Career Readiness Review: The Commonwealth of Virginia, United States

OECD

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Foreword

This review focuses on the design, delivery and impact of teenage career development in the Commonwealth of Virginia. It explores how effectively, efficiently and equitably schools in the state are preparing young people for their early working lives. It does so through a detailed study of provision in the state and by drawing on new data from current and former students within the system, allowing comparisons with international practice and the best available international evidence on how guidance can be expected to enhance the employment outcomes of young people.

There are strong reasons for governments to look afresh at the ways in which they prepare young people for their working lives. Across the globe, students are staying in education longer than ever before, entering the labour market more highly qualified than previous generations. However, in many countries such ostensive increases in the accumulation of human capital are not automatically translating into better economic prospects for young people, nor systematically addressing long-standing skills shortages. Within education systems, it is the role of career guidance systems to help young people make good decisions about their investment in learning and to develop skills, experience and networks which enable good transitions. With labour markets undergoing radical change in light of automation, digitisation and the response to climate change and with post-secondary education and training becoming more marketized in many countries, the need for effective guidance grows.

For a long time, policy in this field has been hindered by lack of evidence on the long-term impact of different career guidance measures. In spite of its importance as a policy tool, longitudinal evaluations of career guidance systems have been limited, hampering capacity for comparisons between jurisdictions. This challenge has been recently addressed through new analysis undertaken by the OECD which draws on longitudinal data from multiple countries, including the United States, to evidence the ways in which particular aspects of teenage career development can be positively associated with better employment outcomes through statistical analysis. Evidence shows that students can commonly expect long-term employment benefits linked to particular ways in which they explore, experience and think about their potential futures in work. Such analysis identifies activities and attitudes which serve as predictors of better outcomes. OECD PISA data subsequently provides a means of comparing systems in terms of how successful they are in helping students to engage in forms of career development which can most confidently be associated with better starts to working life. Such new evidence allows governments to adopt more strategic approaches in supporting young people through their schooling and transitions out of secondary education into ultimate employment.

These developments provide an important context for this first OECD review of career readiness. It is fortunate to have been undertaken in the Commonwealth of Virginia, a state which strongly acknowledges the importance of career readiness and which works in partnership to put in place programmes that prompt students to reflect on their career progression and to develop skills and experience relevant to the working world. The OECD review team was impressed by the commitment of stakeholders across the state in ensuring that a strong system of career preparation is in place for young Virginians. This review highlights practice which will be relevant to other US states and more widely. Opportunity now exists for educational jurisdictions to build upon Virginia's example to strategically learn from one another. As further jurisdictions engage in review processes, it is possible to look forward with confidence to a time when career guidance systems, based on the best available international evidence, will provide all young people with the knowledge and resources that they require to plan effectively and confidently for their working lives.

Acknowledgements

The OECD review team greatly appreciates the time and effort provided by a range of experts and officials from the Commonwealth of Virginia. This work was strongly supported by Aimee Guidara, the Secretary of Education and McKenzie Snow, Deputy Secretary of Education of the Commonwealth of Virginia. Heather McKay, Rachel O'Brien and Renata Scott from Virginia Office of Education Economics (VOEE) have been tremendously helpful partners in this work, especially in organising highly informative and stimulating meetings for the review team to have a better understanding of policy and practice in Virginia. Antionette Stroter and Anthony Williams (Virginia Department for Education), Tod Massa (State Council of Higher Education for Virginia) also provide invaluable support and guidance throughout the project period.

Special thanks go to all the interviewees from the 22 institutions in Virginia who shared their ideas, opinions and information which allowed the OECD review team to deepen their knowledge and understanding of Virginia's policies, practices, challenges, and strengths, as well as highlighting to the team their passion to strengthen the career readiness of young people. Throughout the course of the project, the enthusiasm, commitment, depth of knowledge and professionalism of everyone working on this issue in Virginia was evident. The review team was inspired and impressed by the commitment of all those working on career readiness in Virginia and saw directly how hard they work to meet the expectations of the citizens of the Commonwealth.

This report was drafted by Shinyoung Jeon from the OECD Education and Skills Directorate (EDU), under the supervision of Anthony Mann (Head of Career Readiness team, EDU) and Andreas Schleicher (EDU director). Tricia Berry, an external career expert from Department for Education, New Brunswick, Canada, accompanied the review team from the initial phase of building conceptual frameworks, through a mission to Virginia, and to the early drafting and review phase. André Lopes (EDU) assisted research and data work as well as the preparation of the mission and online interviews. The report has benefited from comments provided by Shivi Chandra, Rebecca Frankum, and Simon Roy (EDU). Administrative assistance was provided by Dongwook Choi (EDU) and Eda Cabbar (EDU).

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Acronyms and abbreviations

Acronyms and abbreviations	Full name
ACP	Academic and Career Plan(s)
ACPP	Academic and Career Plan Portfolio
ACS	American Community Survey
ACS-CWIFT	American Community Survey Comparable Wage Index for Teachers
AFNR	Agriculture, Food, and Natural Resources
AI	Artificial Intelligence
ASD	Advanced Studies Diploma
BCC	Board for Community Colleges
BWD	Board of Workforce Development
CC	Community College(s)
CCCI	College, Career, and Civic Readiness Index
CCD	Common Core of Data
CCL	Career Connected Learning
CCR	College and Career Readiness
CDA	Career Development Activities
CEM	Career Education Model
CGC	Career Guidance and Counselling
CIC	Career Investigation Courses
CMEC	Council of Ministers of Education (Canada)
COVID-19	Coronavirus disease 2019
CPI	Consumer Price Index
CRI	Career Readiness Index
CTE	Career and Technical Education
CTSO	Career and Technical Student Organizations
CV	Curriculum Vitae
DECA	Distributive Education Clubs of America
DEIS	Delivering Equality of Opportunity in Schools
DHCD	Department of Housing and Community
DWFDA	Department of Workforce Development and Advancement
DoDEA	Department of Defense Education Activity
ECEC	Early Childhood Education and Care
EDU	OECD Education and Skills Directorate
EIP	Early Identification Program
ESSA	Every Student Succeeds Act
FBLA	(Virginia) Future Business Leaders of America
FCCLA	(Virginia) Family, Career and Community Leaders of America

Acronyms and abbreviations	Full name
FCD	Facilitating Career Development
FFA	(Virginia) Future Farmers of America
FRL	Free or Reduced Lunch
GCDF	Global Career Development Facilitator
GDP	Gross Domestic Product
GMU	George Mason University
GO	Growth and Opportunity (Virginia)
GO TEC	Great Opportunities in Technology and Engineering Careers
GUV	Gear Up Virginia
HB	House Bill
HE	Higher Education
HEI	Higher Education Institutions
HOSA	(Virginia) Health Occupations Students of America
HQWBL	High Quality Work-based Learning
HS	High School
IALR	Institute for Advanced Learning and Research
IBR	Income-Based Repayment
ICT	Information and Communications Technology
IDEA	Individuals with Disabilities Education Act
IHE	Institutions of Higher Education
IIFP	(Commonwealth) Innovative Internship Fund and Program
ILP	Individualised Learning Plan
ISCO	International Standard Classification of Occupations
IT	Information Technology
JLARC	Joint Legislative Audit & Review Commission
LEA	Local Education Agency
LED	Local Employment Dynamics
LMI	Labour Market Information
MSCI	Middle School Career Investigations
NCDA	National Career Development Association
NCES	National Center for Education Statistics
NDE	Nebraska Department of Education
NEET	Not in Education, Employment or Training
NOCTI	National Occupational Competency Testing Institute
ODiCY	(OECD) Observatory on Digital Technologies in Career Guidance for Youth
OECD	Organisation for Economic Co-operation and Development
PES	Public Employment Service
PIAAC	Programme for International Assessment of Adult Competencies
PISA	Programme for International Student Assessment
PK	Pre-kindergarten
RUCA	Rural-Urban Commuting Area
RW-LMIC	Real World Labour Market Challenges

Acronyms and abbreviations	Full name
SAE	Supervised Agricultural Experience
SB	Senate Bill
SCHEV	State Council of Higher Education for Virginia
SD	Standard Diploma
SDS	Skills Development Scotland
SES	Socioeconomic Status
SOA	Standards of Accreditation
STEM	Science, Technology, Engineering, and Mathematics
TAG	Tuition Assistance Grant
TANF	Temporary Assistance for Needy Families
TEC	Technology and Engineering Careers
TET	Finnish: “Työelämään tutustuminen”; English translation: “Getting to know working life”
TLP	The Learning Partnership
TOKW	Take Our Kids to Work
TSA	(Virginia) Technology Student Association
UDL	Universal Design for Learning
UI	Unemployment Insurance
UK	United Kingdom
US	United States
US DOE	United States Department of Education
US DOL	United States Department of Labor
USD	United States Dollar
V-TOP	Virginia Talent Opportunity Partnership
VA	Virginia
VATI	Virginia Telecommunication Initiative
VCC	Virginia Cooperative Council
VCCC	Virginia Career Coach Certification
VCCS	Virginia Community College System
VCU	Virginia Commonwealth University
VDHCD	Virginia Department of Housing and Community Development
VDOE	Virginia Department of Education
VEDP	Virginia Economic Development Partnerships
VET	Vocational Education and Training
VICE	Virginia Institute on Cooperative Education
VIEW	Vital Information for Education and Work
VLDS	Virginia Longitudinal Data System
VOEE	Virginia Office of Education Economics
WBL	Work-based Learning
WFD	Workforce Development
WIOA	Workforce Innovation and Opportunity Act
WRS	Workplace Readiness Skills

Executive summary

Across the world, on average young people are entering the labour market more highly qualified than ever before, but still they are seen to struggle in their attempts to achieve smooth transitions from education into fulfilling employment. In this light, many countries are reviewing career guidance systems designed to help students better prepare for their working lives. The longer young people stay in education, the more decisions they have to make about what they study, where they study and how hard they apply themselves. Moreover, such decisions are becoming more challenging as the labour market itself becomes more uncertain and precarious. Historically, policy making in this field has been constrained by lack of strong quantitative evidence on how career guidance activities can most effectively enhance the employment outcomes of youth. In recent years however, the emergence of substantial new data has provided governments with the opportunity to review and benchmark their school career guidance against international best practice.

This report reviews teenage career development in the US Commonwealth of Virginia. It is the first in a series of studies that explore how effectively, efficiently and equitably guidance systems are preparing secondary school students for their working lives. Benchmarking reviews draw on newly available longitudinal data from 10 countries, including the United States, that reveal statistically significant relationships between teenagers' participation in different forms of career development and better employment outcomes at age 25. Such benefits are associated with the ways in which students (typically at age 15) explore, experience and think about their potential futures in work. Data from the OECD Programme for International Student Assessment (PISA) allows assessments of the comparative teenage career readiness by measuring such indicators across countries.

In this review, new data was collected from a survey of 9 333 students aged 15-17 (Grades 10 and 11), enabling benchmarking against international practice as captured in PISA. Additionally, 1 100 young adults aged 19 to 26 who had attended secondary school in Virginia were surveyed about both the character of their current labour market participation and their recollections of school experiences of career guidance. This user survey provides insight into the success of the school guidance system in preparing young people for their transitions into working life. The study also benefited from considerable sharing of policy and practice from Virginia's Department for Education and its agencies, and a study visit from the OECD research team which engaged with multiple stakeholders involved in the development and delivery of guidance provision within the state.

The review identifies many strengths within Virginian practice. Career development is a high policy priority. The state expects all students to engage in programmes of career exploration, articulating academic and career plans as they progress through secondary education. It also offers students a range of institutional and pathway approaches (notably through well-developed career and technical education) which enable the supported exploration of economic sectors of potential interest to students. The ratio of students to guidance counsellors is low compared to other states.

The student survey found that respondents were commonly serious about their future employment plans, but concerned as to whether the support received from their schools was sufficient to their needs. Benchmarking participation in key career development activities against international practice reveals that

Virginian students do often engage less intensely in guidance activities than peers in other countries, notably with regard to activities associated most strongly with better employment outcomes. Virginia students demonstrate high comparative levels of uncertainty and confusion about their career plans. However, participation in career development, notably first-hand experiences of the world of work, is associated with more beneficial forms of career thinking. Beneficial effects of teenage career development can also be identified in the survey of young adults with regression analysis finding teenage career exploration and especially work-based experiences to be strongly associated with better employment outcomes. However, the survey confirms relatively low historic levels of engagement in such activities. The analysis also reveals patterns of inequalities, notably linked to the social background and residency of students and challenges in labour market signalling, particularly with regard to awareness and interest in the skilled trades.

Through detailed discussion, the study reviews Virginia's career readiness systems across three thematic areas:

- **Effectiveness**: the engagement of students in forms of career development that can most confidently be associated with better employment outcomes.
- **Efficiency**: the extent to which student career development is informed by understanding of the economic and labour market opportunities while minimising unnecessary navigation time and waste of resources.
- **Equitability**: the extent to which young people's transitions are enabled through equal and targeted access to opportunities and by empowering marginalised youth to build human, social and cultural capital necessary for effective transitions into employment.

The study concludes by highlighting seven recommendations for consideration:

1. Virginia should consider systematising and monitoring the implementation of career readiness instruments to strengthen effective provision.
2. Virginia should consider revising and updating its K-12 framework for career readiness.
3. Virginia should consider further increasing the quantity of relevant staff in part by easing regulations in recruitment to strengthen career readiness efforts.
4. Virginia should consider adopting new approaches to encouraging and enabling employers and people in work to engage with schools to provide students with systemic, consistent and diverse exposure to the working world.
5. Virginia should consider introducing new means of deepening and broadening the exposure of students to the skilled trades from an earlier age, through career guidance interventions and work-based learning.
6. Virginia should consider providing greater support to students facing additional barriers within career development and labour market participation to create more equitable outcomes for youth.
7. Virginia should consider ways in which it can take greater advantage of digital technologies, notably to address geographic variations in access to career development.

Each recommendation is discussed based on the character of challenges within the state and relevant examples of international practice for the consideration of policy makers, practitioners, and researchers.

Part I : Overview

Chapter 1. Introduction to Career Readiness Review of the Commonwealth of Virginia

Across the world, on average young people are entering the labour market more highly qualified than ever before, but still they struggle in their attempts to achieve smooth transitions from education into fulfilling employment. Understanding the how career guidance systems are working to support students in this transition is an important step to addressing this issue. This chapter gives an overview of this review of career readiness undertaken in the Commonwealth of Virginia (United States).

Introduction

This report presents the conclusions of the OECD Review of Career Readiness in the Commonwealth of Virginia (VA). Within the review, the OECD team with the support of the Virginian Department of Education (VDOE) and its agencies, notably the Virginia Office of Education Economics, reviewed existing data, research, and policy on career readiness in the state, collected new data from current and former students and undertook a mission to the state in March 2023, holding 22 meetings with state leaders, officials, school leaders, guidance practitioners and stakeholders within the state.

The report consists of five chapters. It begins by providing an overview of how the K-12 school system, notably at lower and upper secondary level, in Virginia is designed to ensure the career readiness of students and the economic context within which it operates. The report then presents the results of two surveys which were conducted within the review. A survey of 19–26-year-olds provides a user perspective on teenage career development within the state. A second survey of current Grade 10 and 11 students allows for benchmarking against international practice as captured in the 2018 round of the OECD Programme for International Student Assessment (PISA 2018). Overall, the chapter provides an assessment of the career readiness of young people and the career readiness system in Virginia in international context.

The report then reviews Virginia's career readiness systems across three thematic areas:

- **Effectiveness**: how the VA career readiness system engages students in forms of career development that can most confidently be associated with better employment outcomes (Theme 1).
- **Efficiency**: how the VA career readiness system ensures that the career development of students is informed by understanding of the economic and labour market opportunities while minimising unnecessary navigation time and waste of resources (Theme 2).
- **Equitability**: how the VA career readiness system addresses inequalities in assisting young people's transition by providing them with equal and targeted access to opportunities and empowering marginalised youth to build human, social and cultural capital necessary for effective transitions into employment (Theme 3).

The study concludes with seven recommendations which are discussed below and in detail through the report, alongside international examples of practice.

Summary of recommendations

Recommendation 1: Virginia should consider systematising and monitoring the implementation of career readiness instruments to strengthen effective provision.

Recommendation 2: Virginia should consider revising and updating its K-12 framework for career readiness.

Recommendation 3: Virginia should consider further increasing the quantity of relevant staff in part by easing regulations in recruitment to strengthen career readiness efforts.

Recommendation 4: Virginia should consider adopting new approaches to encouraging and enabling employers and people in work to engage with schools to provide students with systemic, consistent and diverse exposure to the working world.

Recommendation 5: Virginia should consider introducing new means of deepening and broadening the exposure of students to the skilled trades from an earlier age, through career guidance interventions and work-based learning (WBL).

Recommendation 6: Virginia should consider providing greater support to students facing additional barriers within career development and labour market participation to create more equitable outcomes for youth.

Recommendation 7: Virginia should consider ways in which it can take greater advantage of digital technologies, notably to address geographic variations in access to career development.

Theme 1: Providing high-quality career development activities in Virginia

Career readiness is a key policy agenda for Virginia, and the state has made visible efforts in many policy fields to support and strengthen the career readiness of students. In line with this, the OECD Career Readiness Survey of Young Adults in Virginia shows that most former students have a positive perception of their career readiness experiences in high schools. Virginia is already equipped with valuable instruments and strategies that can enable the state to strengthen career readiness of young people.

Revisiting career readiness instruments

Recommendation 1: Virginia should consider systematising and monitoring the implementation of career readiness instruments to strengthen effective provision.

While each one of current career readiness instruments has value and potential, they are not consistently used across schools and school districts, reflecting that state standards for these instruments are not strictly respected or consistently implemented. For example, Virginia should ensure that every student actually has an Academic and Career Plan (ACP) as mandated by the state (currently 75% of Grade 10/11 students), define how each mandated provision such as Career Investigation Course is offered, assessed, and reported on, and measure outcomes of each mandated provision in relation to the K-12 learning framework. The data collected in this process can be used to further assess engagement of students in forms of career development which are associated in empirical studies with the greatest effectiveness of the provision. It can also be used to plan future offerings in relation to local labour market needs and challenges in delivery, with an aim of building a consistent, systematic and institutional procedure to use, track, update and transfer ACPs between educational institutions and stages to facilitate the overall career readiness process. Opportunity exists to further manage the ACP online within a single or better co-ordinated system that both record student decision-making and makes available resources useful in that decision-making.

Updating career readiness standards and frameworks

Recommendation 2: Virginia should consider revising its K-12 framework for career readiness.

Where school districts and schools exert a high level of autonomy, as in Virginia, variation in delivery is to be expected. Career readiness systems can better function when being underpinned by a well-designed and commonly agreed set of standards and frameworks, including the articulation of expected outcomes, which can be measured and monitored.

In this context, there are strong rationales for a more updated and comprehensive career readiness framework for K-12 system in Virginia. This is timely because of the character of educational and labour market participation has changed considerably over the last generation, increasing the need for more informed decision-making by young people as options, opportunities and risks of poor integration into the labour market proliferate. Data on the effectiveness of specific guidance inventions, evidenced in longitudinal data (including from the United States), also demands consideration in determining framework content.

Virginia should therefore develop a new, or at least update its existing K-12 career guidance framework. In recognition of school district autonomy, this new or updated framework need not be overly prescriptive in determining every aspect of career development, but should articulate a core collection of activities and experiences that students should be able to expect of their schooling. At the heart of such expectations are those career development activities and experiences which can be most confidently associated with better employment outcomes. By Grade 11 for example, the state should ensure that all students have had opportunity to participate in career talks and job fairs, workplace visits and job shadowing, application and interview skills workshops alongside direct experience of the world of work through internships, volunteering or part-time employment linked to areas of career interest. Integrating such provision into an online ACP would allow for monitoring of provision in order to ensure that all Virginian school students receive a minimum level of provision based on international standards.

This new or updated framework can allow for the variance of the ACP instruments and career development activities used to achieve the career guidance framework outcomes, but with clearer monitoring mechanisms. It is possible to systematise how the framework outcomes are tracked, evaluated and fed back to stakeholders to improve career readiness provision.

Supporting the career readiness workforce

Recommendation 3: Virginia should consider further increasing the quantity of relevant staff in part by easing regulations in recruitment to strengthen career readiness efforts.

While teachers and counsellors play a crucial role in student career readiness, they often lack time and resources to put additional effort into further strengthening the career readiness of students given existing workloads and responsibilities. On average, ratios of counsellors to students in Virginia public schools are low compared to the US average but are generally still high in comparison to standards recommended by the American School Counsellor Association. Virginia also spends less than the US average on per-pupil student support, including career guidance although many schools in Virginia now also benefit from career coaches who provide an important additional resource in the career development of students.

Virginia can benefit from further increasing the quantity of relevant staff. One option to consider is the easing of regulations in recruitment to strengthen career readiness efforts. Compared to the US average and other states, Virginia relies heavily on traditional teacher preparation programmes in comparison to alternative programmes (e.g., recruiting professionals with prior work experience but seeking to switch careers). Virginia can diversify recruitment and training routes for teaching professions to ease teacher shortages and attract talent with industry experience to the profession. Such an approach would be particularly relevant to developing the workforce involved in provision of CTE programmes.

At the same time, it is essential that counsellors and teachers receive appropriate, high-quality training. In this regard, schools and responsible institutions should look to enhance in-service training and other resources that can inform teachers and counsellors about appropriate methods and approaches for career counselling, including up-to-date entry requirements for tertiary education, labour market dynamics and key new research findings.

Theme 2: Aligning career development activities with labour market opportunities in Virginia

Virginia emphasizes the responsiveness of its education system, notably at High School level, in relation to labour market opportunities in various ways. The 'responsiveness' component in the career readiness system enriches the choices and pathways available to students and helps them to make informed choices. At the heart of effective labour market signalling, is the active engagement of employers in the career development of students. Virginia has been proactive in encouraging and enabling collaboration with the economic community, especially through the provision of work-based learning (WBL) opportunities, but current levels of employer engagement are insufficient to meet student needs.

Engaging employers to increase, strengthen, expand and promote WBL opportunities, setting up systemic and consistent collaboration among key stakeholders

Recommendation 4: Virginia should consider adopting new approaches to encouraging and enabling employers and people in work to engage with schools to provide students with systemic, consistent, and diverse exposure to the working world.

Employer engagement is an essential component of effective career development. Considerable opportunity exists in Virginia to strengthen the engagement of employers and people in work in the career development of students. Student participation in WBL activities in Virginia is also low compared to other states and many other countries. For example, 18% of CTE concentrators in Virginia participate in work-based learning compared to 38% in Georgia in 2020-21. The OECD Career Readiness Surveys also confirm that in comparison to international practice job shadowing, worksite visits and internships are particularly weak in Virginia. While many CTE programmes currently provide excellent examples of provision enriched by strong employer engagement, this is not always the case.

In this context, Virginia should consider additional mechanisms, from Elementary through to High School, for encouraging and enabling the enrichment of career development by employers and people in work. A first step for Virginia would be to make the business case to employers and people in work as to why they would benefit from engaging with schools to support guidance activities. Secondly, Virginia should consider removing barriers that prevent the provision of and participation in employer engagement activities.

Collaboration and co-ordination between stakeholders are key to operating a career readiness system given that the system lies at the intersection of education and workforce development. While collaboration between schools, employers and communities and co-ordination among state agencies is happening, there is a tendency for this to be in an ad hoc fashion and is shaped by the capacity of the school, division, agency and employer. Greater clarity on expectations, as articulated in a revised set of standards/framework will enable stronger local cultures of collaboration.

Strengthen career development activities that lead to aspiration for skilled employment

Recommendation 5: Virginia should consider introducing new means of deepening and broadening the exposure of students to the skilled trades from an earlier age, through career guidance interventions and WBL.

The skilled trades (construction and manufacturing) is one of Virginia's most in-demand industries. Such professions offer many attractive careers, but student interest is limited. As is the case across the United States, interest in those professions among teenage students is low by international comparison. Only 9% of surveyed teenagers in Virginia with a clear idea of their occupational expectation, named a medium-skilled occupation.

While CTE and co-operative education programmes in Virginia offer valuable introductions to skilled employment, opportunity exists to expand student interest. Lack of interest may be for one of two reasons. Students may not have a fully informed understanding of relevant professions and decide that their career ambitions lie elsewhere. Alternatively, it is possible that student understanding is partial and insufficient to make an informed decision about CTE provision or the professions to which it is related. While the education system has limited capacity to address the attractiveness of occupations, it can (in collaboration with the economic community) take steps to address information asymmetry. Here, scope exists to broaden and deepen student understanding of careers to which CTE and co-operative education provision commonly provides access. Notably, during Middle School (before important decisions are made concerning more vocationally-focused pathways through secondary education), it is possible to expand potential interest in fields commonly entered without the need for a four-year university degree. By providing students with the opportunity to see the actual careers behind the CTE courses, through programmes of career talks, job fairs, workplace visits and digital tools, opportunity exists to broaden career interests and address potentially erroneous assumptions. Within High School, the expansion of WBL opportunities will provide students with deeper, first-hand experiences of potential future employment and access to social networks which can facilitate progression into employment. Such an objective would be facilitated through the availability of state-wide mechanisms that enable schools across the Commonwealth to connect employers and employee volunteers. Efforts can also be made to better inform parents about the realities of employment in the skilled trades. School provision in Virginia can also do more to help young people in the process of identifying and applying for apprenticeship and training programmes while students are still in school.

Theme 3: Ensuring equitable access to career development activities in Virginia

One of the goals of a career readiness system and strategy is to provide young people from all backgrounds with relevant information and experiences to broaden and raise aspirations to make appropriate educational, training and occupational choices, and to support their transitions into fulfilling employment. This is accomplished through building the human, social and cultural capital that enables employment regardless of the student's existing challenges or characteristics, school or community of residence. By consequence, equitable guidance systems will not be based on one size fitting all. Participation in career development activities (CDA) can assist in breaking negative intergenerational cycles of disadvantages and gender and racial/ethnic disparities by recognising and addressing structural barriers.

In this regard, Virginia offers multiple pathways and programmes for diverse segments of its population, for example through well-integrated CTE, co-operative education and dual enrolment. In particular, integration of vocationally-focused provision within general high schooling keeps options open for all students and reduces reputational risks. School divisions have autonomy to make customised selections of programmes and introduce specialised institutional approaches, such as the Career Academies programmes. While this autonomy can make it difficult to set state-level standards and work toward

balanced implementation, it can act positively and swiftly to adjust provision and options based on student needs and local labour market demand. Overall, Virginia is putting significant effort into reducing existing gaps and, this study shows, is performing well in several equity indicators, but there remains a case for strong minimum standards for all (as articulated within a revised framework and standards) and targeted interventions to support students who face additional barriers in converting their human capital into successful employment.

Reducing gender, race/ethnicity and socio-economic disparities

Recommendation 6: Virginia should consider providing greater support to students facing additional barriers within career development and labour market participation to create more equitable outcomes for youth.

The variation in career exploration, experiences and thinking of students who share comparable levels of academic achievement and social characteristics helps to explain similar variation in their work and study status as young adults. The two OECD Career Readiness Surveys show that disparities among different groups remains an issue in Virginia, although positive cases were highlighted, such as better access to CDA for historically marginalised populations compared to the majority population.

Personalisation in career guidance is a challenge in all countries. In Ireland and Canada, guidance systems explicitly articulate aspects of provision which should be available to all students, while other initiatives are reasonably targeted at some or a few students. In this way, personalisation is increasingly built into the provision of guidance, enabling students to explore and experience a wider range of occupations and addressing known barriers preventing confident transitions. Here, as discussed below, digital technologies are of considerable importance.

Making the issue of equity more explicit in the career readiness policy agenda can help close further gaps in the transition process and expand the careers that are being considered by all students beyond limiting boundaries, with a goal of narrowing labour market outcome disparities. Virginia can build upon other country examples and research that shows how to help raise and broaden the career aspirations of young people from disadvantaged backgrounds, both to make them more informed and better aligned with future opportunities, and to overcome structural inequalities.

Reviewing equity-related data highlighted particularly strong patterns of concern in relation to the socio-economic status and geographic location of students. With relation to the second issue, significant scope exists to enhance the availability of online resources (discussed below). With regard to the former, options exist and are discussed in the report for targeted interventions. Perhaps most striking in international practice is the example of Ireland which in recognition of greater needs, provides more than double the level of standard funding for career guidance provision in schools serving the lowest-income populations.

Increasing provision through the use of digital technologies to overcome regional disparities and enhance personalisation in career development

Recommendation 7: Virginia should consider ways in which it can take greater advantage of digital technologies, notably to address geographic variations in access to career development.

Both access to CDA and the quality of them vary across schools and districts. Students are often bounded by what schools or school districts can offer and the availability of local employment and employers. Transportation is also a significant issue not only because of the cost but also of the lost instruction time. It is striking that the career aspirations of young people in Virginia are particularly strongly influenced by parental occupation: 20% of students say that their parents' opinions are very important in their career planning, compared to an OECD average of 13.5%.

Virginia can broaden the aspirations of young people and address the barriers presented by geography through greater use of digital resources, building on such notable innovations as CTETrailblazers. These new tools also underpin innovative models of guidance that explicitly recognise that equitable guidance will not be characterised by a one size fits all approach.

Virginia can bene it from increasing the use of digital technologies and the innovative approaches they enable. Virginia is already heading in this direction, for example by delivering Career Investigation Courses online. Virginia can build upon examples from other countries and examples from the OECD Observatory on Digital Technologies in Career Guidance for Youth (ODiCY). This is particularly relevant with regard to guidance activities such as online career talks, workplace visits, job shadowing and work placements that are increasingly being developed online.

Chapter 2. Overview of Career Readiness in Virginia

This chapter provides an overview of how the school system in Virginia (United States) is designed to ensure the career readiness of students and the context within which it operates. This chapter explains the importance of career readiness policy and how this review was undertaken. It then provides background information on Virginia, young people within the state and the pathways through education into employment that they take. It describes the objectives, stakeholders, and provision of the school career readiness system in Virginia.

Introduction

Importance of career readiness policy

More than at any point in history, and all around the world, young people are leaving education more highly qualified and with more years of schooling to their name. Yet despite this positive trend, many still struggle in the transition to fulfilling employment. As students stay in education longer, they have more decisions to make about what, where and how hard they will study and train – decisions that can both open and close later economic opportunities. At the same time, there is reason to believe that decision-making is becoming more difficult. Demand for skills is rapidly changing in light of digitalisation, automation and responses to climate change and the COVID-19 pandemic. Moreover, the marketisation of post-secondary education and training adds an additional challenge to young people seeking to navigate smooth transitions through post-secondary education and training provision into desirable employment (OECD et al., 2021[1]).

Within this complex and confusing landscape, governments turn to career guidance within education systems – services and activities intended to assist individuals to make educational, training and occupational choices and to manage their careers (OECD, 2004[2]) – to prepare students for their lives in work while still in education, helping them to optimise the accumulation of human capital and their capacities to deploy it. Recently, understanding of the role of career guidance in preparing students for working life has improved considerably – and the concept has broadened to career readiness (Box 2.1). Analysis of longitudinal data provides a means to establish links between the character of teenage career development and better employment outcomes in early adulthood (OECD, 2021[3]; Covacevich et al., 2021[4]; Covacevich et al., 2021[5]). Such developments, drawing on scientific data, identify specific aspects of career development that can help to shape our understanding of effective career readiness systems, policies, and provision. Moreover, international survey data now allow for comparisons of student preparation around the world. In this context, studies can be undertaken to explore the extent to which career readiness systems deliver effective, efficient, and equitable career development activities, providing all young people with knowledge, skills, resources, and competencies that shape their career readiness.

About OECD work on Career Readiness

Following the publication of the *Career Guidance Handbook* (OECD/The European Commission, 2004[6]), international interest in career guidance grew further in the wake of the Great Financial Crisis and the consequent spikes in youth unemployment. Interest was renewed again among policy makers and practitioners during the COVID-19 pandemic. In response to this growing interest in career readiness and guidance, the OECD launched its *Career Readiness* project for young people. Through 2020-22, the project laid the foundation for rebuilding this important dialogue on career guidance by distilling key indicators of teenage career readiness, collecting best practices, and identifying characteristics of effective career guidance (OECD, 2021[3]; Covacevich et al., 2021[4]; Covacevich et al., 2021[5]). The second phase of the project (2022-24) explores the role of digital technologies in enhancing guidance and the importance of career development in relation to student characteristics (Jeon et al., 2023 forthcoming[7]) and priority economic areas (‘green’ jobs), while providing countries with policy advice to enhance national or sub-national practice by showcasing best practice around the world and benchmarking them against each other.

Box 2.1. Career readiness indicators, career development activities, and school career guidance

Career readiness refers to *three aspects* of teenage **career development** that are linked to more successful transitions into adult employment. The OECD Career Readiness project identified these aspects based on a first-of-its-kind analysis of longitudinal data from ten countries, including the United States. Within this analysis, the OECD confirmed indicators of better employment outcomes in areas where data show in three or more countries that specific aspects of teenage career development (typically at age 15-16) can be linked to positive outcomes at age 25-30 (participation in education, employment, or training; earnings; job satisfaction) or more positive than would be expected of a comparable young person who did not so engage. Integration of new findings into the wider research literature further reinforced confidence in the indictors (Covacevich et al., 2021[4]). These three predictive aspects and example activities are:

- *Exploring potential futures in work:* career conversations with teachers, family members and friends; engaging with people in work through career talks or job fairs; workplace visits or job shadowing; application and interview skills development activities; occupation-focused short programmes, known as career pathways in the United States.
- *Experiencing potential futures in work:* activities involving first-hand experiences of workplaces such as part-time work and volunteering.
- *Thinking about potential future careers*:
  - *Career certainty*: ability as a teenager to name an expected adult occupation.
  - *Career ambition*: expectation of working in a job classified as a high-skilled occupation.
  - *Career alignment*: aligning educational plans with typical requirements of occupational ambitions.
  - *Instrumental motivation*: recognising long-term extrinsic benefits of schooling to employment.

In addition, partial indicators were identified in relation to short work placements, the greater originality of career planning, and participation in school-based guidance activities, such as the use of career questionnaires designed to prompt student reflection (Covacevich et al., 2021[4]).

Career development activities (CDA) refer to activities and services that promote young people's career exploration, experiencing, and thinking. These are intended to assist individuals to make well-informed educational, training, and occupational choices, to gain useful experiences and to manage their careers. Among these activities, **school career guidance** refers to school-mediated activities and services, which cover career guidance/education/information, career counselling and direct contact with the world of work:

- *Career guidance and education*: personalised, impartial, and timely information and support to make informed career decisions and to learn about the world of work and develop career management skills.
- *Career information:* career-related information such as education and training courses, occupations, learning and career opportunities, progression routes and choices, assessment, as well as information on where to find help and advice, and how to access it.
- *Career counselling:* one-to-one or group basis advice on career thinking, exploration or decisions pro-actively or reactively, general or targeted. Counselling to help young people gather, understand, and interpret information and apply it to their own situation; understand themselves and their needs, confront barriers, resolve conflicts, and make progress.

- *Direct contact with the world of work*: first-hand insights into, and experiences of, the labour market in order to raise, broaden and inform career aspirations.

Source: Cedefop, Siebel, J., Dorn, B. (2020). Coordinating guidance and validation, Publications Office. https://data.europa.eu/doi/10.2801/801290:; (Covacevich et al., 2021[5]); (OECD, 2021[3]); (Mann, Denis and Percy, 2020[8]); (Covacevich et al., 2021[4]) (Musset and Kurekova, 2018[9]; OECD, 2004[2]) (OECD, 2004[2]) (Cedefop, European Commission, ETF, ICCDPP, ILO, OECD, UNESCO, 2020[10])

About this Career Readiness Review

With a focus on Virginia (United States), this review, looks closely at the career readiness of students within a specific educational jurisdiction. It focuses primarily on secondary education and examines the design of the Virginian career readiness system and delivery of activities that promote career exploration, experience and thinking (see definition in Box 2.1), provided by secondary schools and other relevant stakeholders.[1]

The purpose of this review is to enable the continual improvement of the provision of school career guidance in Virginia in order to better support the progression of young people through education and training ultimately into fulfilling employment. This review aims to: i) set out the key challenges that policy makers and practitioners in Virginia face in delivering effective, efficient, and equitable career guidance services; ii) benchmark Virginia against OECD countries and economic areas; and iii) provide examples of good practice and effective responses to these challenges. In doing so, it seeks to highlight Virginian practice of value to other jurisdictions.

This review is timely for Virginia. Over recent years, the state has placed increasing efforts into building strong pathways for young people while introducing innovative initiatives and replicating known successes. Career readiness is important for Virginia for a number of important reasons: (i) increasing out-migration among young people contributing to a falling youth population increasingly characterised by race/ethnic diversity; (ii) a higher ratio of youth unemployment to prime-age unemployment; and (iii) growing and changing skills needs from across the economic community. In response to these challenges, Virginia has reinforced its data and evidence base and is streamlining its education, career readiness and workforce development systems. Virginia is keen to encourage young people to have more “exposure, experience and expertise” outside of school, through a holistic approach of transforming and strengthening K-12, college, higher education and workforce development systems while incentivising employer communities to join this journey.

Young people, education and labour market in Virginia

Virginia at a glance

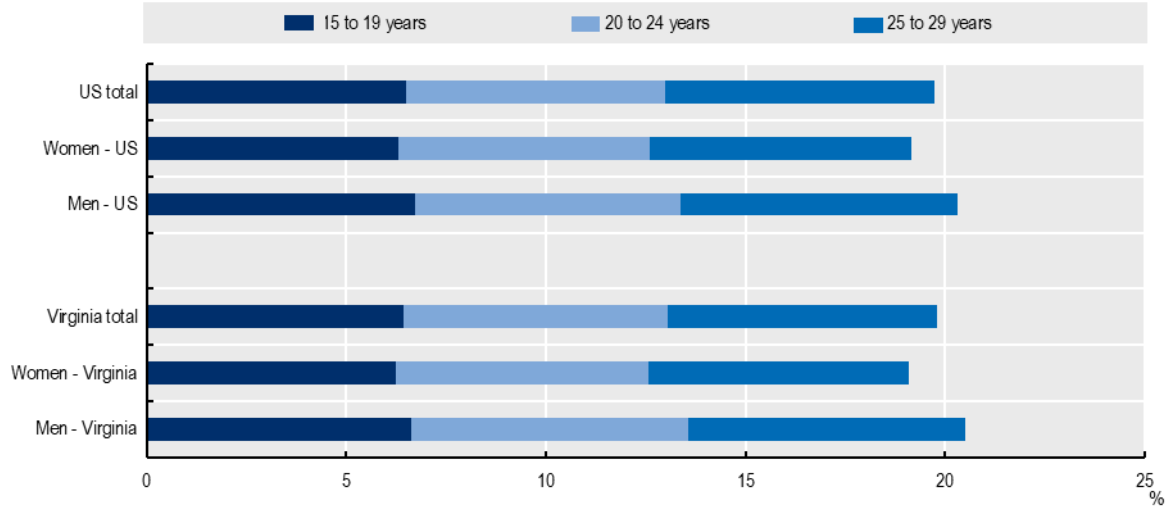
With a Gross Domestic Product (GDP) of USD 655 billion (preliminary Q3 2022; 13th state) and a population of 8.68 million (2022), Virginia is an economy comparable in size to Sweden. Its economic output represents around 2.5% of total GDP in the United States and its population around 2.6% of the US population (2021) (U.S. Bureau of Economic Analysis, 2023[11]; US Census, 2023[12]). Total employment is about 3.5 million (2020) (US Census, 2023[12]) with some 155 000 employer firms (2019) in operation (US Census, 2022[13]). A quarter of the population of Virginia (24%) resides in rural areas (2020), a proportion that has been steady over the past decade. While some Virginia regions have been experiencing net out-migration and others have seen modest in-migration, in general Virginia is under-performing in comparison to states such as North Carolina, South Carolina, Tennessee, Georgia, Florida, and Texas, where many more people are entering rather than leaving (Agee and Treacy, 2023[14]).

Young people in Virginia at a glance

About one fifth of Virginia's population is aged 15-29 with young men outnumbering young women both in absolute and relative terms (2021), similar to the national average (Figure 2.1). According to the 2021 American Community Survey[2], 12% of 15-19-year-olds were not enrolled in school in 2021 (US average: 13%) (US Census, 2023[15]). High school (HS) dropouts[3] in Virginia have been decreasing since 2008 from about 11% to about 5% in 2022 (first-time 9th grader in the year 2018-19 who dropped out school for the period of 2018-22). Comparing status dropouts (the percentage of young people aged 16-24 who are not in High School and who lack a High School diploma or equivalent qualification) in 2015-19 across states (US average 5.5%), Virginia has the lowest rate (3.5%) after New Jersey (3.5%) (Figure 2.2). The State Council of Higher Education for Virginia (SCHEV) projects the pipeline of Virginia's HS graduates to peak in 2026 and then gradually decrease by 6% by 2036 (Massa, 2021[16]). Moreover, High School graduates are expected to become more diverse in terms of race and ethnicity (47% being White in 2021 to 41% in 2029-30) (Massa, 2021[16]).

Figure 2.1. One in five of Virginia's population is at age 15-29

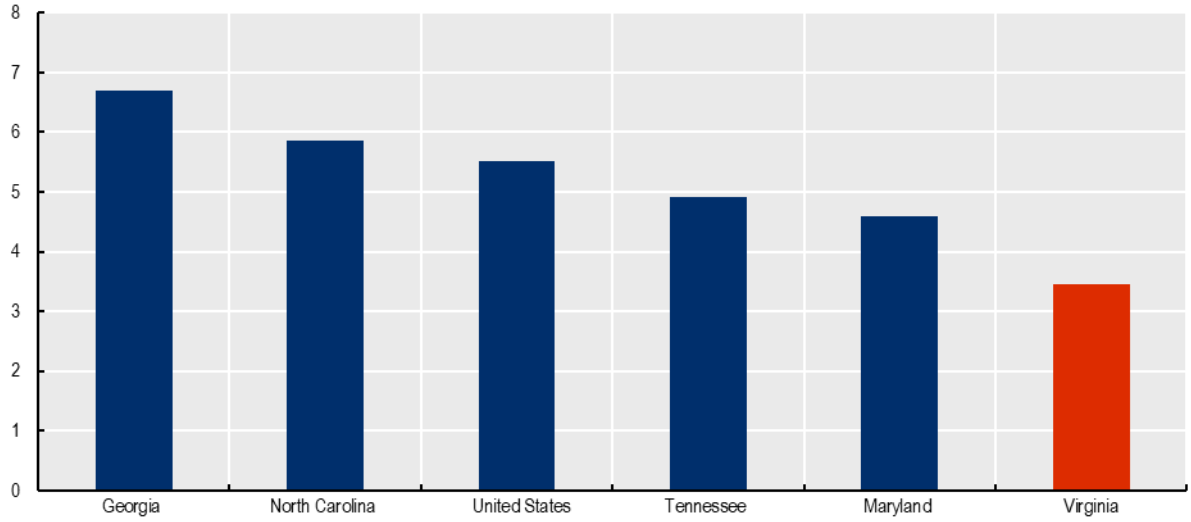
% of population by age group and gender in 2021, Virginia and the United States



Source: U.S. Census (2022[17]), Annual Estimates of the Resident Population for Virginia: April 1, 2020 to July 1, 2021, https ://www2.census.gov/programs-surveys/popest/tables/2020-2021/state/detail/sc-est2021-agesex-51.xlsx

Figure 2.2. Virginia has one of the lowest high school dropout rates in the United States

Percentage of high school dropouts among persons 16 to 24 years-old (status dropout rate), 2015-2019



Source: NCES (National Center for Education Statistics), Table 219.85b. Percentage of high school dropouts among persons 16 to 24 years-old (status dropout rate), by race/ethnicity and state: 2015-2019

The Virginia school system

School structure

The Board of Education establishes the state level standards for public education (Standards of Quality; Standards of Learning; Standards of Accreditation), which the Virginia Department of Education implements, and school districts should adhere to. Virginia's public K-12 schools are operated by 131 school districts.

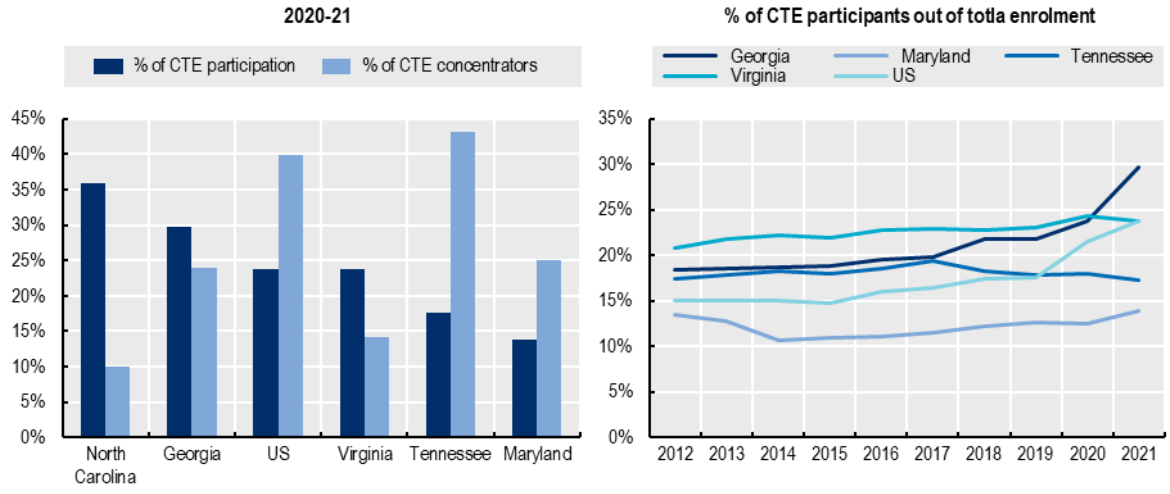
In addition to general public schools, students in Virginia can attend – either full or part-time – *Governor's schools* (which are aimed at high-performing students), *Magnet schools* (public schools that focus on performing arts, science and technology or other particular area of study but also offer regular school subjects) or *Technical Centers* (which offer technical and vocational opportunities to students typically alongside general schooling) (Box 2.2).

Secondary school students undertake a combination of mandatory and elective courses. Elective courses cover career planning and specialised courses such as career and technical education (CTE), which reflect student interests and fields of vocational interest. While there is no formally separated vocational track as in some European countries such as Germany, Switzerland or the Netherlands, most secondary schools offer a wide range of courses and pathways from which students can choose a programme of related courses which can lead to college or university entrance, vocational training or direct entry into employment.

CTE programmes in Virginia's public schools are available through Grades 6-12. In 2022, more than 670 000 students took one or more CTE course. Based on NCES and US Department for Education Perkins data, 24% of students in Virginia public schools participated in CTE in 2020-21, which was about the US average but lower than North Carolina (36%) and Georgia (30%). Among CTE participants, CTE concentrators (i.e., students who opt in for two or more consecutive CTE courses)[4] were low in Virginia: 14% were CTE concentrators in Virginia, compared to 40% in the US, 43% in Tennessee, 25% in Maryland and 24% in Georgia (Figure 2.3).

Figure 2.3. Virginia has opportunity to increase CTE participation and concentration

% of CTE participants out of total enrolment in public schools and % of CTE concentrators among CTE participants



Note: Total enrolment in public elementary and secondary schools was used as denominator for CTE participation.
Source: U.S. Department of Education (2023), The Perkins State Plans and Data Explorer, https://cte.ed.gov/dataexplorer/build_enrolment; U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD) (2022), "State Nonfiscal Survey of Public Elementary/Secondary Education," 2020-21; and Department of Defense Education Activity (DoDEA) Data Center, Enrolment Data, 2020, retrieved July 7, 2022, from https://nces.ed.gov/programs/digest.

Box 2.2. Embedded transitional pathways in Virginia other than typical public-school pathways

Virginia adopts an institution and community-driven approach to amplify labour market demands to young people and support their early engagement in focused studies linked to specific areas of employment.

Governor's Schools

Since their launch in 1973, Governor's Schools have offered high school students (typically grades 9-12) more specialised or advanced academic and visual/performing arts opportunities. These schools apply non-traditional teaching and learning techniques, such as hands-on-experiences, research, field studies, or artistic productions. Students are encouraged to see themselves as emerging scientists, writers, artists, and performers as they work with professional mentors and instructors. With the support of the Virginia Board of Education and the General Assembly, these schools include summer residential, summer regional, and academic-year programmes serving more than 7 500 students in Virginia. These schools are administered by the VDOE Office of Secondary Instructional Services, in co-operation with local school divisions, colleges, and universities. The VDOE, regional governing boards, local superintendents, site or program directors, school boards, and advisory committees establish policies for the Governor's Schools. The Virginia General Assembly, through the VDOE and participating school divisions, fund these programmes. Summer programmes often receive contributions from host colleges, universities, and communities as well as philanthropic foundations. While students tend to split their time between Governor's school and continuing attendance of their home school, this is not always the case. Some Governor's school offer full-time enrolment.

- Academic-Year Governor's Schools: School directors and regional governing boards provide policy and administration of these schools. Focus areas range from the arts to government and international studies, and to mathematics, science, and technology. These schools provide a small number of high-performing students in specific subjects with more tailored and advanced learning opportunities. The schools provide in-service training for other local teachers within school divisions. They also share equipment, facilities, and expertise with other schools. Local employers, industries, and community, through programmes and partnerships, provide mentors to work with students to give them real world experience in careers and to assist them with research projects, or guest lecturers during classes; offer students an opportunity to make professional contacts in their areas of interest; and contribute equipment and supplies, facilities, and expert advice to help support the schools.
- Summer Residential Governor's Schools: Program and site directors, along with the VDOE specialist work together to manage and maintain these programs. Students live on a college or university campus for up to four weeks each summer, involving in laboratory work, field studies, research, individual and group projects and performances, and seminars with noted scholars, visiting artists, scientists, physicians, and a variety of other professionals.
- Summer Regional Governor's Schools: Twenty schools are available throughout the state in a variety of formats, topics, and grade levels. Most often, groups of school divisions design these programs to meet the needs of their local gifted elementary and middle school students in the arts, sciences, and humanities. These programmes are typically housed at a public school or on the campus of a college, community college, or university. The lengths of programs vary, with some lasting a week or less while others may last four or more weeks. Most students return to their homes at the end of each day's activities, with some school programmes being residential. Most localities assume responsibility for transporting students.

Innovation Lab Schools

A recent initiative within Virginia is the creation of Innovation Laboratory Schools. With a budget of approximately USD 150 million, such schools aim to provide young people with an innovative educational experience, including a close engagement with the world beyond the school walls to prepare them for academic and lifelong success. The initiative is based on partnerships between K-12, higher education, and employers to transform the one-size-fits-all system into multiple career pathways to serve students' diverse needs and aspirations. Eligible higher education institutions can establish a Laboratory School to develop innovative PK-12 programmes, particularly in rural areas or for the most marginalised students in terms of academic performance or socio-economic status. It is anticipated that Laboratory Schools will focus on such industries as computer and data science, IT focused on cybersecurity and cloud computing, maritime industries, aerospace, teaching and healthcare, with CTE, work-based learning and industry-recognised credential earning opportunities as well as innovative instructional approaches such as direct instruction from industry professionals (VDOE, 2023[18]).

Pathways or partnerships linking high school, colleges, and universities

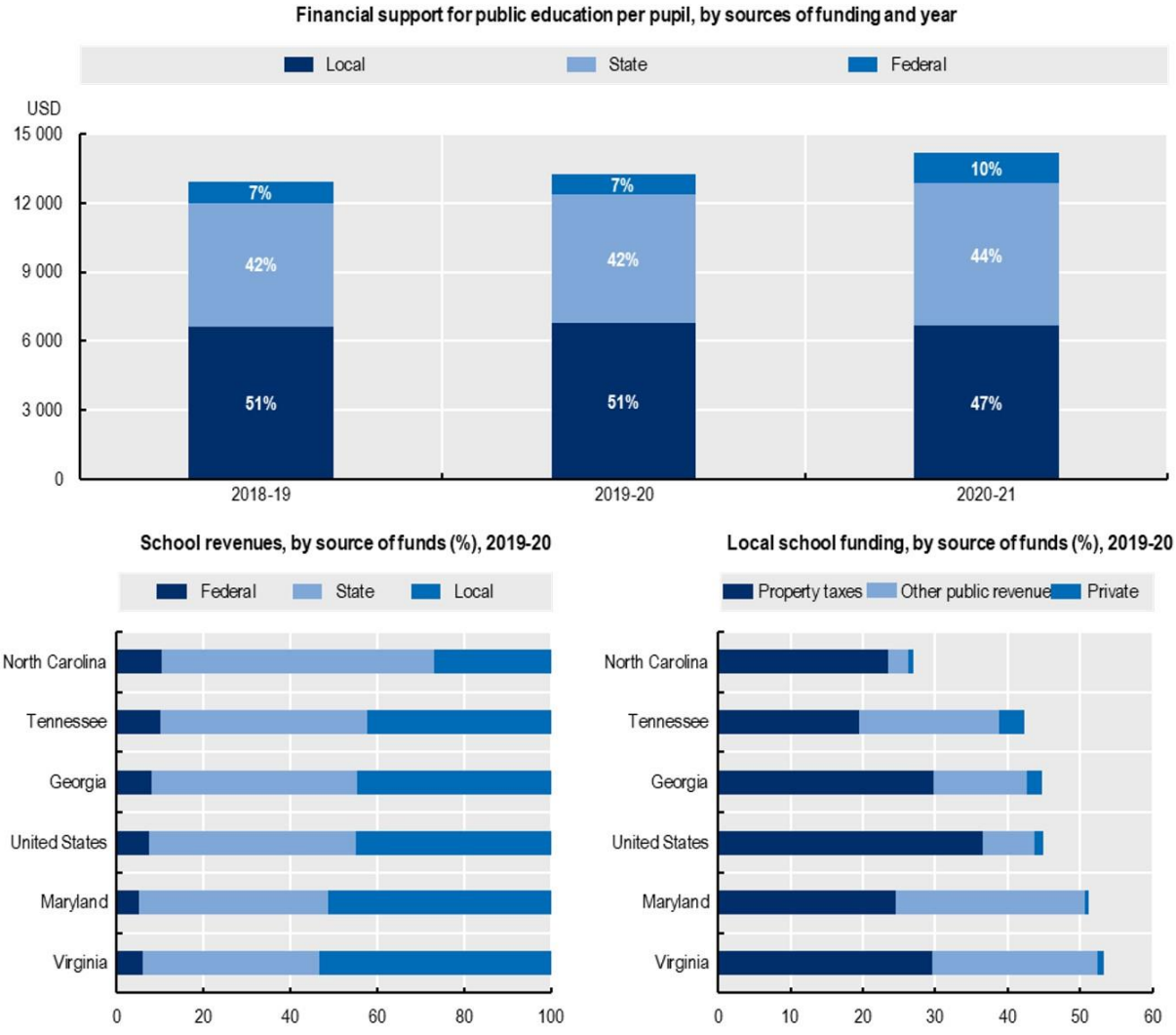
Virginia encourages flexibility in programmes with the aim of creating efficiencies in the development of the skills and credentials that are required for entry into the workforce; students can continue studying and working at any point in their life when needed. Many colleges and universities collaborate with local high schools within dual-enrolment programmes whereby HS students can potentially graduate high school with university credits that might lead up to an associate degree. There are also other types of K-12 programs run by post-secondary institutions. For example, George Mason University (GMU) offers an Early Identification Program (EIP), a free college preparatory program for middle and high school students who would be the first in their family to attend a college or university. GMU's K-12 STEM Programs include residential camps with STEM seminars and professional development activities that prepare students for college, and summer internship programmes for students over the age of 16 (both high school and college students) who are aspire to pursue a scientific career.

Funding

As in other US states, public education funding support in Virginia is made up of local, state and federal sources. In 2020-21, 47% of funding was from local sources, 43% from the state, and 10% from federal (Figure 2.4). Although not directly comparable, the annual expenditure per secondary student in the United States is one of the highest among OECD and partner countries with available data (15 538 USD equivalent, rank 5/36 in 2019). According to (Goren and Kenneth, 2023[19]), in 2022 Virginia was ranked 40th in the country in-state funding per student while it is a top ten state in terms of median household income (Goren and Kenneth, 2023[19]).

In Virginia, the apportionment of state funds for public education is the responsibility of the General Assembly. General fund appropriations serve as the mainstay of state support for the commonwealth's public schools, augmented by retail sales and use tax revenues, state lottery proceeds, and other sources. Counties, cities, and towns comprising school divisions also support public education by providing the locality's share to maintain an educational programme meeting the commonwealth's Standards of Quality and local match requirements for incentive and lottery-funded programmes. While public education is primarily a state and local responsibility, the federal government provides assistance to state and local education agencies in support of specific federal initiatives and mandates (VDOE, 2023[20]). Compared to the US average and comparable states, Virginia has a higher share of public-school revenues coming from local sources, which are composed of local property taxes and other public revenue (Figure 2.4). This is hand in hand with the strong independence and autonomy of school districts in Virginia.

Figure 2.4. Financing structure of public schools in Virginia relies heavily on local sources



Source: (VDOE, 2023[20]); NCES (2022), Table 235.20 Revenues for public elementary and secondary schools, by source of funds and state or jurisdiction: School year 2019-20, https://nces.ed.gov/programs/digest/2022menu_tables.asp

Box 2.3. Virginia schools at a glance – diversity across school districts

Size of school districts, schools, and students: PK-12

In 2022-23, almost 1.3 million school students were enrolled in Virginia. There are 131 school districts with an average of 9 644 students each, ranging from 180 127 students in Fairfax County to 200 students in Highland County (median: 3 762 students in Fredericksburg City). There are 2 438 PK-12 schools in Virginia. The number of students in each PK-12 school ranges from 37 to 4 540 with an average 678 (median: 558), excluding schools that have fewer than 35 students. Compared to other states and the US average, average enrolment in Virginia's public schools is high.

Table 2.1. Average enrolment of Virginia's public schools

Average enrolment of Virginia's public schools, 2019-20

	Elementary	Middle	Secondary and high
Virginia	534	785	1 217
United States	456	599	693

Source: NCES (2021), Table 216.75.Average enrolment of public elementary and secondary schools, by school level and state or jurisdiction: 2019-20, https://nces.ed.gov/programs/digest/2021menu_tables.asp

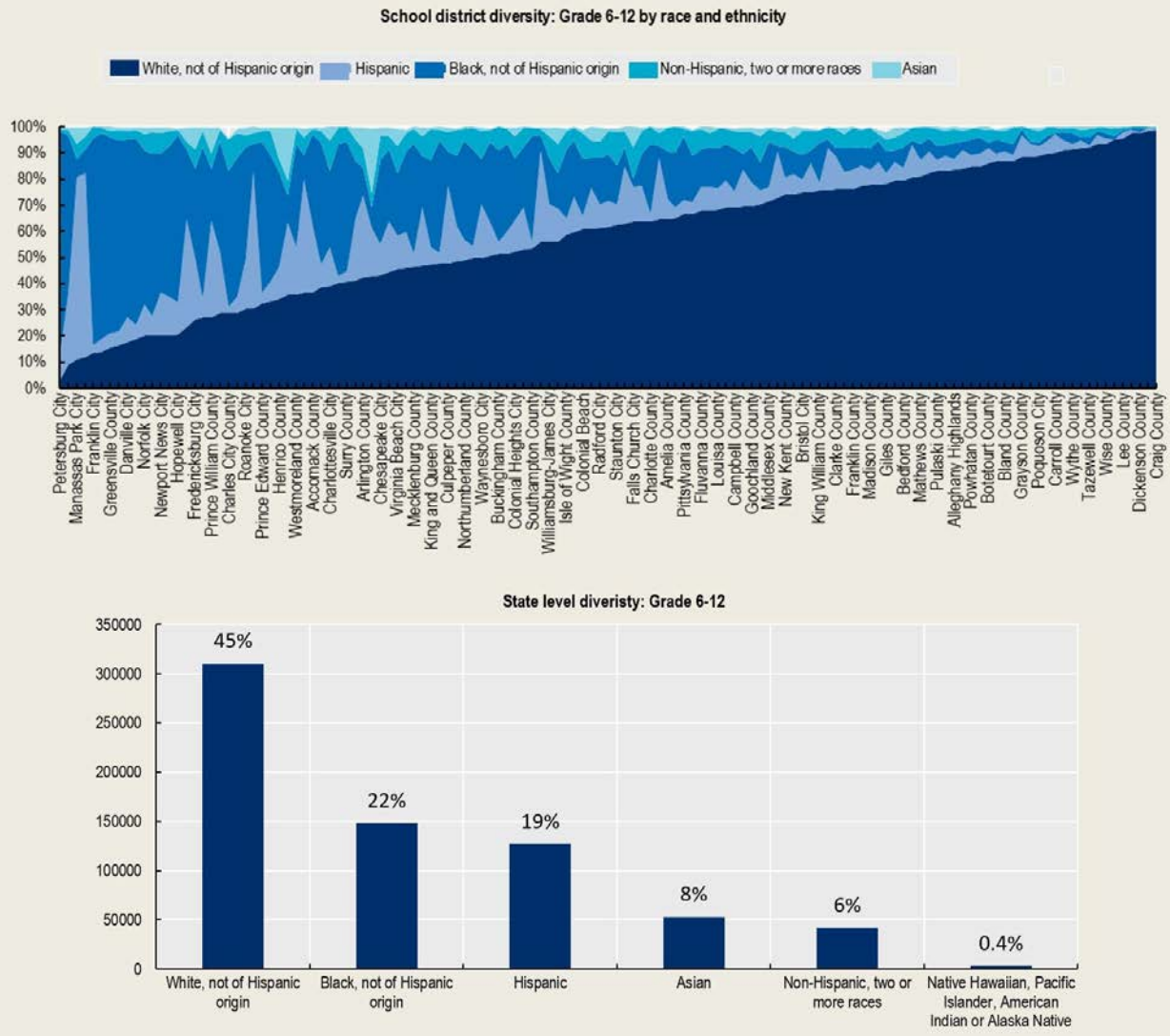
Size and diversity of school districts, schools and students: Grade 6-12

In 2022-23, half of all students are in Grades 6-12 (683 134 students). Across school districts, on average 5 254 students are in Grades 6-12 (median: 2 019 students), ranging from 100 172 students in Fairfax County to 103 students in Highland County. On average, each school district has between 707 and 837 students in each Grade between 6 and 12 (median 273-311 students). A total of 873 schools serve Grade 6-12; among those, 15 schools offer all Grades 6-12, and 334 schools offer all Grades 9-12 only or in addition to Grades 6-8. The average number of Grade 6-12 students in each school ranges from 178 to 325 in each Grade (median: 142-320). In the case of Alexandria City High School, there are 1 127 students in Grade 12 and 1 291 students in Grade 10.

School districts in Virginia vary significantly in many different aspects, including the size, resources, composition of student race and ethnicity, industry, and many others. State level data masks the diversity of school districts. For example, while on average 45% of Grade 6-12 are White, the share ranges from 3% to 99% (Figure 2.5).

Figure 2.5. School districts in Virginia vary significantly

Share of Grade 6-12 students by race and ethnicity, 2022-23



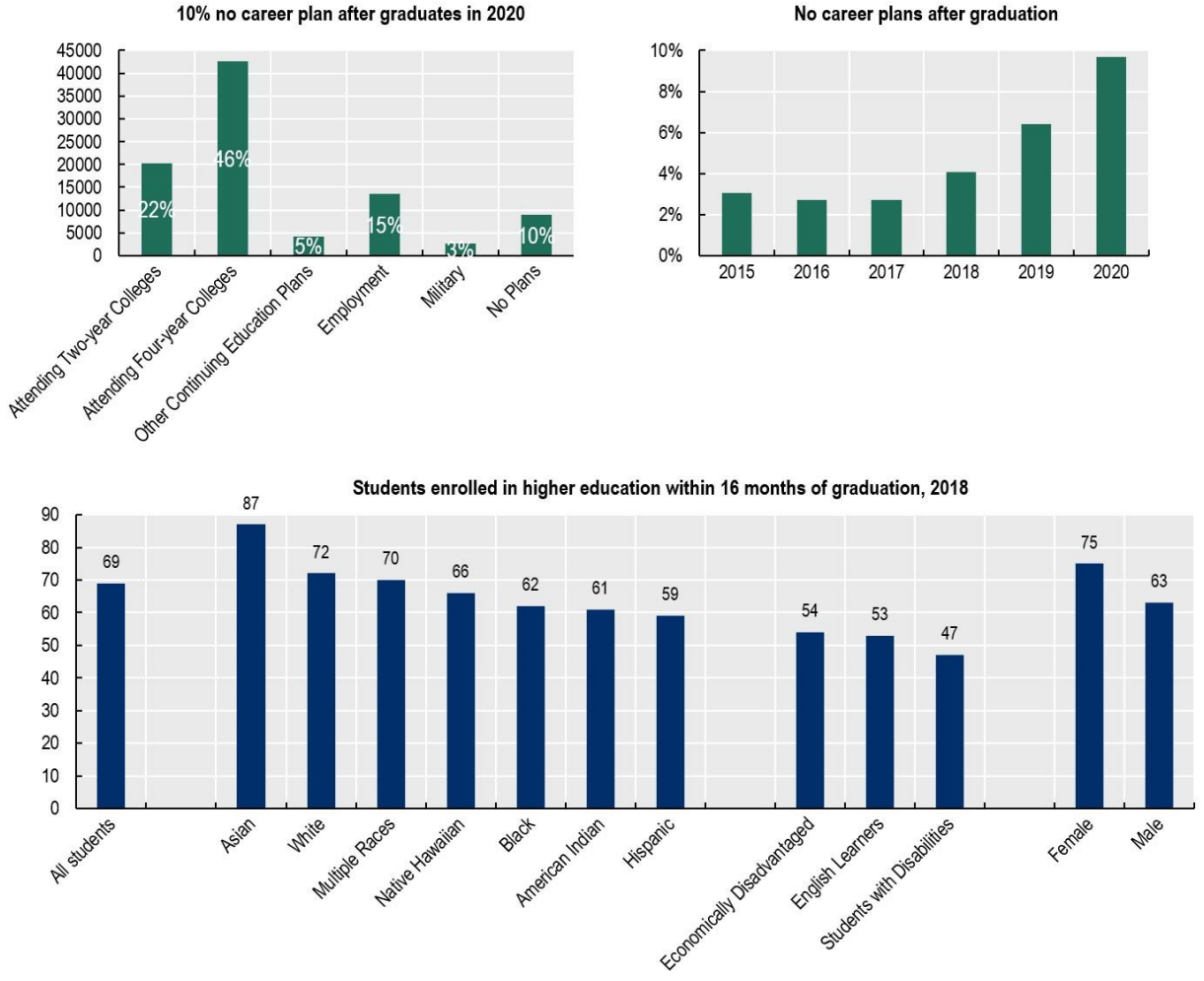
Source: VDOE Fall Membership Reports

Career pathways of young people

Most high school graduates in Virginia transition to college or university within 16 months of graduation. 73% of graduates (school-leavers) in 2020 attended two-year colleges (22%), four-year colleges (46%), or other types of continuing education (5%). Although transitioning to higher education (HE) has been gradually decreasing, from 82% in 2015 and there is concern in this regard, it is still the main pathway. According to 2018 data, Hispanic, economically-disadvantaged students, and English learners have lower HE transition rates than their counterparts (Figure 2.6). The remainder of high school graduates are in work (15%) or military (3%).

The remaining 10% of high school graduates have no plans, i.e., they are not in education and training nor in employment. It is worrisome that this rate has increased over the past 5 years from 3% in 2015-16 to 10% in 2020 (Figure 2.6). To put this in the international context, the share of youth (among 18-24 year-olds) who have been unemployed for 3-12 months and who are not in formal education or training in the United States is one of the lowest among countries with available OECD data (1.9 %, rank 19/26, 2021). However, other indicators show areas for improvement. For example, the share of youth who have been unemployed for less than 3 months and who are not in formal education or training among 18-24 year-olds in the United States is one of the highest among countries with available data (3 %, rank 8/27, 2021). This trend continues for the older populations: for example, the inactivity rate of 25-34 years-old adults with below upper secondary education is high in the United States (40 %, rank 8/41, 2021). Among 25-64 year-olds, the US employment rate among with high school graduates[5] is comparatively low (67 %, rank 36/42, 2021); the inactivity rate of high school dropouts[6] (42 %, rank 8/42, 2021) and of high school graduates (28 %, rank 5/42, 2021) is one of the highest among countries with available data (OECD, 2021).

Figure 2.6. Most high school graduates transition to higher education institution, but graduates with no career plan have increased recently

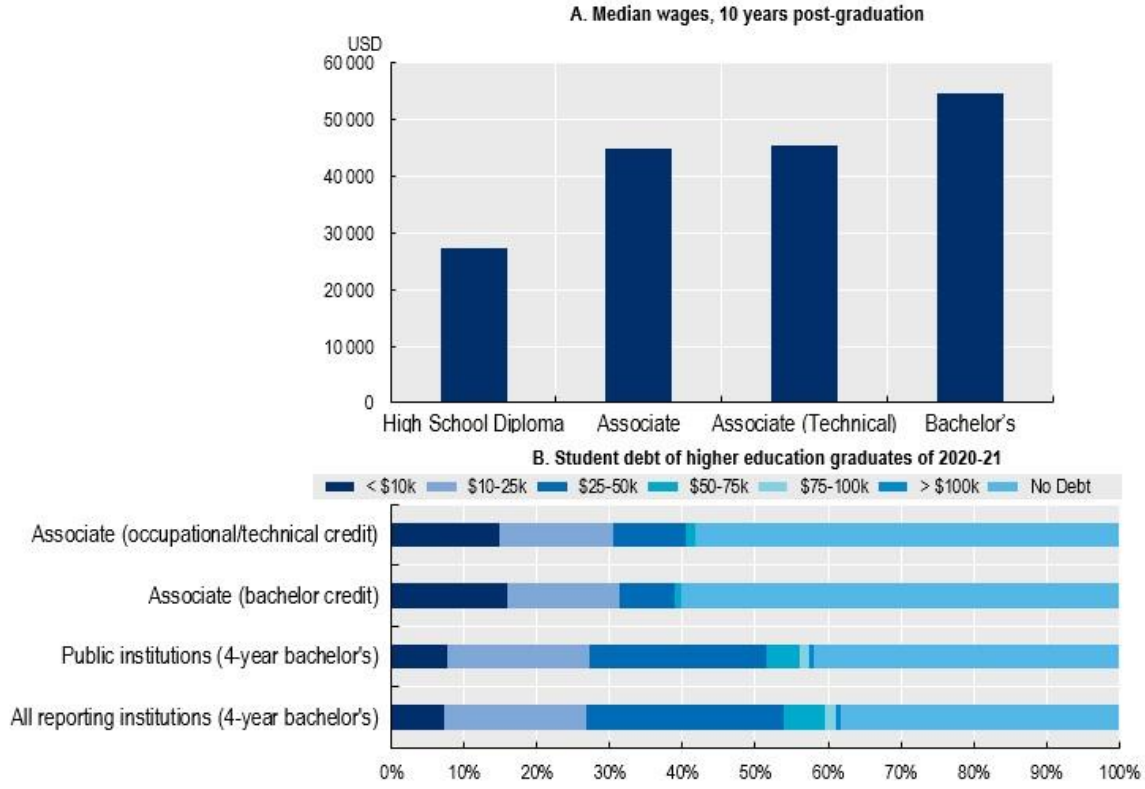


Source: VDOE Graduates and Completers data; http://schoolquality.virginia.gov/ (VDOE, 2023[21])

The high proportion of students transitioning to higher education (HE) is partly driven by the benefits and positive outcomes for earning a post-secondary degree or credential. According to SCHEV, graduates with post-secondary education have better economic and social outcomes (e.g., higher average earnings; more likely to have health insurance, pay taxes, vote and volunteer, and are less likely to receive unemployment benefits or need public assistance benefits) (VDOE, 2022[22]). However, it is also important to look at HE student debt and HE dropouts together. In 2020-21, 62% of graduates from 4-year bachelor's programmes have student debt, although this is less common for graduates from public institutions (58%) and those from 2-year associate degree programmes (40-42%) (Figure 2.7).

While HE dropout rates in Virginia are slightly lower than the US average, HE dropouts in Virginia are still sizable and cause a system inefficiency (Hanson, 2022[23]). For example, a third of college students in Virginia do not graduate within 6 years (National Student Clearinghouse Research Center, 2022[24]).[7] There is also an equity issue: HE graduation rates are consistently much lower for students from lower income families and students of colour. Graduation rates from VA public 4-year institutions within 6 years of 2014-15 cohorts are 20 percentage points (pp) lower for those from the bottom quartile by household income (60%), compared to those from the top quartile (80%); for private institutions, the difference is 50 pp (SCHEV). Graduation rates for the same cohorts are 10 pp lower for the students of colour (69%) compared to the majority of White students (79%); for private institutions, the difference is 8 pp (SCHEV). Virginia is currently putting efforts into identifying challenges and determining the roots of the issue, in order to improve the situation (see Theme 3 Chapter 6.).

Figure 2.7. Median wages by educational attainment and distribution of higher education student debt

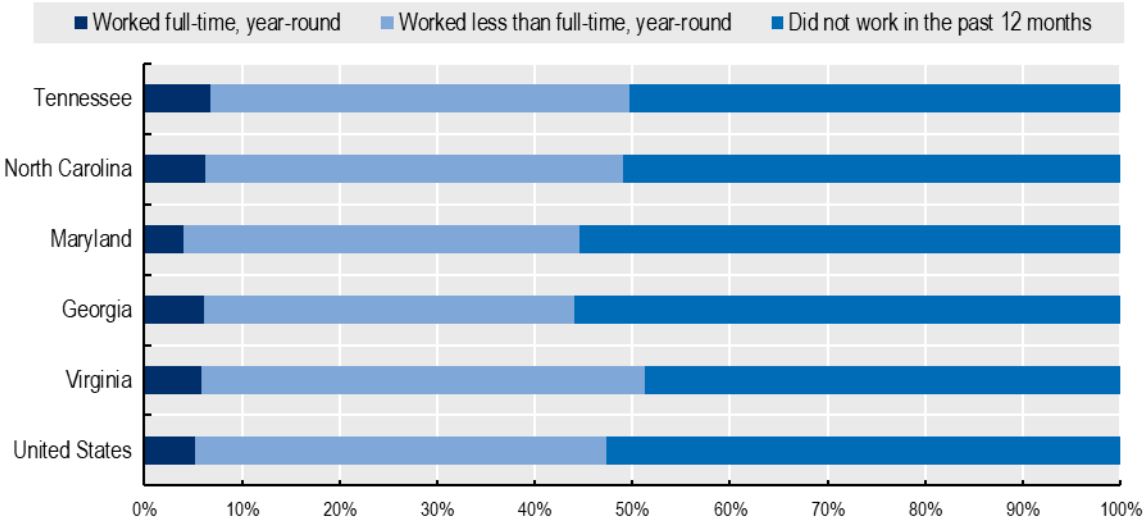


Note: The maximum in federal loans available to undergraduate students is USD 57 500 and only federal loans generally qualify for Income-Based Repayment (IBR) sponsored by the U.S. Education Department.
Source: State Council for Higher Education EOM18: Exploration of Wages over time by Degree for degree wages, U.S. Census Personal Income tables. https://research.schev.edu/eom/opportunity01_report.asp

According to the 2021 American Community Survey,[8] one in three 16-19-year-olds were employed in Virginia, slightly higher than the US average, while 63% of 20-24-year-olds are employed in Virginia, slightly lower than the US average. 51% of 16-19-year-olds worked at some point during the calendar year of 2021: 6% working full-time and 45% working on a part-time basis. This is slightly high compared to the US average (5 and 42%) and selected US states such as North Carolina (6 and 43%) and Maryland (4 and 41%) (Figure 2.8).

Figure 2.8. 16-19-year-olds in Virginia worked relatively more commonly than their peers elsewhere

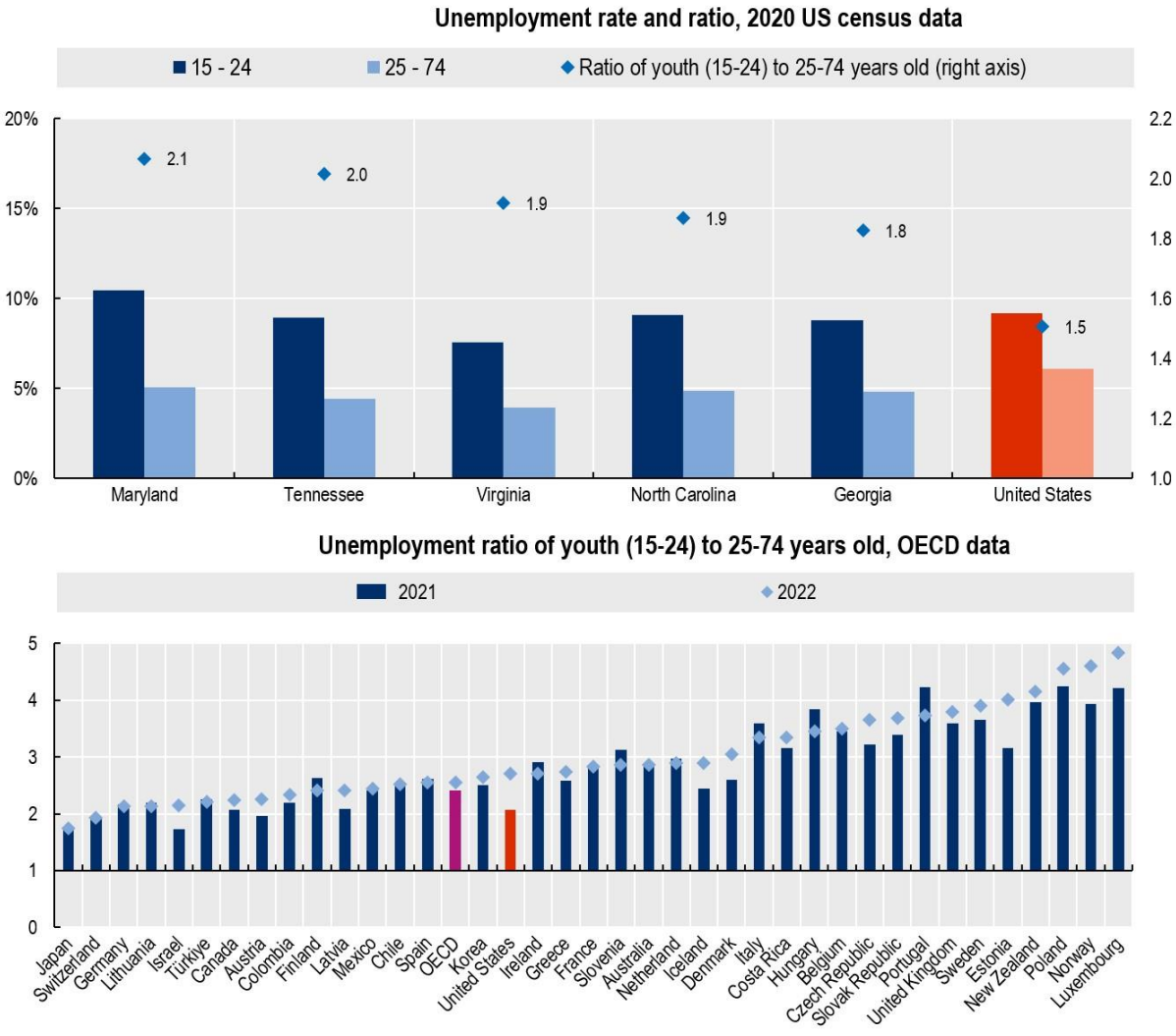
% of work experience in the past 12 month, 16-19 years-old, 2021



Source : https://data.census.gov/table?tid=ACSDT1Y2021.B23027

While Virginia's youth unemployment rate (aged 15-24) is lower than that of the US average and selected US states, its ratio to the unemployment rate of older workers (i.e., comparative unemployment of young people to unemployment of workers aged 25-74 in the same jurisdiction) is relatively high (Figure 2.9). This means that in terms of unemployment rate, young people in Virginia are well-performing compared to young people in other US states, but under-performing compared to Virginia's own working age population. This means that young people in Virginia are at a greater disadvantage in the competition for available employment compared to older workers than is the case in neighbouring states. In Virginia, young people experience unemployment rates twice the level of older workers. However, this is lower than the US and OECD average.

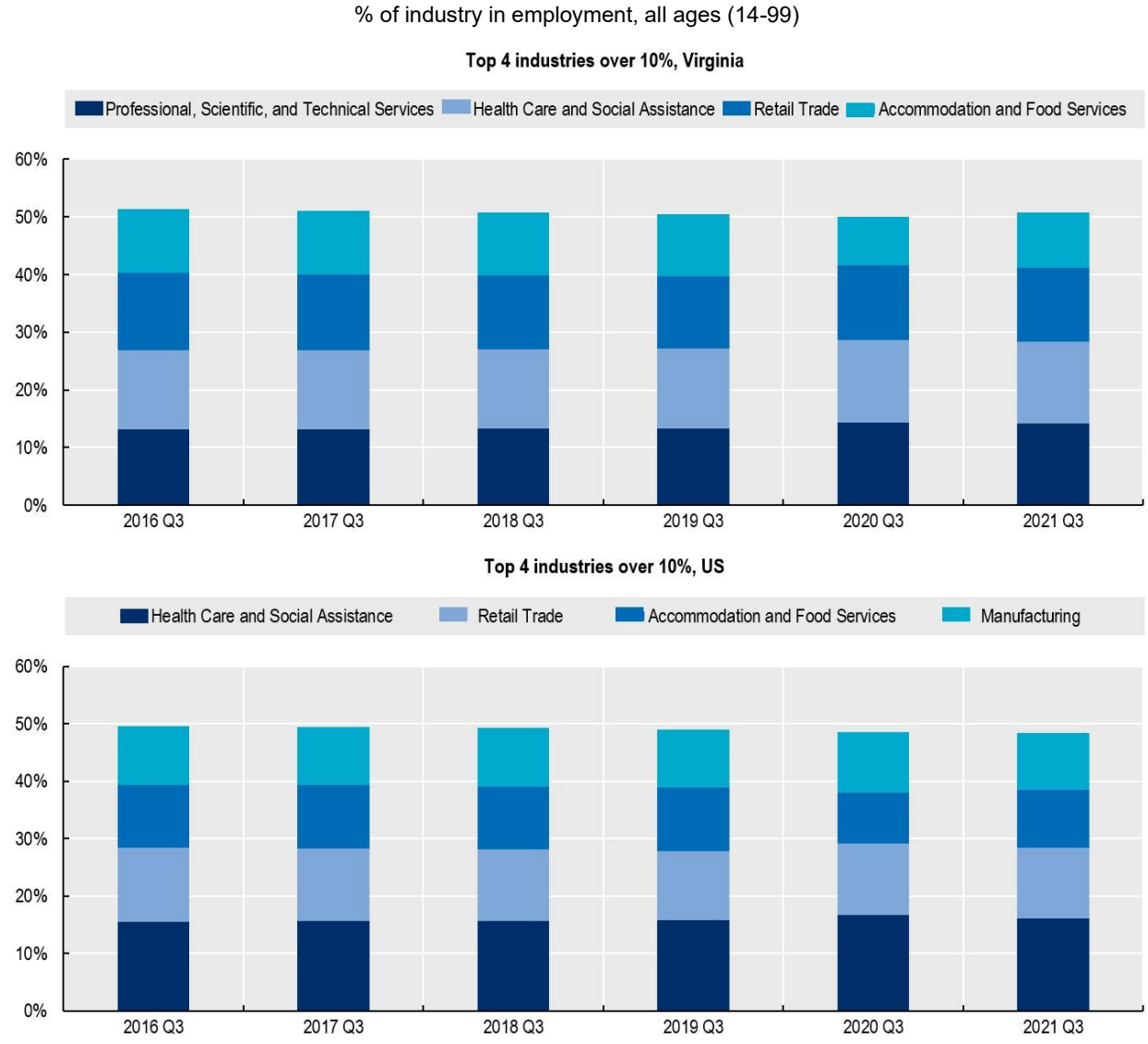
Figure 2.9. Virginia has relatively high unemployment ratios of youth to prime working age, 2021



Source : https://data.census.gov/table?tid=ACSST1Y2021.S2301; https://data.oecd.org/chart/75bE. Note: in order to allow for comparisons to be made, the two tables draw on different data sources. The first table which allows a comparison of the ratio of youth to adult unemployment between US states draws on data from the 2020 US census. The second table, which allows international comparisons, draws on OECD data which is based national labour market statistics for 2021.

The top four industries that hire the most employees (ages 14-99) in Virginia in 2021 were Professional, Scientific, and Technical Services (14%), Health Care and Social Assistance (14%), Retail Trade (13%) and Accommodation and Food Services (10%). This is similar to the national distribution, except for Professional, Scientific, and Technical Services. At the national level, Health Care and Social Assistance accounts for 16%, Retail Trade 12%, Accommodation and Food Services 10% and Manufacturing 10%). Professional, Scientific, and Technical Services accounts for 8%, 6 percentage points lower than in Virginia. This distribution does not appear to have been distorted by the COVID-19 pandemic as the trend has stabilised over the years in both Virginia and in the US (Figure 2.10).

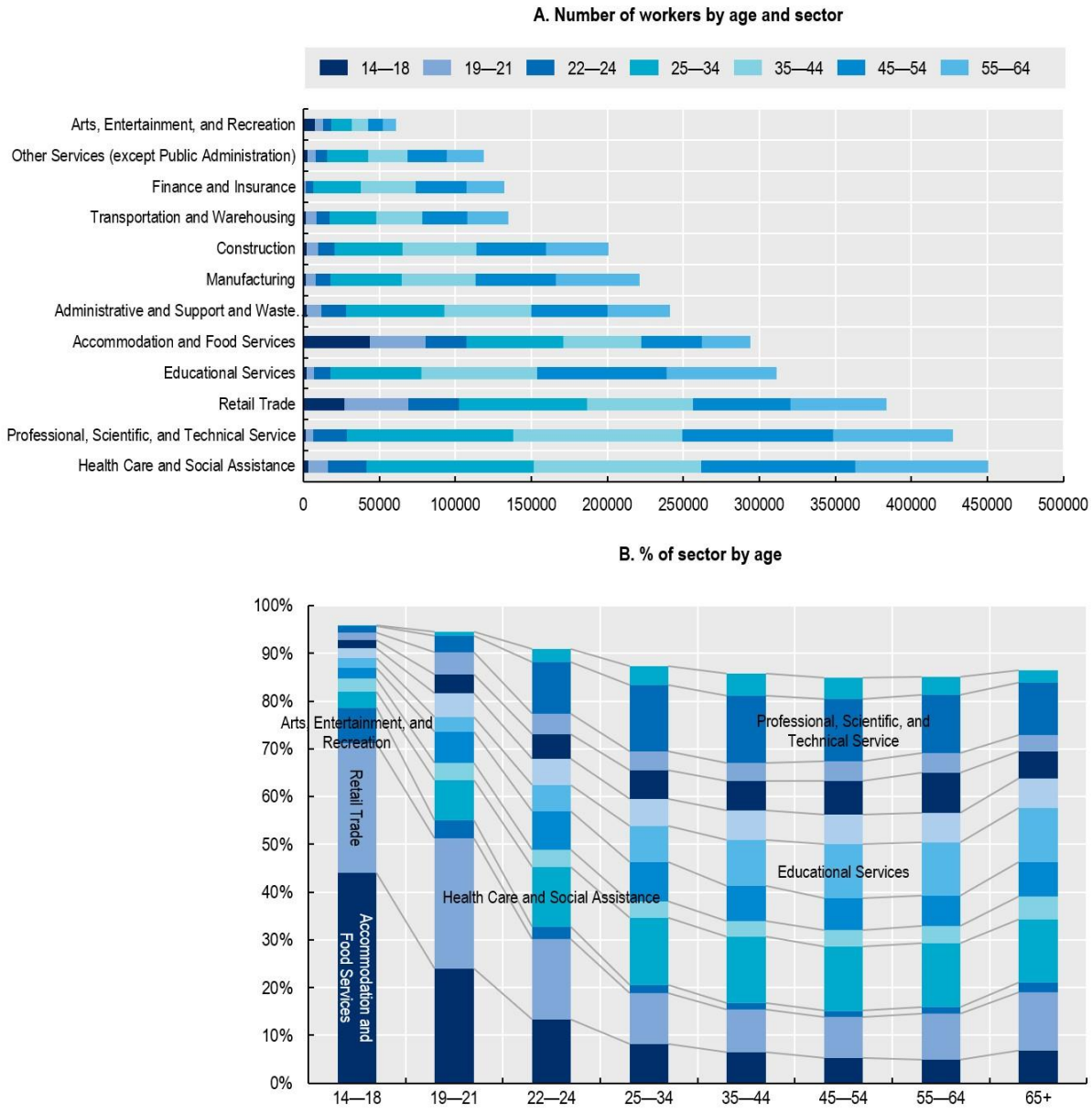
Figure 2.10. Sectoral distribution of employment in Virginia, compared to the US national



Source: U.S.Census Bureau, Center for Economic Studies, LEHD (2023), QWI Explorer, https://qwiexplorer.ces.census.gov

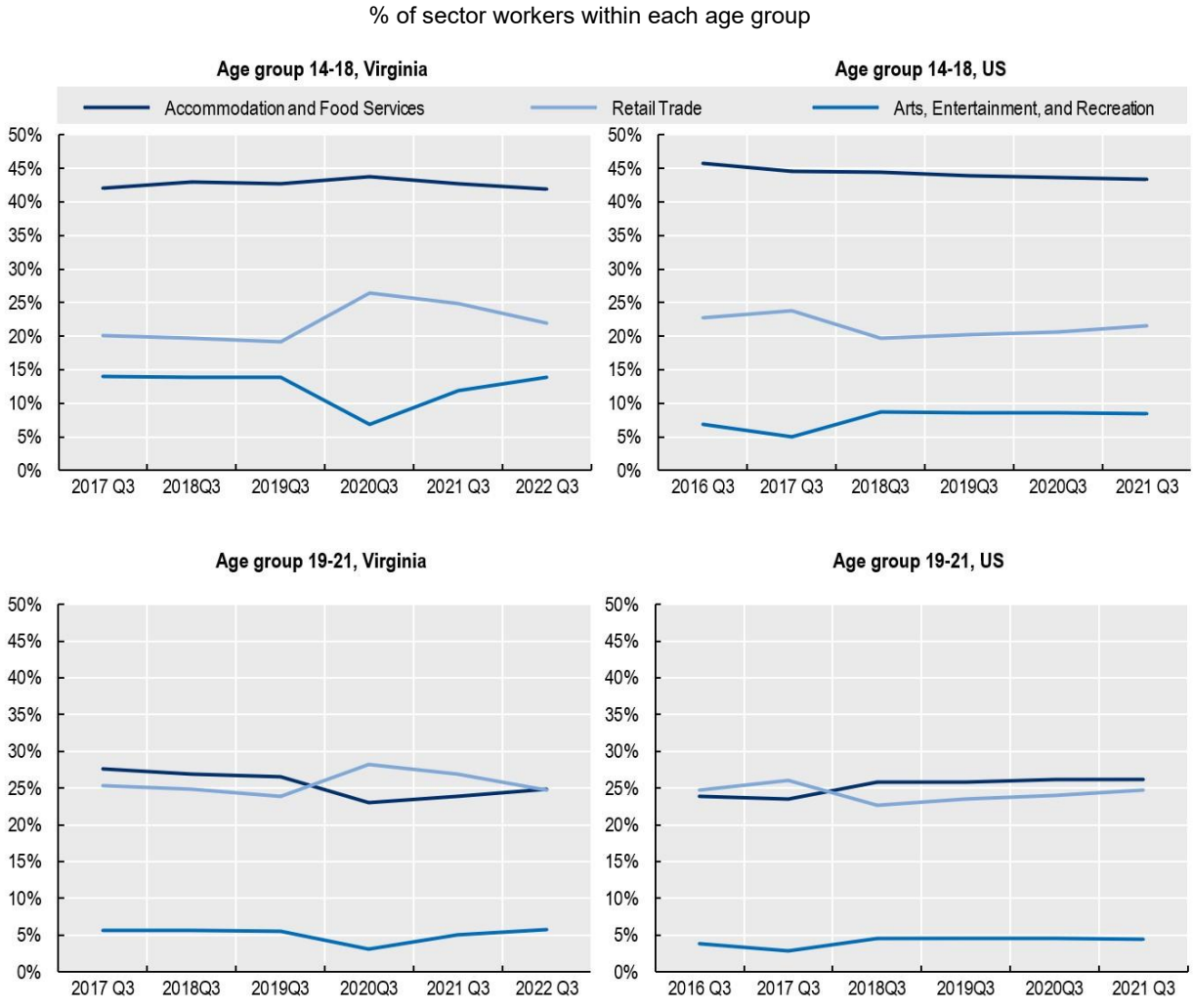
Sectoral distribution of young workers in the United States is quite different from that of older workers and this trend has been consistent over time and across the country. The majority of 14-18-year-olds in Virginia in 2021 worked in accommodation and food services (44%), retail trade (27%), and arts, entertainment, and recreation (8%). The older the group is, more equally distributed the sectors are with a relatively higher share in professional, scientific and technical services, educational services, and health care and social assistance. These sectors absorb the majority of the workforce in Virginia (Figure 2.11). This trend remains similar when looking at the past five years. Moreover, the national distribution is not different from Virginia's (Figure 2.12).

Figure 2.11. Sectoral distribution of young workers is different from that of older workers



Source: VirginiaWorks (2023[25]), Virginia community profile https://virginiaworks.com/_docs/Local-Area-Profiles/5101000000.pdf based on U.S. Census Bureau, Local Employment Dynamics (LED) Program, 4th Quarter (October, November, December) 2021.

Figure 2.12. Sectoral distribution of young workers remains similar over time and across the US



Source: U.S.Census Bureau, Center for Economic Studies, LEHD (2023), QWI Explorer, https://qwiexplorer.ces.census.gov

Career readiness system in Virginia

In this review, career readiness system refers to a system that supports young people's career development activities as they explore, experience and think about potential futures in work in ways that are linked to more successful transitions into adult employment (see Box 2.1). Therefore, it includes both school-mediated activities and activities taking place outside of school. The career readiness system is often a collection of disparate sub-systems within education, training, employment, community and private sectors, each with its own history, rationale and driving forces, rather than a coherent and integrated set of arrangements (OECD, 2004[2]). This is also the case in Virginia: its career readiness system lies at the intersection of education and workforce development (Figure 2.13).

At the US federal level, career guidance and counselling (CGC) programmes refer to a comprehensive developmental programme designed to assist individuals in making and implementing informed educational and occupational choices. A CGC programme aims to develop competencies in self-knowledge, educational and occupational exploration, decision-making, goal setting and career planning (Office of Career, Technical, and Adult Education, 2023[26]).[9] At a national level, the US recognises

the need to align the education system with labour market needs and to establish an education-to-workforce pipeline, throughout the general K-12 system, career and technical education (CTE) programmes, post-secondary institutions, technical training programs, and pre-apprenticeship and registered apprenticeship programmes (Cushing et al., 2019[27]) (see Box 1.4. for the US federal laws that govern the education-to-workforce pipeline).

Box 2.4. Three US federal laws that govern the education-to-workforce pipeline

1. Strengthening Career and Technical Education for the 21st Century Act (Perkins V)

Perkins V (launched in 2018) funds states and other grantees to improve both secondary and postsecondary career and technical education (CTE) programmes and programmes of study that prepare students for the world of work. The Perkins V provisions that have direct relevance to college and career readiness include alignment and integration of CTE programmes of study, employability skills education and academic content standards; assessment of competencies and technical skills to determine work readiness; and strengthening reporting and accountability requirements. In 2020, Virginia received USD 43 million from the U.S. Department of Education appropriations for CTE (12th largest amount among states), which includes CTE State Grants; Adult Basic and Literacy Education State Grants; and English Literacy and Civics Education State Grants (NCES, 2021[28]).

2. Workforce Innovation and Opportunity Act (WIOA)

WIOA Title I (launched in 2014) funds the public workforce development (WFD) system, which responds to labour market needs by funding education, training, and support services for youth and adults looking for meaningful employment. WIOA Title II funds adult education and literacy activities for out-of-school youth and adults who lack a high school diploma or proficiency in English. WIOA Title I supports WFD in states by funding career services and job training programs. It aims to modernise the WFD system and streamline existing employment-related education systems. WIOA also authorises a 'one-stop career centre service delivery system'. It requires partner programmes to provide services through several one-stops that focus on a wide range of agencies and activities.

3. Every Student Succeeds Act (ESSA)

ESSA (launched in 2015) provides funding for K-12 public education and requires that all students be taught to standards that prepare them to succeed in college and careers. ESSA's well-rounded education provision supports states' college and career readiness (CCR) efforts by aligning district- and school level readiness initiatives with curricula, improved conditions for learning, and other educational experiences. States can leverage ESSA funding for a well-rounded education to drive CCR strategies.

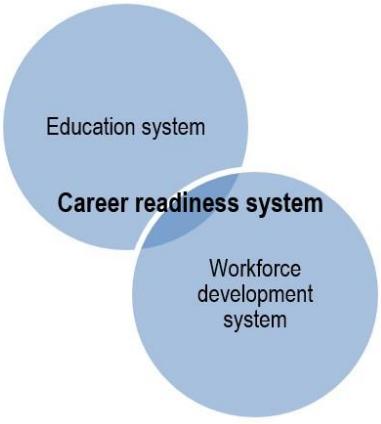
Note: (Cushing et al., 2019[27]) also includes the Individuals with Disabilities Education Act (IDEA) in the list, which is out of scope in this report.
Source: (Cushing et al., 2019[27])

In Virginia, according to Virginia's Administrative Code, elementary, middle and high schools are expected to provide:

> *"a range of educational and academic experiences related to college and career readiness in and outside the classroom, including an emphasis on experiences that will motivate disadvantaged and minority students to prepare for a career or post-secondary education" (Commonwealth of Virginia, 2019[29]) (see Chapter 3. for the reality check).*

The code requires schools to provide students with a range of activities linked to their 'career exposure, exploration, and planning' while providing opportunities for postsecondary credit (e.g., dual-enrolment opportunity to earn college credit while studying in high school). Such support includes provision of information concerning exploration of 'career cluster' areas (i.e., field of study) in elementary schools and course information and planning for college preparation programmes, opportunities and funding for educational and academic experiences, including work-based learning such as job shadowing, internships, co-operative education, and the multiple pathways to college and career readiness in middle and high schools (Commonwealth of Virginia, 2019[29]). More recently, considerable effort has been made to improve student access to labour market information (LMI), providing transparent, reliable, and uniform data not only on the regional labour market but also on pathways (i.e., more detailed field of study under each career cluster), outcomes of those pathways and the linkages between the two (see VOEE's Education and Workforce Alignment Dashboard).

Figure 2.13. The position of the career readiness system in relation to other systems in Virginia



Note: Workforce development includes education, training, and support services designed and administered to prepare and enable young people to enter into careers.
Source: Author's elaboration

Career readiness, along with college and civic readiness, is well integrated in the K-12 system in Virginia. Career readiness is not only one of the priorities and goals for public education (Box 2.5), but also an integral part of school curriculum. Moreover, Virginia has made much progress in including college and career readiness measures in the state's accountability system: for example, the college, career and civic readiness index is being included in high school quality indicators from 2022-23 (Box 2.5).[10]

Box 2.5. Career readiness as one of the priorities and goals for public education in Virginia

The Virginia Board of Education, based on inputs from various stakeholders, developed three priorities for 2018-23 in a Comprehensive Plan, which provides the framework for the Board's leadership, advocacy, and oversight: (i) providing high-quality, effective learning environments, (ii) promoting entries to the teaching profession, and (iii) ensuring successful implementation of the Profile of a Virginia Graduate and the accountability system for school quality.

Regarding the third priority, the Profile of a Virginia Graduate describes the knowledge, skills, and experiences that students must attain during their K-12 education to be successful in college and/or the work force and to be "life ready." It articulates four broad areas:

- content knowledge (academic and technical);
- workplace skills;
- community engagement and civic responsibility; and
- career exploration.

It includes increased career exposure, exploration, and planning beginning in the elementary grades. In the high school grades, there is an emphasis on increased opportunities for internships, and work and service-based learning experiences to achieve workplace and citizenship skills. Career exploration refers to aligning knowledge, skills and personal interests with career opportunities.

High schools are expected to meet goals for increasing participation and achievement in career-relevant learning effective in 2021-2022. High schools are evaluated on a number of school quality indicators, including a College, Career, and Civic Readiness Index (CCCI). The CCCI is designed to measure the extent to which students successfully complete advanced coursework, Career and Technical Education coursework and credentialing, and work- and service-based learning. While there is no specific activity that a student must experience (such as an internship, job shadowing assignment or participation in a career fair) to graduate, school divisions are required to provide opportunities for students to learn about workplace expectations and career options aligned with their interests in their own communities and elsewhere (VDOE, 2018[30]).

Source: VDOE (2022[31]), Profile of a Virginia Graduate, https://www.doe.virginia.gov/parents-students/for-students/graduation/policy-initiatives/profile-of-a-virginia-graduate. VDOE (2017[32]), Virginia Board Of Education Comprehensive Plan: 2018-2023, https://www.doe.virginia.gov/home/showpublisheddocument/1154/637946384285670000.
VDOE (2018[30]), Virginia Standards of Accreditation https://files.eric.ed.gov/fulltext/ED601935.pdf

Objectives of the career readiness system

Public policy goals of the career readiness system

Career readiness systems are generally designed to achieve three objectives as below, and this report looks at Virginia's career readiness systems in light of these themes and provide policy recommendations:

- **Effectiveness:** Career readiness systems prepare young people to smoothly transition to post-secondary education and training or to work that is suited to their skills, interests, and career aspirations. In this process, they also support young people in their personal fulfilment and psychological well-being – the public policy goals for career service organisations should encompass the promotion of mental health and well-being (Robertson, 2019[33]). Governments and relevant stakeholders set standards and frameworks to help students be career-ready and these standards and frameworks are implemented at different levels (see Theme 1 Chapter 4.).

- **Efficiency:** Career readiness systems aim to increase the efficiency of the education and workforce development (WFD) system, by actively helping young people to match with the right study programme and work field that they ultimately find they are interested in, aspire to, or are suited for while minimising unnecessary navigation time and waste of resources. At the same time, career readiness systems can support career development activities (CDA) for young people and school curriculum to be better aligned with economic and labour market opportunities. In this light, career readiness systems can help to build necessary talent pipelines and to address skills shortages by better amplifying labour market signalling (see Theme 2 Chapter 5.).
- **Equity:** Career readiness systems have other important roles to play, given that young people face different challenges in the education-to-work transition depending on their characteristics and on the character of social inequalities in terms of access to relevant opportunities (Alcorn, 2016[34]). Well-designed and implemented CDA can address inequalities in assisting young people's transition by providing them with equal and/or targeted additional access to opportunities and empowering marginalised youth to build necessary human, social and cultural capital (see Box 2.6). In this light, career readiness systems can be a driver of social mobility and for equal opportunity and help diversify the workforce to be better representative of the wider population (Jeon et al., 2023 forthcoming[7]) (see Theme 3 Chapter 6.).

Box 2.6. Career development activities as a means to enhance human, social and cultural capital

Considered from a workforce perspective, the relative attractiveness of potential employees to employers is characterised by a range of attributes which are commonly described as 'capitals' (Tomlinson, 2013[35]) and which can be enhanced through guidance systems (Jones, Mann and Morris, 2015[36]).

Human capital is understood as the collection of knowledge, skills (often codified as qualifications) and work-related experience that an individual possesses (Brown, 2020[37]; Keeley, 2007[38]). School systems help students to structure their accumulating knowledge, skills and qualifications in ways that relate to potential successful futures in work. In this way, students can be seen to accumulate qualifications and credentials of value to their career ambitions. School systems have the capacity to assess the career thinking of students and provide greater input should confusion or uncertainty be apparent, enabling more confident subject selection and understanding of post-secondary pathways. Schools also have scope to support students in accessing work-related experiences that will be of help in progression.

Social capital relates to the networks of people with which an individual comes into contact (Lin, 2012[39]; Halpern, 2004[40]). Social capital represents value to an individual in providing resources of use in their transitions into and within employment. Such value can take different forms, each of which have implications for guidance provision. Social capital can be an expression of cultural norms about what is 'reasonable' for different students to aspire to in gendered and social terms, serving to constrain career ambitions. It can also serve to enhance the development of human capital, notably by enabling access to work-related experiences of value which may lead to recommendations and offers of employment. As first conceptualised by Granovetter (Granovetter, 1973[41]), social capital can provides important access to new and trusted information that is often unavailable outside of immediate social circles which can be linked to more attractive employment outcomes (Franzen, 2006[42]).

If human capital refers to what an individual knows and social capital to who they know, cultural capital is a term used to refer to what they think about themselves and their possible future. It can be understood as the know-how needed to succeed within a profession and is often discussed in terms of understanding of the 'rules of the game' which underpin personal confidence and integration into particular fields of employment (Brown, 2020[43]; Archer, 2014[44]). In this way, it includes understanding of how systems of education and training work – and can be best exploited for personal advantage – so reinforcing a sense of personal agency.

Collectively, the three concepts provide a mechanism for assessing and addressing the differing capacities of young people to progress effectively through education and into employment (Stanley and Mann, 2014[45]). In practice however, guidance activities can be expected to have the potential to address needs in a multi-faceted fashion:

> *Through [school-mediated] employer engagement activities, a teenager may make the contacts needed to be offered a job (social capital … as access to employment) while simultaneously acquiring the expertise or ability to make them employable in that role (human capital … as skills development). Or, to give another example, a young adult may report maturing and becoming more assured about themself (cultural capital … as enhanced personal confidence) as a result of trusted information from employers (social capital … as authentic guidance). (Jones, Mann and Morris, 2015[36])*

Source: Jeon et al., (2023 forthcoming[7]), Challenging social inequalities through career guidance. OECD Education and Skills Working Paper.

Career readiness is a policy priority and goal for public education and school career guidance in Virginia. One of three priorities set out by the Virginia Board of Education for 2018-23, for example, includes ensuring successful implementation of the Profile of a Virginia Graduate (Box 2.5). This priority defines the knowledge, skills and experiences that students must attain during their K-12 education to be successful in college/university and/or the workforce and to be "life ready." This includes not only content knowledge (academic and technical) but also workplace skills, community engagement and career exploration (Box 2.5).

In this regard, it is also important to understand a broader economic development policy objective when it comes to school career guidance. For example, the Virginia Plan for Higher Education aims for 70% of all Virginians to have earned a degree or a postsecondary credential by 2030 (as of 2021, 57%). This is because 70% is roughly the percentage of all jobs that are expected to need a postsecondary degree or credential. To diversify pathways, 'Growth and Opportunity (GO) Virginia', a regional economic development initiative, encourages Talent Pathways Investments to create a larger pool of qualified workers to support economic growth. Talent Pathways are made up of "partnerships that make movement from learning to earning more efficient and affordable by aligning educational curricula with employer needs, embedding internships, apprenticeships, and other work-based learning opportunities in the curricula, and facilitating full-time employment in Virginia after graduation" in order to support state-wide and regional efforts to grow and retain talent across Virginia (GO Virginia, 2023[46]) (see Box 2.7).

Moreover, the increasing out-migration from Virginia that may cause a loss of talent to other states or countries puts the career guidance system at the centre of action to expand internships, apprenticeships, and other work-based learning opportunities with Virginia employers. More than 70% of Virginian businesses, according to the Virginia Chamber of Commerce, would prefer to hire students with relevant workplace experience. Yet, the Chamber also found that only about 10% of students hired by Virginia employers actually possess such experience (Agee and Treacy, 2023[14]). In this context, there is an urgency to agree that informing and shaping the career choices and building career readiness of young people must be a core strategy for retaining talent in the Commonwealth (Agee and Treacy, 2023[14]).

Virginia has an ambition to drastically change the way it approaches education, career readiness and workforce development (WFD), recognising that the traditional school system including CTE, does not fit for all students. While Virginia is strengthening career pathways (high school programme choices defined by field of study) and CTE programmes in schools, there are new initiatives to drive innovation and create different pathways for young people to better transition to work and/or higher education. This effort comes together with facilitating the access to regional labour market information and the direct contact and connection with employers. Virginia has a relatively strong higher education (HE) system that is accelerating its connection with employers and its alignment with labour market needs (OECD, 2020[47]). At the same time, Virginia's HE system is strengthening ties with the secondary education system to better inform high school students about what they can gain from HE and requirements for entry. Moreover, Virginia has many partnerships where K-12 system and HE institutions collaborate to offer pathways that can better meet the academic and career needs of students (see Chapter 4).

Box 2.7. Growth and Opportunity (GO) Virginia – regional economic development through building Talent Pathways

The Virginia Initiative for Growth and Opportunity (GO Virginia) is a business-led economic development initiative. GO VA started from the recognition of Virginia's slow, unbalanced and uneven recovery from the 2009 recession. It encourages Virginia's diverse regions to collaborate on economic and workforce development activities. It fosters private sector growth and job creation through state incentives for regional collaboration by business, education, and government in each of the nine regions.

The GO Virginia Board is responsible for overseeing the development and implementation of the GO Virginia programme. The 24-member board consists of three ex-officio members of the Governor's cabinet, seven legislators and 14 private sector representatives. The Virginia Department of Housing and Community Development (VDHCD) is the state agency responsible for administering the GO Virginia programme on behalf of the board.

As of June 2022, GO Virginia projects under contract have pledged to support the creation of 2 700 new work-based learning opportunities, including internships and apprenticeships; the training 13 000 students in high demand fields; and the awarding 3 600 workforce credentials. GO VA mainly focuses on trade sectors that pay wages at or above regional averages and that are high multipliers to create other jobs in the community. It encourages moreover the use of IT in the non-IT sectors to increase productivity.

Funded initiatives include GO TEC that serves Career Connection Labs (career pathway programmes) for middle school students in the advanced manufacturing sector and provides career development activities through high school and into post-secondary. It also funds an initiative promoting careers in Aquaculture to high school students and creating internship opportunities that help young people gain experience and awareness, and Internship Expo & Hiring Workshop.

Source: VDHCD (2022[48]), GO Virginia 2022 Annual Report, https://www.dhcd.virginia.gov/sites/default/files/Docx/gova/board-docx/gova-annual-report-2022-final.pdf. (GO Virginia, 2023[46])

Standards and frameworks of the career readiness system

Virginia's Administrative Code defines relevant regulations and standards that set the foundation for the career readiness system (see in-depth analysis in Chapter 4.). For example:

- Regulations Establishing Standards for Accrediting Public Schools in Virginia (8VAC20-131)
  - College and career readiness; career exposure, exploration, and planning; and opportunities for postsecondary credit (8VAC20-131-140)
  - Instructional program in middle schools (8VAC20-131-90) and secondary schools (8VAC20-131-100).
- Regulations Governing Career and Technical Education (8VAC20-120)
- School guidance and counselling services (8VAC20-620-10).
- School counsellor preK-12 (8VAC20-23-670)

These regulations include important career readiness instruments used in Virginia, including academic and career plans (ACP), career investigation courses, career and technical education (CTE), work-based learning (WBL) as well as school guidance and counselling services. Career exposure, exploration, and planning in Virginia are expected to begin in the elementary grades and continue through middle schools. High schools emphasise work-based learning opportunities (Box 2.5).

Academic and career plans (ACP) and career investigation courses

In the US, many states have adopted policies that require all secondary school students to develop and maintain an individualised learning plan (ILP) in order to make schooling more personalised and improve student outcomes. In 2016, 38 states have begun to use ILPs, with 21 of those states mandating them for use with all students (US DoL, 2016[49]).

In Virginia, the Academic and Career Plan (ACP) is an ILP that has been mandated by the state since the 2013-14 school year. The ACP is a process for students to plan for the future by exploring college and career options in light of available learning opportunities. Schools in Virginia require students to have an ACP as a roadmap and students work with their teachers and school counsellor to discover their personal strengths and interests, create career goals, plan for courses that meet high school graduation requirements and prepare for life after high school (see Table 2.2). The actual implementation of the ACP varies significantly across school divisions and schools because there is no set curriculum or format (see Chapter 4).

Table 2.2. Standards of career development activities in Virginia K-12

Highlight of administrative code College and career readiness; career exposure, exploration, and planning; and opportunities for postsecondary credit

	Career development activities
Elementary school (Typically, G1-4: ages 6-9)	• Schools provide information concerning exploration of career cluster areas in elementary schools. • Beginning in the elementary school years, students are to explore the different occupations associated with career clusters and select areas of interest. • Students begin the development of an academic and career plan portfolio (ACPP) in elementary grades. The ACPP is a repository for planning notes, class projects, interest inventory results, awards and recognitions, and other information related to academic and career plans and preparation. The ACPP is student led and updated and revised as the student continues to plan for the student's future throughout school years. The information contained in the ACPP serve as the foundation for creating the ACP in grade 7.
Middle school (Typically, G5-8: ages 10-13)	• G-7: Develop a personal Academic and Career Plan (ACP), including the student's programme of study for high school graduation and a postsecondary career pathway based on the student's academic and career interests. • Beginning in the middle school years, students are counselled on opportunities for beginning postsecondary education and opportunities for obtaining industry certifications, occupational competency credentials, or professional licenses in a CTE field prior to high school graduation. • In middle school, students are to complete a career investigations course and select a career pathway.
High school (Typically, G9-12: ages 14-17)	• In high school, a career-related learning experience shall be chosen by the student and documented in the ACP. • Students are encouraged to research work-based experiences (job shadowing, internships) based on careers of interest and experiences.

Note: In terms of the grade levels and the equivalent ages, the first column reflects typical patterns of progression rather than all possible variations. In Virginia, every child between the ages of 5-17 is required by law to attend school.
Source: Typical grades and ages are from U.S. Department of Education, National Center for Education Statistics, Annual Reports Program. Standards are from Commonwealth of Virginia (2019[29]), 'College and career readiness; career exposure, exploration, and planning; and opportunities for postsecondary credit', https://law.lis.virginia.gov/admincode/title8/agency20/chapter131/section140.
8VAC20-131-90. Instructional program in middle schools.

Box 2.8. Example of career investigation courses and beyond

Great Opportunities in Technology and Engineering Careers

Great Opportunities in Technology and Engineering Careers (GO TEC) is a talent pathway programme for students in Grades 5-12 that began in 2018. GO TEC will be available in 50 middle schools in Virginia by 2025 (Shelton, 2023[50]). Through GO TEC Career Connections Labs, middle school students explore all 17 available career clusters and experience hands-on activities. Through this career exploration curriculum, students begin to learn about job opportunities through these career paths. A nine-unit career exploration curriculum is designed to expose middle school students to all career clusters, emphasising GO TEC pathways. Provision includes hands-on activities and use of industry-comparable equipment (GO TEC, 2023[51]). Students can choose pathways in welding, robotics, engineering, and others like IT, advanced manufacturing and STEM (science, technology, engineering and math).

The Institute for Advanced Learning and Research (IALR) manages and expands GO TEC with a state grant from GO Virginia (Shelton, 2023[50]). GO TEC will cover GO Virginia's three Regions. This initiative includes middle school Career Connections Labs and curriculum development, starting from a pilot and scaling to eventually establish 17 middle school Career Connection Labs. The programme begins to engage with the student at the middle school level and continues through high school dual enrolment and post-secondary programs. The focus of the project is to further develop the sectors of IT, advanced manufacturing and STEM (science, technology, engineering and math) by creating talent pipelines that begin in K-12. Middle schoolers are introduced early to the occupations and basic skill training in Career Connections Labs. They are then connected in high school to expanded CTE courses, industry certification programs and dual-enrolment training opportunities with higher education partners. Finally, they may progress to advanced level training at a hub educational provider. To achieve this, five targeted, in-demand career pathways have been identified. Programme goals and curriculum are led by GO TEC staff with the support and guidance of a 21-member GO TEC Advisory Board comprised of employers, K-12 and higher education. In Southern Virginia, a particular focus of IALR is the engagement of learners in STEM from a young age through to adulthood.

IALR provides a range of career exploration and exposure activities not only GO TEC but also class field trips, Career Choice Youth Expo (7-11th grades), STEM camps during off-school time and Loaner Lab programme through which educators can borrow robotics, vernier and biotechnology equipment to use in classroom STEM activities. IALR also provides high school programmes including:

- *Academy for engineering & technology* which enables high school students to take dual-enrolment engineering courses to expedite their training for an in-demand career path.
- *Piedmont Governor's School for math, science and technology* offers advanced, dual-enrolment classes to high school students wishing to prepare early for college and future career opportunities.
- *Next generation of work* pairs student teams with area companies who pose a problem for the students to solve.
- *Internships* help students prepare for their future with experiential learning in the real world through paid internship opportunities with IALR and others.

Source: (Shelton, 2023[50]) (GO TEC, 2023[51]); IALR (2023[52]), How we inspire K-12, https://www.ialr.org/inspiring-prek-12.

To support development of the ACP, middle school students complete a career investigations course selected from the CTE state-approved list, or a school division-provided alternative means of delivering the career investigations course content (Commonwealth of Virginia, 2019[29]). While this course or the alternative should address planning for academic courses, work-based learning opportunities, completion of industry certifications, possible independent projects, and postsecondary education, there is no set curriculum or format. Although no data are available, examples of how the Career Investigations curriculum can be delivered are provided in Delivering Career Investigations Guidance Document for School Personnel:

- A stand-alone Career Investigations Course (9, 18 or 36 weeks)
- Inclusion of Career Investigations course curriculum in content areas
- Delivering Career Investigations course curriculum in homeroom classes
- Partnering horizontally and/or vertically between course disciplines or grade levels
- Locally Developed Competency-Based Modules
- Infusion into classes with school counsellor support over multiple years
- Online Modules

Career and technical education (CTE) and work-based learning (WBL)

In Virginia, career and technical education (CTE) allows students to explore multiple pathways to potential postsecondary employment through work-based learning (WBL) experiences, workforce training, college preparation, and earning industry-recognised credentials. Virginia defines CTE as programmes that are "designed to prepare young people for productive futures while meeting the commonwealth's need for well-trained and industry-certified technical workers" (Harris, Jonas and Schmidt, 2022[53]).

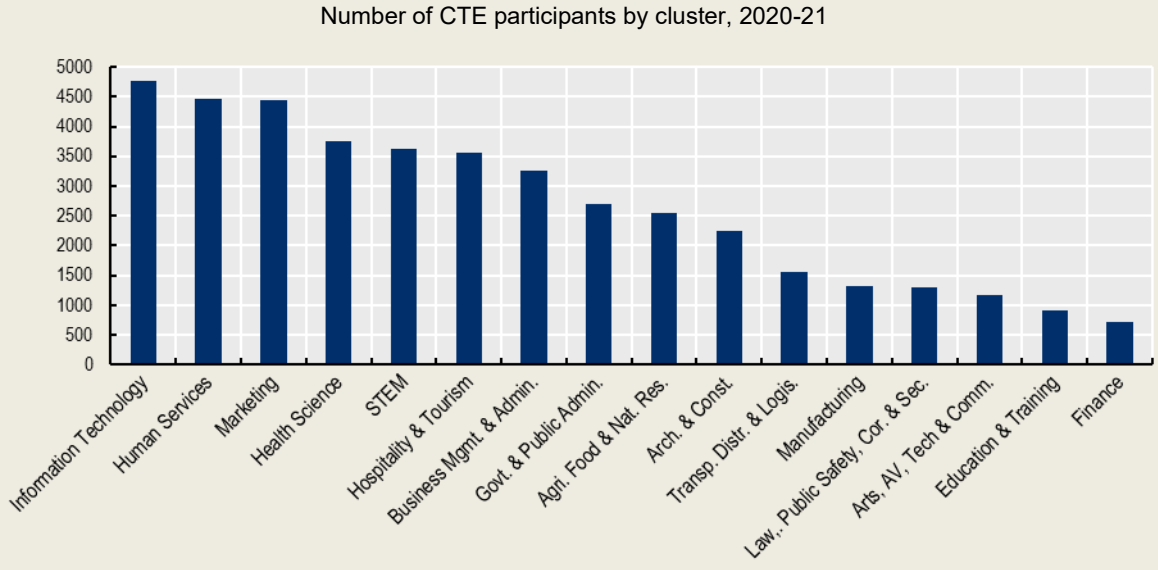
In 2020, the Virginia General Assembly passed high school graduation requirements which included the completion of a 'high-quality WBL experience' or earning a CTE credential that has been approved by the Board of Education (VDOE, 2023[21]). The CTE credential could include the successful completion of an industry certification, a state licensure examination, a national occupational competency assessment, the Armed Services Vocational Aptitude Battery, or the Virginia workplace readiness skills assessment (VDOE, 2022[54]).

Virginia has approved CTE courses within 17 career clusters, representing 83 career pathways. Career clusters are designed to help create student plans of study. Each cluster contains multiple pathways to complete a credential. For example, the Health Science career cluster includes pathways for therapeutic services, biotechnology, and diagnostic services (Harris, Jonas and Schmidt, 2022[53]). The framework also functions as a guide in developing programmes of study (courses and curriculum as well as credentials and other outcomes). In 2022, the four most popular career clusters among secondary CTE concentrators in Virginia were Information Technology (11.2%), Human Services (10.5%), Marketing, Sales, & Service (10.5%), and Health Science (8.9%). The top four career clusters among postsecondary CTE concentrators were Health Science (22.5%), Business Management & Administration (16.8%), Information Technology (14.0%), and Transportation, Distribution & Logistics (12.1%) (U.S. Department of Education, 2022[55]).

Box 2.9. Career clusters and pathways in Virginia

There are 17 career clusters, representing 83 career pathways in Virginia. Among these clusters, information technology, human services, and marketing were the most popular clusters in 2020-21. In addition to the 16 national career clusters for which data is collected at a federal level, in Virginia a further career cluster is available in related to the energy sector.

Figure 2.14. Number of CTE participants by cluster



Source: U.S. Department of Education (2023), The Perkins State Plans and Data Explorer, https://cte.ed.gov/dataexplorer/build_enrolment
Source : https://www.cteresource.org/career-clusters

School guidance and counselling services

The standards for school guidance and counselling programmes in Virginia public schools are defined by grade level (Table 2.3). In 2001, the Virginia Board of Education authorised the Department of Education to revise the 1984 State Standards for School Counselling Programs in Virginia Public Schools. The revision was adopted in 2004 by the Board of Education. In principle, these programmes should reinforce previously acquired knowledge and skills as defined by these standards throughout the course of a student's subsequent educational experience. There are three domains of guidance and counselling (Virginia Department of Education, 2004[56]):

- *Academic counselling* to assist students and their parents to acquire knowledge of the curricula choices available to students, to plan a programme of studies, to arrange and interpret academic testing, and to seek post-secondary academic opportunities;
- *Career counselling* to help students to acquire information and plan action about work, jobs, apprenticeships, and post-secondary educational, and career opportunities;
- *Personal/social counselling* to assist students to develop an understanding of self and others, how to resolve conflict and to define individual goals, reflecting their interests, abilities and aptitudes.

Table 2.3. Standards for school counselling programmes for career development in Virginia public schools

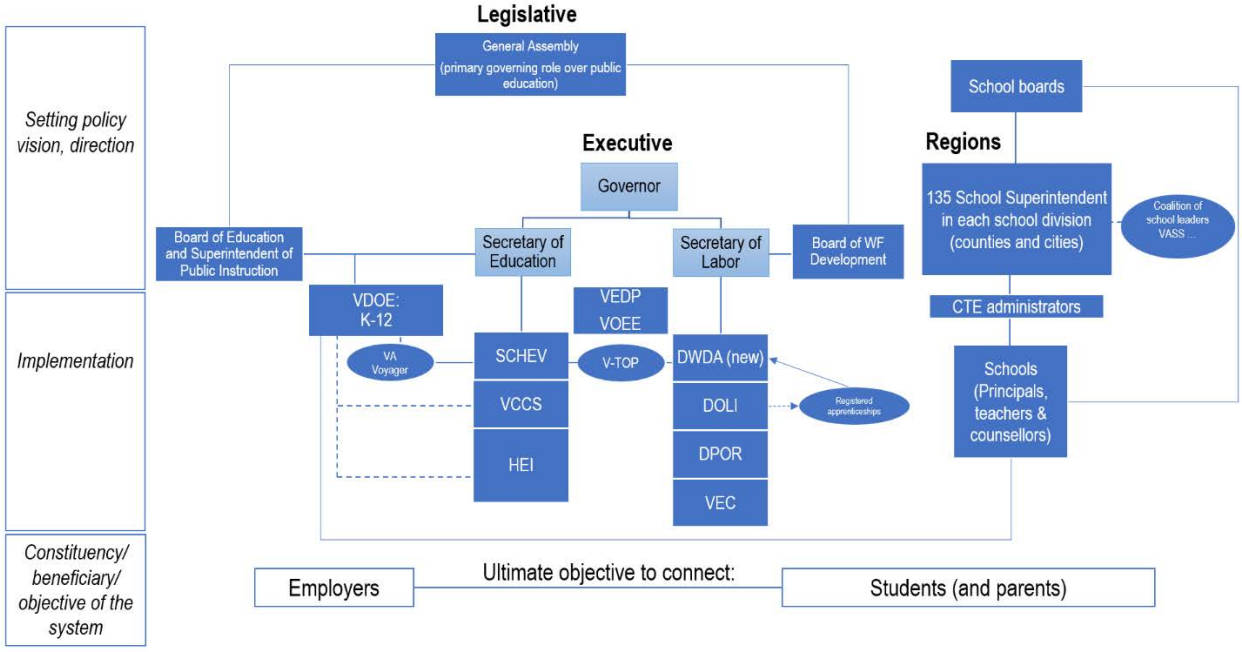
Grades	Standards
K-3	1. Understand the concepts of job and career, 2. Understand that behaviours such as punctuality, courtesy, proper dress and proper language are essential to current and future success, 3. Understand the relationship of individual effort, hard work and persistence to achievement, 4. Understand the importance of teamwork in working towards a common goal, 5. Demonstrate the decision-making process, and 6. Demonstrate goal setting.
Grade 4-5	7. Recognise the benefits of both individual initiative and teamwork, 8. Recognise that the changing workplace requires lifelong learning, 9. Identify hobbies and interests, and 10. Identify career choices through exploration.
Grade 6-8	1. Identify the relationship of course content, educational achievement, and career choices, 2. Identify personal preferences, skills, and interests that influence career choices and success, 3. Understand the effect of career choices on quality of life, 4. Understand that behaviours such as punctuality, courtesy, proper dress and language, and hard work are essential to success in the job market, 5. Demonstrate understanding of the education and training needed to achieve career goals, 6. Demonstrate employability skills such as individual initiative, teamwork, problem solving, organisation, and communication, 7. Use research skills to locate, evaluate, and interpret career and educational information, and 8. Demonstrate awareness of educational, vocational, and technical training opportunities available in high school.
Grade 9-12	1. Understand the value of ethical standards and behaviours in education and the workplace, 2. Understand how changing economic and societal needs influence employment trends and future training, 3. Understand how work and leisure interests can help to achieve personal success and satisfaction, 4. Understand how the changing workplace requires lifelong learning, flexibility, and the acquisition of new employment skills, 5. Understand that behaviours such as punctuality, courtesy, proper dress and language, and hard work are essential to success in the job market, 6. Understand that self-employment is a career option and demonstrate knowledge of the variety of professional, technical and vocational skills necessary for self-employment, 7. Demonstrate employability skills such as individual initiative, teamwork, problem solving, organisation, and communication, 8. Demonstrate skills involved in locating, using, and interpreting career and educational resources, including the Internet, 9. Develop and utilize time and task management skills, 10. Demonstrate knowledge of the current job market trends, and 11. Apply decision-making skills to career planning.

Notes: See the source for the standards of academic development and personal/social development.
Source: (Virginia Department of Education, 2004[56])

Stakeholders of career readiness system

The spectrum of stakeholders relevant to school career guidance is broad, encompassing not only Virginia state and local governments and agencies that are involved in education and workforce development, but also employers, schools and teachers, community organisations, educational and training institutions, parents, students and career guidance practitioners (Figure 2.15).

Figure 2.15. Mapping stakeholders in the school career guidance services in VA (work in progress)



Note: VDOE-Department of Education, SCHEV-State Council of Higher Education for Virginia. VCCS-Virginia Community College System. HEI-higher education institutions. VEDP-Virginia Economic Development Partnerships. VOEE-Virginia Office of Education Economics. Department of Workforce Development and Advancement (DWFDA)
Source: Author's elaboration

From the education side, there are three state agencies that work together and share responsibilities for career readiness under the direction of the State Secretary of Education, a member of the Virginia Governor's Cabinet. The Governor appoints the Superintendent of Public Instruction, who serves as secretary of the state Board of Education and as the executive officer of the VA Department of Education (VDOE), the administrative agency for VA's public schools (VDOE, 2022[57]). The State Council of Higher Education for Virginia (SCHEV) is the VA's coordinating body for higher education and makes higher education public policy recommendations to the Governor and General Assembly. VA Community College System (VCCS) has its own state Board for Community Colleges (BCC), whose members are appointed by the Governor.

- VDOE informs school superintendents, CTE administrators and schools about state education policy and direction. It operates Perkins V for CTE and provides academic and career plan (ACP) information for K-12. It recently hired eight work-based learning (WBL) specialists/co-ordinators, one for each superintendent region, using resources from Perkins V to coordinate school level WBL co-ordinators or career development specialists who are already in place. VDOE offers guidelines, information and advice for students to make informed decisions about their careers (e.g. Postsecondary Opportunities for High School Students (VDOE, 2022[22]); Virginia Labor Market Career Cluster Analysis through CTE Trailblazers jointly with Weldon Cooper Center for Public Service at the University of Virginia.
- SCHEV collects and provides data on pathways, and operates several programmes and initiatives that concern highs school students' college and career readiness. For example, SCHEV collects data on the impact of college access programmes through the federal programme Gear-Up, and administrates Virginia Talent Opportunity Partnership (V-TOP) that grants funds for colleges and

universities to administrate internships or new apprenticeships such as in IT sector (but no other work-based learning activities). SCHEV also offers financial counselling programmes to inform high school students about how much college tuition is and different ways to pay it.

- VCCS runs career coaching programmes and hires career coaches who are placed in high schools (HS) as well as apprenticeships co-ordinators. Within HS, career coaches advise HS students on entry into the workforce, college and university or military. When students transition from HS to community colleges (CC), their relationship with career coaches is maintained.

These departments and agencies often collaborate. For example, VDOE sits in SCHEV's V-TOP policy and employer advisory panel (which meets quarterly) together with other state agencies and employer representatives (part of employer membership organisations). A V-TOP manager from SCHEV sits in the advisory panel for VAVoyager run by VDOE to discuss how V-TOP can best serve HS students. V-TOP is building relationships with regional WBL co-ordinators hired by VDOE. However, collaboration is mostly based on personal or working relationships, without a systemic structure for collaboration.

There are also intermediary agencies that facilitate policy implementation and organisational collaboration. For example, the CTE Resource Center assists the VDOE in developing curriculum-related publications that address specific courses or programmes, encourage collaboration between career/technical and academic disciplines, foster collaboration between CTE at secondary and postsecondary levels, correlate with national standards and industry certification requirements, and enhance comprehensive school improvement efforts. The Center also offers information on career clusters, related pathways and occupations, courses and curriculum, related industry credentials and tests. Sometimes, state agencies collaborate through other intermediary agencies: for example, the VA Ed Strategy receives grants from VDOE to work with school level WBL coordinators and aligns K-12, employers and HEI. V-TOP engage with this intermediary agency and through that it connects with the school system.

From the perspective that workforce development (WFD) begins from the early stages of education, the Secretary of Labor, the Board of Workforce Development (BWD), and related agencies are also relevant stakeholders in the career readiness system. The BWD assists and advises the Governor, the General Assembly, and the Secretary of Labor in meeting workforce development needs through recommending policies and strategies to increase coordination and efficiencies of operation between all education and workforce programmes (VA code 2.2-2471).

One change that will affect the career readiness system in the near future is the expected consolidation of the state-wide workforce programmes. A new Department of Workforce Development and Advancement (DWFDA) is being created under the Secretary of Labor to consolidate existing WFD programmes, evaluation and data. The goal is to create a unified WFD system and ensure alignment of WFD programmes and labour market needs. The DWFDA will expand V-TOP (Innovative Internship Fund and Program) and measure its progress jointly with SCHEV, plus take over responsibilities for apprenticeships. The Department will direct the Secretary of Labor to conduct a comprehensive review of WFD programmes and make recommendations to address a wide range of subjects relating to improving the effectiveness and efficiency of such programmes (SB 1470/HB 2195). This effort is expected to lead to a substantial change in the K-12 system, by clarifying the role of K-12 system in WFD and emphasising the needs for career exposure and experience. It is expected that this new Department will consolidate WFD-related functions more efficiently and effectively across different agencies, budget lines and initiatives.

Linking education and WFD agencies, the Virginia Economic Development Partnership (VEDP) and the Virginia Office of Education Economics (VOEE) provide partnerships, research and data to support these two sets of stakeholders and inform policy and practice. The VOEE, which was created in 2021 as an independent office, was put under VEDP to keep the independence, but with some oversight from the Secretary of Commerce.

Each region in Virginia is independent and has autonomy and authority over education and career readiness provision. Across the eight school regions, there are 131 school superintendents. Each county

and city (approximately each school division) has one school superintendent, selected by its school board that sets policies and directions for schools. The size of school divisions varies from 200 students to over 180 000 students and so does their resources. Consequently, in sight of state level direction, provision of career readiness differs widely depending on localities and schools (see Theme 3 Chapter 6.).

Finally, employers and students as well as their parents, are beneficiaries or clients of the career readiness system and have important influence within the system. Ultimately, the system's objective is to connect students and graduates with employers.

Box 2.10. The role of higher education and SCHEV in K-12 career readiness system

Virginia has several career development activities and tools that are offered through higher education (HE) institutions, which can also serve high school students.

Virginia Talent + Opportunity Partnership and VAVoyager

For example, Virginia is considering expanding the Virginia Talent + Opportunity Partnership (V-TOP)[11], which mainly serves students in higher education, to high school students. The VA Chamber Foundation and the VA State Council of Higher Education (SCHEV) are partnering to form this initiative and they aim to create 100 000 new internships through V-TOP by 2033. V-TOP connects and supports employers, HE institutions and HE students to better prepare for internship and other work-based learning (WBL) opportunities. V-TOP offers free, online career readiness modules for students and Employer Readiness Toolkit (Employer Modules) to assist, coach and mentor employers in the development and delivery of quality WBL opportunities. Secondary educational providers can harness the network with employers and make use of established modules to strengthen provision of WBL opportunities.

In addition, the VAVoyager WBL network, developed by VDOE, is a free, virtual network platform to reach high school students as well as community college students (rolling out over 2022 & 2023) (VA CTE Resource Center, n.d.[58]). It helps students to connect with employers and to explore and access to High Quality Work-based Learning (HQWBL) opportunities. To join, participants are required to connect with a regional WBL specialist (one in each of the eight VA regions) and CTE administrator. It also provides employers with the resources they need to offer WBL opportunities (VAVoyager, n.d.[59]).

College access services: Career guidance to support the transition to higher education

Virginia has several tools and instruments to help students make informed decisions about postsecondary planning and prepare for requirements for jobs available in the regions. SCHEV is conducting a Strategic Plan – Pathways to Opportunity – to promote equitable, affordable, and transformative post-secondary education. To do so, SCHEV aims to increase the coverage of costs to educate in-state students and provides information about pathways that Virginians can have for an affordable education, which include the Workforce Credential Grant, G3, Public four-year federal and state grants, Private colleges Tuition Assistance Grant (TAG), Military State and federal grants, as well as apprenticeships that pay students to work and attend school (SCHEV, 2021[60]).

In line with the Strategic Plan Pathways to Opportunity, and to improve college-going rates for low income students or students from where college transition is low, SCHEV operates GEAR UP VIRGINIA (GUV) 2021-2028 (Gaining Early Awareness and Readiness for Undergraduate Programs) – a federal grant program awarded to Virginia (federal funding with state matches) – to increase student college enrolment and graduation rates. With 13 participating School Divisions, and 12 partners, GUV sets goals to increase knowledge of college and financial aid among students and their families, improve college readiness rates and academic performance, and increase college enrolment rates.

The GUV programme begins in middle school and remains available to young people until one year after high school graduation. It provides college campus visits, financial aid workshops, career counselling and academic tutoring services to students and families in select school divisions. The GEAR UP data analysis found that when economically-disadvantaged students receive college access services, they are more likely to enrol in a college within 16 months after high school graduation in 2020 (64%) than their comparable peers who did not have such services (49%) (Lowe and Allison, 2023[61]). The more services students participated in as part of the GEAR UP programme, the more

likely they were to go to college (Lowe and Allison, 2023[61]). Based on this finding, the Joint Legislative Audit & Review Commission (JLARC)'s recommended that Virginia should support the state's higher education access and affordability (Lowe and Allison, 2023[61]).

SCHEV also offers resources for students, families, and educators. For example, its websites provides a free toolkit of resources on how to apply for college, pay for college, and make decisions about college. SCHEV also manages Virginia Student Loan Help. Virginia Student Loan Help's College Explorer helps to compare institutions across the state or country, providing information about a higher education institution's profile, costs, student success, admissions, financial aid debt, and student body. Students can explore a variety of data about how much graduates earn 18 months following completion of a degree or certificate (Guide to the Post-Completion Wages of Graduates).

The SCHEV website features the 123Go! Student toolkit that provides information to assist students in preparing for, applying to and the financing of higher education. For such preparation, the toolkit directs the students to follow a checklist at the start of their High School enrolment, from Grade 9 to Grade 12, which includes meeting routinely with the school counsellor, reviewing the Academic and Career Plan (ACP); visiting career navigation platforms such as vawizard.org; talking to people about their jobs and career path; creating a personal activity résumé; applying for a job to save money for college and gain work skills; and taking leadership roles in extracurricular and volunteer activities. The toolkit also shows various resources that promote affordable access to higher education (SCHEV, 2023[62]).

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Notes

[1] Despite being important, this report does not cover the provision at the early childhood, elementary and tertiary education and PES and young people with special needs.

[2] The American Community Survey (ACS) is an ongoing survey conducted by the U.S. Census Bureau. It gathers on a yearly basis information previously contained only in the long form of the decennial census. It is the largest household survey that the Census Bureau administers.

[3] Dropout refers to both the event of leaving school before completing high school and the status of an individual who is not in school and who is not a high school completer. High school completers include both graduates of school programmes as well as those completing high school through equivalency programs such as the GED programme. A person who drops out of school may later return and graduate but is called a “dropout” at the time he or she leaves school. Measures to describe these behaviours include the event dropout rate (or the closely related school persistence rate), the status dropout rate, and the high school completion rate.

[4] In Perkins V, the term 'CTE concentrator' means at the secondary school level, a student served by an eligible recipient who has completed at least 2 courses in a single career and technical education program or program of study, i.e., once a student completes 2 courses in a single CTE program of study, they are counted as a CTE concentrator. In Virginia, this refers to two 36-week courses as listed on each CTE curriculum framework located within the Career Clusters.

[5] Upper secondary or post-secondary non-tertiary education.

[6] Those with below upper secondary education.

[7] The National Student Clearinghouse collects data from more than 3 600 postsecondary institutions, which represent 97% of the US postsecondary enrolments in degree-granting institutions, as of 2021.

[8] 1-year estimates.

[9] According to the Office of Career Technical and Adult Education, the Key Components of Successful Career Guidance and Counseling Programs are the following:

- "A planned sequence of activities and experiences to achieve specific competencies such as self-appraisal, decision making, goal setting, and career planning"
- "Accountability (outcome oriented) and program improvement (based on results of process/outcome evaluations)"
- "Qualified leadership"
- "Effective management needed to support comprehensive career guidance programs"
- "A team approach where certified counselors are central to the program"
- "Adequate facilities, materials, resources"
- "Strong professional development activities so counselors can regularly update their professional knowledge and skills"
- "Different approaches to deliver the program such as outreach, assessment, counseling, curriculum, program and job placement, follow-up, consultation, referral" (Office of Career, Technical, and Adult Education, 2023[26]).

[10] The College, Career and Civic Readiness Index will be a school quality indicator for high schools effective with the 2022-2023 accreditation year ratings using the 2021-2022 cohort data. The index will measure the extent to which students successfully complete advanced coursework, Career and Technical Education coursework and credentialing, and work-based and service learning. Beginning with the class of 2022, all students must either earn a CTE credential or complete an Advanced Placement, International Baccalaureate or honors course to graduate.

[11] V-TOP is a brand name of the Commonwealth Innovative Internship Fund and Program (IIFP), funded by the Virginia General Assembly, to expand paid and credit-bearing internships and other WBL opportunities for student, in collaboration with Virginia employers, and to facilitate the readiness of students, employers, and higher education (HE) institutions to participate in internship and WBL. It comprises grants to HE institutions/career practitioners and regional collaboratives, and a state-wide initiative to facilitate the readiness of students, employers and institutions of HE to participate in internship and other WBL opportunities. There are several work groups that develop different modules such as Employer Toolkit, Remote Work-Based Experiences, Student Readiness/Work-Ready Experiences (to be merged as Student Modules Work Group), Technology, Data and Measures of Success, Professional Development, and Transforming Federal Work-Study.

Chapter 3. Career readiness of young people in the progression through education to ultimate work in Virginia: Results of two surveys

This chapter presents the results of two surveys which were conducted as part of this review. A survey of 19–26-year-olds provides a user perspective on teenage career development within the state. A second survey of Grade 10 and 11 students allows for benchmarking against international practice as captured in PISA 2018. Overall, the chapter assesses career readiness of young people and career readiness system in Virginia.

Introduction

For young people, finding a job that matches their career aspirations is a major challenge, especially for non-college-bound youth, for whom well-paid, meaningful work opportunities are rarer. One avenue often proposed to enhance these youths' chances of successful professional integration is through career exploration opportunities and work experiences during high school (Thouin, Dupéré and Denault, 2023[1]).

In this regard, policy effort that enables school-mediated career development activities for teenage students pays off. In particular, experience from OECD countries provides evidence on the positive impact of career development activities that promote extensive connections with employers. For example, England (United Kingdom) introduced a statutory requirement for work-related learning in 2004 that demand schools to integrate learning about the world of work into the schooling of 14-16-year-olds. This experience from England shed light on the positive, statistically significant relationships between participation in employer-engaging career activities and adult wage premiums and reduced risks of becoming NEET (Not in Education, Employment or Training) (Percy and Mann, 2014[2]; Mann and Percy, 2013[3]; Mann et al., 2017[4]). This offers valuable lessons to Virginia.

Many studies support this too. For example, Hughes et al. (2016[5]) examined studies that included careers provision, career guidance, entrepreneurial education, ICT and careers, job shadowing, mentoring, transformative leadership, volunteering, work experience, and work-related learning. They found that the way in which teenagers think about their futures in education and employment has a significant impact on what becomes of them as working adults, impacting the status of NEET. Moreover, teenage experience of work is associated with improved employment outcomes for young adults. Also, young people from poorer backgrounds are more likely to have career aspirations that are misaligned with their educational ambitions (Hughes et al., 2016[5]). Mediation analyses in Canada showed that moderate work in high school (less than 20 hours per week) was significantly associated with future career planning, thinking about interests, values and vocational training options (called 'identity commitment'), which was in turn linked to integration into a career-related job matching professional goals in early adulthood. Among the control variables, having a vocational degree was a strong predictor of integration into a career-related job. Overall, these results suggest that career counsellors accompanying adolescents who do not intend to attend college should consider employment at moderate levels as an option to foster their career identity (Thouin, Dupéré and Denault, 2023[1]). Moreover, as longitudinal data from multiple countries became available, the analysis of these data provides means to establish links between the character of teenage career development and better employment outcomes in early adulthood (OECD, 2021[6]; Covacevich et al., 2021[7]; Covacevich et al., 2021[8]).

Backed by this wealth of evidence, two surveys were conducted as part of this review to see if these positive relationships hold the same in Virginia. As seen in Chapter 2, one important concern for education policy makers in Virginia is the increasing number and share of young people who have no concrete plan for their career when finishing their high school. The question is how Virginia can exploit the policy tools of career development activities well enough to make positive outcomes. The first step is to understand how teenage students explore, experience and think about their potential future in work, and how their engagement in career development activities can shape their career trajectories and outcomes in their adult working life. The analysis of the two surveys that collected the relevant data provides insightful findings related to this question.

OECD Career Readiness Survey of Teenage Students

Background information of the Career Readiness Survey of Teenage Students

Based on PISA questionnaires on career exploration, experiencing and thinking, the OECD review team in collaboration with Virginia authorities selected and developed 30 survey questions. Over 13 000 students in grade 10-11 from 57 high schools were asked about career thinking, plans and participation in career development activities, and how well their high school was preparing them for their transition into higher education and work. The data sample used in this report includes students who completed the survey and from schools with more than 22 respondents or 14% student participation. To optimise the comparison with the PISA data, the subsample analysed in this report only includes students who were born in 2006-08, a total of 9 333 students from 46 schools (9 353 with weight) (see Annex 2.A for details).

The results of this survey show a snapshot of 15-17 years-olds' career exploration, experience and thinking as well as their perception of the usefulness of the career readiness system.

Overview of the survey results

Although this survey was conducted in a different sampling method and scale from the original PISA data collection, the teenage student survey based on PISA career questionnaires does allow for benchmarking Virginia's practice against national and international practice captured by PISA. This survey provides rich snapshots about the teenage students who attend high school in Virginia, their career readiness and their perception of the career readiness system (see OECD Career Readiness Survey of Young Adults (19–26-year-olds). Gender, race/ethnicity, socio-economic status (SES), urbanicity and school region show the key demographic characteristics of teenage students, which are further analysed in Chapter 6 of this report.

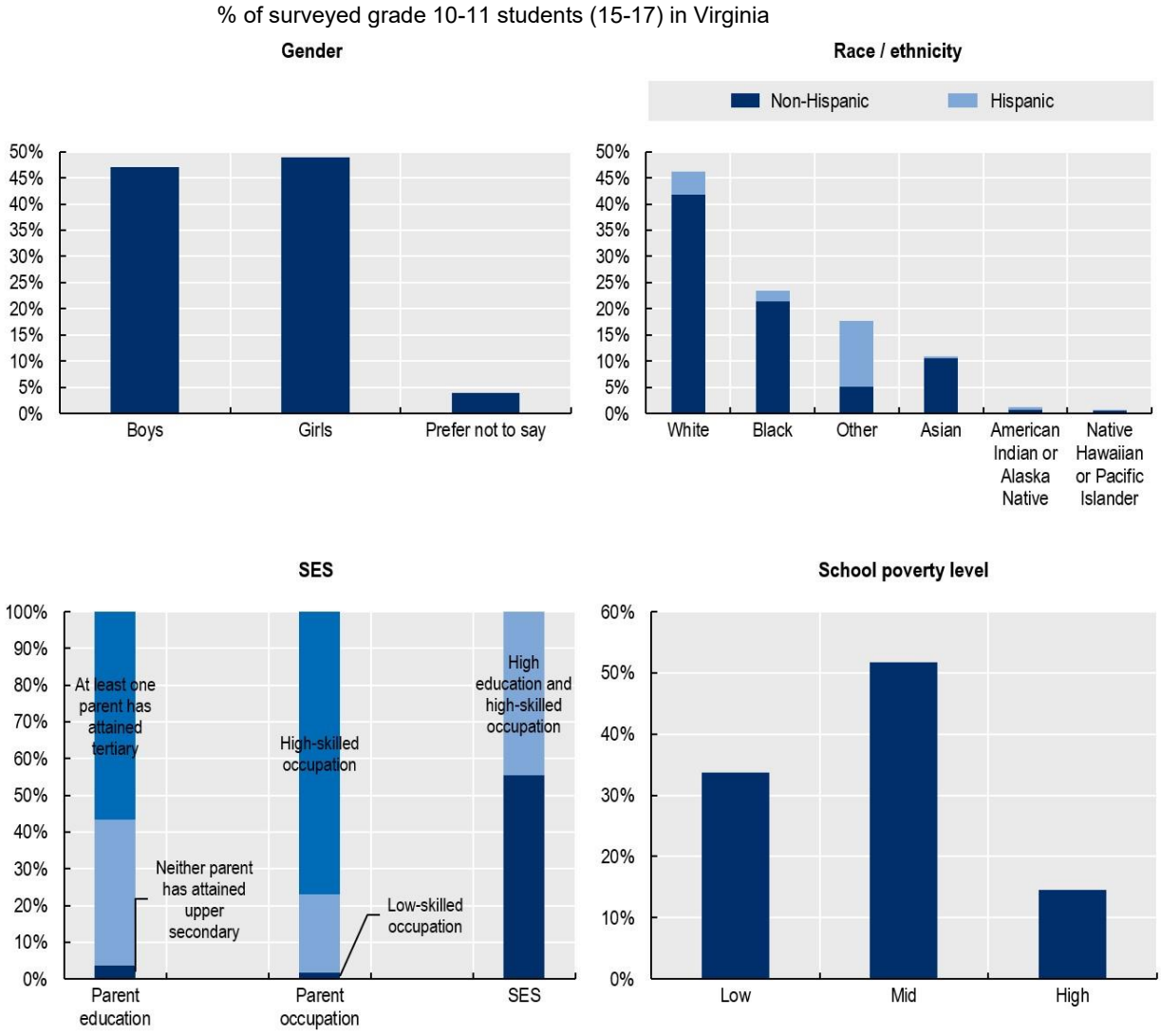
Among a representative sample of 9 333 students (15-17-year-olds) who attended a high school in Virginia at the time of the survey, some 47% gave their gender as male and 49% as female. The rest of respondents answered 'other' or 'prefer not to say'. 54% were born in 2006; 45% in 2007; and 0.4% in 2008. Overwhelmingly, students attended grade 10 (67%) or 33% grade 11 classes.

In terms of ethnicity, 20% of the respondents had Hispanic background. In terms of race, 46% were White, 23% Black, and 11% are Asian. About 91% were born in the US; 8% were foreign-born and 1% preferred not to say.

Socio-economic status (SES) is defined by the occupation and educational attainment of respondents' parents. Respondents were categorised as high SES; if at least one of their parents has attained tertiary education, and at least one parent has a high-skilled job (manager, professional or associate professional). The rest of respondents were categorised as low SES. With this indicator (8 207 representative sample), 45% were from high SES.

Surveyed respondents were attending different schools in terms of poverty level. 15% of surveyed teenage students were attending in a school with a high poverty level and 34% in a school with a low poverty level.

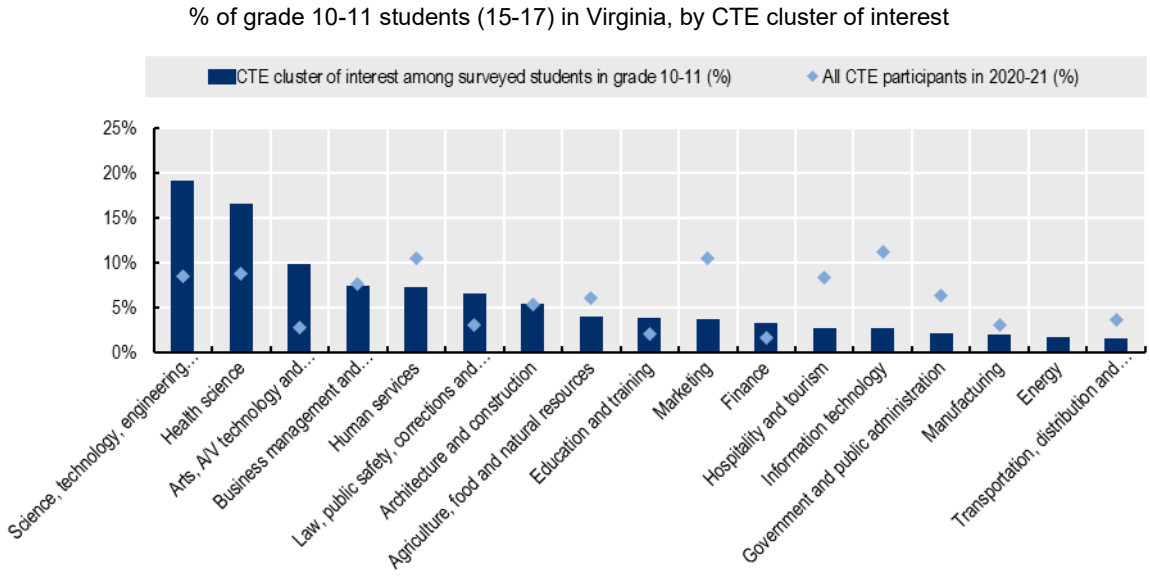
Figure 3.1. Gender, race/ethnicity, socio-economic status and location of the survey respondents



Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see 0 for details).
SES measures the percentage of survey respondents who have at least one of their parents having attained tertiary education, and at least one parent having a high-skilled job (manager, professional or associate professional) versus the rest.
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023

Within the survey, students in Grades 10 and 11 were required to select one CTE cluster of greatest interest to them personally from the list of 17 clusters available across the Commonwealth. Among 17 CTE clusters, surveyed students show the highest interest in science, technology, engineering and mathematics (STEM) (19%) and Health science (17%). In Figure 3.2, the results are compared to actual patterns of enrolment (Grades 8-12) within Virginia.

Figure 3.2. Grade 10 and 11 student interest in CTE clusters compared to actual distribution of enrolment in CTE clusters (Grades 8-12)

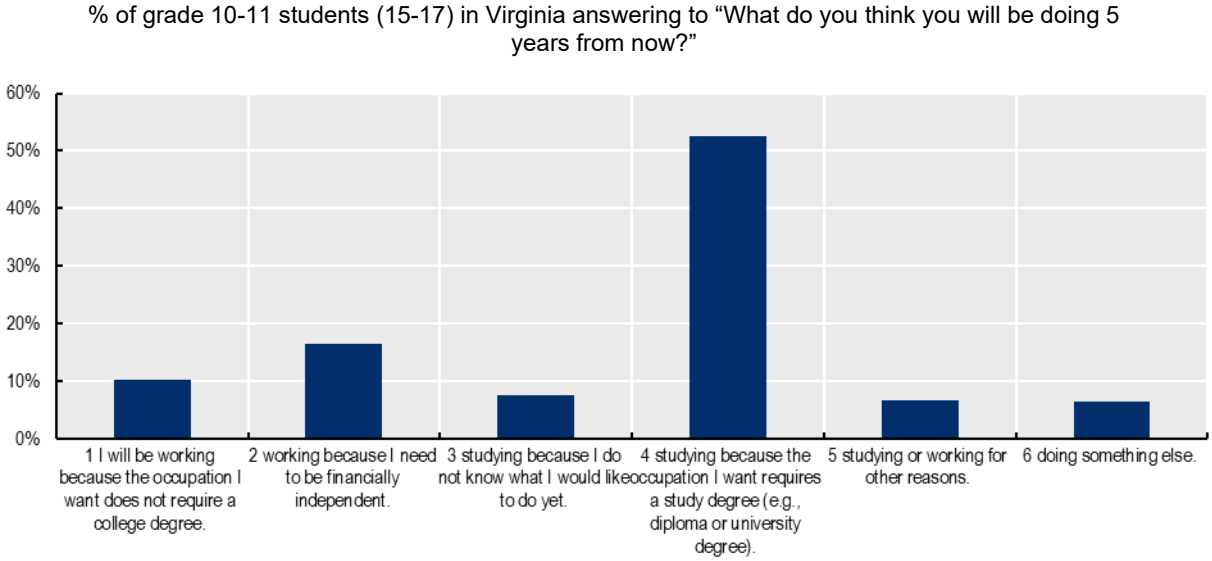


Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see 0. for details).
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023

Future career plans

Students were asked about what they would be doing in five years' time. 53% of students answered that they would pursue a diploma or university degree required for the occupation they want, compared to an OECD average (not including the United States) recorded in the 2018 edition of PISA of 40%. 26% of young Virginians reported that they would work because they need to be financially independent (16%, compared to an OECD average of 17%) or because the occupation they want does not require a college degree (10%, compared to an OECD average of 14%). 8% would be studying because they do not know what they would like to do yet, compared to an OECD average of 16%. While not directly comparable, as the PISA survey was undertaken nearly five years earlier, this remains the best available means of benchmarking Virginian experience against international provision.

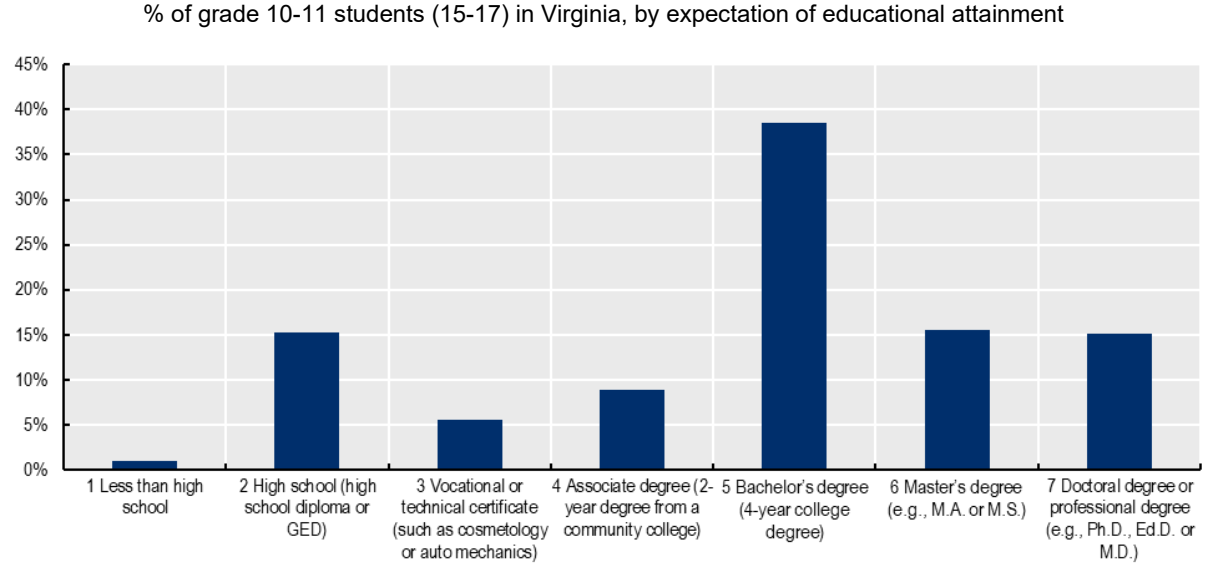
Figure 3.3. More than half of students in Virginia are planning to pursue a degree required for the occupation they want



Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see 0. for details).
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023

The majority of students (78%) reported that they expect to complete tertiary education. This figure is lower than the average of 88% for US students who responded to the same question in PISA 2018. 9% expect to complete associate degree, 39% bachelor's degree and 15% respectively master's and doctoral degree. 21% expect to complete high school (15%) or vocational certificate (6%).

Figure 3.4. The majority of students in Virginia expect to complete tertiary education



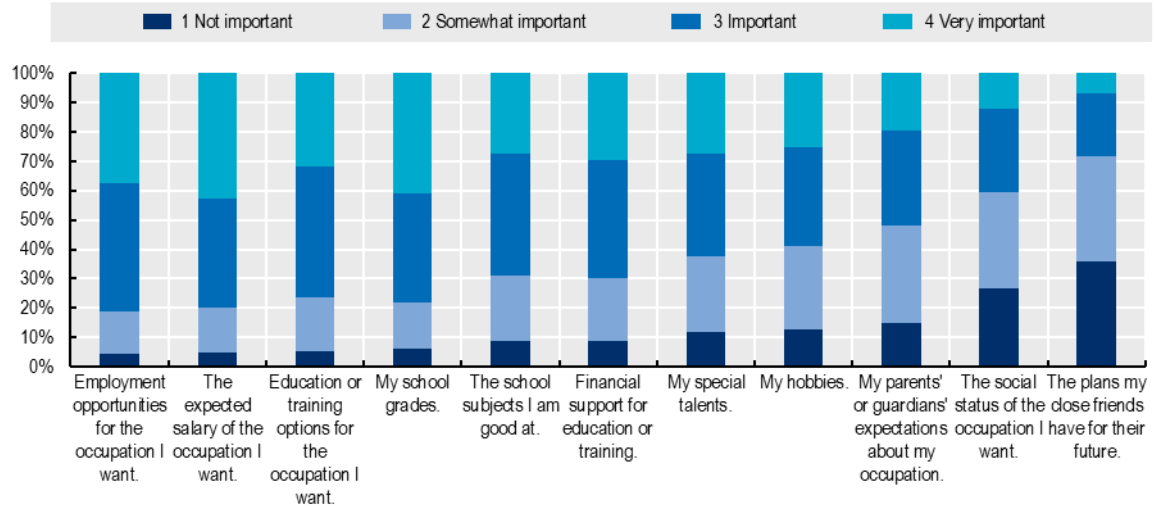
Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see 0 for details).
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023

Factors in career decision making

Similar to students across the OECD, the majority of surveyed students in Virginia are keen to make career decision based on labour market needs, conditions and options rather than social influence from parents, society or friends. What most of the students surveyed consider important in career decisions include employment opportunities (96% compared to an OECD average of 95%), salary (95% compared to an OECD average of 95%) and education options (95% compared to an OECD average of 95%) for the occupation they want as well as their school grades (94% compared to an OECD average of 95%) and subjects they are good at (91% compared to an OECD average of 95%). Financial support for education or training (91% compared to an OECD average of 92%) was also considered an important factor in the decisions they make about their future occupation. Their special talents (88% compared to an OECD average of 96%) and hobbies (87% compared to an OECD average of 94%) were considered more important than their parents' or guardians' expectations (85% compared to an OECD average of 83%), the social status of the occupation they want (73% compared to an OECD average of 88%) or close friends' plan (64% compared to an OECD average of 67%).

Figure 3.5. Students in Virginia consider labour market needs and conditions important in their career decision making

% of grade 10-11 students (15-17) in Virginia answering to "How important are the following things in the decisions you make about your future occupation?"

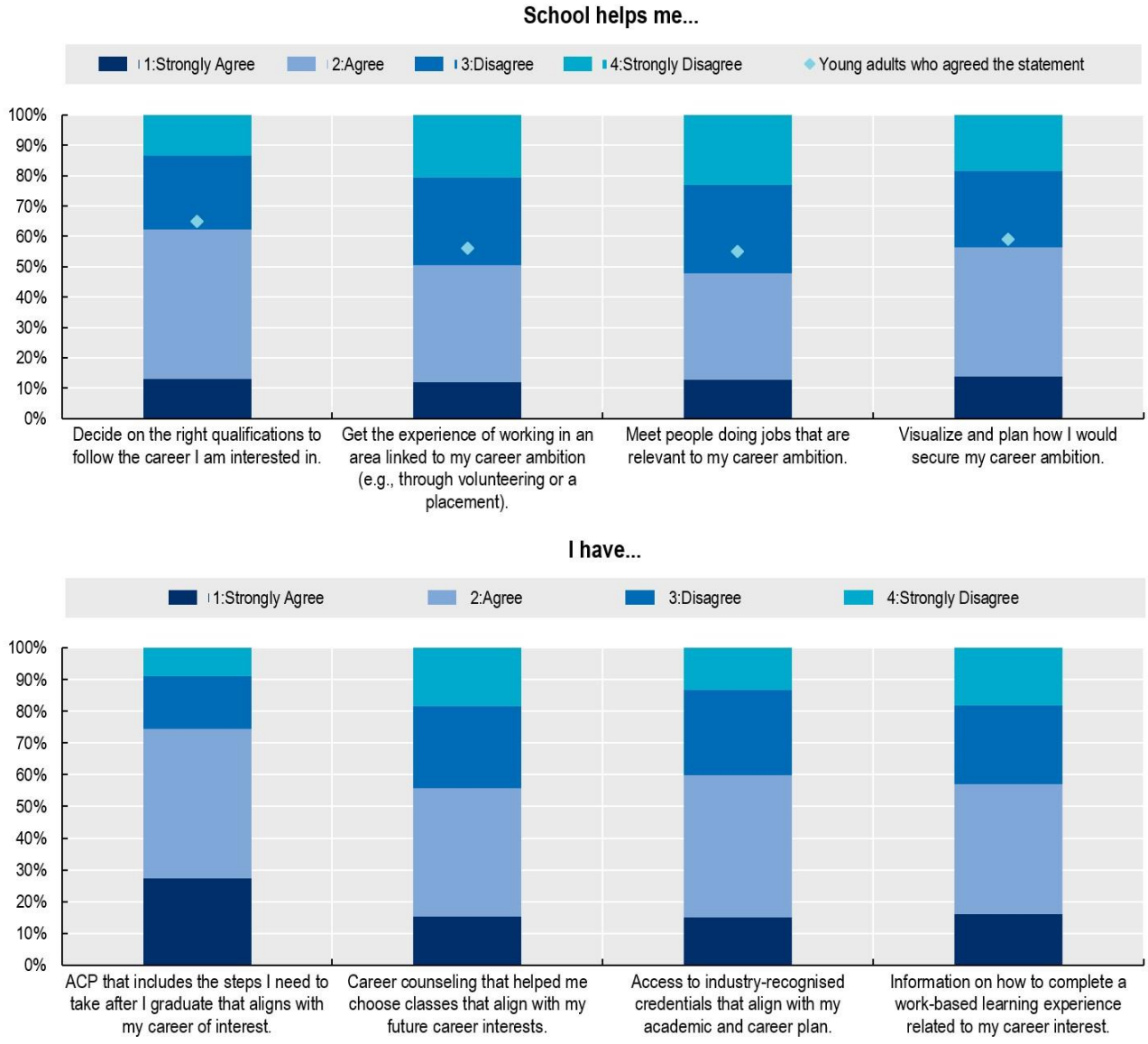


Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see 0 for details).
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023

In terms of specific career guidance at school, the majority of students (74%) reported that they have an academic and career plan (ACP) that includes the steps they need to take after graduation that aligns with their career of interest. 60% reported that they have access to industry-recognised credentials that align with their ACP. A similar percentage of students agreed that they have received information on how to complete a work-based learning (WBL) experience related to their career interest (57%) and that the career counselling they received helped them to choose classes that align with their future career interests (56%). However, still fairly high shares of students do not benefit from career counselling in choosing classes based on their career plan (44%), do not have WBL information (43%) nor access to industry-recognised credentials (40%).

Figure 3.6. Still many students think that they do not have necessary career support from school in Virginia

% of grade 10-11 students (15-17) in Virginia



Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see 0 for details).
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023

Career exploration and experiencing of teenage students

The survey asked students if they took part in a range of career development activities in high school. Drawing on the OECD Career Readiness Indicators, these activities are categorised into three thematic groups:

- *Career exploration activities:* career info, Higher education programme info, Questionnaire, Guest speakers, Speaking to teachers, Speaking to school advisor, Touring, How to apply, Job fair, Vocational program, Job shadowing, Worksite visits, Speaking to outside-school advisor (see Figure 3.7, Panel B) as well as learning how to search for job, how to write resume, how to find info, how to prepare for interview, how to find aid info (see Figure 3.7, Panel A).
- *Career experiencing activities:* volunteering, internship and paid part-time job including work outside school hours, family business and occasional informal jobs.
- *Career thinking activities:* activities that promote career certainty, career ambition, career alignment and instrumental motivation (see Career thinking for more details)

All surveyed students in Virginia participated in at least one type of career development activities (CDA) while in high school. All students participated in at least one career exploration activity such as learning how to search for job or write a resueé. 83% participated in at least one career experiencing activity while in high school. While compared to Grade 10 students, slightly more Grade 11 students participated in CDA consistently across activities, the patterns remain at similar levels.

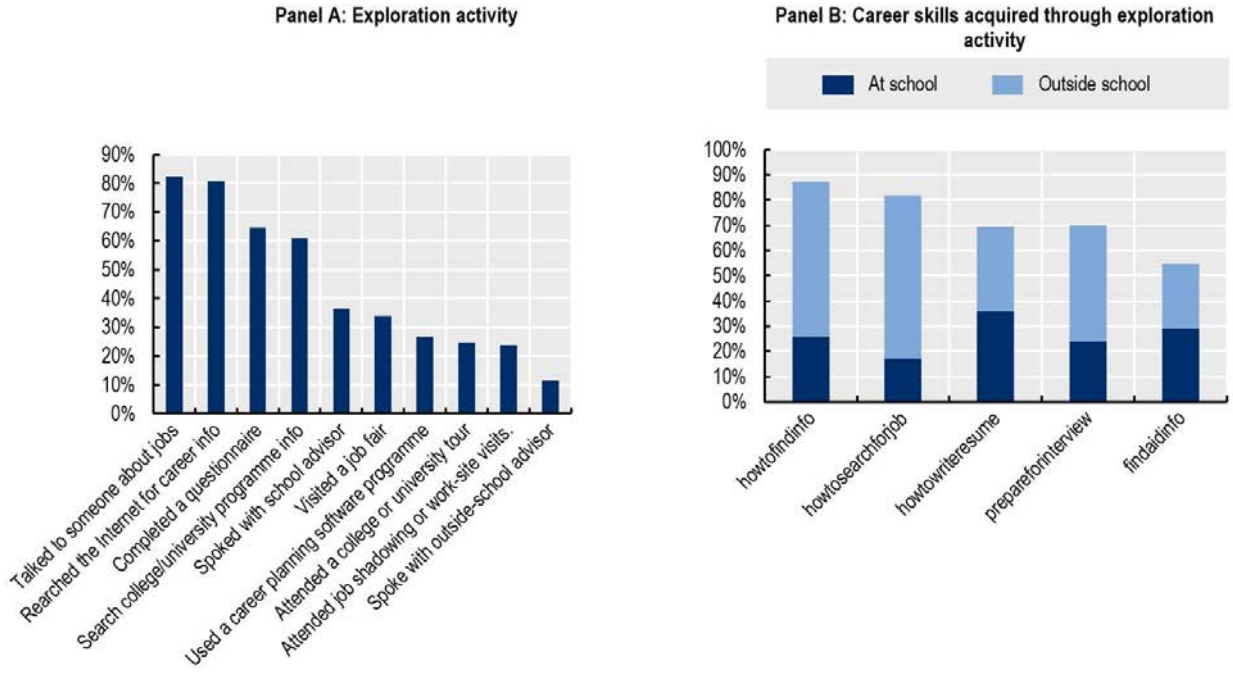
Participation in career exploration activities of teenage students

All students in Virginia from the sample participated in a career exploration activity, including learning skills necessary to career preparation and development. The most common activity was learning how to find information on jobs they are interested in (87%) – however, 62% participated in such activity outside school. Talking to someone about the job they would like to do when they finish their education (82%) was also common.

Speaking directly to a career counsellor was comparatively rare. Only a third of students (36%) spoke to a career counsellor at their school, and one student in eight (12%) spoke to a career counsellor outside of their own school. Around a quarter of surveyed students participated in job shadowing (24%) or an organised tour at a college or university (25%); a third of students (34%) participated in a job fair. 27% used a career planning software programme.

Figure 3.7. Many students in Virginia participated in exploration activities, but with a varying degree across types of activities

% of grade 10-11 students (15-17) in Virginia who participated in career development activities

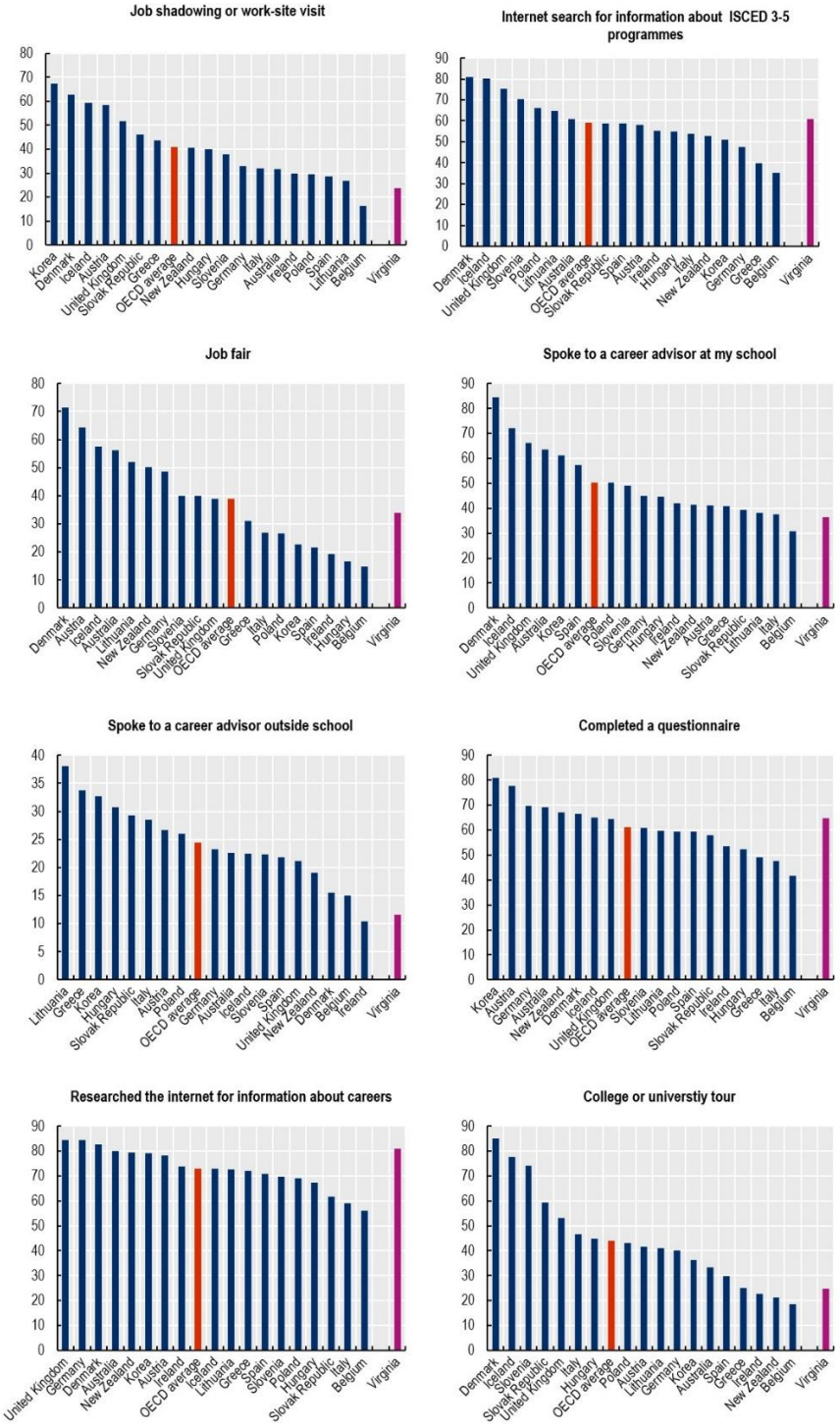


Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see 0 for details).
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023

Benchmarked against OECD countries for which data is available from the PISA 2018 survey, comparatively few Virginian students reported having taken part in important guidance activities that provide the opportunity to engage with people in work, to visit post-secondary educational institutions and/or speak directly to a guidance counsellor.

Figure 3.8. Relatively few Virginian students reported having taken part in career exploration activities compared to students in other OECD countries

% of students in PISA 2018 who participated in career development activities, compared to students in Virginia



Note: The sample of Virginian students includes grade 10-11 students in Virginia who completed the 2023 OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see 0 for details).
Source: OECD PISA 2018; OECD Career Readiness Survey of Teenage Students in Virginia 2023

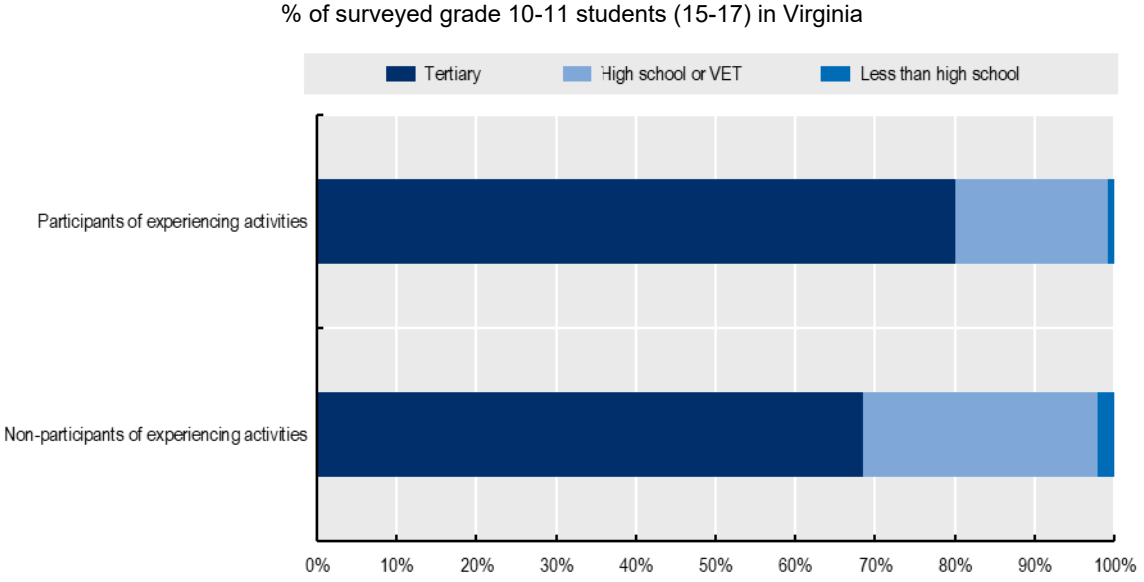
Participation in career experiencing activities of teenage students

Career experiencing activities involve first-hand experiences of workplaces such as part-time work, internships, and volunteering. About half of grade 10-11 students in Virginia engaged in volunteering (54%) or worked occasional informal jobs (48%), similar to the level of volunteering in Lithuania (56%) and of occasional job experience in the United States as a whole (51%), Finland (51%) and Canada (46%) as recorded in the OECD PISA 2018 study. 41% of students in Virginia work outside of school (e.g., a holiday job, part-time work), similar to the US average (42%) and the OECD average (40%).

Those who participated in an internship are less common (11%). Those who worked in a family business (16%) were slightly more common. This is at a similar level to the students' family business experience in Canada (17.5%) and Spain (14%) from OECD PISA 2018 data although they are not directly comparable.

Hughes et al. (2016[5]) concluded that studies on career education broadly support the hypothesis that careers education helps young people to better understand the relationship between educational goals and occupational outcomes, increasing pupil motivation and application. Studies suggest that higher levels of attainment can be expected when young people engage in career development activities, or when such interventions are delivered in specific ways. In fact, Virginia showed this relationship: 80% of participants of experiencing activities expect to complete tertiary education while 68% of non-participants do so. Although this is not a causal relation but an association, those who expect to complete tertiary education are three times more likely to participate in experiencing activities, in reference to those who do not expect to complete high school (without controls) or two times more likely when controlling for gender, socio-economic status, migrant status, race and school region.

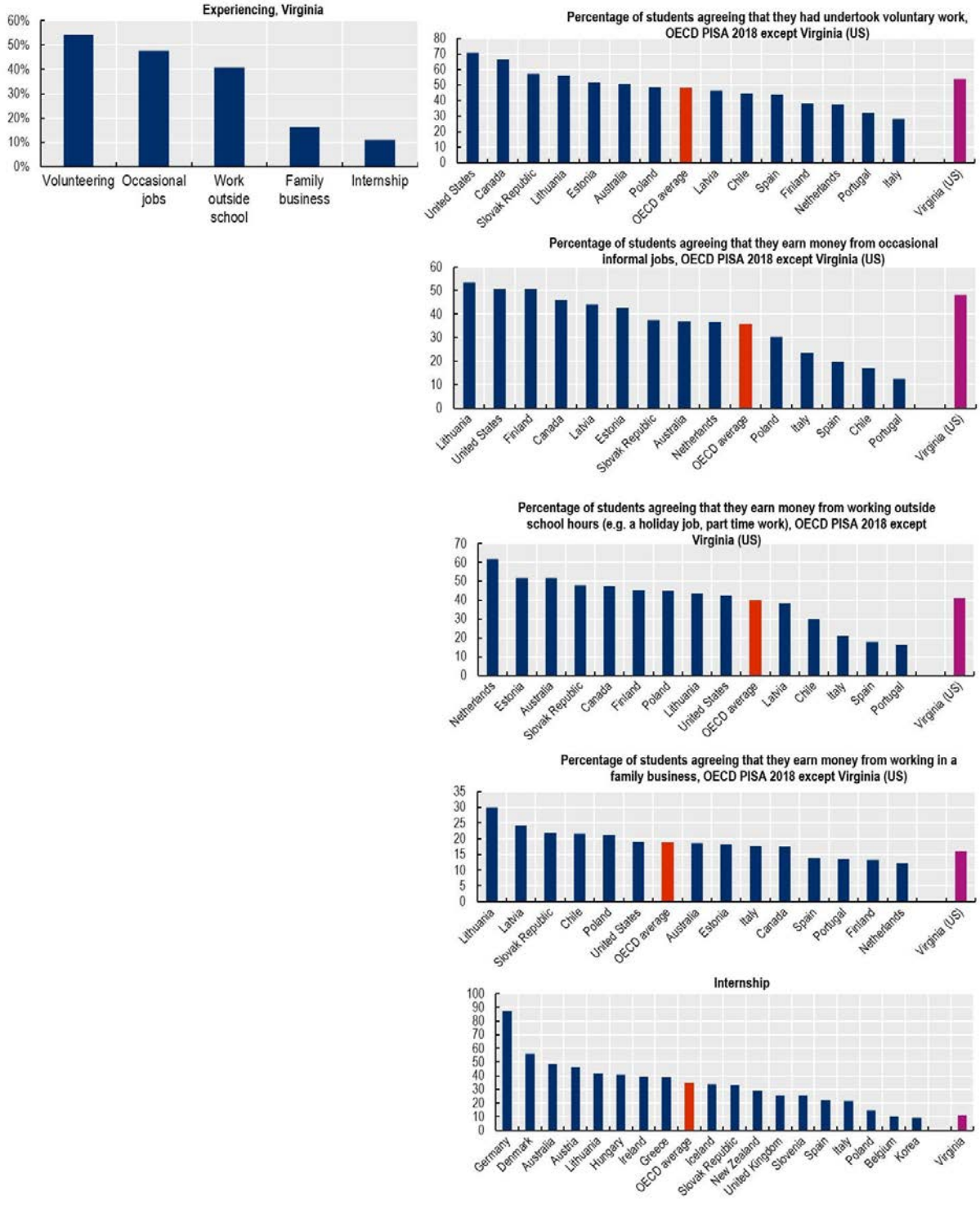
Figure 3.9. Participants of experiencing activities are more likely to expect to complete tertiary education



Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see 0 for details).
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023

Figure 3.10. Career experiencing activities are less common

% of surveyed grade 10-11 students (15-17) in Virginia who participated in career development activities involving workplace participation



Note: The sample of Virginian students includes grade 10-11 students in Virginia who completed the 2023 OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see 0 for details).
Source: OECD PISA 2018; OECD Career Readiness Survey of Teenage Students in Virginia 2023

Career thinking

Clearer career thinking is associated with better employment outcomes

The OECD Career Readiness Indicators highlight four aspects of career thinking that are associated with better employment outcomes typically at the age of 25: career certainty, career ambition, career alignment and instrumental motivation (Covacevich et al., 2021[7]; Covacevich et al., 2021[8]).[1]

- *Career certainty :* The capacity of teenagers to name an occupation in which they expect to work as an adult. No assumptions are made that students will retain the same occupational expectation through their schooling.
- *Career ambition :* The articulation of a managerial (ISCO major category 1), professional (ISCO 2) or associate professional (ISCO 3) occupational expectation. Data also suggest that the expectation of attending tertiary education is also associated with better adult employment outcomes.
- *Career alignment:* The alignment of occupational expectations with educational plans. Poorer adult employment outcomes are commonly observed where teenage ambitions are misaligned, typically so categorised where students plan on working in high-skilled occupations (ISCO 1 and 2), but do not intend to pursue tertiary education which is typically required for entry into such occupations.
- *Instrumental motivation:* The recognition that engagement in schooling will provide long-term extrinsic benefits in employment, typically tested through student responses to such statements as 'Working hard at school will help me get a good job.' or 'School is a waste of time'.

Career uncertainty

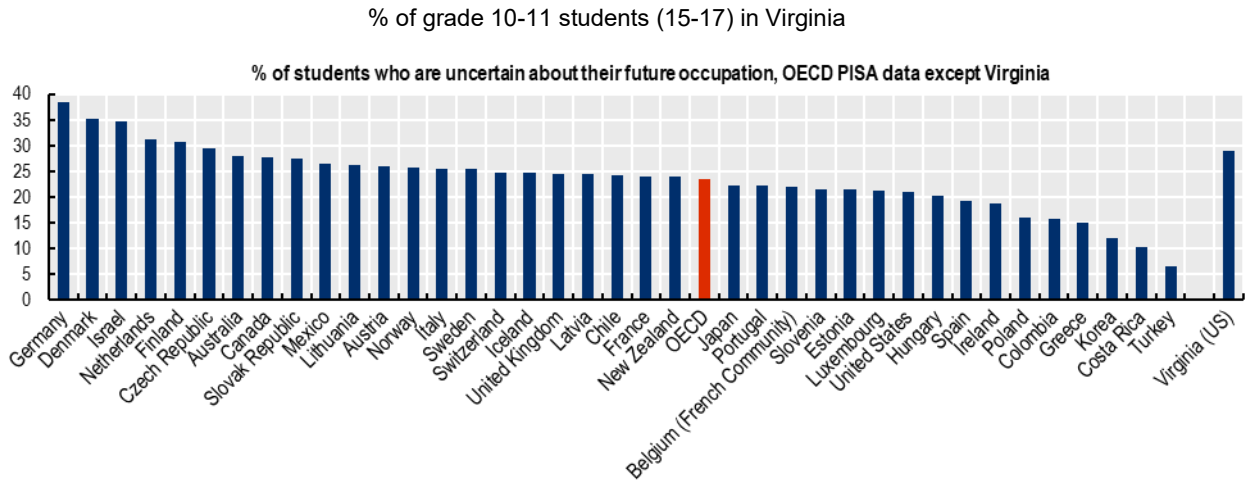
Understanding how to develop career plans and align them with educational plans is one of the goals of career development and planning for Grade 6-8 students in Virginia. It involves: identifying the relationship of course content, educational achievement, and career choices, demonstrating understanding of the education and training needed to achieve career goals, using research skills to locate, evaluate, and interpret career and educational information, and demonstrating awareness of educational, vocational, and technical training opportunities available in high school (VDOE, 2004[9]). The OECD survey shows that many Virginian students are ambitious for their futures, but a sizable proportion demonstrate uncertainty and confusion about what they need to do to achieve their career plans.

Career uncertainty refers to the inability as a teenager to name an expected adult occupation. It is linked with greater difficulty in transitions and is significantly associated with poorer employment outcomes in a number of longitudinal studies reviewed by the OECD. For example, in the United States, analysis of the 2002 Educational Longitudinal Study shows that students who named an occupational expectation at 15 (being classified as career certain) were found to earn 11 percentage more than average at age 25 after statistical controls were used to take account of gender, socio-economic status, academic achievement and other factors that commonly influence employment outcomes. In Canada too, an earnings premium of 6% between certain and uncertain youth has been identified along with lower levels of youth unemployment (career certain youth are 6 percentage points less like to be Not in Education Employment or Training at age 25 associated with ability to name an occupational expectation. Teenage career certainty is also significantly associated with higher life satisfaction in the United Kingdom. However, in Korea career certainty is linked with lower wages at age 25 (Covacevich et al., 2021[8]). Wider studies however also point to teenage career certainty being a frequent predictor of better employment outcomes (Covacevich et al., 2021[7]).

In Virginia, using the 2023 OECD Career Readiness survey, 29% of students were not able to name an occupation in which they expect to work when they become 30 years old, measured in 2-digit ISCO.

Although this is not directly comparable with PISA data, it is similar to Finland (31%), Czech Republic (30%), and Australia (28%) and higher than the figure for the United States (21%).

Figure 3.11. One in three students are uncertain about their future occupation at the age of 30

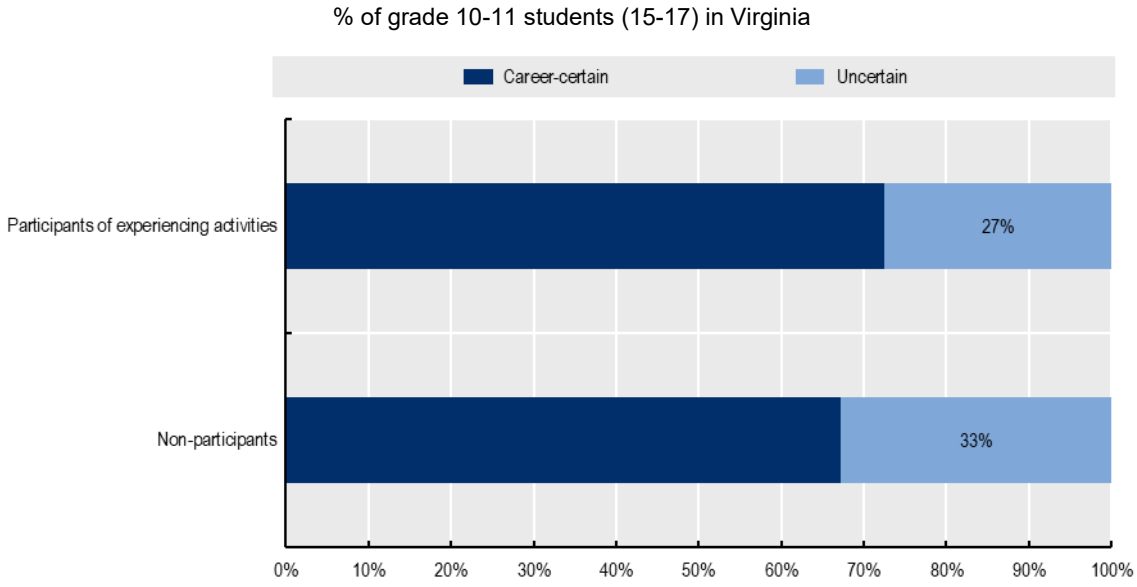


Note: ISCO number refers to 0 Armed Forces Occupations, 1 Managers, 2 Professionals, 3 Technicians and Associate Professionals, 4 Clerical Support Workers, 5 Services And Sales Workers, 6 Skilled Agricultural, Forestry and Fishery Workers, 7 Craft and Related Trades Workers, 8 Plant and Machine Operators and Assemblers, and 9 Elementary Occupations.
The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see 0. for details).
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023 and OECD PISA 2018

Among those who could name one, 81% of career expectation was concentrated in ten 2-digit ISCO groups and 93% was in 15 occupational groups in Virginia. Although this is not comparable with the OECD PISA results, measured in 4-digit ISCO, the Virginia result is fairly high compared to the PISA results: 59% of girls and 47% of boys in the United States plan on working in one of 10 most popular jobs (Mann et al., 2020[10]). However, the patterns of named jobs are similar. For example, the top occupational group in Virginia was health professional (23%) and the two occupations in the US were doctors (15%) and nursing and midwives (6%).

Students in schools described by their principals as offering no formal career guidance were the most likely subgroup of all in PISA 2018 to be uncertain of their career ambitions (Covacevich et al., 2021[8]). In Virginia, the survey data also show that participants of career experiencing activities tend to be less certain about their future job (27%) compared to non-participants (33%).

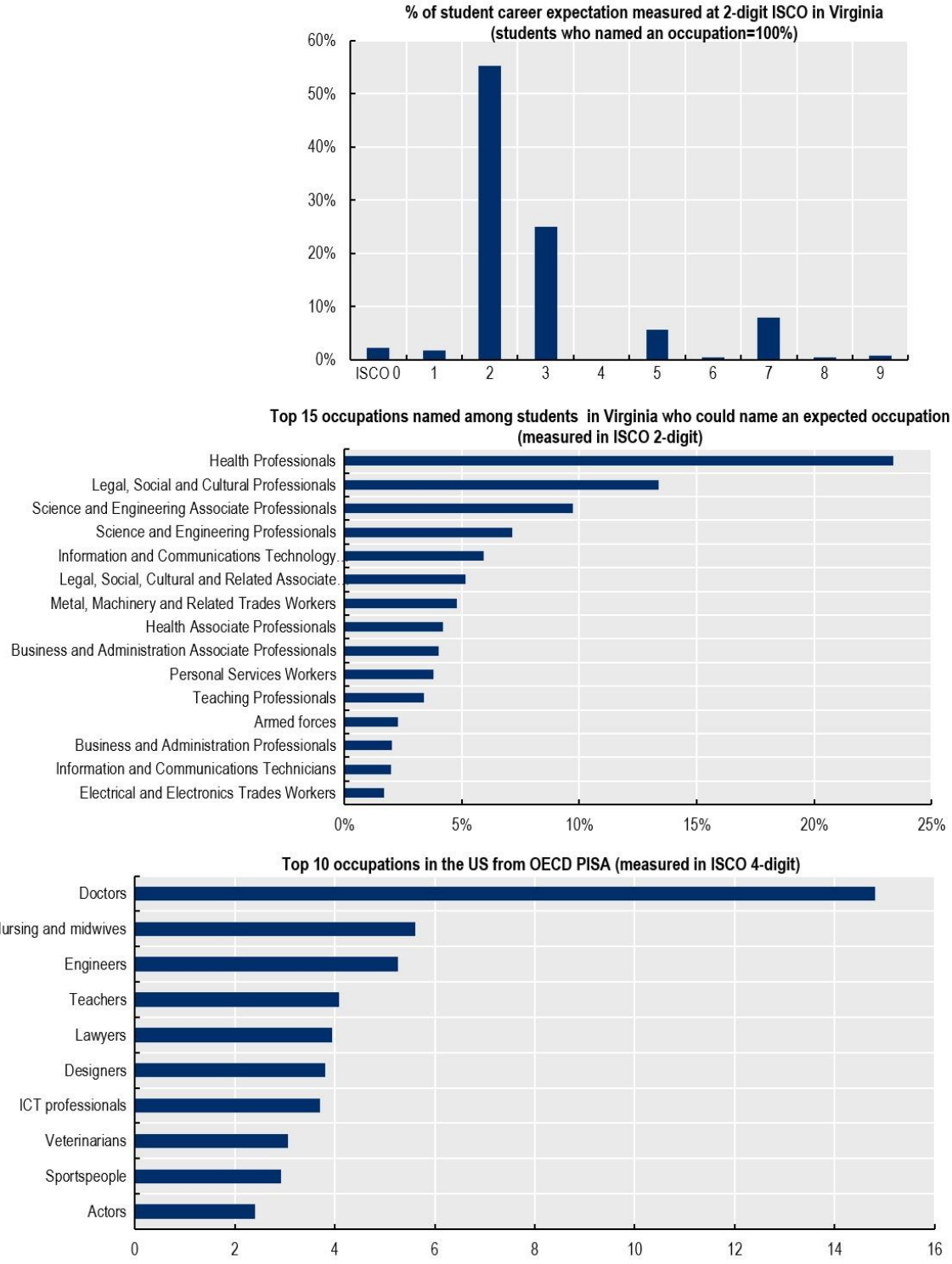
Figure 3.12. Participants of career experiencing activities tend to be less certain about their future job compared to non-participants



Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see 0 for details).
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023

Figure 3.13. Health professional is the most popular occupational group in Virginia as in the US

% of grade 10-11 students (15-17) in Virginia who name an expected occupation at the age of 30



Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see 0 for details).
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023 and OECD PISA 2018

Career ambition and misalignment

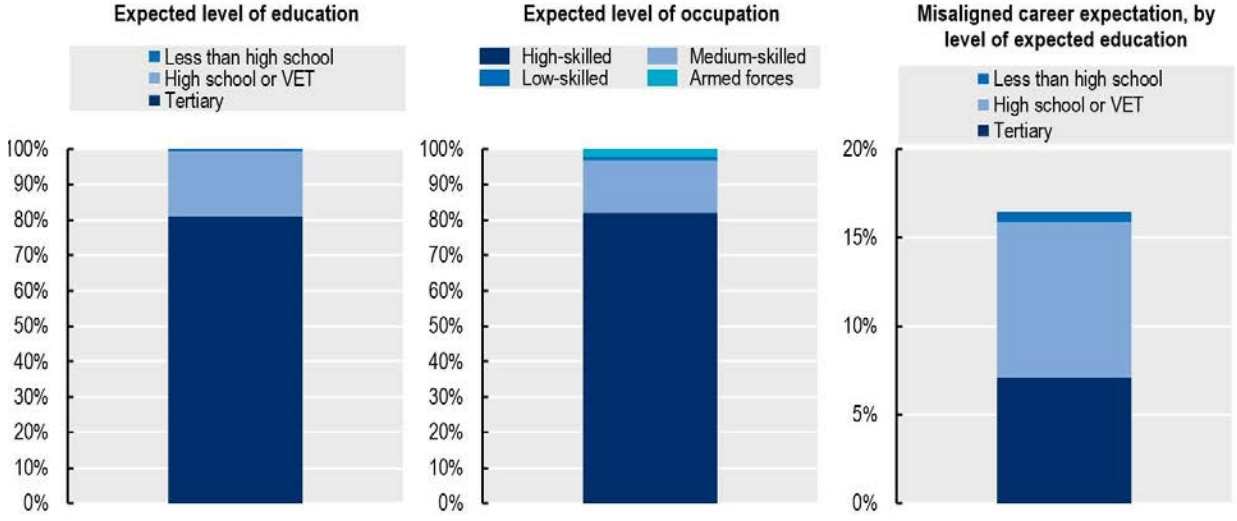
In thinking about futures in employment, ambition and clarity over what is needed to be done to achieve job goals commonly shape better outcomes. Analysis of longitudinal data shows that students expressing the intention of working in a high skilled job, typically classified as a professional or managerial job (major categories 1 and 2 in the International Standardisation Classification of Occupations) can expect to enjoy better employment outcomes, in terms of NEET rates, earnings and job satisfaction than comparable students. Moreover, longitudinal studies show that teenage students whose educational ambitions are aligned with the typical entry-level qualifications demanded of their occupational ambitions can also expect better outcomes (Covacevich et al., 2021[7]).

In PISA through the OECD Career Readiness, the alignment between education and career interest can be measured by student expectation of educational attainment and future employment. For example, in PISA 2018, the majority of American 15-year-olds expect to follow tertiary education (88%), one of the highest proportions across the OECD (average: 68%). Also, the majority of American students named a job within manager or professional categories (70%), one of the highest across OECD countries (62%). With so many young Americans expected to proceed to tertiary education, unsurprisingly only 5% are misaligned in linking education and career interest, the lowest among OECD countries (average: 20%).

Although the national and OECD results from PISA are not directly comparable with the Virginia results due to the time difference between the two surveys, similar patterns are observed when comparing Virginia results with PISA. In Virginia, 78% of students expect to undertake tertiary education and 57% anticipate working in a managerial or professional occupations (ISCO major categories 1 and 2). Both figures are lower than the US average recorded in PISA 2018. The concentration of interests in professional occupations is still very high however – with more than one in two young Virginians expecting to work as a lawyer, teacher, engineer, scientist or other profession.

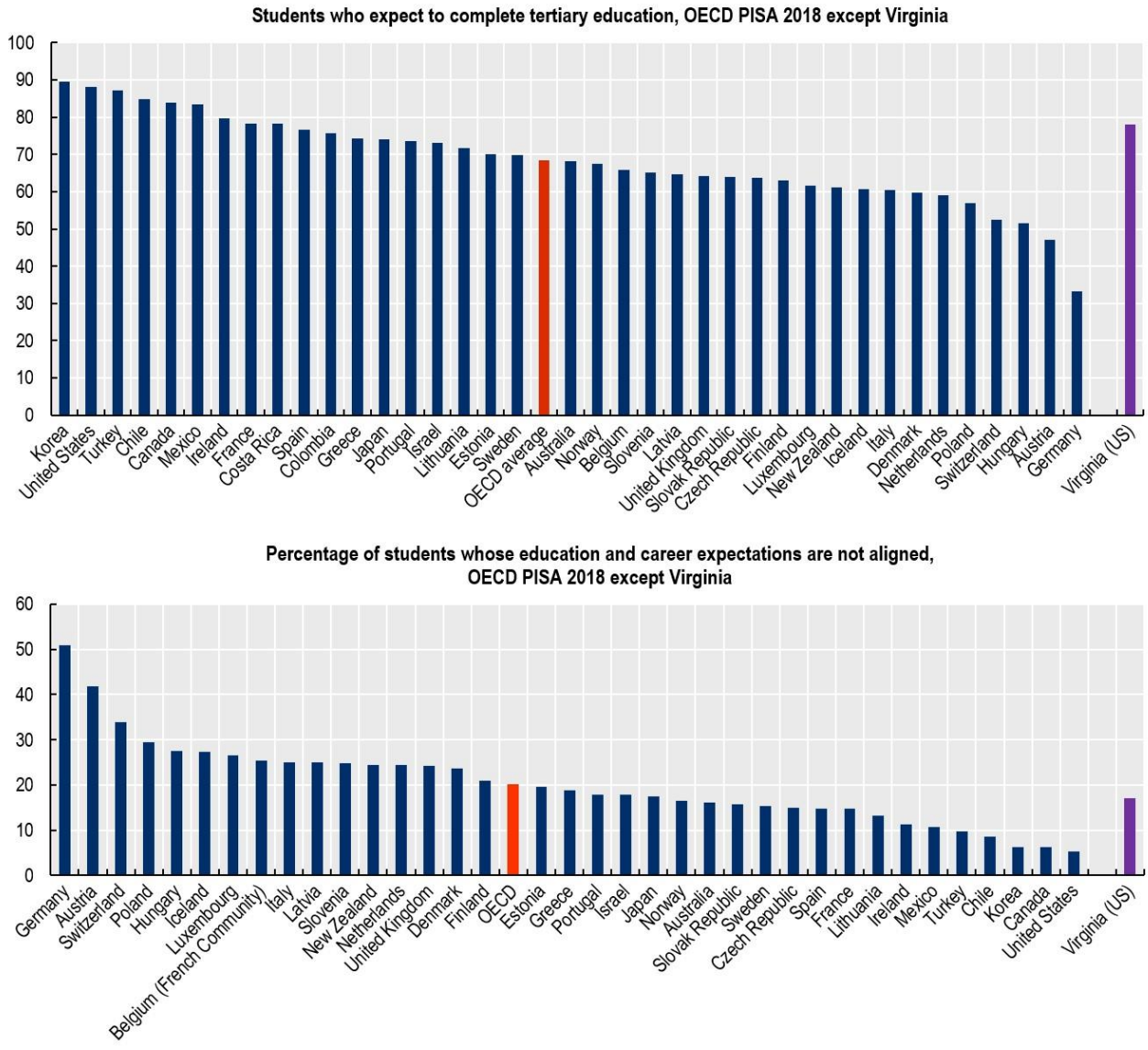
Figure 3.14. While many Virginian students express high levels of career ambition, their education and occupational expectations are often misaligned

% of grade 10-11 students (15-17) in Virginia who named an expected occupation at the age of 30



Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see 0 for details).
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023

Figure 3.15. The majority of Virginian students expect to complete tertiary education, as many as Ireland, France and Costa Rica

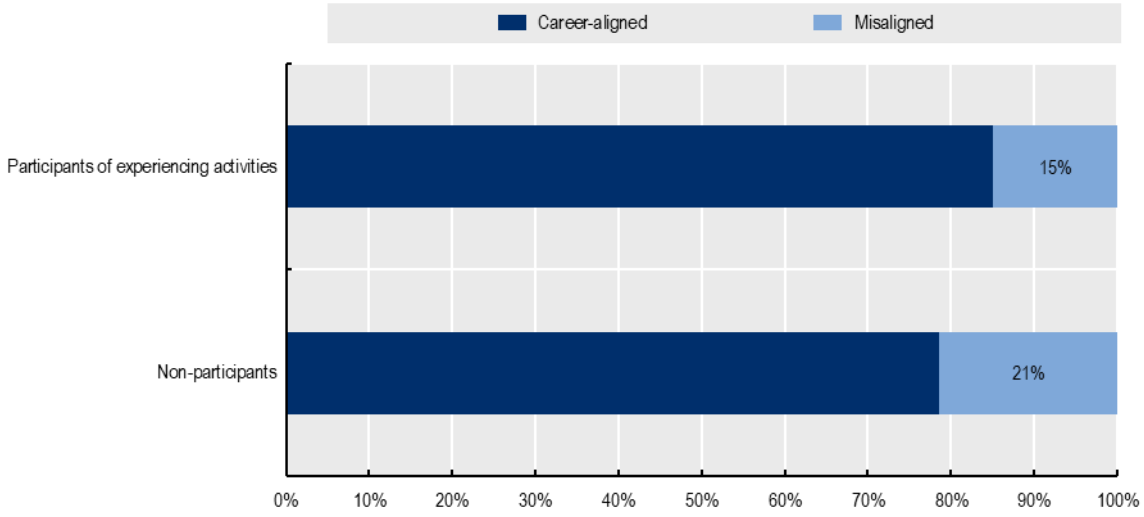


Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see 0 for details).
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023 and OECD PISA 2018.

Similar to career uncertainty, the survey data also show that participants of at least one career experiencing activity tend to be less misaligned compared to non-participants.

Figure 3.16. Fewer participants of career experiencing activities tend to be misaligned compared to non-participants

% of grade 10-11 students (15-17) in Virginia who named an expected occupation at the age of 30



Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see 0 for details).
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023

Instrumental motivation: the perception of school preparing students well for the working world

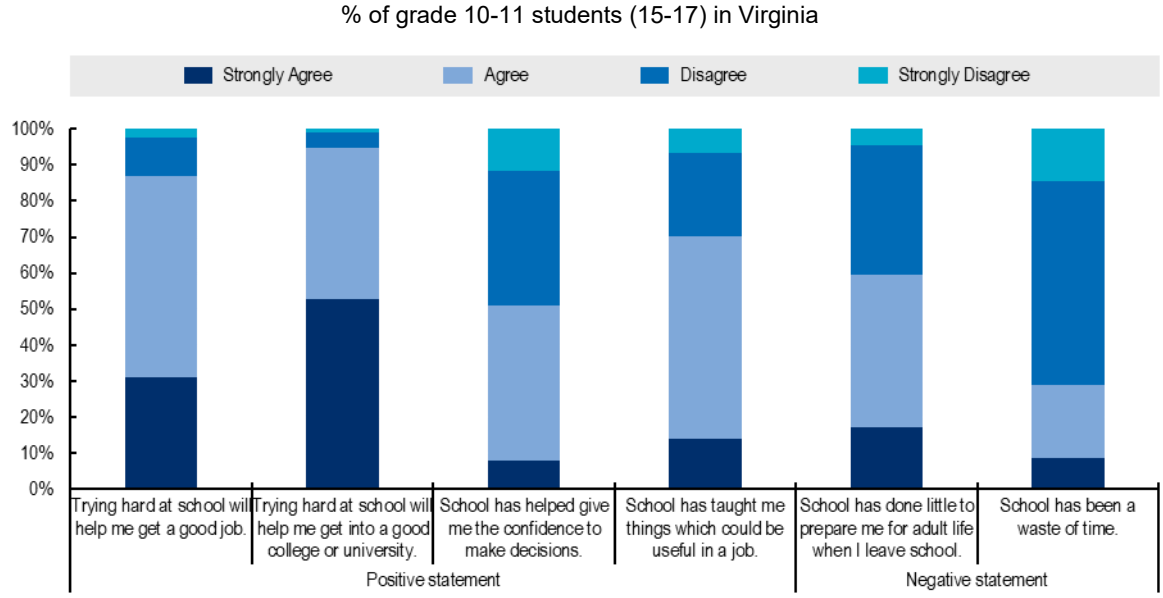
The belief that engagement in schooling will help to secure a successful working life is a form of instrumental motivation. Instrumental motivation describes a situation where a teenage student is able to draw a positive connection between the education they are engaged in and a potential future in work and is also associated with better employment outcomes among young adults (Covacevich et al., 2021[7]). It is tested for by seeing how students respond to survey questions like “Trying hard at school will help we get a good job” and “School is a waste of time”. Evidence from Australia, Canada, Denmark, United Kingdom and the United States illustrates the relationship between better outcomes in employment and such teenage attitudes towards the value of schooling. The 2018 PISA survey shows that most, but by no means all students exhibit such instrumental motivation across OECD countries (OECD, 2021[6]).

The majority of Virginian students in the OECD Career Readiness Survey of Teenage Students agreed that trying hard at school will help them get into a good next step in their careers, but at the same time, they also felt that school had done little to prepare them for adult life.

On average, across participating OECD countries in 2018, 86% of students aged 15-16 agree with the statement that ‘trying hard at school will help me get a good job.’ In the United States, this figure is 90% (OECD, 2021[11]). In Virginia, 87% of teenage respondents agreed with the same statement and more (95%) agreed that it will help them get into a good college or university. 51% agreed that school has helped give them the confidence to make decisions, and more (70%) agreed that school has taught them things which could be useful in a job. Regarding negative statements, almost 60% agreed that school has done little to prepare them for adult life after leaving school. 29% agreed that school has been a waste of time.

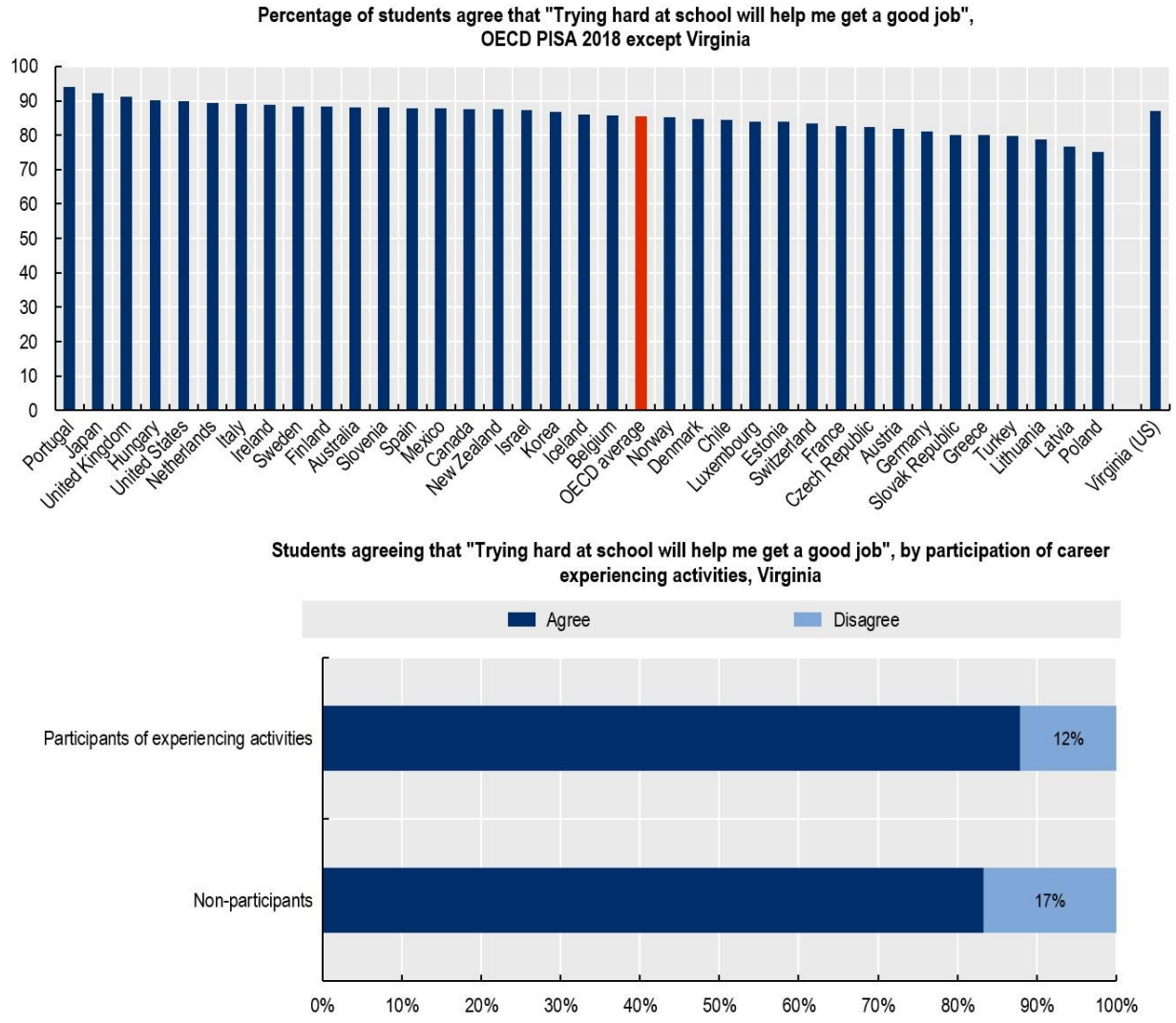
The perception of school tends to be positive among those who expect to complete higher level of education compared to those who expect lower level of education. The perception also tends to be positive among those who have higher school grades compared to those who have lower grades, raising concerns over lower achieving students who can be expected to be leave education and go into the labour market earlier than their peers. These results were similar between grade 10 and 11. Similar to career uncertainty, ambition and misalignment, the survey data also show that participants of career experiencing activities tend to have higher instrumental motivation.

Figure 3.17. The majority of students in Virginia agreed that trying hard at school will help them get into a good next step in their careers, but also that school has done little to prepare them for adult life



Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see 0 for details).
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023

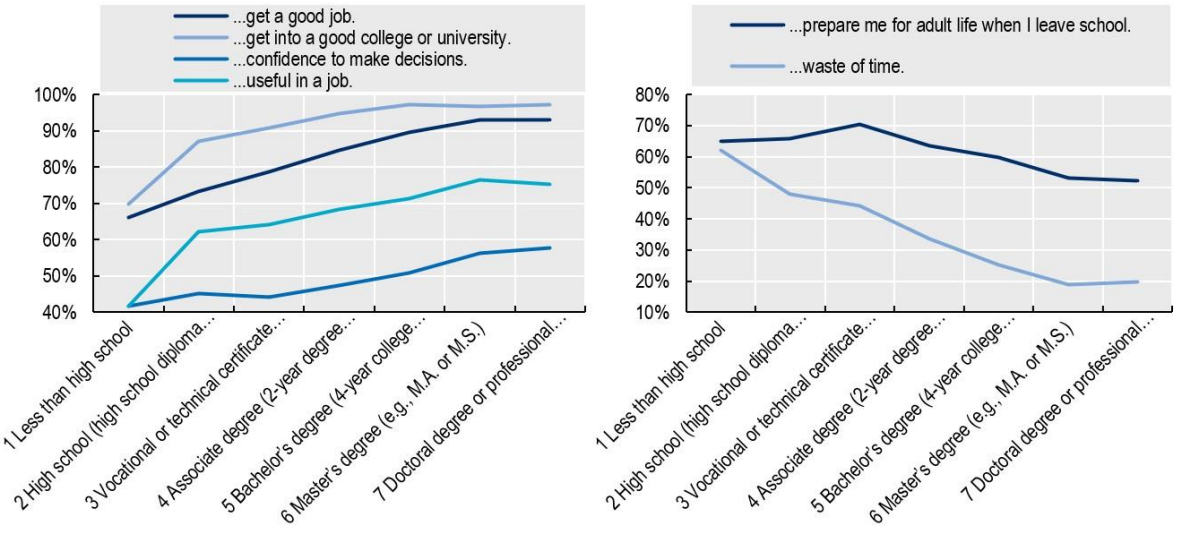
Figure 3.18. The majority of students in Virginia agreed that trying hard at school will help them get into a good job



Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see 0 for details).
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023 and OECD PISA 2018.

Figure 3.19. Perception of school is associated with students' expectation of educational attainment in Virginia

% of grade 10-11 students (15-17) in Virginia who agreed that trying hard at school helped or school helped them the following, by expected level of education



Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see 0 for details).
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023

Students' perception of how well high school is helping them prepare for their future careers was generally positive. This result was in line with that of the young adult survey for the same question, but the positive answer was slightly lower in the student survey than in the young adult survey. In particular, fewer than half of teenage students agreed that school helped them to meet people doing jobs that are relevant to their career ambition (48%).

OECD Career Readiness Survey of Young Adults (19–26-year-olds)

Background information of the Career Readiness Survey of Young Adults

Based on PISA and other relevant questionnaires, the OECD review team in collaboration with Virginia authorities selected and developed 31 survey questions. The survey also drew on questions that had been used in comparable UK studies (Mann and Percy, 2013[3]) (Mann and Percy, 2014[12]) (Mann and Kashefpakdel, 2014[13]) (Jones, Mann and Morris, 2015[14]) (Mann et al., 2017[4]) (Mann, Huddleston and Kashefpakdel, 2019[15]) which have been drawn upon by the UK (England) government in policy development (Department for Education, 2017[16]).

1 123 young adults aged 19–26-year-old in Virginia were asked about their social characteristics, current activities in relation to education and work, perceptions of job security, experience of higher education and/or feelings about college and university (tertiary education), career progress and career focus, and how well they felt their high school had prepared them for their post-high-school experiences. In particular, respondents were asked when they were in high school whether they explored career activities such as school-based career reflection activities, including career questionnaires and career classes, career conversations, engaging with people in work through career talks or job fairs, workplace visits or job shadowing, application and interview skills development activities, or occupationally focused

short programmes. They were also asked to reflect on their time in high school and whether they had experienced activities which enabled first-hand experience of the working world whether through volunteering, internship or part-time jobs (e.g., working outside school hours such as summer job, working in a family business, or working on an informal job like baby-sitting or landscaping).

The data sample used in this report is restricted to young adults who attended a high school in Virginia (unweighted 1100; weighted 977). It also includes young adults who live in Virginia at the time of survey and undertook distance learning or home-schooling during high school time (2% of the sample).

Overview of the survey results

Characteristics of young adults who attended a high school in Virginia

The young adult survey provides rich snapshots about the perception of young adults who attended high school in Virginia on the usefulness of the career readiness system that they experienced while in high school as well as its relation to their early career outcomes (see Early career outcomes linked with high school career development activities). Gender, race/ethnicity, socio-economic status (SES), urbanicity and school region show the key demographic characteristics of young adults, which are further analysed in Chapter 6 of this report.

Among a representative sample of 977 young adults who had attended a high school in Virginia (including a small proportion who were educated through distance learning/home-schooling), about 46% gave their gender as male and 43% as female. The rest of respondents answered ‘other’ or ‘prefer not to say’.

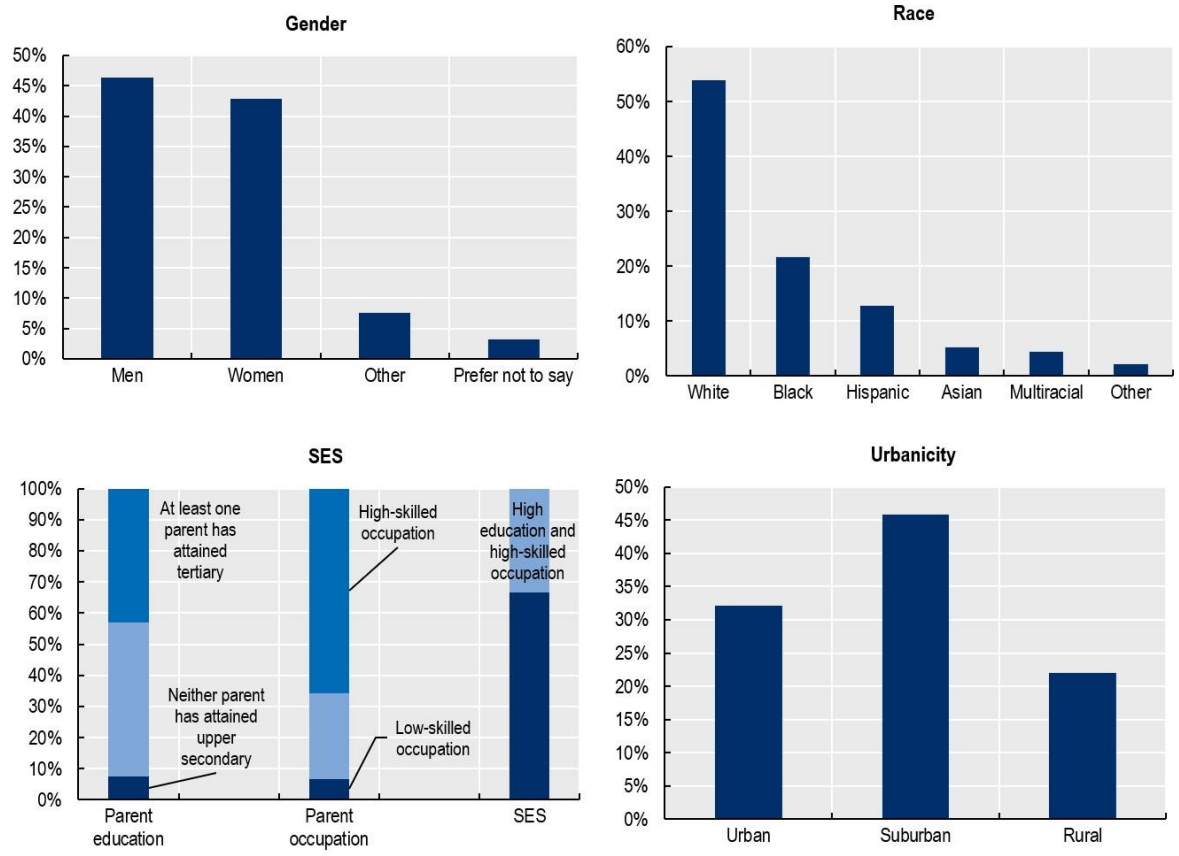
In terms of race/ethnicity, 54% were White, 22% Black, 13% Hispanic and 5% are Asian. While 50% of the sample were White respondents who had attended a public school, White respondents were overrepresented in non-public high schools: 63% of private school graduates were White (3% of the sample) as were 58% of distance learners (0.4% of the sample) and 85% of home-schoolers (1.1% of the sample). About 7% of the sample were foreign-born.

Socio-economic status (SES) is defined by the occupation and educational attainment of respondents’ parents. Respondents were categorised as high SES; if at least one of their parents had attained tertiary education, and at least one parent had a high skilled job (manager, professional or associate professional). The rest of respondents were categorised as low SES. With this indicator (951 representative sample), a third of young adults (33%) were from high SES. Private school graduates tended to have parents with a high-skilled occupation more than public school graduates.

Surveyed young adults were living different areas in terms of urbanity at the time of the survey and attended high school from different regions before the time of the survey. A third (32%) of surveyed young adults were living in an urban area, 22% in a rural area and the remainder (46%) in a suburban area. Private high school graduates were overrepresented in urban areas (43%) and suburban areas (48%) while home-schoolers were mostly in suburban areas (49%) and rural areas (40%). Among the representative sample of 906 young adults who provided information on a high school district, 29% attended high school in Northern Virginia region.

Figure 3.20. Gender, race/ethnicity, socio-economic status and location of the survey respondents

% of surveyed young adults (19-26) who attended a high school in Virginia



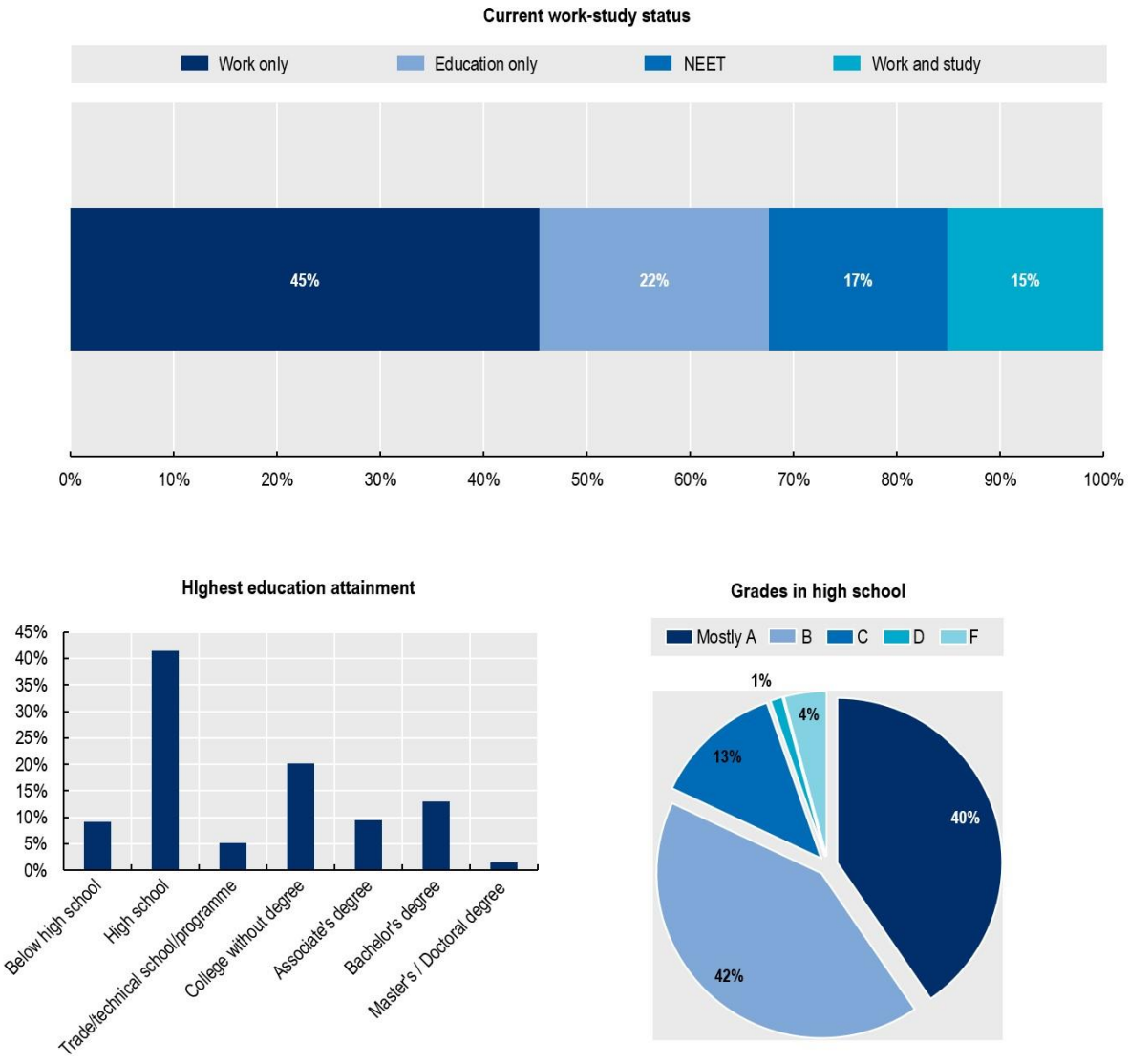
Note: SES measures the percentage of survey respondents who have at least one of their parents having attained tertiary education, and at least one parent having a high skilled job (manager, professional or associate professional) versus the rest.
Source: OECD Career Readiness Survey of Young Adults in Virginia 2023

Among those who had attended a high school in Virginia, about 83% were in work or study at the time of the survey. Of these, 61% were in work and 39% were working full-time. Those who were not in education nor in employment and training (NEET) were about 17%, among which 11% are looking for a job and 6% not.

In terms of their highest education attainment, 41% reported a high school diploma, 5% a formal apprenticeship or a CTE programme, 20% had completed some college work but had not yet completed a degree, and 24% reported a 2 or 4-year degree. 9% had not yet completed high school.

Figure 3.21. Current work-study status, highest education attainment and high school grades of the survey respondents

% of surveyed young adults (19-26) who attended a high school in Virginia

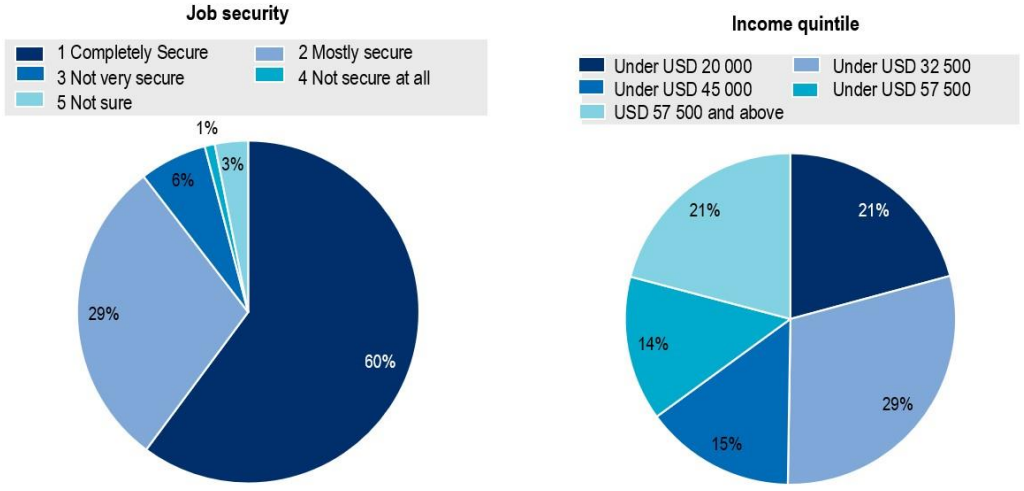


Source: OECD Career Readiness Survey of Young Adults in Virginia 2023

Among those in work (624 young adults), 89% reported that their job was secure: 60% completely secure and 29% mostly secure. Among those who reported their gross pay, half earn less than USD 32 500 and 21% earn greater than USD 57 500.

Figure 3.22. Job security and earning of the survey respondents who are in work

% of surveyed young adults (19-26) who attended a high school in Virginia and are in work at the time of the survey



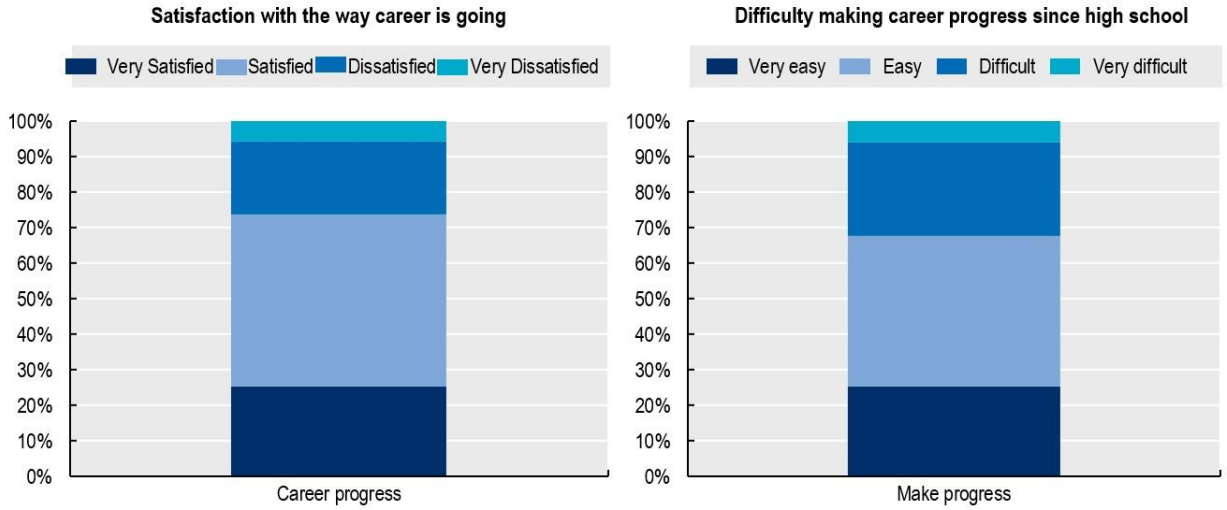
Source: OECD Career Readiness Survey of Young Adults in Virginia 2023

Perception of career progress and satisfaction

The majority of the surveyed young adults who attended high school in Virginia felt satisfied with how career was going and agreed that it had been easy for them to make progress in their education or work since leaving high school. 74% reported 'satisfied' with the way career is going (25% reported very satisfied) and 26% were dissatisfied. In term of making progress in education or work since leaving high school, 67% agreed that it had been easy or very easy while 33% said difficult or very difficult (Figure 3.23).

Figure 3.23. The majority of the surveyed young adults in Virginia feel satisfied with their career progression and easy to make progress since they left high school

% of surveyed young adults (19-26) who attended a high school in Virginia

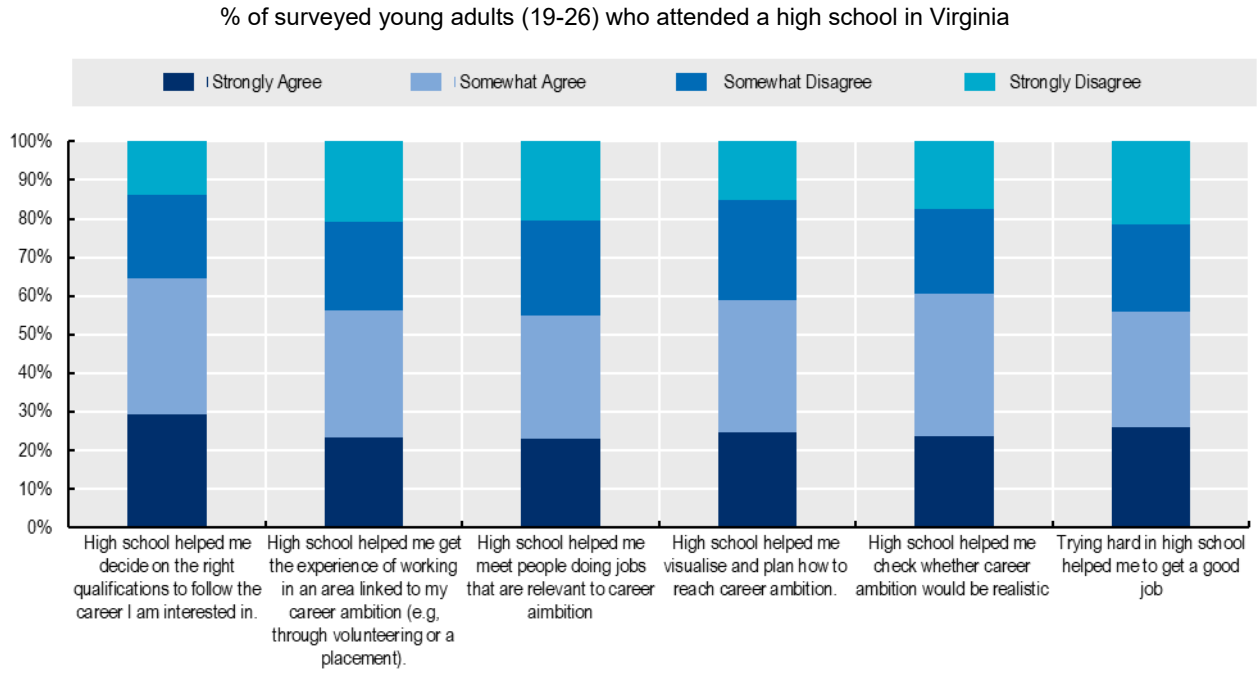


Source: OECD Career Readiness Survey of Young Adults in Virginia 2023

Perception of how helpful high school was for career readiness

Young adults' perception of how well high schools in Virginia had helped them prepare for career transition was generally positive. Two-thirds (65%) agreed that high school had helped them decide on the right qualifications to follow the career they were interested in. About 60% agreed that high school had helped them verify whether their career ambition was realistic, and had helped them visualise and plan how to reach their career ambition (Figure 3.24). In line with this result, 60% said that high school had prepared them for working life somewhat well (42%) or very well (17%). However, across all categories, large minorities of young adults stated that they had felt poorly prepared by their schools.

Figure 3.24. More than half of young adults in Virginia agreed that high school was helpful in preparing their careers



Source: OECD Career Readiness Survey of Young Adults in Virginia 2023

Compared to those who did not have a high school diploma, those who attained a bachelor's degree and above were more likely to report a positive perception of high school helping in deciding on the right qualification and verifying whether their career ambition was realistic. However, compared to those who did not have a high school diploma, those who attained a high school diploma or an associate degree or who attended a college without degree are less likely to report a positive perception of high school helping in getting work experience and in meeting people in work. Female students, students with lower achievement in school and high SES students all reported being less likely to feel a positive perception than their comparable peers. Compared to White respondents, Black respondents are more likely to report a positive perception. Compared to 19-year-olds, older respondents were less likely to report a positive perception, especially 26-year-olds at the time of the survey (see Chapter 6, for further details by gender, race/ethnicity, SES, region and urbanicity).

Participation in career development activities while in high school

The survey asked young adults if they recalled taking part in a range of career development activities while in high school. Based on the OECD Career Readiness Indicators, these activities are categorised by:

- *Career exploration activities:* Career info, Higher education programme info, Questionnaire, Guest speakers, Speaking to teachers, Speaking to school advisor, Touring, How to apply, Job fair, Vocational program, Job shadowing, Worksite visits, Speaking to outside-school advisor (see Figure 3.26, Panel B) as well as learning how to search for job, how to write resume, how to find info, how to prepare for interview, how to find aid info (see Figure 3.26, Panel A).
- *Career experiencing activities:* volunteering, internship and paid part-time job including work outside school hours, family business and occasional informal jobs.

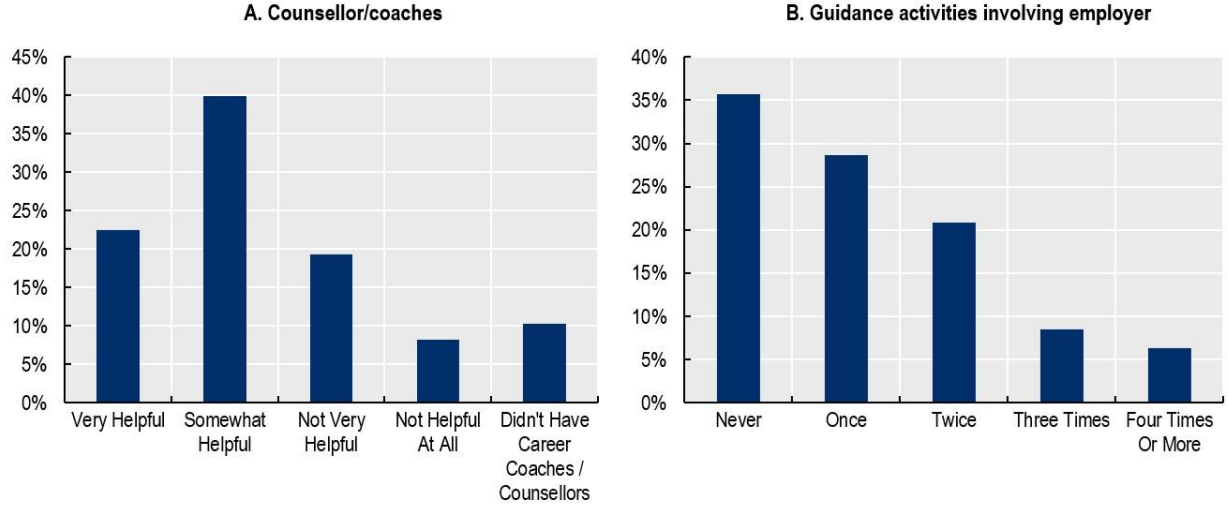
The majority of the surveyed young adults who attended high school in Virginia participated in at least one type of career development activities while in high school, listed above. Almost all (99%) participated in at least one career exploration activity such as learning how to search for job or write a resume. 91% participated in at least one career experiencing activity while in high school. 90% had access to career coaches or counsellors (Figure 3.25, Panel A). This is comparable to the US and OECD average: the vast majority of students in OECD countries (94%) and in the US (97%) attend schools that offer career guidance (OECD, 2020[17]),

Relatively fewer said that they participated in a career exploration activity which allowed them to engage with employment. Such activities include work placements, mentoring, junior achievement, career advice, resume or interview workshops, workplace visits, academic and career planning. More than a third (36%) answered that their high school never arranged for them to take part in any career guidance activities which involved them meeting with employers or local business people. 29% said their high schools did this once, 21% twice; 14% say this took place three (8%) or more (6%) times (Figure 3.25, Panel B).

Moreover, having access to career coaches or counsellors does not tell a full story. While 62% say their school counsellors or career coaches were helpful in helping them make decisions about their post-high-school plans (22% very helpful, 40% somewhat helpful), 29% say they were not helpful (19% not very helpful, 8% not helpful at all). Another 10% say they did not have career coaches or counsellors (Figure 3.25, Panel A).

Figure 3.25. More than a third did not have access to career exploration activities involving employers and more than a tenth to career counsellor or coach

% of surveyed young adults (19-26) who attended a high school in Virginia



Source: OECD Career Readiness Survey of Young Adults in Virginia 2023

Young adults' recollection of teenage career development activities (closely related to "effectiveness")

Participation in career exploration activities while in high school

Almost all young adults who attended in high school in Virginia (99%) participated in a career exploration activity while in high school in one form or other, gaining the opportunity to learn skills relevant to career preparation and exploration. The most common activity was learning how to search for job (85%) and how to write a resueé (85%) and how to find information on jobs of interest (84%).

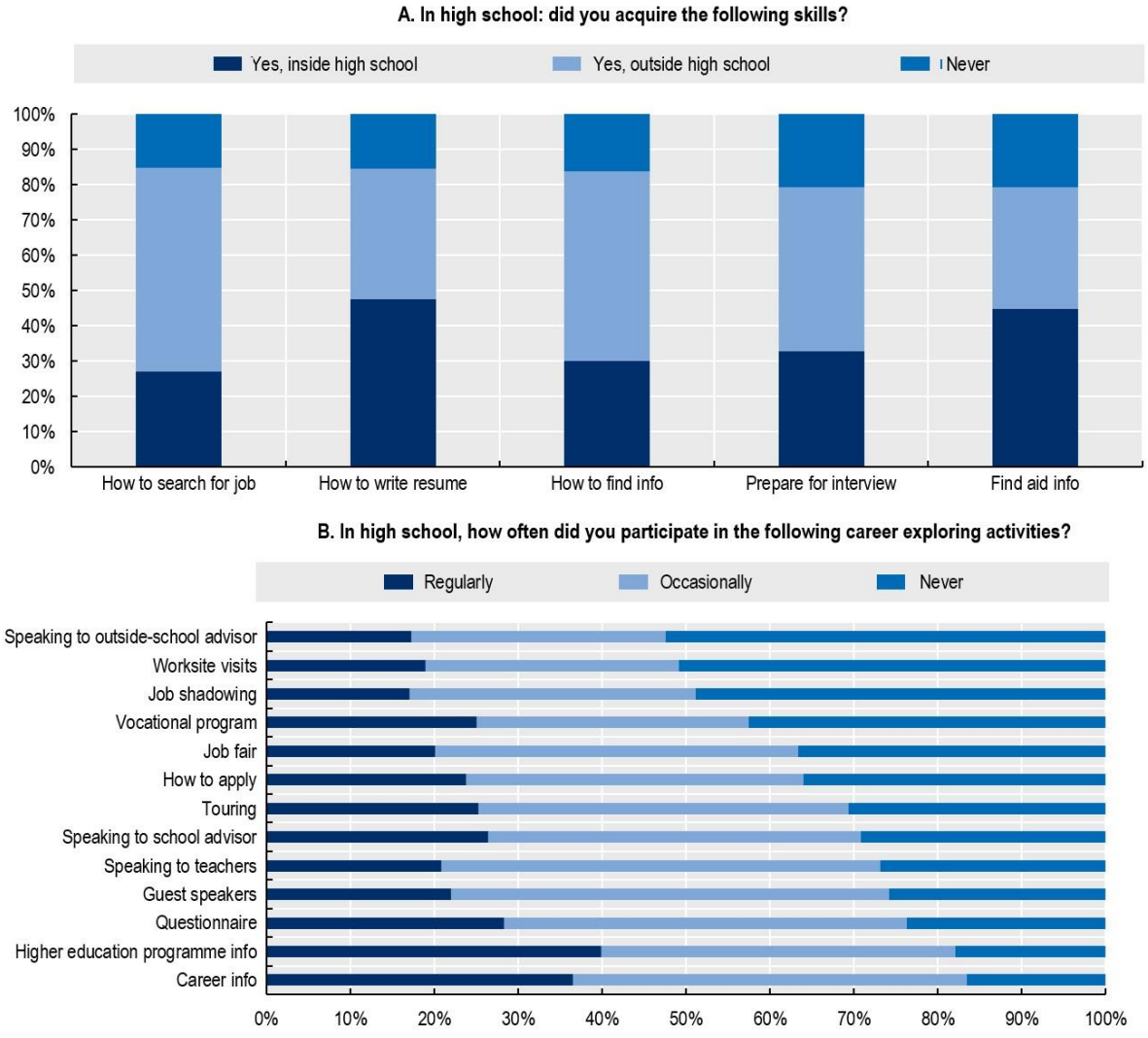
More than half learned outside of high school how to find information on jobs (54%) as well as how to search for a job (58%). Almost half (47%) learned how to prepare for a job interview outside of high school. In contrast, almost half learned in high school how to write a resueé (48%) and how to find student financial aid information (45%) (Figure 3.26, Panel A).

Also common was researching career information, hearing from guest speakers and speaking to a school teacher or career advisor, touring a college or university, learning how to apply for a job, and visiting a job fair. Overall, three quarters (73%) of young adults who attended in high school in Virginia reported that they participated in at least one such activity on a regular basis and 26% occasionally (Figure 3.26, Panel B). However, more than half never spoke to an advisor outside of their school (52%) and never participated in worksite visits (51%). Almost half never participated in a job shadowing activity (49%). The share of respondents who never took part in a vocationally-focused programme was also high (43%); although 33% occasionally did and 25% regularly (Figure 3.26, Panel B).

As noted, older respondents with more experience of the labour market were more likely to report more negative views in relation to school-mediated career preparation. 26-year-olds (9.5% of the sample) reported relatively lower access and more negative views on the utility of school interventions than younger respondents.

Figure 3.26. Participation in career exploration activities while in high school

% of surveyed young adults (19-26) who attended a high school in Virginia



Source: OECD Career Readiness Survey of Young Adults in Virginia 2023

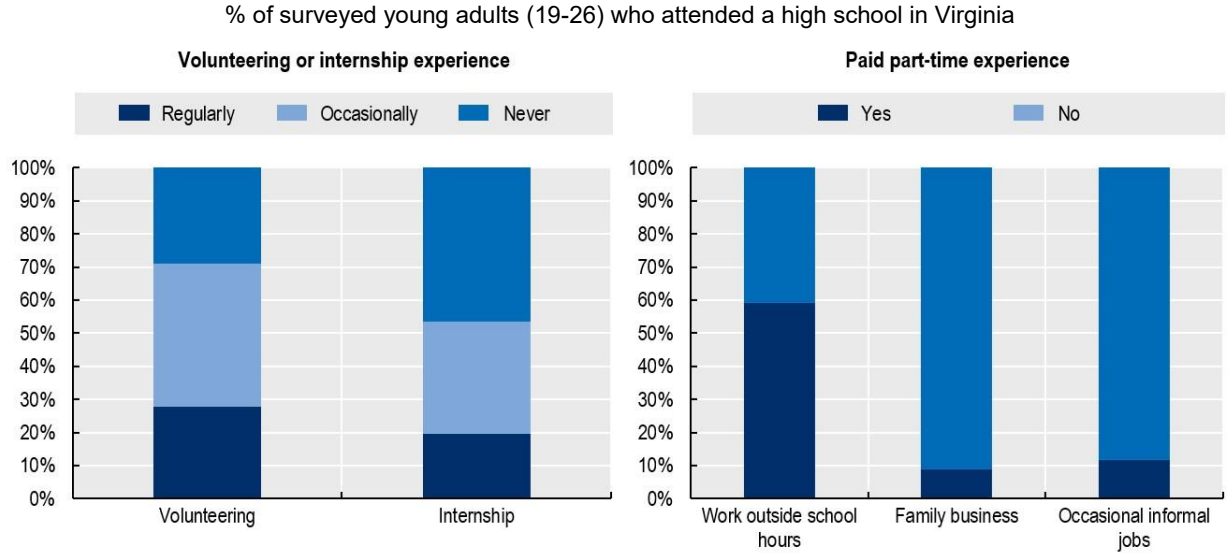
Most young adults in the survey had access to counsellors/coaches while in high school (90%), but not all of them took advantage of high school counsellors/coaches – e.g., 29% never spoke to a career advisor in their school; 27% never spoke with teachers about jobs of interest. One reason might be that they did not find it useful: 27% felt that career coaches or school counsellors in high school were not helpful in making their career decision or achieving their goal, although 62% felt such conversations to be very (22%) or somewhat (40%) useful.

Participation in career experiencing activities while in high school

Career experiencing activities involve first-hand experiences of workplaces such as part-time work, internships, and volunteering. The majority of young adults who attended high school in Virginia engaged in volunteering (71%) or worked part-time (69%) while in high school. Those who participated in an internship or short work placement while high school are less common (54%) than volunteering or part-time work. Those who worked in a family business (9%) and occasional informal jobs (12%) are rare.

Combining all these activities, the majority of young adults (91%) reported that they participated in at least one career experiencing activity while in high school. 74% participated in at least one regular activity, 17% did at least one occasional activity and 9% had no career experiencing activity.

Figure 3.27. Volunteering, internship and paid part-time experience of surveyed young adults



Source: OECD Career Readiness Survey of Young Adults in Virginia 2023

Early career outcomes linked with high school career development activities

Impact of high school career development activities on early careers

Participating in career development activities (CDA) while in high school has a significantly positive impact on young adults' early careers in Virginia, even when controlling for age, highest education attainment, high school grades, gender, socio-economic status based on parent education and occupation, place of birth, race, school region and residency.

Participating regularly in a career exploration activity is associated with positive transition outcomes. Respondents were asked whether they participated in the following activities while in high school on a regular basis: researching career information or higher education programme information, conducting a questionnaire related to their career interest, attending guest speakers' career talks or job fairs, speaking to teachers, school advisor or outside-school advisor, touring a college or university, learning how to apply for a job, and participating in a vocational programme, job shadowing or worksite visit (see Figure 3.26, Panel B).

Compared to those who did not or only occasionally participate in a career exploration activity, those who regularly did are 3.3 times more likely to think that high school was helpful in preparing them for their careers, 2.5 times more likely to be satisfied the way their career is going and 2.5 times more likely to think it had been easy to make career progress. They are also 2.3 times more likely to think that their current was situation useful for the future and 1.8 times more likely to be in employment, education and training than their peers. However, there was no significant difference in earning (Table 3.1).

Regularly participating in a career experiencing activities while in high school is also strongly associated with significantly positive transition outcomes. For example, compared to those who did not or only occasionally participated in volunteering, internship or paid part-time work while in high school, those who

participated regularly are more likely to think that high school was helpful for preparing them for their careers (4.3 times), think that their current situation useful for the future (3.1 times), think it had been easy to make career progress (2.8 times) and be satisfied the way their career is going (2.6 times) (Table 3.1).

In terms of work and study status of young adults, participating in a career experiencing activity while in high school shows significantly positive impact. Compared to those who did not regularly participate in volunteering, internship or paid part-time work, those who did were 3.5 times more likely to be in employment, education or training and 2.2 times more likely to work; If in work, young adults with teenage experience of work are 1.7 times more likely to earn over USD 40 000, and 2 times more likely to have a job that is completely or mostly secure (Table 3.1). In terms of part-time employment, more formal teenage employment is more strongly associated with better outcomes in young adulthood.

Internship appears to be a powerful career development activity. With controls applied, regularly participating in internship results in 4.5 times more likely to be satisfied with their career progression, 4 times more likely to think high school had been useful to them, and 3.5 times more likely to think that it had been easy to progress in their careers. It was also associated with significantly higher odds of having positive perception on their current situation, being in employment, education or training (Table 3.1).

Respondents were also asked whether they had participated in an employer-involving exploration activities such as work placements, mentoring, junior achievement, career advice, resume or interview workshops, workplace visits, academic and career planning (see Figure 3.25, Panel B). Reporting the participation in an employer-involving exploration activity appears to give smaller and narrower impacts compared to the two indicators above but is still associated with positive perception and outcome (Table 3.1).

Table 3.1. Participating in career development activities while in high school has positive impacts on young adults' transition outcomes

Relative likelihood (odds ratio) of young adults who participated in CDA while in high school in reference to those who not, by CDA type

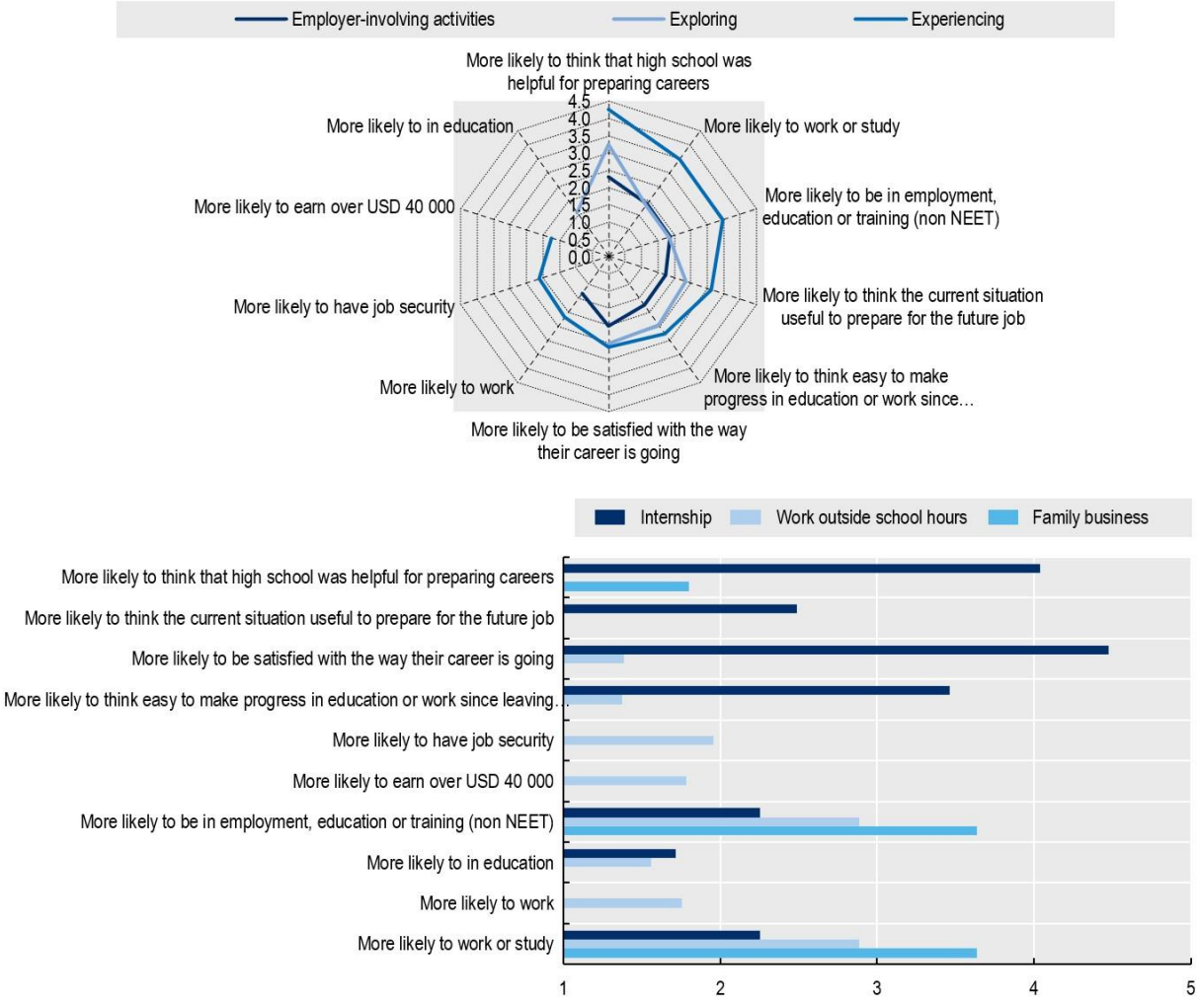
	Regularly exploring	Regularly experiencing	At least one time employer-involving exploration activity	Work outside school hours	Family business	Occasional jobs	Regularly volunteering	Regularly internship
More likely to be in employment, education or training (non NEET)	**1.826*** **	**3.471*** **	**1.869*** **	**2.887*** **	**3.638** **	1.700	**1.507***	**2.256** **
More likely to work	1.095	**2.163** **	**1.314***	**1.757*** **	1.261	**1.772** **	0.904	0.955
More likely to in education	**1.565** **	1.595	1.209	**1.559** **	1.489	0.788	**1.559** **	**1.718*** **
More likely to earn over USD 40 000	0.803	**1.747***	1.109	**1.781*** **	1.198	0.987	**0.487*** **	1.053
More likely to have job security	1.242	**2.107** **	1.375	**1.960*** **	1.235	1.595	1.128	1.061
More likely to think easy to make progress in education or work since leaving high school	**2.465*** **	**2.762*** **	**1.742*** **	**1.377***	1.033	0.953	**1.793** **	**3.464*** **
More likely to be satisfied with the way their career is going	**2.523*** **	**2.611*** **	**2.005*** **	**1.388***	1.457	1.237	**2.361*** **	**4.474*** **

More likely to think the current situation useful to prepare for the future job	**2.340*** **	**3.123*** **	**1.725** **	1.204	1.086	1.641	**2.950*** **	**2.490** *
More likely to think that high school was helpful for preparing careers	**3.252*** **	**4.252*** **	**2.304*** **	1.189	**1.800** **	0.742	**2.430*** **	**4.038*** **

Note: CDA refers to career development activities. Statistical significance was marked as *** p<0.01, ** p<0.05, * p<0.1. This analysis controls for age, highest education attainment, high school grades, gender, socio-economic status based on parent education and occupation, place of birth, race/ethnicity, urbanicity and school region. Career exploration activities include those who regularly participated, while in high school, in career info, higher education programme info, questionnaire, guest speakers, speaking to teachers, speaking to school advisor, touring, how to apply, job fair, vocational program, job shadowing, worksite visits, speaking to outside-school advisor (see Figure 3.26, Panel B). Career experiencing activities include those who regularly participated, while in high school, in volunteering, internship, paid part-time job outside school hours, work in a family business and occasional work.
Source: OECD Career Readiness Survey of Young Adults in Virginia 2023

Figure 3.28. Participating regularly in career experiencing activities while in high school, in particular internship, has positive impacts on young adults' transition outcomes

Relative likelihood (odds ratio) of young adults who participated regularly in CDA while in high school in reference to those who not, by CDA type



Source: Table 3.1

The intensity and combination of CDA also shows difference in the transition outcomes. Compared to those who did not participate in any CDA or only occasionally exploring or experiencing activities, those who regularly participated in either exploring or experiencing activities are more likely to have positive outcomes such as working or studying rather than being NEET (2.7 times), thinking it had been easy to make career progress (3.1 times), being satisfied with their careers (2.2 times), think their current situation useful for their future (2.1 times) and think that high school had been helpful for preparing for the world of work (5.3 times). When comparing those who regularly participated in both exploration and experiencing activities with their peers, they are 2.4 times more likely to be in work or study, and if in work, 1.5 times more likely to have job security. Perceptions of career progress and the usefulness of high school were also more likely to be positive. It should be noted however that given the small proportion (6%) of young adults who recalled none or only occasional engagement in exploring or experiencing activities, this analysis should be treated with caution.

Table 3.2. The intensity and combination of CDA shows more positive transition outcomes

Relative likelihood (odds ratio) of young adults who participated in CDA while in high school in reference to other groups, by the intensity and combination of CDA type

Those who regularly participated in…	Either exploring or experiencing activities (94%) *versus* none or only occasionally exploring and experiencing (6%)	Both exploring and experiencing activities (69%) *versus* none or either one not regularly (31%)
More likely to: be in employment, education or training (non NEET)	**2.735*** **	**2.351*** **
Work	**1.504***	**1.339***
be in education	1.69	**1.598*** **
earn over USD 40 000	1.379	0.916
have job security	1.574	**1.466***
think easy to make progress in education or work since leaving high school	**3.109*** **	**2.634*** **
be satisfied with the way their career is going	**2.218** **	**2.925*** **
think the current situation useful to prepare for the future job	**2.130*** **	**3.082*** **
to think that high school was helpful for preparing careers	**5.253*** **	**3.568*** **

Note: CDA refers to career development activities. Statistical significance was marked as *** p<0.01, ** p<0.05, * p<0.1. This analysis controls for age, highest education attainment, high school grades, gender, socio-economic status based on parent education and occupation, place of birth, race/ethnicity and school region. Career exploration activities include those who regularly participated, while in high school, in career info, higher education programme info, questionnaire, guest speakers, speaking to teachers, speaking to school advisor, touring, how to apply, job fair, vocational program, job shadowing, worksite visits, speaking to outside-school advisor (see Figure 3.26, Panel B). Career experiencing activities include those who regularly participated, while in high school, in volunteering, internship, paid part-time job outside school hours, work in a family business and occasional work.
Source: OECD Career Readiness Survey of Young Adults in Virginia 2023

Transition to tertiary education

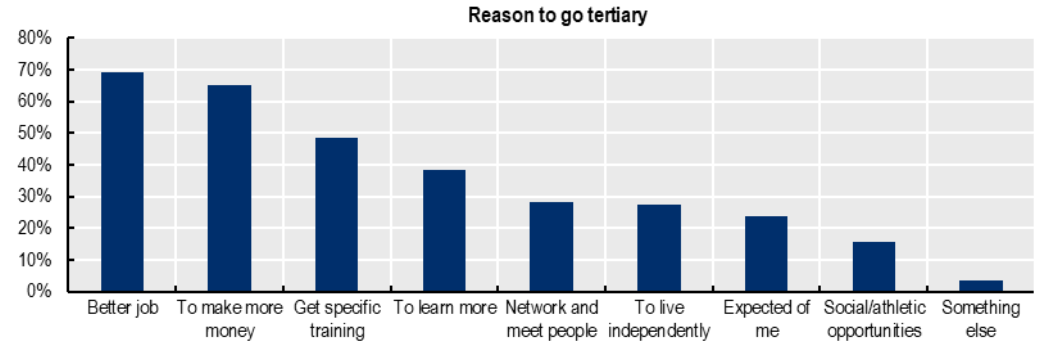
Among those surveyed young adults who attended high school in Virginia, 35% started and were still in a post-secondary tertiary programme or had completed it, 25% had started a college or university programme but dropped out, and 40% had never started such provision. Of those who started a 2 or 4-year college or university programme (i.e., the first two categories), 42% dropped out.

For those who were enrolled in a tertiary education institution, the most important reason for attending a college or university was related to careers (Figure 3.29): 69% wanted to be able to get a better job, 65% were interested in making more money and 49% wanted to get specific training for a specific career. Among other reasons, 38% wanted to learn more about topics that interested them and 24% that they were doing something that was expected of them – more common among Latinos than other groups.

Among those who entered a tertiary education but dropped out, the most important reason given was that they got a job (41%), followed by 'could not afford to continue' (26%). Some dropped out because they were unsure about future (23%) or their studies (19%). There are also other reasons such as health or other personal issues (17%) or too stressful (13%) (Figure 3.30).

Figure 3.29. The most important reason to go to tertiary is to get a better job

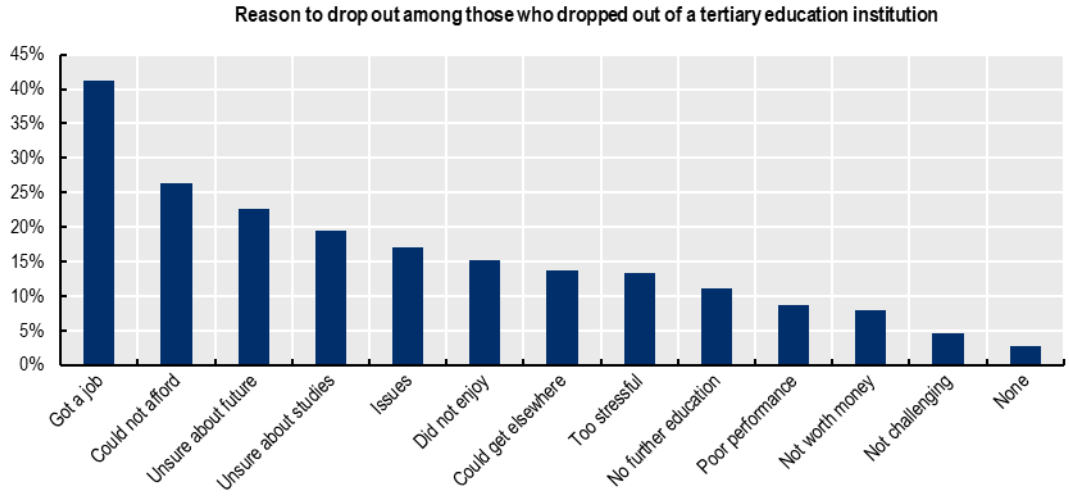
% of surveyed young adults (19-26) who started a college programme and are still studying or have completed



Source: OECD Career Readiness Survey of Young Adults in Virginia 2023

Figure 3.30. The most important reason to dropout of tertiary education is getting a job

% of surveyed young adults (19-26) who started college or university programme and dropped out



Source: OECD Career Readiness Survey of Young Adults in Virginia 2023

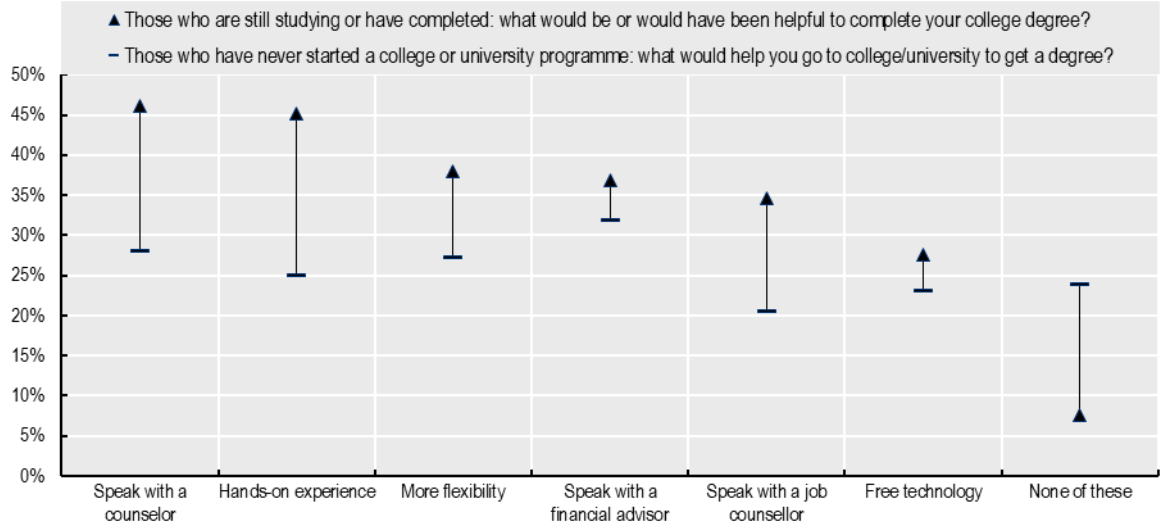
A large majority of young adults who **never started** a college or university programme agree that speaking with financial advisor, counsellor or job counsellor would help them to enrol in higher education: 32% say it would be helpful to speak with a financial or college advisor to help find opportunities for financial aid, scholarships, childcare, and help with questions about money and life management. 28% say speaking with a counsellor to help them figure out what to study, select their classes, and make sure they meet the requirements of their major would be helpful. 21% would find value in speaking with a job counsellor who will help them make connections in their chosen field, prepare for interviews, and help find the job they are looking for (Figure 3.31). Also, more flexibility in programmes to fit their lives (27%) and having

opportunities to get real-world, hands-on experience while in school (25%) and accessing free technology, such as a laptop and internet access, when enrolling (23%) could attract these people to tertiary education programmes (Figure 3.31).

Those who are **still in a college** or university programme or completed the programmes agree that speaking with financial advisor (37%), counsellor (46%) or job counsellor (35%) would be or would have been helpful to complete a degree – the perception of such needs appears to be stronger than among those who never started post-secondary education (Figure 3.31). 45% say having opportunities to get real-world, hands-on experience while in school (45%) would be or would have been helpful to complete their tertiary programme. More flexibility in programmes to fit their lives (38%) and accessing free technology, such as a laptop and internet access, when enrolling (28%) would be or would have been helpful to complete their tertiary education programmes (Figure 3.31).

Figure 3.31. Speaking with financial advisor or counsellor could help more young people start tertiary education while speaking with counsellor and more hands-on experience while in school would be or would have been helpful for young people to complete tertiary education

% of surveyed young adults (19-26) who attended high school in Virginia



Source: OECD Career Readiness Survey of Young Adults in Virginia 2023

Impact of high school career development activities on tertiary education completion

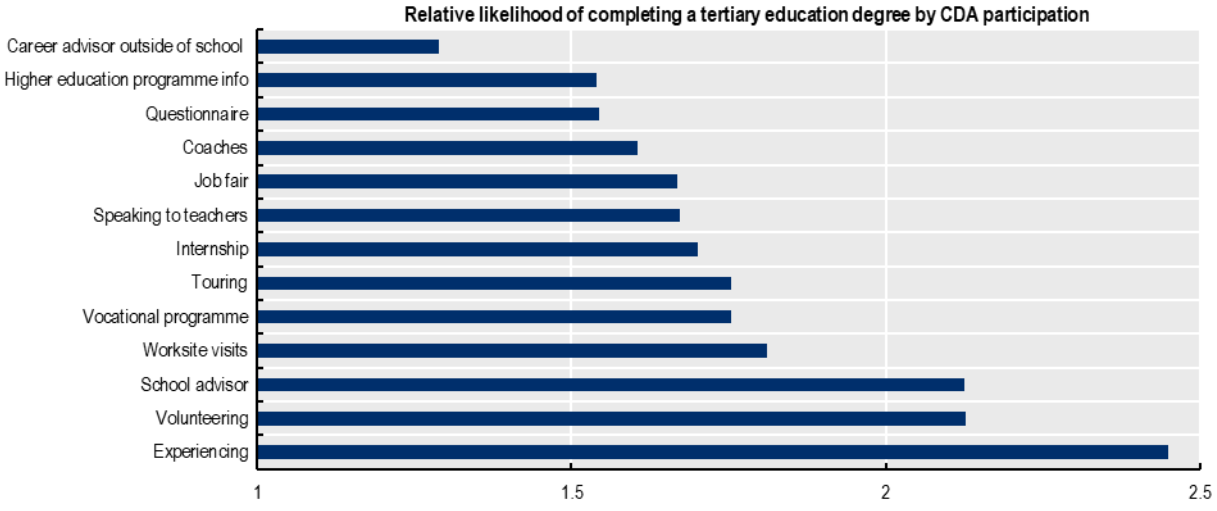
Using the young adult survey in Virginia, the most impactful factors related to tertiary education dropout appear to be SES, race, and full-time employment. This result is in line with other findings such as reasons to go to tertiary education and reasons to dropout, which is mainly related to getting a job (see Figure 3.29, Figure 3.30). Tertiary incompletion rates vary by student characteristics. Incompletion rates for Hispanic and Black young adults were 2-3 times greater than White young adults. Incompletion rates for young adults from low SES were 1.6-2 times greater than those from high SES. Although the precise magnitude of these impacts differs depending on the specification of statistical models, the results were always significant.

However, compared to those who did not have career coaches or school counsellors in high school, those who reported that coaches and counsellors were not very helpful in making decisions and achieving career goal were 3.4 times more likely to dropout a college or university. This highlights the importance of the quality of career guidance provision.

While the effect of participating in a high school CDA to drop out is found unclear, its effect to tertiary education completion was significantly positive. Participating in volunteering, internship or paid part-time was related to 2.5 times higher likelihood of having a tertiary education degree, even after controlling for age and other characteristics. Volunteering alone was 2.1 times higher likelihood, so does speaking to a school advisor. Worksite visits, vocational programme, touring a college or university, internship, speaking to teachers or coaches, job fair, questionnaire, higher education programme information were also related to a positive effect on tertiary education completion (Figure 3.32, Panel B). This analysis controls for a wide range of student characteristics, including geographic variation theme which is explored in more detail in Theme 3, Chapter 6 of this report.

Figure 3.32. Likelihood of higher education completion by participation in high school CDA, by type

Relative likelihood (odds ratio) of those who participated in a career development activity while in high school in reference to those who did not participate



Note: Only statistically significant results are presented. The analysis takes into account age, high school grades, gender, socio-economic status based on parent education and occupation, place of birth, race, full-time employment, school region and urbanicity.
Source: OECD Career Readiness Survey of Young Adults in Virginia 2023

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Note

[1] In addition, analyses of longitudinal data point towards better employment outcomes being associated with more original teenage occupational expectations at 15. However, data are less conclusive (Covacevich et al., 2021[7]).

Annex 2.A. Technical notes about the two surveys

Survey of students in grade 10-11

In collaboration with the OECD and the Virginia Department of Education (VDOE), VEDP/VOEE conducted a survey of grade 10 and 11 students in Virginia in March-May 2023. Each question in the survey was designed to be mandatory. If students were not in grade 10 or 11, the survey was not completed nor added into the database. The survey platform used was Qualtrics.

Virginia public school divisions and schools are divided into eight regions (Virginia Public School Listing by Region). The target high schools for the survey were selected from each of these regions, i.e., two largest and two smallest high schools in each region in addition to three or four mid-sized high schools from each region. For example, eight high schools were selected from Central Virginia (Region 1); seven high schools were selected from each of the other seven regions. The target sample was 57 high schools, most of which serve grades 8/9 to 12.

Over 13 000 students accessed the survey, and out of those 11 115 students completed it. Three schools (mid and large size) were excluded: these schools had fewer than 12 respondents and fewer than 2% of the estimated number of grade 10-11 students. After exclusions, there were 11 088 respondents from 46 schools: each school had a minimum of 22 respondents or 14% student participation. A simple weight was then applied to match the distribution of the respondents by region to that of the sampled population by region, i.e., post-stratification (see Annex Table A.1. below). For the analysis, in order to optimise the comparison with the PISA data, the OECD used a subsample of students in grade 10 (6 152 students) and grade 11 (3181 students) who were born in 2006-08 for a final total of 9 333 (9 353 with weight).

Annex Table A.1. Representative weight by school region

School region	Number of respondents	% of respondents	Number of surveyed schools	Estimated number of students in sampled schools	Estimated % of students in sampled schools	Number of sampled schools	Weight
	(1)	(2)	(3)	(4)	(5)	(6)	(5)/(2)
1	1 437	13.0	7	4 942	15.4	8	1.186051
2	2 473	22.3	6	4 904	15.3	7	0.683922
3	2 370	21.4	7	4 416	13.7	7	0.642659
4	1 259	11.4	5	6 827	21.2	7	1.870853
5	946	8.5	5	3 455	10.7	7	1.259809
6	1 393	12.6	6	3 512	10.9	7	0.869702
7	708	6.4	6	1 876	5.8	7	0.912897
8	502	4.5	4	2 221	6.9	7	1.524608
Total	11 088	100	46	32 151	100	57	

Note: The estimated number of sampled students is the number of students in grade 9-12 divided by two, assuming that each grade has the equal number of students in each school.
Source: OECD Career Readiness Survey of Teenage Students in Virginia; Estimated number of students in sampled schools, provided by VDOE and VOEE.

Survey of 19–26-year-olds

On behalf of the OECD, SurveyUSA conducted a survey of 1 100 young adults aged 19-26 in Virginia in January 2023. Topics included respondents' current activities, job security, college experience and/or feelings about college, career progress, parental education and career focus, and how well their high school prepared them for their post-high-school experiences. SurveyUSA interviewed respondents online, among a representative cross-section of Virginia 19–26-year-olds using sample provided by Lucid Holdings LLC of New Orleans. Online respondents are drawn from a large poll of pre-recruited, cross-section of adults and interviewed via visual questionnaires displayed on respondents' smart phones or other electronic devices. Results were weighted to US Census-derived targets for gender, age, and race/ethnicity in Virginia.

OECD review team further restricted the weighted sample to 977 young adults, based on the high school information, to exclude young adults who attended a high school outside of Virginia. This did not affect the representativeness in terms of gender, age and race/ethnicity.

The survey results include percentage, percentage point difference and odds ratio of those who participated in career development activities (employer-involving, exploration and experiencing activities) while in high school in reference to those who did not. Odds ratios were calculated through logistic regressions to see the relative likelihood of young adults who participated in career development activities in reference to non-participants in terms of transition outcomes. In the regression, the number of unweighted observations was 918 (weighted 882). Statistical significance levels are marked as *** $p<0.01$, ** $p<0.05$, * $p<0.1$. Career exploring activities include those who regularly participated, while in high school, in career info, higher education programme info, questionnaire, guest speakers, speaking to teachers, speaking to school advisor, touring, how to apply, job fair, vocational program, job shadowing, worksite visits, speaking to outside-school advisor. Career experiencing activities include those who regularly participated, while in high school, in volunteering, internship, paid part-time job outside school hours, work in a family business and occasional work.

Part II Key Recommendations

Chapter 4. Theme 1: Effective career readiness: Providing high-quality career development activities in Virginia

This chapter assesses the effectiveness dimension of the career readiness system in Virginia, the United States. It presents Virginia's strengths and explores its challenges, concluding with a set of policy recommendations to more effectively provide high-quality career development activities.
The chapter integrates and builds upon data analysis from Chapter 3, which presents the results of the OECD Career Readiness Survey of Young Adults (aged 19-26) and Teenagers (aged 15-16). It focuses on the gaps in provision of career development activities in Virginia and provides examples of practices from other jurisdictions that can help address those gaps.

Key recommendations for an effective career readiness system: Providing high-quality career development activities in Virginia

Career readiness is a key policy agenda for Virginia, and the state has made visible efforts in many policy fields to support and strengthen the career readiness of students. In line with this, the OECD Career Readiness Survey of Young Adults in Virginia shows that most former students have a positive perception of their career readiness experiences in high schools. Virginia is already equipped with valuable instruments and strategies that can enable the state to strengthen career readiness of young people.

Revisiting career readiness instruments

Recommendation 1: Virginia should consider systematising and monitoring the implementation of career readiness instruments to strengthen effective provision.

While each one of the current career readiness instruments has value and potential, they are not consistently used across schools and school districts. For example, Virginia should ensure that every student actually has an Academic and Career Plan (ACP) as mandated by the state (currently 75% of Grade 10/11 students), define how each mandated provision such as Career Investigation Course is offered, assessed, and reported on, and measure outcomes of each mandated provision in relation to the K-12 learning framework. The data collected in this process can be used to further assess engagement of students in forms of career development which are associated in empirical studies with the greatest effectiveness of the provision. It can also be used to plan future offerings in relation to local labour market needs and challenges in delivery, with an aim of building a consistent, systematic and institutional procedure to use, track, update and transfer ACPs between educational institutions and stages to facilitate the overall career readiness process. Opportunity exists to further manage the ACP online within a single or better-co-ordinated system that records student decision making and makes available resources useful in that decision making (for example, myBlueprint which is used extensively across Canada). Such online portfolios help students to record experiences of value to later transitions while providing management information for analysis. In Virginia, two primary systems are used – Wizard and Naviance – and consideration can be given to broadening and systematising the use of a single tool.

Updating career readiness standards and frameworks

Recommendation 2: Virginia should consider revising its K-12 framework for career readiness.

Where school districts and schools exert a high level of autonomy, as in Virginia, variation in delivery is to be expected. Career readiness systems can better function when being underpinned by a well-designed and commonly agreed set of standards and frameworks, including the articulation of expected outcomes, that can be measured and monitored.

In this context, there are strong rationales for a more updated and comprehensive career readiness framework for the K-12 system in Virginia. This is timely because of the character of educational and labour market participation has changed considerably over the last generation, increasing the need for more informed decision making by young people as options, opportunities and risks of poor integration into the labour market proliferate. Data on the effectiveness of specific guidance inventions, evidenced in longitudinal data (including from the United States (Covacevich et al., 2021[1])), also demands consideration in determining framework content.

Virginia should therefore develop a new, or at least update its existing K-12 career guidance framework. In recognition of school district autonomy, this new or updated framework need not be overly

prescriptive in determining every aspect of career development, but should articulate a core collection of activities and experiences that students should be able to expect of their schooling. At the heart of such expectations are those career development activities and experiences which can be most confidently associated with better employment outcomes. By Grade 11 for example, the state should ensure that all students have had the opportunity to participate in career talks and job fairs, workplace visits and job shadowing, application and interview skills workshops alongside direct experience of the world of work through internships, volunteering or part-time employment linked to areas of career interest. Integrating such provision into an online ACP would allow for monitoring of provision in order to ensure that all Virginian school students receive a minimum level of provision based on international standards.

This new or updated framework can allow for the variance of the ACP instruments and career development activities used to achieve the career guidance framework outcomes, but with clearer monitoring mechanisms. It is possible to systematise how the framework outcomes are tracked, evaluated and fed back to stakeholders to improve career readiness provision. For example, New Brunswick (Canada) has recently developed a new K-12 career education framework that takes account of new research on how guidance provision can most confidently be expected to enhance adult outcomes.

Supporting the career readiness workforce

Recommendation 3: Virginia should consider further increasing the quantity of relevant staff in part by easing regulations in recruitment to strengthen career readiness efforts.

While teachers and counsellors play a crucial role in student career readiness, they often lack time and resources to put additional effort into further strengthening the career readiness of students given existing workloads and responsibilities. On average, ratios of counsellors to students in Virginia public schools are low compared to the US average but are generally still high in comparison to standards recommended by the American School Counsellor Association. Virginia also spends less than the US average on per-pupil student support, including career guidance although many schools in Virginia now also benefit from career coaches (see Box 2.7, Chapter 2.) who provide an important additional resource in the career development of students.

Virginia can benefit from further increasing the quantity of relevant staff. One option to consider is the easing of regulations in recruitment to strengthen career readiness efforts. Compared to the US average and other states, Virginia relies heavily on traditional teacher preparation programmes in comparison to alternative programmes (e.g., recruiting professionals with prior work experience but seeking to switch careers). Virginia can diversify recruitment and training routes for teaching professions to ease teacher shortages and attract talent with industry experience to the profession. Such an approach would be particularly relevant to developing the workforce involved in provision of CTE programmes. For a recent review of how VET systems are adopting more flexible approaches in the recruitment of professionals with industry experience, see Teachers and Leaders in Vocational Education and Training.

At the same time, it is essential that counsellors and teachers receive appropriate, high-quality training. In this regard, schools and responsible institutions should look to enhance in-service training and other resources that can inform teachers and counsellors about appropriate methods and approaches for career counselling, including up-to-date entry requirements for tertiary education, labour market dynamics and key new research findings.

Introduction – the right interventions at the right time

This chapter on effectiveness reviews the extent to which students in Virginia are engaging in career development activities that can most confidently be associated with better employment outcome.

International and national data, including from the United States, show statistically significant relationships between participation in specific career development activities (CDA) and better employment outcomes for young people (Mann, Denis and Percy, 2020[2]; Covacevich et al., 2021[1]; Covacevich et al., 2021[3]). In addition, the analysis of the OECD Career Readiness Survey of Teenage Students shows that students who participated in a career experiencing activity tend to be more certain and ambitious about their future careers, be less misaligned in terms of education and career expectation, and more likely to value schooling as a process of their career preparation. The analysis of the OECD Career Readiness Survey of Young Adults also clearly shows strong, positive relationships between participation in CDA and better transition outcomes, including economic benefits, positive perceptions and greater confidence in career readiness and transition.

Strengths of Virginia

Career readiness is a key policy agenda for Virginia

As discussed in Chapter 2, career readiness is a key policy agenda for Virginia, not only in the education system but also in the context of the commonwealth's broader economic and social agenda. There is an expectation that every student in the state will engage in the career and education planning process through the development of an Academic and Career Plan (ACP), an individual learning plan, and fulfil career readiness-oriented requirements for high school graduation. These graduation profiles include: (i) completion of an Advanced Placement, honours, or International Baccalaureate, or dual enrolment course; (ii) completion a high-quality work-based learning (WBL) experience; or (iii) earning of a Career Technical Education (CTE) credential that has been approved by the Board of Education (which include a state licensure examination, a national occupational competency assessment, the Armed Services Vocational Aptitude Battery, or the Virginia workplace readiness skills assessment). Virginia is trying to expand WBL opportunities (defined in the state as job shadowing, service learning, mentorship, externship, school-based enterprise, internship, entrepreneurship, clinical experience, co-operative education, youth registered apprenticeship, registered apprenticeship, and supervised agricultural experience) to make these opportunities available to all students (VDOE, 2022[4]).

Virginia has made other visible efforts to support and strengthen the career readiness of students, while introducing innovative initiatives and replicating known successes for example, creating and building strong pathways and special-purpose schools. Virginia has also reinforced its data and evidence base, for example through VLDS and VOEE, and is currently streamlining its state-level education, career readiness and workforce development systems. Virginia is keen to encourage young people to have more "exposure, experience and expertise" outside school, through a holistic approach that seeks to transform K-12, higher education including colleges, and workforce development systems. In parallel, Virginia has broadened partnerships with employer communities by incentivising and supporting employers to offer more WBL and collaborate with the school system. Virginia has also increased the quantity of school counsellors, from a ratio of 385 students per counsellor to 307 between 2015 and 2022, moving closer to the recommended ratio of 250 (Figure 4.2).

Virginia offers multiple pathways and means to allow students to explore and prepare their future careers

Virginia offers multiple pathways and choices to allow students to explore and prepare for their future careers. In middle school, students have opportunities to explore different pathways either through CTE, other elective courses, or external activities and events as part of mandatory Career Investigation Courses. Students can then concentrate on themes of personal interest.

In high school, students are given opportunities to prepare and deepen knowledge and skills relevant to their interests within the pathways that they choose. Importantly, this is undertaken without completely closing off other options. When schools do not offer pathways of interest to students, students have options to attend other schools part-time, if not change school entirely, depending on school and transportation availability. For example, a comprehensive high school model offers different pathways in the same school (or close by); when a student's home high school does not have available pathways they are interested in, they can attend other types of schools that offer those options such as Governor's schools (which often offer learning opportunities for high-performing students), Magnet schools (public schools that focus on performing arts, science and technology or other particular areas of study but also offer regular school subjects) or Technical Centers (which offer technical and vocational opportunities for students who are more suited for hands-on experience and learning), without needing to fully move away from their home school that offers basic and core academic instruction (typically on a 50% basis).

Virginia has a strong and solid provision of Career Technical Education, starting from middle school

Starting from grade 6 to 12, Career Technical Education (CTE) offers a safe space for vocationally focused exploration, exposure, and experience through offering elective courses and specialised programmes without closing off future options. CTE often includes 12 types of rich work-based learning (WBL) including job shadowing, service learning, mentorship, co-operative education (Box 4.1), and internship. These opportunities encourage student development of social emotional/global competencies as they are faced with learning challenges that require critical thinking, teamwork and problem solving as well as technical skills. This provision is co-ordinated with other instruments that motivate student engagement, such as through Career and Technical Student Organizations (Box 4.2) and the Career Success Stars Initiative that celebrates career success of former CTE students in their 20s and 30s (see Student Profiles).

During the OECD review process, the Secretary of Education expressed a vision to transform CTE from what has been seen as an occupationally-focused tracking programme to a universal career-oriented experience that concern all K-12 students. This approach also aims to remove the stigma that CTE often has as provision suited best for lower achievers (Kidwai, 2011[5]). Instead of requiring CTE students to obtain a specific credential, Virginia now requires all high school students to graduate with an associate degree or a CTE credential which might include the successful completion of an industry-recognised certification, a state licensure examination, a national occupational competency assessment or the Virginia workplace readiness assessment.

In 2020-21, there were 405 430 participants in CTE in Virginia. Although gender balance differs across CTE clusters, 55% of secondary CTE participants were male, and 45% were female (among those students who reported gender as male or female), similar to the K-12 population distribution (U.S. Department of Education, 2022[6]). Data shows that about half of all CTE programme completers went on to attend 4-year college (VDOE, 2022[7]).

Virginia offers and recognises 12 forms of High-Quality Work-Based Learning (HQWBL), which are comprised of school-co-ordinated workplace experiences related to career interests of students (typically Grade 6-12), connected to a CTE course, and take place in partnership with local employers or organisations (VDOE, 2022[8]): **job shadowing, service learning, mentorship, externship, school-based enterprise, internship, entrepreneurship, clinical experience, co-operative education, youth registered apprenticeship, registered apprenticeship, and supervised agricultural experience**. HQWBL enables students to apply classroom instruction in a real-world work environment. HQWBL promotes career awareness, exploration and preparation. They are available year-round, including the summer months (VDOE, 2022[8]). Table 4.1 provides information on Virginia regulations and guidelines for the administration of HQWBL which school divisions are expected to use in their local implementation of HQWBL offerings.

The 12 types of HQWBL are grouped into two categories:

- *Career exploration experiences* encourage students to develop personal career interests, a better understanding of pathways to a chosen career, and the workplace readiness skills needed to make informed decisions regarding secondary and postsecondary education and training. These experiences are **typically of shorter duration**. Students may be assigned supplementary work connected with the activity and may be graded on their performance in a way that contributes to the final grade in a CTE class.
- *Career preparation experiences* deepen student knowledge and develop skills necessary for success in employment and postsecondary education. These experiences are recommended for students who have a clear goal of entering the workforce directly after high school or of enrolling in a closely related postsecondary training programme. These experiences are structured primarily to give students extensive practice in applying fundamental technical and practical knowledge and skills in their chosen careers. Career preparation experiences take place over a **longer timeframe and involve more responsibilities**.

In addition, *Career awareness activities* prepare students for HQWBL experiences. These activities are designed to increase student awareness of personal interests and talents along with the education and training needed to pursue a career goal. Through career awareness activities, students gain an initial understanding of work, various industries, and different career pathways. Career awareness activities ideally lead to HQWBL experiences where students can deepen their knowledge of career pathways and begin applying skills learned in the classroom. Examples are **guest speakers, career days or college and career fairs, field trips and workplace tours, videos or presentations about various professions, and opportunities to conduct informational interviews**.

Accompanying each HQWBL experience is a training agreement, a written statement of commitment made by the student, parent/guardian, WBL coordinator, and employer. It contains mutually agreed-upon expectations for all parties involved, spells out each party's role, and addresses considerations such as employment terms, schedule, duration of work, compensation, and termination. It is the most important tool providing protection to the WBL co-ordinator and school officials against accusations of negligence and liability claims. It is important that each student placed in a HQWBL workplace has a completed training agreement on file. A training agreement must be used for the corresponding HQWBL experience.

Table 4.1. Criteria for High-Quality Work-Based Learning (school-mediated career development activities)

Types	Suggested grade levels	Minimum duration	Training plan	Paid option	Credit option	Meets graduationrRequirement
Job Shadowing	6-12	Varies by type				
Service Learning	6-12	Varies by type				✓
Mentorship	6-12	Course duration or 140 hours for.5 credit option			✓	✓ (at least 140 hours)
Externship	6-12	40 hours				✓ (at least 40 hours)
School-Based Enterprise	6-12	Course duration		✓		✓
Internship	11-12	Course duration or 280 hours for 1 credit option	✓	✓	✓	✓
Entrepreneurship	11-12	Course duration or 280 hours for 1 credit option	✓	✓	✓	✓
Clinical Experience	11-12	Varies by type	Corresponding documents governed by regulations in each area.			✓
Cooperative Education	11-12	280 hours for 1 credit option	✓	✓	✓	✓
Youth Registered Apprenticeship	11-12	280 hours for 1 credit option		✓	✓	✓
Registered Apprenticeship	11-12	144 hours related technical instruction per 2 000 hours on-the-job-training	Corresponding documents governed by regulations in each area.	✓		✓
Supervised agricultural experiences (Immersion)	9-12	280 hours for 1 credit option	✓	✓	✓	✓

Note: All types are required to have training agreement and related CTE instruction. "Apprentice" means a person at least 16 years of age who is covered by a written agreement with an employer and approved by the Director, requiring a minimum of 2 000 hours of on-the-job work, for his participation in an approved schedule of work experience through employment, and for the amount of related instruction required in the occupation. The Apprenticeship Council will establish/determine standards for apprentice agreements pursuant to Article 3 (§ *54.1-1128* et seq.) In this context, apprentices combine work with training with continuing high school education. Source: Extracted from VDOE (2022[4]), High-Quality Work-Based Learning, https://www.doe.virginia.gov/teaching-learning-assessment/k-12-standards-instruction/career-and-technical-education-cte/hqwbl

A HQWBL training plan is a document identifying the classroom instruction and workplace training that will contribute to the employability and ongoing development of a student. Training plans are required for co-operative education, internship, entrepreneurship, and supervised agricultural experiences (Immersion - SAE for All), while apprenticeships and clinical experiences have corresponding documents governed by regulations in their respective areas. The WBL co-ordinator, employer, and student must jointly prepare the training plan. The plan serves as a record of the student's progress throughout the experience and provides documentation for evaluation (VDOE, 2022[8]).

Box 4.1. Co-operative education programmes in Virginia

Cooperative education (co-op) is a method of education for students who receive instruction by alternation of study in school with paid employment in any occupation field. It is planned and supervised by the school and employer so that each contributes to the education, employability, and career objective of the individual. It may include an arrangement in which work periods and school attendance may be on alternate half days, full days, weeks, or other periods of time in fulfilling the cooperative programme. Co-op combines classroom learning with practical work experience. Students earn academic credit for structured job experience, which is planned, supervised, and documented by the coordinating teacher in partnership with local businesses (Administrative Code, 2023[9]; Bedford County Public Schools, 2023[10]).

According with Virginia's Administrative Code (2023[11]), CTE programmes using the co-operative education method of instruction should:

- develop and follow a training plan and training agreement for each student receiving training through cooperative education;
- require parties to the training agreement include the student, parent or guardian, instructor, employer, and a school administrator; and
- specify provisions for instructor travel for on-the-job coordination.

The Virginia Cooperative Council (VCC) sponsors two educational conferences annually aimed at educating and improving the skills of students in the cooperative business model. The Cooperative Education Conference is attended by 70 students aged 16-19, while the Virginia Institute on Cooperative Education (VICE) is attended by up to 64 Virginia high school students with the aim of enhancing their business, teamwork, leadership, and communication skills (Virginia Cooperative Council, 2023[12]).

Box 4.2. Career and Technical Student Organisations (CTSO)

CTSOs extend Career and Technical Education in Virginia through networks of programmes, business and community partnerships and leadership experiences at the school, state and national levels. Virginia students enrolled in CTE courses are members of the local CTSO related to their courses and area of interest. CTSOs provide Virginia students with opportunities to apply academic, technical and employability knowledge and skills relevant to employment as well as a hand-on approach to learning in their chosen career pathways. CTSOs promote awareness of new career opportunities and help students to refine career objectives through realistic experiences and personal development.

Virginia CTE students are served through eight organisations, all of which have a national organisation.

- Virginia DECA Organization: prepares high school and college students in the field of marketing, finance, hospitality and management.
- Educators Rising Virginia provides high school students with opportunities to explore the nature of education and the role of the teacher.
- Virginia Future Business Leaders of America (FBLA) prepares students in the field of business through business-related education and entrepreneurial skill development, community service and partnerships with the professional sector.
- Virginia Family, Career and Community Leaders of America (FCCLA) provides opportunities for students to prepare for multiple roles of family member, wage earner, and community leader as they develop skills for life through Family and Consumer Sciences Education.
- Virginia Future Farmers of America (FFA) aims to develop students' potentials and career success through agricultural education in the food, fibre, and natural resources industries.
- Virginia Health Occupations Students of America (HOSA) promotes career opportunities in the health care industry to enhance the delivery of quality health care.
- SkillsUSA Virginia is a partnership of students, teachers, and industry working together to ensure Virginia and America have a skilled workforce.
- Virginia Technology Student Association (TSA) provides the application and integration of science, technology, engineering, and mathematics (STEM) concepts through co-curricular instruction, leadership development, competitive events and related programs.

Source: VDOE (2022[13]), Career and Technical Student Organisations (CTSO), https://www.doe.virginia.gov/teaching-learning-assessment/k-12-standards-instruction/virginia-career-and-technical-student-organizations-ctso

The majority of Virginian students have a positive perception of their career exploration and experiencing in schools

The OECD Career Readiness Survey of Teenage Students shows that most students in Virginia have a positive perception of their career readiness experiences in high schools. As seen in the results presented in Chapter 3., most of the surveyed students in grade 10-11 in Virginia agreed that trying hard at school will help them get a good job (87%) and get into a good college or university (95%). Moreover, 70% agreed that school had taught them things which could be useful in a job. 51% agreed that school had helped to give them the confidence to make decisions. However, almost 60% agreed that school had done little to prepare them for adult life after leaving school and 29% agreed that school had been a waste of time.

All surveyed students in Virginia from the sample reported that they took part at least one type of career exploring activity and 78% participated in at least one career experiencing activity.

The OECD Career Readiness Survey of Young Adults also shows that most former students in Virginia have a positive perception of their career readiness experiences in high schools. As seen in the results presented in Chapter 3., most of the surveyed young adults who attended high school in Virginia agreed that high schools had helped them prepare for their career transition. Two-thirds (65%) agreed that high school had helped them decide on the right qualifications to follow the career they were interested in. About 60% agreed that high school had helped them verify whether their career ambition was realistic and had helped them visualise and plan how to reach their career ambition (Figure 3.24). In line with this result, 60% said that high school had prepared them for working life somewhat well (42%) or very well (17%).

Also, most young adults took part in a range of career development activities while in high school. Most of the surveyed young adults who attended high school in Virginia participated in at least one type of career development activity while in high school. Almost all (99%) participated in at least one career exploration activity such as learning how to search for a job or write a resume (see Chapter 3). 91% participated in at least one career experiencing activity while in high school; three quarters (74%) participated in at least one such activity on a regular basis and 26% occasionally (see Chapter 3). 90% had access to career coaches or counsellors (Figure 3.25, Panel A).

The results of how these career development activities in high school clearly pave the way to the largely positive transition outcomes of young adults in Virginia which are presented in Chapter 3.

Key recommendations

Revisiting career readiness instruments

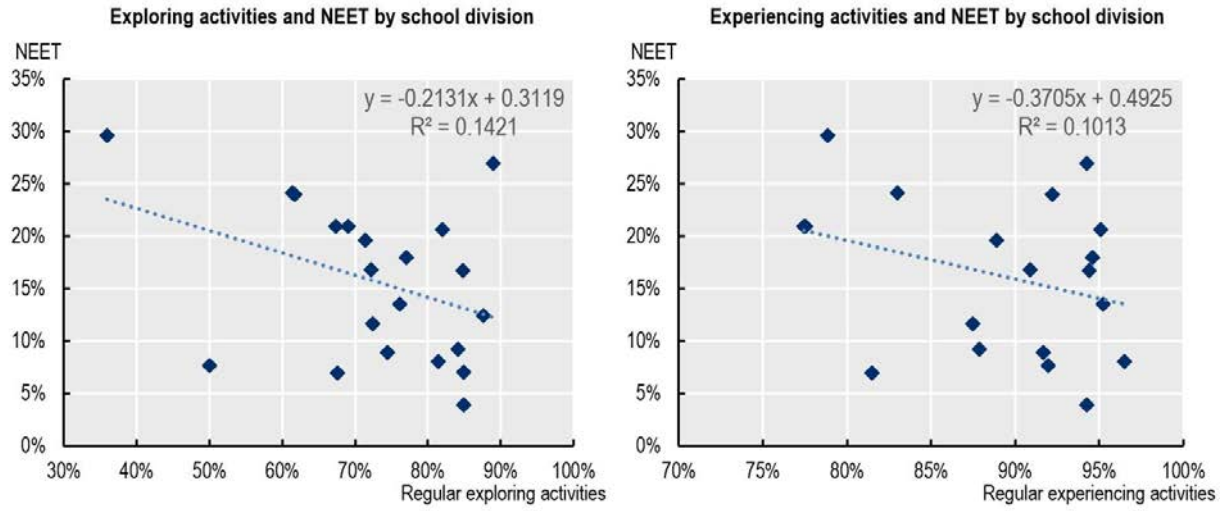
Challenge: Career readiness instruments are not yet reaching their potential in Virginia

Virginia is equipped with all the instruments and strategies it needs to for strengthen the career readiness of young people, from legal instruments at the state level to practical instruments at individual schools. As seen in Chapter 2., Virginia has a wide range of such career readiness instruments, including graduate profiles, academic and career plans (ACP), career investigation courses, career and technical education (CTE), work-based learning (WBL), and career navigation platforms.

While each one of these instruments has value and potential, they are not consistently used. How these tools are used also varies across schools and school districts. The effect of both career exploration and experiencing activities on labour market outcomes is significant. For example, based on the OECD Career Readiness Survey of Young Adults, school divisions that have higher participation rates in CDA show lower NEET rates. However, variations across school divisions are also significant. For example, participation in exploration activities ranges from 17% to 94% and in experiencing activities from 41% to 97% (Figure 4.1). The question for Virginia is how to ensure that all schools offer effective provision to students.

Figure 4.1. What makes the difference in CDA provision/participation that has a significant effect on labour market outcomes?

% of survey respondents who were in NEET at the time of the survey and % survey respondents who participated in exploring and experiencing activities while in high school, by school division



Note: School divisions whose NEET and CDA participation rates are outliers are omitted. Sample size below 10 students per school division are also omitted.
Source: OECD Career Readiness Survey of Young Adults in Virginia 2023

While no data are available on what specific career readiness instruments are available in each school division and how each school division uses those instruments, common instruments are available for all school divisions to use and follow. All school divisions should meet state graduate profiles, use academic and career plans (ACP) and career navigation platforms, and offer career investigation courses (CIC), career and technical education (CTE) and work-based learning (WBL). VDOE provides guidance materials for school divisions: for example, Delivering Career Investigations Guidance Document for School Personnel (2018), which explains the goals of CIC and examples of delivery.

For example, while an ACP is or could be an essential component of student success in transitions between grades, levels, and on to post-secondary life, the results of the OECD review process suggested that ACP is not being fully utilised. A personal ACP can be developed as early as elementary school (ACP profile) and is typically used from grade 7 (around age 12). It is reviewed and updated annually until grade 12. It is signed by the student, student's parent or guardian, and school official or officials designated by the principal (Commonwealth of Virginia, 2019[14]) (VDOE, 2022[7]). (Commonwealth of Virginia, 2019[14]). The ACP for middle and high school students must include a programme of study for high school graduation and a postsecondary career pathway based on the student's academic and career interests. Beginning in middle school years (grades 5-8), students can be counselled on opportunities for postsecondary education or vocational credentials in a CTE field prior to high school graduation (Commonwealth of Virginia, 2019[14]).

Although the ACP is, in principle, designed to be used from Grade 7, its use is not always guaranteed. Currently, each Superintendent certifies that the ACP has been completed at an end-of-year middle-school level certification process, but there is no reporting or review on quality or quantity. There is no state depository of ACPs so there is no data available to determine how many students completed an ACP in what fields, or how they are progressing.

This lack of direction and accountability in having each student to produce an ACP is a lost opportunity. Based on the OECD review team's visit to Virginia schools and the interviews with stakeholders, the use, tracking, and updating of the ACP is inconsistent across districts and schools, and even less consistent is the transfer of ACP information from middle to high schools, or from home high schools to other programmes/schools (e.g., Governor's schools or Tech centers). This is done only by the students themselves and without institutional arrangements and is therefore at risk of not happening. In addition, there is currently no collection of data on how ACP is implemented whether at the school level, at the school division level, or at the state level. ACP data (e.g., on the occupational expectations of students and their educational plans) are not systematically gathered or used, making it much more difficult to plan future career readiness provision or to assess needs for programme and financial support.

Similarly, while all middle school students (typically Grade 6-8) must undertake a programme of Career Investigation within an associated curriculum, there are no standards in the offerings, no defined outcomes, nor any obligation to report on the offerings and outcomes. Depending on the availability and school resources, some middle schools offer a class or other format, offer them through CTE or other elective courses (such as languages, arts or information and technology system), or offer them in collaboration with external bodies such as colleges, universities, employers, or intermediary bodies. Due to this variety, and without outcomes being measured, it is difficult to determine the effectiveness of this provision, as schools have not clearly identified how these outcomes are measured and reported. The Career Investigations outcomes are assumed to be covered across various curricular areas, but a method for assessing and evaluating the student's development in this area is unclear, if it exists at all. In such decentralised education systems, where prescription in teaching and learning is limited, the value of clearly defined outcomes and means of measuring them becomes particularly important.

While CTE and WBL provide great opportunities to engage in different potential career pathways and experiential learning, more commonly at the high school level, limitations exist in the integration integrate of WBL programmes and initiatives into the core curriculum and in the transformation of occasional but innovative initiatives into more systemic and sustainable programmes. For example, co-operative education programmes that allow students to combine paid work experience and relevant studies while being in high school are currently limited to business, economics, and finance programmes of study. This is mainly due to an issue with teacher licences and endorsements: business, economics, and finance teachers can only supervise students who take their classes but not, for example, students who take engineering or science classes.

In addition, there is no state-level data collection or overview on what types of WBL are available across schools/districts, who is participating, and what are the outcomes of such participation. In addition, as shown in Chapter 3, CTE participation and concentration remains relatively low – 24% of students in Virginia participated in CTE in 2020-21 compared to 36% in North Carolina and 30% in Georgia. Among CTE participants in Virginia, only 14% were CTE concentrators (i.e., students who opt for two or more consecutive CTE courses) compared to 43% in Tennessee, 25% in Maryland, and 24% in Georgia. While the interpretation of 2020-21 data does require caution due to the impact of the COVID-19 pandemic, this data still suggests weaknesses of Virginian provision in comparison to other states.

Box 4.3. Virginia can more effectively use online career navigation platforms and resources

A variety of online career navigation platforms and tools are available for students, parents, teachers, and counsellors in Virginia. Each school chooses its own platform, depending on available resources or preferred functions, which may raise a question at the state level on the effectiveness, efficiency, and equity in terms of accessing the platform, transferring information, and exploiting data. An analysis of career navigation platforms conducted by the VDOE[1] suggests an extensive spectrum of available services for students, parents, adults, and jobseekers to explore future readiness, career assessments, career readiness, secondary and postsecondary academic planning, college research and application, and work-based learning opportunities (Table 4.2).

Virginia can take greater advantage of these platforms to collect data more systematically. For example, data on what types of work-based learning are available across schools/districts, how they are integrated with the core school curriculum, which students are participating in what activities, and what are the outcomes of such participation. Such data collection could strengthen evaluation of, and feedback into, current approaches and programmes. For instance, the data can serve to review and reshape the school curriculum to make it more conducive to career readiness. It may not be necessary to designate one online platform, but it is important that standards and provision are tracked and assessed by accessing data that could easily be tracked through a digital platform. Moreover, the student interest survey that is required as part of VDOE approval of new CTE programmes and/or courses could be conducted through these platforms. For instance, Naviance (a College & Career Readiness Technology Solution provider at the national level) produced a Student Survey Report in 2022 for Grades 6-12 students in the US to learn about their career plans, their college application trends, and their strategies for achieving future success (Naviance, 2023[15]).

It appears that Virginia is moving in the right direction. The VDOE Office of Career, Technical, and Adult Education has established a contract with the Virginia Education Wizard to provide an automated Academic Career Plan (ACP) that will record a student's courses, assessments, and other career requirements free of charge to all Virginia public school students. In addition to the ACP, there are other tools that assist students to plan for developing career exploration, experience and thinking. Career Assessments through the Virginia Education Wizard allow students to look at how careers fit into their personal strengths and attributes (VDOE, 2022[7]). Many countries have adopted comprehensive digital portals to support student learning. Students in Canada, for example, make use of myBlueprint to manage their engagement in career development and such models are of relevance to Virginia.

Table 4.2. Career navigation platforms and resources used in Virginia

Funder/operator	Navigation tool	
At the state level, Virginia (VDOE) funded	Virginia Wizard	Allows students of all ages to explore careers and find the best fit.
	Virginia Career VIEW (Vital Information for Education and Work)	Career exploration and planning resources for K-12 students, parents, and career professionals (VIEW, 2023[16]).
	Virginia Workforce Network – Elevate Virginia	Helps Virginians with a network with the tools such as business, education, and workforce partners.
	Virginia Workforce Connection	Online tool to connect with potential employers, search for jobs, find training opportunities, and research wage data along with industry and occupational trends.
	VA Ready - Reskill for In-demand Jobs	Enables partnerships with businesses and Virginia's Community Colleges and the FastForward Workforce Credential Program as well as Sentara College of Health Sciences to equip them with the skills

		needed for jobs in high-growth sectors; provides training information and opportunities for in-demand jobs.
	Virginia Career Works Centers	Virginia's link between meaningful employment and growing businesses.
	CTE Trailblazers	A joint project of the Virginia Department of Education Office of Career, Technical, and Adult Education and the Weldon Cooper Center for Public Service at the University of Virginia, brings current, high-quality demographic and labour market data together with policy and program analysis to support continuous improvement in CTE in Virginia.
Service providers at the national level	YouScience	Creates hyper-personalised pathways linked to student aptitudes and connects students to careers and educational pathways designed to help students find relevance in school and beyond.
	Xello: College & Career Readiness Software	A K-12 resource designed to help students explore career areas of interest and to develop career related skills.
	Kuder: Career Assessment | Career Development System	Provides career assessments and online college and career readiness solutions to support students and adults of all ages.
	MajorClarity	Designed to help students develop learning profiles that link with career ambitions.
The US Department of Labor	O*NET Resource Center and CareerOneStop	Contains national career resources for individuals and organisations, including career exploration, training and wayfinding support.

Source: VDOE; (VIEW, 2023[16])

Recommendation: Systematise and monitor the implementation of career readiness instruments to strengthen effective provision

Career readiness instruments should be integrated into the continuum of learning. For example, given that the use of the ACP is not followed systematically, the potentially valuable connection between the ACP and the K-12 learning framework is not guaranteed. Also, the forms and content of Career Investigation Courses (CIC) are not set in relation to the K-12 learning framework and there is no mechanism to ensure or monitor how effective these courses are implemented.

Virginia can benefit from investigating and collecting evidence on how these useful instruments are being implemented, monitored, and evaluated. The commonwealth would then be better positioned to systematise the implementation of career readiness instruments across the state and monitor the process of how ACPs are developed, updated, and utilised and how CIC and other career development activities are designed, operated, and evaluated and further engage students and employers. There is currently no mandatory mechanism of tracking and evaluating how ACPs and career development activities are implemented, therefore no data are collected. If such data were collected and analysed, enabling factors and environments could be identified, enabling the updating of standards, and if necessary, the revamping of support system and tools, and the promotion of peer-learning across schools and school divisions. In this monitoring and evaluation process, structural factors beyond the programme or activity level must be accounted for: for example, many high schools, mainly in resource-rich divisions, already have a Career Academy or CTE academy (e.g., Coding Academy) where students can deepen their knowledge and experience.

In the process of ACP from Grade 7 to 12, and especially around Grade 8, students make the important choice of a college and career pathway. This decision is too critical to be made in haste but should rather

be the result of a gradual process of career awareness, exploration, experiencing and thinking. Students need to be better prepared earlier, ideally beginning in elementary school, where international studies show early attitudes about the suitability of possible future employment (OECD, 2021[17]) post-secondary education (UCAS, 2021[18]) are formed. In principle, the process of academic and career planning can begin that early, however the OECD review team did not see any evidence of systematic efforts at this level. Virginia can benefit from strengthening the implementation of career readiness instruments from elementary school, for example through more explicit and systematic exploration of career cluster areas and development of an academic and career plan portfolio, as set out in the standards. Given that it is difficult for students at ages 6-11 to initiate career conversations, Virginia may consider revisiting the phrase "the ACPP is student led" to make it more of a conversation or process that a teacher or counsellor should lead while more intentionally linking it to curriculum and subject areas.

ACP, Career Investigation Course and other career development activities should:

- **Ensure** that each student sets up an ACP as mandated.
- **Define** or at least gather information on how each mandated provision (e.g., Career Investigation Course) is offered (e.g., place, duration, organiser, method, linkage to curriculum), assessed, and reported on. The ACP can serve as formative assessment from Grades 6/7-12, indicating the student's engagement in this process.
- **Measure outcomes** of each mandated provision (e.g., Career Investigation Course) in the process between Grade 6/7 to 12.
- **Collect relevant data** at the state level and possibly link or integrate the data related to career development activities to Virginia's longitudinal data system (VLDS) and **use the data to assess the effectiveness of the provision** and plan future offerings in relation to local labour market needs and the need of financial support. Data collection can be particularly effective in looking at patterns in student aspirations and how these patterns reflect labour market opportunities.
- **Develop a consistent, systematic, and institutional procedure to use, track, update and transfer ACP** at certain relevant points in a student's school progression.
- **Update the 2004 'Standards** for school counselling programmes for career development' to specify the use of ACP in line with College and career readiness; career exposure, exploration, and planning; and opportunities for postsecondary credit and instructional program in middle/high schools. The standards can be further refined and expanded upon the best practices from other US states or countries (see Box 4.4, e.g., Canada's MyBlueprint as a model of practice including portfolio, and the following section 1.3.2 on standards).

To engage students successfully in actively developing their ACP/ILPs, career development opportunities are assumed to be necessary, and therefore, ACPs can be considered as: (i) portfolio documents that are created and updated annually and (ii) a process that helps students engage in processes of self-exploration of their career interests, skills and values, career exploration to identify career aspirations, career planning, and development of career management skills as they identify postsecondary education and training opportunities and develop employment seeking skills (Solberg et al., 2011[19]).

Teachers indicated that engaging in ILPs enabled them to mentor students, resulting in the (i) development and documentation of career goals, (ii) awareness of the relevance of specific high school courses to those career goals, (iii) selection of more rigorous high school courses, (iv) identification of postsecondary tertiary and training programs needed to enter those careers, and (v) career planning and management activities related to securing employment. If successful, students who engage in ILPs should begin engaging in self-initiated learning by managing and selecting courses and other educational and learning opportunities that support their ability to successfully realise their future aspirations (Solberg et al., 2011[19]).

As ILP/ACPs are transitioning to or already in an electronic format, existing cumbersome issues are being addressed. For example, such documents become more accessible to students, their and school staff and provide a substantially more efficient means of monitoring and evaluating provision. In addition, online career information systems or career navigation platforms also allow access to electronic ACPs as an integrated feature together with career information and guidance and often work-based learning opportunities, while storing the results of self-exploration, career exploration, and career planning and management activities (Solberg et al., 2011[19]).

When supporting educational and career pathways, it is crucial to understand gaps in the college and career preparation process. Career readiness systems can maximise the use of student information on what courses or activities they are taking in order to provide better advice on career pathways. Virginia provides data-driven support for students on the path to college, by investigating the relationship between high school curriculum and tertiary enrolment. The association between high school course taking and postsecondary institution enrolment can be quantified and shared with guidance counsellors, students, and parents to provide outcomes-based benchmarks for curricular planning. An analysis using data from the Virginia Longitudinal Data System investigated how course taking during the junior and senior years of high school relates to college enrolments (VLDS, 2015[20]). The research findings include that: most college-bound students in Virginia attain an Advanced Studies Diploma (ASD); courses taken at high school are a strong differentiator of post-secondary enrolment; and examining combinations and sequences of course taking can provide a more holistic picture of the pathway through high school to college (VLDS, 2015[20]). In this way, Virginia can analyse the ACP.

Virginia can benefit from monitoring career readiness provision through enhanced use of online navigation tools and by automating the development and process of ACP. In order to strengthen the provision of effective career development activities, Virginia should collect data on what types of WBL and other career readiness provision are available across schools/districts, how that provision is linked to CTE, who is participating, what are the outcomes of such participation and other useful aspects. This can be collected and tracked through close reporting and updating through the ACP, using online platforms. Simplifying terminology and course classifications can help facilitate monitoring and evaluation, research, and feedback.

Such monitoring processes help identify weak and strong points. For example, as seen in Chapter 3. the OECD Career Readiness Survey of Young Adults revealed that many students in Virginia do not engage in worksite visits, job shadowing, vocationally-focused programmes (exploration) and internships (experiencing) despite the fact that they can all be expected to link with better employment outcomes in the early labour market (Covacevich et al., 2021[1]). While Virginia has made considerable progress increasing internships, it is mostly for students in higher education. In order to increase the offers of and participation in these CDA, it would be helpful to simplify the intern hiring process for employers and may also be helpful to provide matching grants to small businesses (which V-TOP is playing a role to some extent). Most importantly, it is important to make it easy and accessible for schools and employers to connect and interact, whether through online systems (such as the REACH+ programme in Ireland) or traditional brokerage models (as in New South Wales, Australia). As noted, one survey of Virginian employers found a high demand for relevant workplace experience among young recruits, but found this was very often lacking (Agee and Treacy, 2023[21]).

Also as seen in Chapter 3., more than half of surveyed young adults reported needs for career guidance in terms of the transition to higher education. Regular surveying can help identify the status of access to high-quality career guidance information and advice about education, training and work and access to career guidance and career development activities.

Box 4.4. Good practices in the effective provision of career readiness activities

Finland and Norway

In Finland and Norway, student guidance is formally scheduled into student time at schools. In Norway, guidance is an individual right for all pupils, regulated by the Education Act. During lower secondary education, for example, students at Grade 8-10 have a mandatory subject called "education choices (utdanningsvalg)" devoted to student guidance and support (Directorate of Education of Norway, n.d.[22]). The course's main goal is to help students make informed educational and career choices. It commonly includes work placements of one week's duration as well as classroom-based activities. The course provides students with knowledge about opportunities and requirements in the education system and how they can influence future possibilities when it comes to their working life. By following this subject, students are expected to develop the competences needed to succeed in transition periods and the knowledge needed to make informed decisions (Directorate of Education of Norway, n.d.[22]).

In Finland, students are required to follow compulsory career education. They also have access to school guidance counsellors who are specifically responsible for following up and ensuring that students who complete lower secondary apply to upper secondary general or vocational education (Finnish National Agency for Education, 2022[23]). In this process, counsellors are required to provide students with information about the different programmes available, their content and future job and educational opportunities.

Canada – New Brunswick and Ontario

In Canada, career preparation in many provinces is part of compulsory education. myBlueprint, an online platform for developing and tracking career portfolio, is used extensively across Canada. Such online portfolios help students to record experiences of value to later transitions while providing management information for analysis.

In New Brunswick, the Universal Design for Learning principles have been applied to the design and delivery of Career Connected Learning (CCL) K-12. The Universal Design for Learning (UDL) is a set of principles for curriculum development that gives all individuals equal opportunities to learn. It is an educational approach with three primary principles: multiple means of representation, expression and engagement to accommodate diverse learning styles, abilities, and backgrounds (Johnson, 2016[24]). UDL is a key component of New Brunswick's inclusive education policy, which emphasises the provision of diverse and flexible learning opportunities to meet the needs of all learners.

The approach focuses on multiple means of representation, flexible learning environments, personalised approaches to learning, collaboration and professional development, assessment and evaluation, and ongoing research and evaluation. New Brunswick encourages teachers to adopt personalised approaches to instruction, allowing students to choose pathways that align with their learning styles and goals. The province also supports collaborative efforts among educators, administrators, and specialists to effectively implement UDL.

In Ontario, during secondary education, students need to follow guidance and career education from Grade 9 (last grade of lower secondary education) until Grade 12 (last grade of upper secondary education) (Queen's Printer for Ontario, n.d.[25]). Similar to guidance when entering into programmes, counsellors need to be trained and prepared to avoid biases and judgements when helping students make decisions on subject and specialisations options. At this transition stage, student guidance plays an even stronger role in supporting students to make informed decisions, because there is usually very limited information on procedures regarding how choices or allocations into options or specialisations are made. In this scenario, students can find themselves in options which affect their eligibility for further

education or job options. In England, for example, the choice of A-Level subjects is complex, with universities prioritising a combination of subjects depending on the student's choice of education field (Rodeiro, 2019[26]). However, such information is not always straightforward, and less advantaged students, for example, may not always receive the same level of advice as their better-off peers (Périco e Santos and Kitchen, 2023 forthcoming[27]). Unsurprisingly, many students find that as they reach the end of upper secondary education, they are unable to pursue post-secondary programmes of interest because at an earlier age they failed to engage with a specific programme of study (UCAS, 2021[28]).

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

Updating career readiness standards and frameworks

Challenge: Current career readiness standards result in varying outcomes in Virginia

Career readiness instruments can have varying outcomes especially when standards and frameworks do not define what those instruments are and how these instruments should be implemented and improved to achieve desirable outcomes. This can also be the case when school districts and schools exert a high level of autonomy, as in Virginia. Career readiness systems can only function optimally when underpinned by a set of well-designed, commonly agreed, and concrete standards and frameworks that include outcomes as well as how they are measured, achieved and monitored. For example, career readiness standards could include a school-industry-state agreed set of knowledge, skills and behaviours that are identified as being necessary for students to be career ready. A career readiness framework can be a structure that provides relevant institutions with guidance on the features and components associated with career readiness. It can provide a list and structure of both mandatory and optional programmes and activities for student career development, and the design, delivery and assessment of those programmes and activities.

Standards that are created in this way can allow the creation of clear pathways across different clusters within CTE as well as the creation of clear combinations of career development activities that are expected to lead to stronger career readiness. To review the current approach of Virginia, Administrative codes that are relevant to the OECD Career Readiness Indicators and 'Standards for school counseling programs (2004)' were analysed (see Table 4.3).

Although each type of career exploration activity such as "career talks", "job fairs", "workplace visits", "job shadowing", "job application and interview skills development activities", "career conversations", "occupationally-focused short courses", "part-time work", "volunteering" are not mentioned verbatim, 8VAC20-131-140 (College and career readiness) broadly require schools to provide:

> *"a program with a range of educational and academic experiences related to college and career readiness in and outside the classroom..."*

However, the code does not refer to any specific type of career development activity, which could provide guidance to school districts and schools. For example, while the ACP can be a good instrument for career conversation, 8VAC20-131-140 (College and career readiness) does not strongly suggest an engagement in meaningful career conversations. In addition, the code does not require monitoring and evaluation of the process related to ACPs and career development activities nor the collecting of data for improvement of provision. Virginia has opportunity further exploit Virginia Longitudinal Data System which allows to track career pathways of young people and to link those pathways to their employment outcomes.

While 8VAC20-131-140 (College and career readiness) emphasises academic ambition quite substantially, there is little emphasis on career ambition and alignment that the process of ACP could integrate.

While 8VAC20-131-90 (Instructional program in middle schools) and 8VAC20-131-100 (Instructional program in secondary schools) emphasises career investigation courses, work-based learning experience respectively and CTE, opportunities exist to integrate these into (or as) regular/mandatory courses.

8VAC20-620-10 (School guidance and counseling services) ensures that each school make career guidance available for each student while regulating conditions for opting-in and opting-out of personal/social counselling.

8VAC20-120 (Regulations Governing CTE) defines terms, technicalities of financial assistance, organisations, and reporting/programme requirements. Opportunities exist to make more concrete connections to career readiness, for example by highlighting career development activities that can be most confidently associated with better employment outcomes (for example, the OECD Career Readiness Indicators).

The 2004 Standards for school counselling programmes (see Table 2.3, Chapter 2) provide a relatively narrow framework for articulating expectation in comparison to more recent college and career readiness approaches. While these standards are still useful and defined by grade level, they do not refer, connect or lead to certain outcomes, measurements or set of activities (e.g., HQWBL), which could be useful for each school, counsellor and teacher to take concrete action. In other words, the standards define when (grade) and what (knowledge, attitude, skill) but not why (goals and outcomes) and how (activities and measurements).

Table 4.3. Benchmarking Virginia's career readiness standards against OECD Career Readiness Indicators

Text extract from Virginia's Administrative Code relevant to the OECD Career Readiness Indicators (emphasis added)

CRI		Virginia's Administrative Code (8VAC20)
Career exploration	1. Career talks or job fairs.	131-140 C1: "…school shall provide for the identification by all students of personal interests and abilities to support planning for postsecondary opportunities and career preparation." "…include provision of information concerning **exploration of career cluster areas…experiences in and outside the classroom**…and the **multiple pathways to college and career readiness…**". C2: "…students are to **explore the different occupations**…begin the development of an academic and career plan portfolio (ACPP)…to include information about interests, values…and skills supporting decisions about their future interests and goals." 131-100 A: "The secondary school shall offer opportunities for each student…5. **Participation in work experiences**..." 620-10. A: "…each school shall make reasonably available…to all students…**career guidance which helps students to acquire information and plan action about work, jobs, apprenticeships, and post-secondary educational and career opportunities**..."
	2. Workplace visits or job shadowing	131-140 C1: "…provision of information concerning exploration of career cluster areas…**experiences…outside the classroom, including internships and work-based learning, and the multiple pathways to college and career readiness**…". 131-100 A: "The secondary school shall offer opportunities for each student, including: 1. CTE choices that incorporate knowledge of regional workforce needs and opportunities…5. **Participation in work experiences such as internships, externships, and other work-based learning experiences, and attaining workforce and career readiness and industry credentials**." 620-10. A: "…each school shall make reasonably available…to all students…career guidance which helps students to acquire **information and plan action about work, jobs, apprenticeships, and post-secondary educational and career opportunities**…."
	3. Job application and interview skills development	131-140 C2: "…students shall complete a career investigations course…The course, or its alternative, shall include **demonstration of personal, professional, and technical workplace readiness skills**."
	4. Career conversations	131-140 C1: "…school shall provide for the **identification by all students of personal interests and abilities to support planning for postsecondary opportunities and career preparation**." C3: "The **ACP** (…) **shall be reviewed and updated annually**". 620-10. A: "…each school shall make reasonably available…to all students…**career guidance which helps students to acquire information and plan action about work, jobs, apprenticeships, and post-secondary educational and career opportunities; personal/social counseling which assists a student to develop an understanding of themselves…define individual goals, reflecting their interests, abilities and aptitudes**.
	5. Occupationally -focused short courses (career pathways)	131-140 C1: "…**experiences in and outside the classroom, including internships and work-based learning, and the multiple pathways to college and career readiness**…". C2: "…students shall complete a **career investigations course**." "…**a career related learning experience** shall be chosen by the student…". 131-90 A: "…each [middle] school shall provide…**career and technical exploration**…**career investigation course content could include online methods**, …**exploratory course options**, and **delivering the course content through other courses**." 131-100 A: "The secondary school shall offer opportunities for each student, including: 1. **CTE choices that incorporate knowledge of regional workforce needs and opportunities**…5. **Participation in work experiences such as internships, externships, and other work-based learning experiences, and attaining workforce and career readiness and industry credentials**." 120-120 C: "**CTE programs must be provided in middle and secondary schools**. The middle school must include a minimum of one career and technical offering. Each secondary school shall provide a minimum of three career and technical program areas to include a minimum of 11 course offerings." D. "Career and technical education programs **must provide industry credentialing, certification, and licensure**…"
Career experiencing	6. Part-time working	131-140 C1: "**experiences…outside the classroom, including internships and work-based learning**…". 131-100 A: "The secondary school shall offer opportunities for each student, including: 1. **CTE choices that incorporate knowledge of regional workforce needs and opportunities**…5. **Participation in work experiences such as internships, externships, and other work-based learning experiences, and attaining workforce and career readiness and industry credentials**." 120-140 **Cooperative Education: "alternation of study in school with paid employment in any occupation field**…be planned and supervised by the school and employer so that each contributes to the education, employability, and career objective of the individual"
	7. Volunteering	131-140 C1: "**experiences…outside the classroom**, …**work-based learning, and the multiple pathways** to college and career readiness…". 131-100 A: "The secondary school shall offer opportunities for each student, including: 5. **Participation in work experiences** such as…**other work-based learning experiences**"

Career thinking	8. Career certainty	131-140 C2: "…students are to **explore the different occupations**…begin the development of an academic and career plan portfolio (ACPP)…to include information about **interests, values…and skills supporting decisions about their future interests and goals**." "…students shall **complete a career investigations course**." "…a **career related learning experience** shall be chosen by the student…". 131-100 A: "The secondary school shall offer opportunities…: 1. **CTE choices that incorporate knowledge of regional workforce needs and opportunities**…5. **Participation in work experiences**…and attaining workforce and career readiness and industry credentials." 620-10. A: "…each school shall make reasonably available…to all students…**career guidance which helps students to acquire information and plan action about work, jobs, apprenticeships, and post-secondary educational and career opportunities; personal/social counseling which assists a student to develop an understanding of themselves…define individual goals, reflecting their interests, abilities and aptitudes**." School counseling EC10: "Identify **career choices through exploration**".
	9. Career ambition	131-140 B2. "Students shall be **counseled on opportunities for beginning postsecondary education** and **opportunities for obtaining industry certifications, occupational competency credentials, or professional licenses**…". C5: "students shall be **encouraged and afforded opportunities to take college courses simultaneously**…" 131-100 A: "The secondary school shall offer opportunities for each student, including: 1. **CTE choices that incorporate knowledge of regional workforce needs and opportunities**…2. **Coursework and experiences that prepare the student for college level studies**…5. **Participation in work experiences**…and **attaining workforce and career readiness and industry credentials**."
	10. Career alignment	131-140 B2. "Students shall be **counseled on opportunities for beginning postsecondary education** and **opportunities for obtaining industry certifications, occupational competency credentials, or professional licenses**…". 131-100 A: "The secondary school shall offer opportunities for each student, including: 1. **CTE choices that incorporate knowledge of regional workforce needs and opportunities…2. Coursework and experiences that prepare the student for college level studies…5. Participation in work experiences**…and **attaining workforce and career readiness and industry credentials**." 620-10. A: "…each school shall make reasonably available…to all students…**academic guidance…; career guidance which helps students to acquire information and plan action about work, jobs, apprenticeships, and post-secondary educational and career opportunities…define individual goals, reflecting their interests, abilities and aptitudes**." School counseling MC1: "Identify the **relationship of course content, educational achievement, and career choices**" MC5: "Demonstrate understanding of **the education and training needed to achieve career goals**"
	11. Instrumental motivation towards school	131-140 C1: "…school shall provide for the identification by all students of **personal interests and abilities to support planning for postsecondary opportunities and career preparation." "…include provision of information concerning exploration of career cluster areas…experiences in and outside the classroom…the multiple pathways to college and career readiness**…". 131-100 A: "The secondary school shall offer opportunities for each student, including: 1. **CTE choices that incorporate knowledge of regional workforce needs and opportunities…2. Coursework and experiences that prepare the student for college-level studies…5. Participation in work experiences…and attaining workforce and career readiness and industry credentials**." 620-10. A: "…each school shall make reasonably available…to all students… **academic guidance…; career guidance which helps students to acquire information and plan action about work, jobs, apprenticeships, and post-secondary educational and career opportunities**" School counseling MC1: "Identify the **relationship of course content, educational achievement, and career choices**"

Source: Author's elaboration based on Virginia's Administrative Code

Box 4.5. Virginia Longitudinal Data System (VLDS)

The VLDS tracks the journeys of young Virginians through education and into adulthood. It provides authorised researchers with access to data records that are merged across multiple agency datasets.

VLDS is organised around addressing questions that are pivotal to Virginia citizens and policymakers, including:

- Impact of health, social service, education, and workforce pipeline on Virginia's economy;
- Return on investment of health, social service, education, and workforce opportunities and programmes;
- Alignment of health, social service, education and workforce programmes to known and projected employers' needs;
- Collective, long-term impact of health, social service, education, and workforce programmes on people served;
- Pathways to the workforce, patterns of employment, and factors or conditions that predict success; and
- Factors or conditions that have the greatest impact on educational achievement and later productivity.

By making data available and collaborating across agencies and research institutions, VLDS can answer equity-centred research questions about programme access, pathways, and impacts, and identify conditions that have the greatest effect on individuals' ability to thrive.

Through the VLDS, analysts and policy makers have been able to track the wage outcomes of graduate cohorts from as far back as the 1990s. Because data on post-secondary degrees and certificates are matched to Unemployment Insurance (UI) wage records from the Virginia Employment Commission, the data include only information on graduates who joined the workforce in Virginia after graduation and thus do not include graduates from Virginia's higher education system who moved out of state. However, it is estimated that about 82% of Virginia bachelor degree graduates and 88% of associate degree graduates remained in the state after graduation in 2019. It appears that a student's chosen field of study is one of the strongest predictors of future earnings. Among Virginia graduates, there is substantial earnings dispersion both within and between fields of study. STEM field graduates had the highest median earnings five years post-completion (USD 38 346) and enjoyed the steepest earnings trajectory over time compared to other fields of study. The difference in median earnings between the highest earning field (STEM) and the lowest earning field (liberal arts) was USD 44 924 (OECD, 2020[29]).

Source: https://www.doe.virginia.gov/data-policy-funding/data-reports/virginia-longitudinal-data-system-vlds.

Recommendation: Set concrete standards and frameworks, quality assurance and evaluation mechanisms

There are strong rationales for a more concrete, updated and comprehensive career readiness standards and framework for K-12 system in Virginia. Rationales for change include acknowledgement of the changing character of educational and labour market participation which increase the need for more informed decision making by young people. Data on the effectiveness of specific guidance inventions, evidenced in longitudinal data (including from the United States), with better employment outcomes also requires consideration in articulating a core framework for guidance provision in secondary education.

Virginia should therefore develop a new, or at least update, K-12 career guidance standards and framework. In recognition of school district autonomy, this new or updated standards and framework do not need to be overly prescriptive in determining every aspect of career development. Indeed, excessively granular frameworks can work against their intended purpose (Hooley, 2013[30]), but should articulate a core collection of experiences that students should be able to expect of their schooling.

At the heart of such expectations are those career development activities and experiences which can be most confidently associated with better employment outcomes. Integrating such provision into an online ACP would allow for monitoring and evaluation of provision in order to ensure that all Virginian school students receive a minimum level of provision based on international standards. For example, the province of New Brunswick (Canada) has recently developed a new Career Education Framework in collaboration with the OECD (Box 4.6). The document articulates expectations of career development from K-12 and draws closely on the most robust quantitative evidence available of the forms of career development that can most be expected to enhance the employment outcomes of young people. It includes the expectation that all students will leave secondary education with a Career Life Plan. Other models are also available, such as the Gatsby Framework (UK) which articulates eight broad benchmarks (that articulate well, if not completely, against insights from subsequent longitudinal data analysis) against which secondary schools are expected report progress. While less comprehensive than the New Brunswick approach and currently under review, the Gatsby benchmarks benefit from simplicity in design within an educational system where school autonomy is relatively high. Moreover, statistically significant relationships have been identified between the extent to which school's have adopted the benchmarks and the employment outcomes of their former students (Percy, 2021[31]).

Box 4.6. Elements of career readiness framework structure

1. Ensure that **all students** are helped from an **early age** to think about their potential futures and how they might achieve their ambitions.
2. Help students to understand and prepare for **not only the opportunities** presented by the **labour market**, but also its **challenges**.
3. Ensure that students understand the role that **qualifications and experiences** can play in helping to mitigate risks of poor outcomes.
4. Respond to the fact that transitions frequently are a cause of **stress and anxiety** and can be expected to be more difficult for students with underlying **mental health problems**.
5. Ensure that all students receive a **solid foundation of career preparation** while putting in place effective mechanisms to identify and support those students who require **additional, more personalised support**.
6. Ensure that students understand the **changing character of demand for skills**.
7. Ensure that students understand the **changing character of employment**, its benefits and drawbacks, and how less desirable transitions can be mitigated.
8. Develop the framework as a **living document** that respond to important contextual changes and new information related to the more effective transitions of young people through education and into work.
9. Draw on **existing practice in framework design** while privileging available longitudinal data to focus on those aspects of career education that can be most confidently connected with better outcomes for young people.
10. Draw on **best available longitudinal evidence** in relation to the specific teenage ways in which students explore, experience, and think about potential futures in work have been linked with better employment outcomes.
11. Ensure that career education is enriched for young people through **multiple and diverse opportunities** to **engage with employers and people** in work from a young age.
12. Ensure that young people are well prepared to take full advantage of **digital innovations** in career education.
13. Encourage and enable children from **elementary** school to build understanding of the relationships between **education and employment**, and broaden understanding of contemporary careers, including skilled employment, while **challenging forms of stereotypical thinking** that are linked to gender and other personal and social characteristics.
14. Ensure that all students develop a strong understanding of **all postsecondary pathways** open to them, including direct entry to employment, self-employment, education and training.
15. Ensure that students gain **first-hand experiences of work** through internships, volunteering, and/or part-time working; encouraging and enabling students to reflect on their experiences in light of career development while discouraging excessive hours.
16. Ensure that **all young people are helped to actively manage their transitions** out of secondary education.

Source: New Brunswick (Canada) Career Education Framework in collaboration with the OECD.

Supporting the career readiness workforce

Challenge: Teachers and counsellors lack the time and resources needed to put additional effort into strengthening the career readiness of students

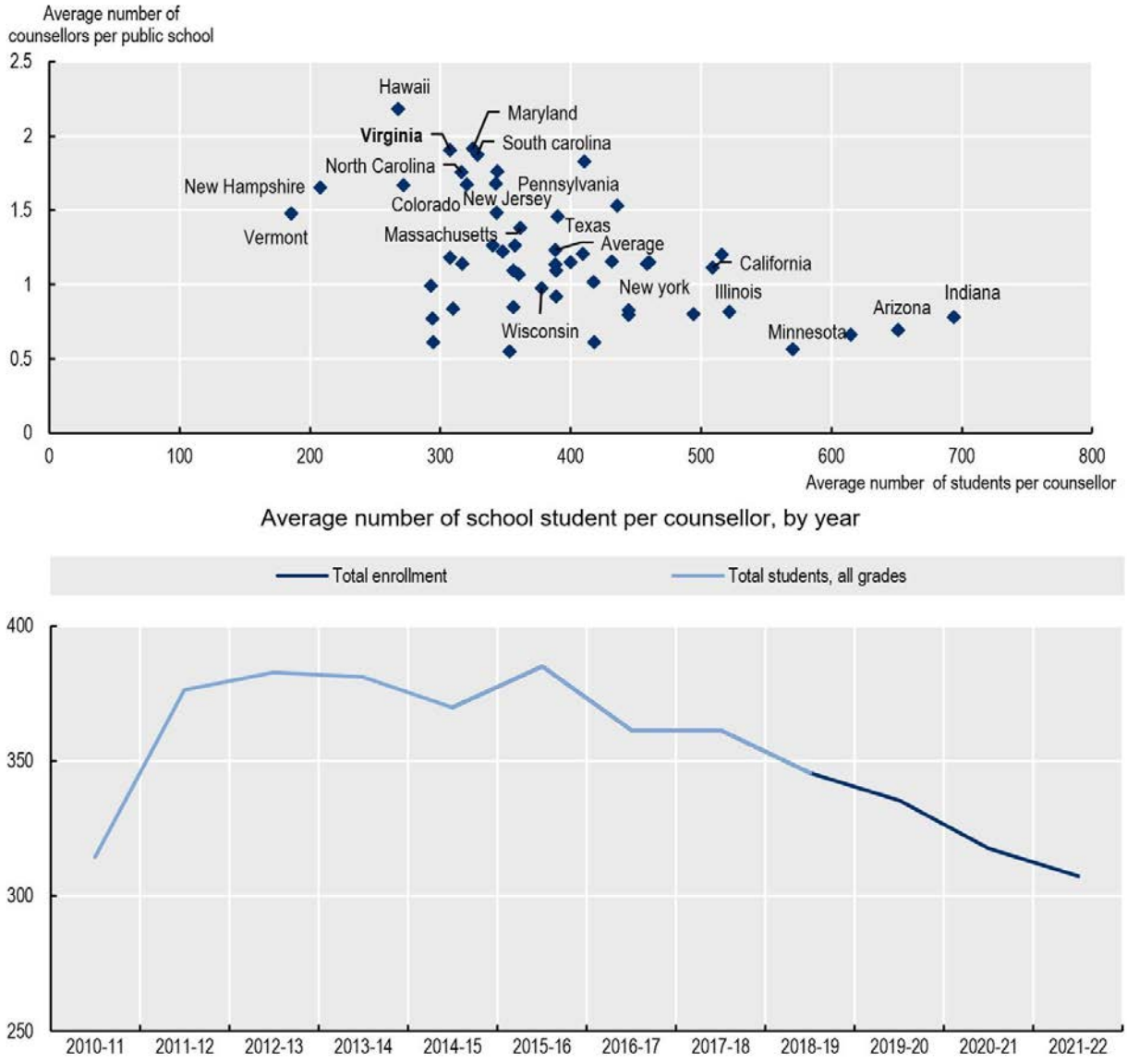
School teachers and counsellors play a crucial role in student career readiness by providing a wide range of support including providing career guidance at school, and being a direct link with students, parents, employers, and school/CTE administrators. The role of school counsellors is to provide the leadership necessary to manage the school counselling programme and ensure effective strategies to implement counselling standards (Virginia Department of Education, 2004[32]). School counsellors employed by a school board in a public school are required to spend at least 80% of their time during normal school hours in the direct (one-to-one) counselling of students (Virginia Law, 2023[33]). The responsibilities of counsellors also include support for the academic success and social and emotional well-being of studies as well as their preparation for post-secondary employment and continuing education.

Given existing workloads and responsibilities, teachers and counsellors often lack the time, training, and resources needed to put additional effort into further strengthening the career readiness of students (or at least this varies across schools and school districts). They are often busy with delivering core instruction, meeting graduation requirements, and dealing with other administrative and educational matters; this leaves less time to focus on academic and career counselling as other urgent issues also require attention, including mental and behavioural health.

Counsellors in Virginia tend to be well trained and have access to considerable support. However, on average, although Virginia has put effort in increasing the quantity of school counsellors, the ratio of counsellors to students in Virginia is high compared to the US average and it is still low by the recommended standards and varies across regions and schools. On average across US states, one school counsellor is available for 388 students,[2] or 1.2 counsellors are available per school. In Virginia, one school counsellor is available for 307 students (9th best ratio among US states), or 1.9 counsellors per school (2nd best ratio among US states). Virginia has made real progress from the peak of 385 students in 2015-16, especially by hiring more counsellors in secondary schools (Figure 4.2). The American School Counselor Association recommends a ratio of 250 but only Vermont (186) and New Hampshire (208) are below this ratio in the US.

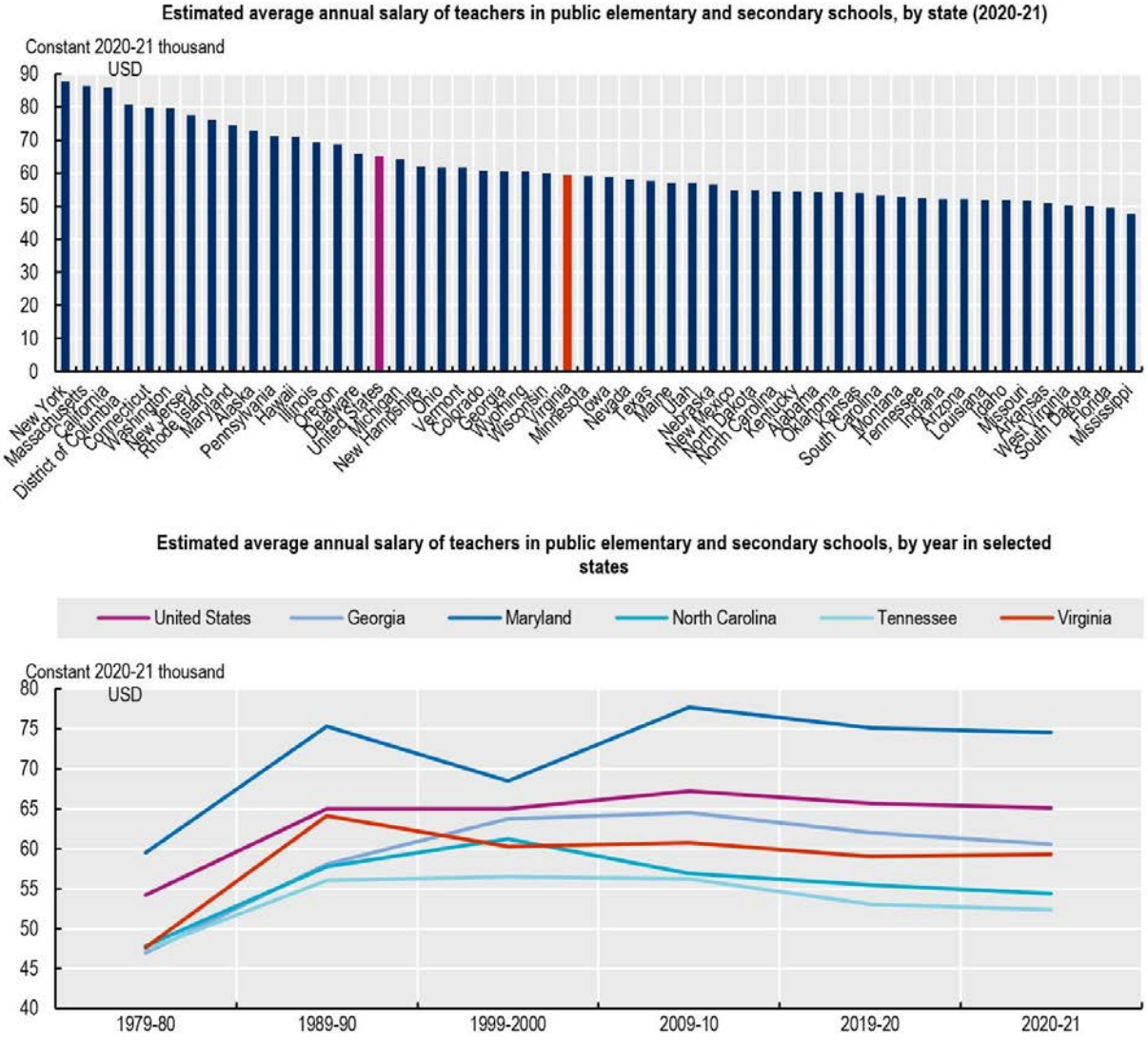
Figure 4.2. While Virginia has a relatively high number of school counsellors in K-12, it has yet to meet the recommended ratio

Average number of counsellors per public school and average number of school student per counsellor, 2021-22



Note: The data include all school level including elementary and secondary schools.
Source: National Center for Education Statistics - https://nces.ed.gov/ccd/elsi.

Figure 4.3. Teacher salaries are relatively low and not progressing well in Virginia



Note: Constant USD based on the Consumer Price Index (CPI), prepared by the Bureau of Labor Statistics, U.S. Department of Labor, adjusted to a school-year basis. The CPI does not account for differences in inflation rates from state to state. For more information about adjusting for differences in the cost of living from state to state, see the American Community Survey Comparable Wage Index for Teachers (ACS-CWIFT) at https://nces.ed.gov/programs/edge/Docs/EDGE_ACS_CWIFT2015_FILEDOC.pdf.
Source: NCES (2021), Table 211.60. https://nces.ed.gov/programs/digest/d21/tables/dt21_211.60.asp?current=yes

Career readiness workforce shortages including teachers and counsellors, is becoming more severe. According to the 2021 Annual Report on the Condition of Needs of Public Schools in Virginia by the Virginia Board of Education, there were 1 063 unfilled teaching positions in the 2019-20 school year. As of April 2023, the Staffing and Vacancy Report tool shows 3 573 teacher vacancies for the 2022-23 school year.

In order to address such shortages, the Virginia Department of Education (VDOE) investigated its programmes and initiatives related to recruitment and retention and articulated plans. In January of 2022, the Department of Teacher Education and Licensure formed the Recruitment and Retention Advisory Committee. The committee reviewed existing efforts, such as more flexible licensure policies, offered hiring and retention funding for school divisions, awarded grants to help cover the cost of assessments and scholarships to tertiary students completing their student-teaching experience. As successes are scattered

across the Commonwealth, the Advisory Committee developed a strategic plan for 2023-26. Numerous grants have been developed and offered, though on an ad-hoc basis, to incentivise school divisions to develop teacher apprenticeship programmes, to support hiring bonuses and continuing education for teachers. Several policies have been established to provide greater flexibility to educators, including 2022 General Assembly House Bill 829, which expanded the types of licenses issued by the Department of Public Health that may be eligible for provisional licensure with a school counsellor endorsement and 2021 House Bill 1776, which establishes a two-year extension of the renewable license for public school teachers with licenses set to expire in 2021 (VDOE, 2023[34]).

> ***HB 829 School counselors; staffing ratios, flexibility (2022).***
>
> *Permits school boards to fulfil the staffing ratio requirements for school counselors by (i) employing, under a provisional license issued by the Department of Education for three school years with an allowance for an additional two-year extension with the approval of the division superintendent, any professional counselor licensed by the Board of Counseling, clinical social worker licensed by the Board of Social Work, psychologist licensed by the Board of Psychology, or other licensed counseling professional with appropriate experience and training, provided that any such individual makes progress toward completing the requirements for full licensure as a school counselor during such period of employment or (ii) in the event that the school board does not receive any application from a licensed school counselor, professional counselor, clinical social worker, or psychologist or another licensed counseling professional with appropriate experience and training to fill a school counselor vacancy in the school division, entering into an annual contract with another entity for the provision of school counseling services by a licensed professional counselor, clinical social worker, or psychologist or another licensed counseling professional with appropriate experience and training.*

Box 4.7. Career coaches

Career coaches are community college employees who are based in local high schools to help high school students define their career aspirations and to recognise community college and other postsecondary programmes, including apprenticeships and workforce training, that can help students achieve their educational, financial and career goals. CTE career coaches introduce students to CTE occupations, careers, and opportunities including CTE training, certification programmes and WBL. They may advise students at different levels including secondary and post-secondary students. When students transition from HS to community colleges (CC), their relationship with career coaches is maintained – this is a good model for easing the transition.

Career coaches typically require a Bachelor's degree or equivalent in education, counselling, business, human services, or a related field from a regionally accredited institution, with some experience working in education, recruitment, workforce, or career coaching.

To support the retention and completion of at-risk students (first-generation families, low-income, or identify as a minority) at the community college level, some Virginia Community College System (VCCS) since 2012 some colleges have implemented, student success coaching under the Chancellor's College Success Coach Initiative. This entails not only assisting students with academic coaching, but also with career, financial, and personal matters that may affect their academic success (Lawhorne, 2020[35]). Success coaches work with an assigned caseload of 100 to 150 students per coach and assist students from college application to graduation (Lawhorne, 2020[35]). An analysis using propensity score matching studied 1 749 treatment participants and the same number of control participants found that students with coaching had 1.8 times higher retention rate but no impact on completion, controlling for gender, age, race/ethnicity and type of enrolment (Lawhorne, 2020[35]).

VCCS offers a course to obtain Virginia Career Coach Certification (VCCC). This course is only open to employees of the Virginia Community College System and its partners. Based on the 12 competency areas outlined in the National Career Development Association (NCDA) Career Development Facilitator curriculum, the Virginia Career Coach Certification (VCCC) programme provides coaches at Virginia's community colleges with the frameworks and tools needed for effective career coaching. VCCC requires 40 hours of training consisting of 10 hours of face-to-face training, split into two 5-hour parts, and 30 hours of online training modules. Hours earned through VCCC count toward the requirements of the Facilitating Career Development (FCD) course and the Global Career Development Facilitator (GCDF) certification offered by VCCS. To complete VCCC, participants must complete the required 10 hours of face-to-face training in addition to the 30-hour online modules (VCCS, 2020[36]).

Recommendation: Clarify roles and increase the quantity and quality of the workforce

Virginia can benefit from further increasing the quantity of teachers and counsellors and diversifying recruitment channels to strengthen career readiness efforts. Building the workforce, through WBL specialists, career coaches, and career specialists can also strengthen career readiness efforts. One way to increase the quantity of teachers and support staff, including counsellors, up to the needed number is to make their pay competitive so that Virginia can attract, recruit, and retain them in the profession. It may be possible through, for example, fully funding the state's share of the cost of providing a high-quality education (i.e., fully funding the Board or Education-prescribed Standards of Quality), lifting the cap on state funding for support staff, and investing in teacher and staff salaries (Goren and Kenneth, 2023[37]). There are several other ways to achieve this goal: through diversifying recruitment channels, providing teachers and counsellors with relevant training, automation of administrative tasks and maximising the use of career readiness system to bring young people to the profession.

Diversifying recruitment channels

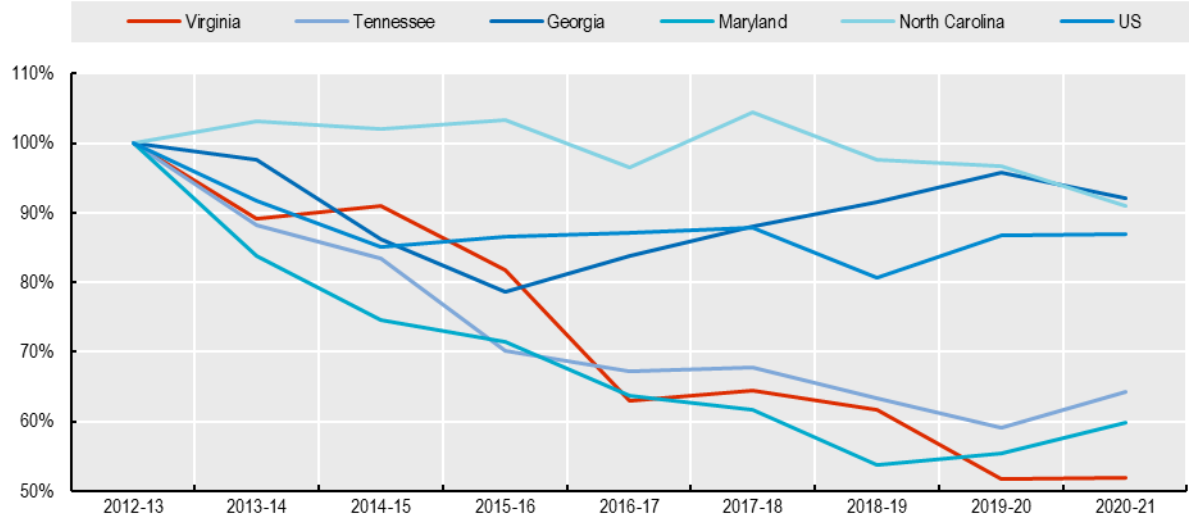
School counsellors in Virginia are required to obtain a license from the Virginia Department of Education. The initial license is valid for three years, after which the counsellor must renew their license every five years by completing continuing education requirements. School counsellors are required to have a master's degree from a regionally accredited college or university in a state-approved school counsellor preparation programme. Such a programme should include at least 100 hours of internship and practical experiences in the preK-6 setting, 100 hours of internship and practical experiences in the Grades 7-12 setting, and two years of full-time teaching experience or two years of full-time experience in school counselling in a public or an accredited non-public school (Virginia Law, 2023[38]). Qualified counsellors should also complete training in the recognition of mental health disorder and behavioural distress, including depression, trauma, violence, youth suicide, and substance abuse (VDOE, 2023[39]).

There are training courses available for school counsellors. For example, Virginia Tech School of Education provides degree programmes for prospective teachers, educational leaders, school counsellors and other related professionals (Virginia Tech School of Education, 2023[40]). Its Counselor Education programme offers two master's degree tracks (School Counseling and Clinical Mental Health Counseling) and a doctoral programme (Counseling Education and Supervision), which prepares skilled counsellors to conduct impactful research, practice, supervise, and teach (Virginia Tech School of Education, 2023[41]). To renew a license, counsellors are required to attend the VDOE-preapproved webinars, complete training in five categories (depression, trauma, violence, youth suicide, or substance abuse), and complete a knowledge check. Upon completing of the knowledge check, participants receive a certificate and a results summary report.

However, evidence shows that enrolment in teacher preparation programmes in Virginia has decreased sharply in the past decade as student enrolment has increased (Figure 4.4). Compared to the level of 2012-13 (100%), enrolment in teaching programmes in Virginia decreased to 62% in 2018-19. This decrease was larger than Georgia (92%), North Carolina (98%) and Tennessee (63%) and the US average (81%). This suggests that current model of teacher preparation requires change and innovation.

Figure 4.4. Enrolment in teacher preparation programmes in Virginia has decreased sharply in the past decade

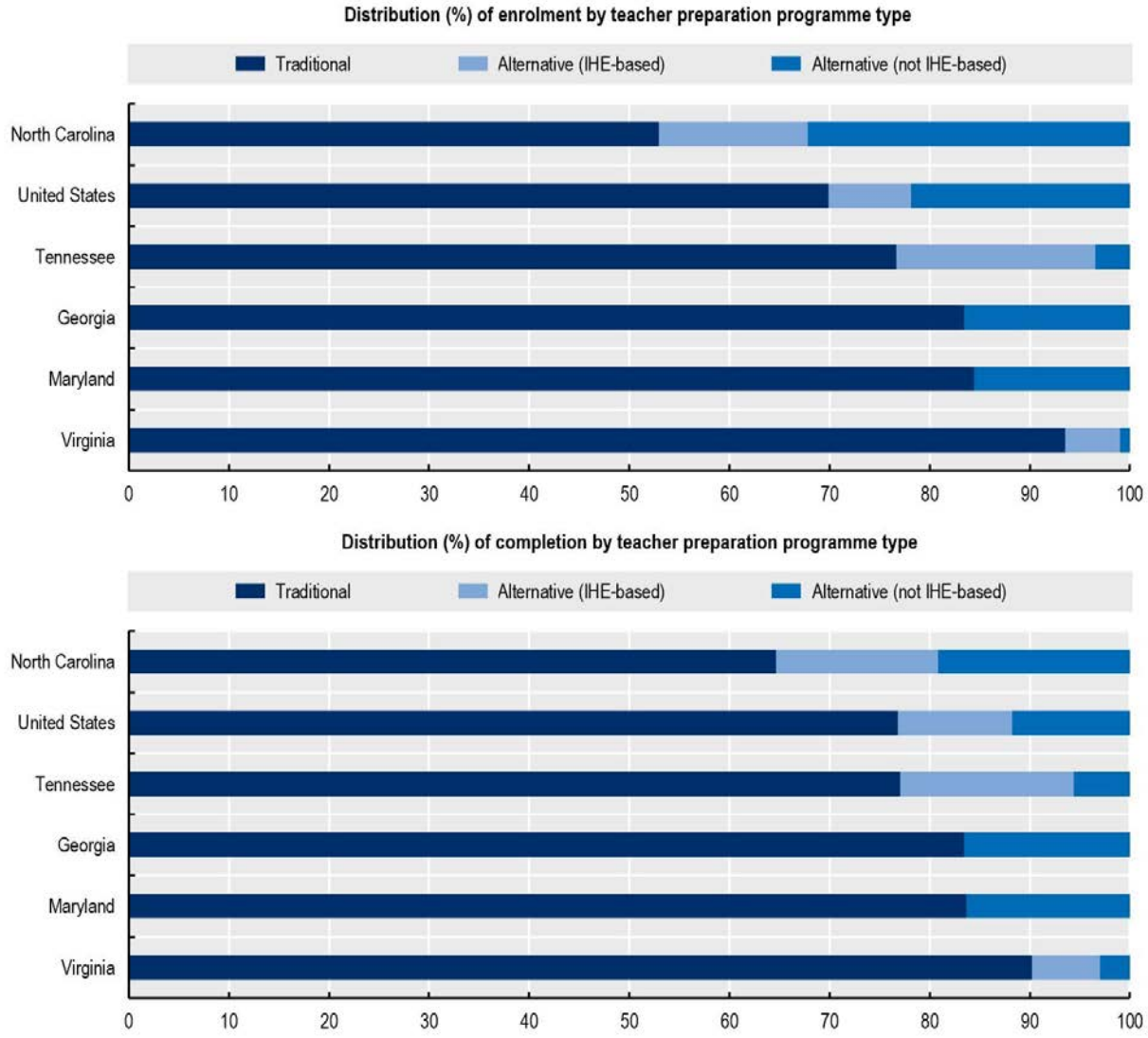
The number of individuals enrolled in teacher preparation programmes (2012-13=100), 2012-2021



Source: U.S. Department of Education (2022[42]), Preparing and Credentialing the Nation's Teachers: The Secretary's Report on the Teacher Workforce, https://title2.ed.gov/Public/OPE%20Annual%20Report.pdf; https://title2.ed.gov/Public/Home.aspx

One approach of particular relevance to the career development of students relates to the diversification of recruitment and training routes into teaching. Compared to the US average and other states, Virginia relies heavily on traditional teacher preparation programmes compared to alternative programmes (Figure 4.5). Traditional teacher preparation programmes refer to undergraduate programmes and often attract individuals who enter college with the goal of becoming a teacher. Alternative programmes often attract candidates who already hold a bachelor's degree in a specific content area and may have prior work experience but are seeking to switch careers to the teaching profession. These programmes may be offered by higher education institutions but also by states, districts and various organisations and partnerships (NCES, 2022[43]). Virginia can diversify training and recruitment routes for teaching professions to ease the teacher shortages and attract talent to the profession.

Figure 4.5. Virginia relies heavily on traditional teacher preparation programmes, 2019-20



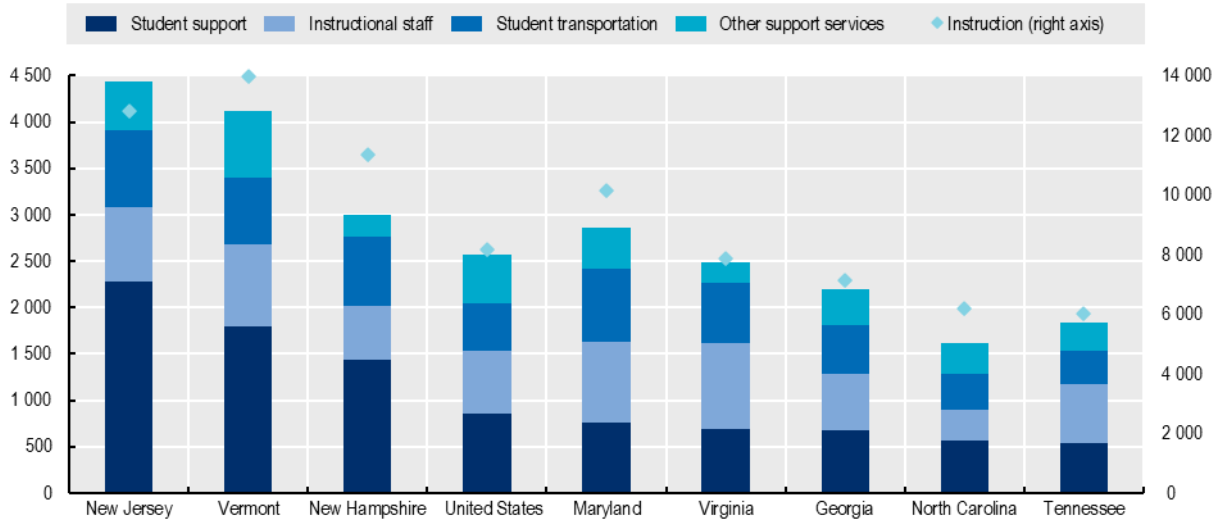
Note: Traditional teacher preparation providers typically offer undergraduate programs and often attract individuals who enter college with the goal of becoming a teacher.

Alternative teacher preparation providers often serve candidates who are the teacher of record in a classroom while participating in the program, frequently attracting candidates who already hold a bachelor's degree in a specific content area and may have prior work experience but are seeking to switch careers. Alternative routes to a teaching credential are defined as such by the state and vary by state. IHE refers to institutions of higher education. Alternative, not IHE-based, programs are offered by a variety of organisations, including states, nonprofits, for-profit entities, districts, and various partnerships.
Source: NCES (2022), Table 209.05. Number and percentage distribution of persons who were enrolled in and who completed a teacher preparation program, by program type and state or jurisdiction: Academic year 2019-20, https://nces.ed.gov/programs/digest/d22/tables/dt22_209.05.asp

Virginia spends relatively high per-pupil amounts for instructional staff (curriculum development, staff training, libraries, and media: 6th among states) and transportation cost (17th among states) while relatively low amounts for student support including guidance, health, attendance, and speech pathology services (33rd among states). Vermont and New Hampshire, the only two states that meet the recommended a counsellors-student ratio, spend more than twice as much as Virginia on per-pupil student support (Figure 4.6).

Figure 4.6. Virginia spends relatively low on student support that includes guidance

Current expenditures (USD) per-pupil in fall enrolment in public schools, by selected function, 2019-20



Note: Data includes elementary and secondary schools and does not include all items of current expenditures per-pupil.
Student support includes expenditures for guidance, health, attendance, and speech pathology services. Instructional staff includes expenditures for curriculum development, staff training, libraries, and media and computer centers. Other support services include business support services concerned with paying, transporting, exchanging, and maintaining goods and services for local education agencies; central support services, including planning, research, evaluation, information, staff, and data processing services; and other support services.
Source: NCES (2022), Table 236.75. Total and current expenditures per-pupil in fall enrolment in public elementary and secondary schools, by function and state or jurisdiction: School year 2019-20

Providing teachers and counsellors with relevant training

In addition to increasing the number of teachers and counsellors, it is essential that they receive relevant, high-quality training – in particular to change the perception of, and to understand the important role of career guidance within education. In this regard, schools and responsible institutions should provide in-service training and other resources that can inform teachers and counsellors about appropriate methods and approaches for counselling, up-to-date entry requirements for tertiary education and labour

market dynamics. This mechanism can help teachers and counsellors to keep abreast of how college and career pathways are evolving. However, more importantly, schools should support all school staff to play a role in career guidance and make career guidance happen in every learning aspect.

For example, Experience Works is the CTE professional development conference for all stakeholders associated with or interested in HQWBL. CTE HQWBL stakeholders include administrators, WBL co-ordinators/points-of-contact, teachers, counsellors, career coaches, and business and community partners. Such opportunities can be encouraged and promoted as part of teacher and counsellor professional development.

In addition, it is important to understand how student socio-economic background, ethnicity, race, gender, sexuality, and others can play a role in student pathways and transition outcomes (see Theme 3, Chapter 6.). This effort is needed to avoid certain groups of students being systematically guided towards certain pathways that are sometimes perceived as less prestigious based on stereotypes (Jeon et al., 2023 forthcoming[44]). Theme 2, Chapter 5. of this report argues that students in Virginia receive limited exposure to the breadth of labour market demand of their region. This can be addressed through effort of teachers and counsellors so that students can broaden the career perspectives and aspirations outside their usual boundaries. This is in line with US National Career Development Association (NCDA) recommendations: "reducing bias and stereotyping in career awareness. NCDA policy is to encourage career development facilitators and all other educators, beginning at the K-6 level, to help pupils become aware of occupations in ways that demonstrate the potential of occupations being open for choice without restrictions based on sex, race, ethnic heritage, age, sexual orientation, creed, or disability. The emphasis should be on the possibility of openness, not on the likelihood of bias and stereotyping." (NCDA, 2011[45])

Automation of administrative tasks

Automation of tasks can assist teachers and counsellors to gain more time for student-focused career related provision (OECD, 2021[46]). There are many administrative tasks that can be automated to save the time of CTE administrators/teachers, counsellors, and teachers. For example, applications for new CTE programme/courses can be automated, instead of submitting a document through fax or email to reduce transactional costs and keep abreast with the rapidly changing labour market. Scope also exists to digitalise the ACP, helping to reduce paperwork and enhancing the availability of management information. Increasingly, digital technology can support and provide career development activities that can ease the workload of school counselling practitioners (e.g., AI-based career decision-support systems designed to cope with the job). CiCi for example is a career chatbot that automates a wide range of career related reflection and information seeking activities providing guidance counsellors with considerable background information about students prior to face-to-face meetings.

Maximise the use of career readiness system to bring young people into the teaching and counselling profession and diversify the workforce

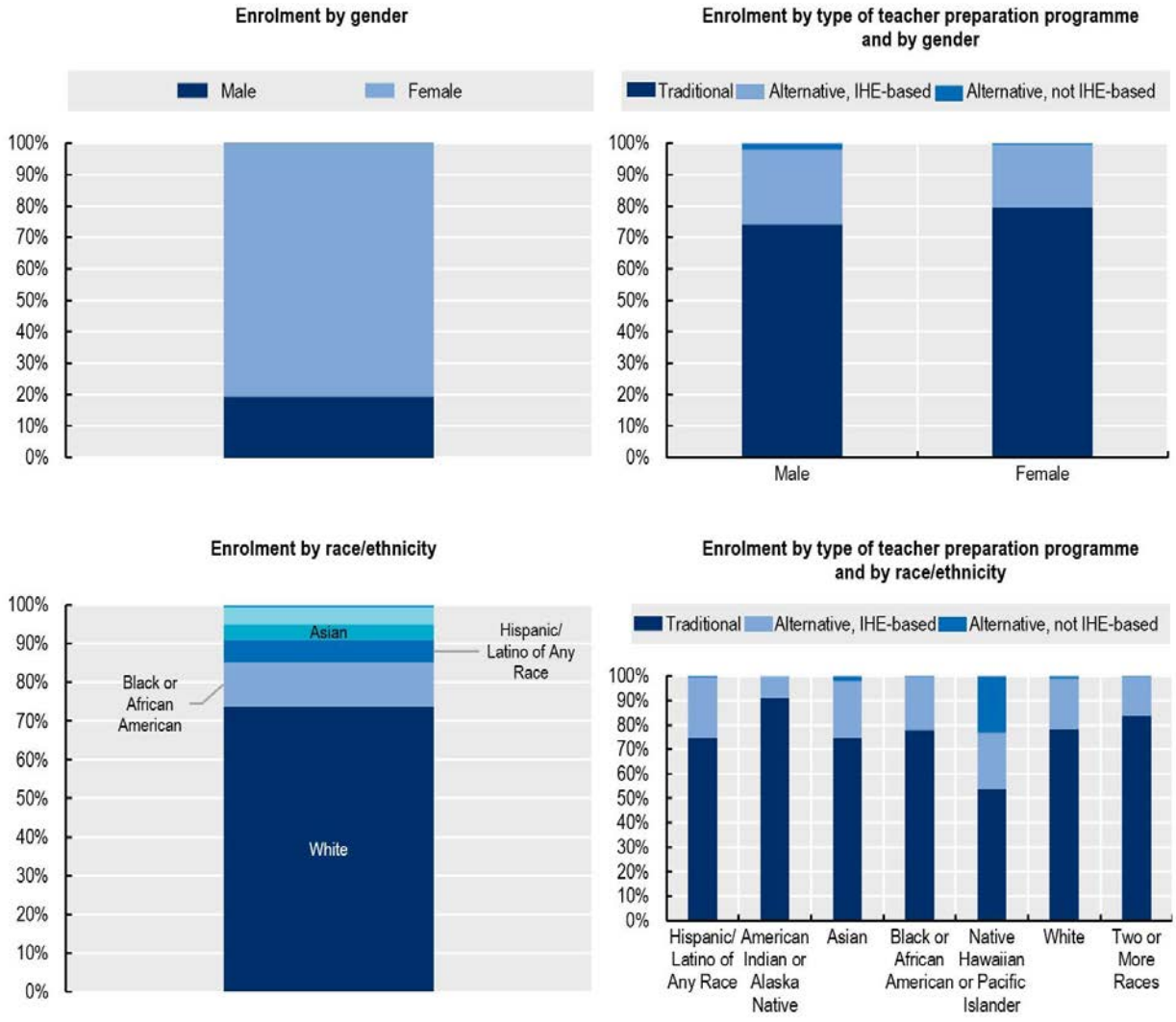
Addressing teacher shortages is an education policy goal in Virginia, and as discussed above Virginia has put significant effort into achieving this goal. While Virginia could diversify recruitment channels and reduce the workload of teachers and counsellors by automating certain tasks, there are also other ways to promote the teaching and counselling profession by expanding the base talent pool.

As many other employers try to reach younger students to attract them to their fields, the teaching profession can also attract students to explore and experience teaching and the education sector. For example, the OECD review team learned that schools can offer internships at school to promote teaching career pathways in Virginia. This can be particularly helpful for non-White students and for STEM teaching careers; although more than half of students are non-White, only 26% of prospective teachers are non-White. To address this issue, Virginia can build up on the example from other parts of the United States: *Pathways2Teaching* is a programme run by the University of Colorado Denver designed to give

upper secondary school students, and particularly those from diverse and disadvantaged backgrounds, the opportunity to explore teaching as a potential career choice while reflecting on issues related to educational equity. As part of the programme, students participate in weekly field experiences in primary schools, learn skills to assist them in applying to higher education programmes, engage with current student teachers, and learn about how teaching can challenge existing inequities and advance social justice. Approximately 50% of upper secondary students who participate in the programme go on to study teaching (Barber, 2018[47]).

Figure 4.7. The majority of future teachers are female and White in Virginia

% of individuals who are enrolled in teacher preparation programmes, 2020-21



Source: https://title2.ed.gov/Public/DataTools/Tables.aspx

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Notes

[1] This review does not include sources and sites that are solely limited to job listings.

[2] To compared, the average ratio of students to guidance counsellors per secondary school is 391 to 1 in Ontario, Canada.

Chapter 5. Theme 2: Efficient career readiness: Aligning career development activities with labour market opportunities in Virginia

This chapter assesses the efficiency dimension of the career readiness system in Virginia (the United States). It presents Virginia's strengths and explores challenges, concluding with a set of policy recommendations to better align career development activities with labour market opportunities. The chapter integrates and builds upon data analysis from Chapter 3, which presents the results of the OECD Career Readiness Survey of Young Adults (aged 19-26) and Teenagers (aged 15-16). It focuses on the labour market linkages in provision of career development activities in Virginia and provides examples of practices from other jurisdictions that can help address those gaps.

Key recommendations for an efficient career readiness system: Aligning career development activities with labour market opportunities in Virginia

Virginia emphasises the responsiveness of its education system, notably at High School level, in relation to labour market opportunities in various ways. The 'responsiveness' component in the career readiness system enriches the choices and pathways available to students and helps them to make informed choices. At the heart of effective labour market signalling, is the active engagement of employers in the career development of students. Virginia has been proactive in encouraging and enabling collaboration with the economic community, especially through the provision of work-based learning (WBL) opportunities, but current levels of employer engagement are insufficient to meet student needs.

Engaging employers to increase, strengthen, expand and promote WBL opportunities, setting up systemic and consistent collaboration among key stakeholders

Recommendation 4: Virginia should consider adopting new approaches to encouraging and enabling employers and people in work to engage with schools to provide students with systemic, consistent and diverse exposure to the working world.

Employer engagement is an essential component of effective career development. Considerable opportunity exists in Virginia to strengthen the engagement of employers and people in work in the career development of students. Student participation in WBL activities in Virginia is also low compared to other states and many other countries. For example, 18% of CTE concentrators in Virginia participate in work-based learning compared to 38% in Georgia in 2020-21. The OECD Career Readiness Surveys also confirm that in comparison to international practice job shadowing, worksite visits and internships are particularly weak in Virginia. While many CTE programmes currently provide excellent examples of provision enriched by strong employer engagement, this is not always the case.

In this context, Virginia should consider additional mechanisms, from Elementary through to High School, for encouraging and enabling the enrichment of career development by employers and people in work. A first step for Virginia would be to make the business case to employers and people in work as to why they would benefit from engaging with schools to support guidance activities. Longitudinal studies show that greater levels of teenage career readiness are associated with lower unemployment rates, higher wages, and greater job satisfaction in young adulthood – all indications of better matching in the early labour market, underpinning more fulfilling employment for the individual and greater productivity for the employer. Secondly, Virginia should consider removing barriers that prevent the provision of and participation in employer engagement activities.

There are several examples that can inspire Virginia to increase, strengthen, expand, and promote employer engagement within guidance. More efficient models are based on governance and design principles which bring together government, educators and employers/professional bodies to share ownership and enable efficient delivery. There are many examples that can inspire Virginia to increase, strengthen, expand, and promote opportunities. Elementary level is not too early to begin career development enriched by employer engagement. It is not a matter of requiring students to select a career for their adult lives, but helping them to broaden their understanding of the world of work through enjoyable and engaging encounters with working people and employers, so enriching learning and personal development while challenging stereotypical thinking (which begins as young as five) that may not be representative of the modern working world. A number of countries have introduced models for engaging children at a younger age worthy of consideration within Virginia.

Collaboration and coordination between stakeholders are key to operating a career readiness system given that the system lies at the intersection of education and workforce development. While collaboration between schools, employers and communities and coordination among state agencies is happening, there is a tendency for this to be in an ad hoc fashion and is shaped by the capacity of the school, division, agency and employer. Greater clarity on expectations, as articulated in a revised set of standards/framework will enable stronger local cultures of collaboration.

A more formalised, systemic and consistent collaboration to support career readiness would remove barriers to improvement. Evidence shows that increasing employer engagement enhances the quality and quantity of career guidance and this is now widely seen as an essential characteristic of an effective guidance system. Students who interact more with employers tend to participate more regularly in career development activities and can expect better employment outcomes than comparable peers. Virginia is aware of the importance of employer engagement, and it is increasing, but significant opportunities for improvement remain. Examples that can be helpful to improve Virginia's approach include Inspiring the Future in the UK and New Zealand that provides secondary school students with opportunities to identify and connect with volunteers from different backgrounds who work in a wide and diverse range of careers through career talks, job fairs, mentoring, job shadowing, interview practice and CV workshops. Inspiring the Future makes use of online technologies to make it quick and easy for employers and volunteers to make themselves available to schools to support career development in different ways. Such an approach would allow for state-wide campaigns to connect employers and people in work with local schools which would themselves decide how to best make use of their voluntary engagement. By adopting a state-wide approach, opportunity exists moreover to provide employers in strategically important economic sectors experiencing skills shortages with a simple means to better amplify career opportunities to young people through state-wide campaigns. Other models also exist operating on more traditional lines, brokering relationships between schools and employers by sector or geographic location. In New Brunswick (Canada), Centres for Excellence help schools to connect with employers in relation to four strategically important areas of economic activity.

Strengthen career development activities that lead to aspiration for skilled employment

Recommendation 5: Virginia should consider introducing new means of deepening and broadening the exposure of students to the skilled trades from an earlier age, through career guidance interventions and WBL.

The skilledtTrades (construction and manufacturing) is one of Virginia's most in-demand industries. Such professions offer many attractive careers, but student interest is limited. As is the case across the United States, interest in those professions among teenage students is low by international comparison. Only 9% of surveyed teenagers in Virginia with a clear idea of their occupational expectation, named a medium-skilled occupation.

While CTE and co-operative education programmes in Virginia offer valuable introductions to skilled employment, opportunity exists to expand student interest. Lack of interest may be for one of two reasons. Students may not have a fully informed understanding of relevant professions and decide that their career ambitions lie elsewhere. Alternatively, it is possible that student understanding is partial and insufficient to make an informed decision about CTE provision or the professions to which it is related. While the education system has limited capacity to address the attractiveness of occupations, it can (in collaboration with the business community) take steps to address information asymmetry. Here, scope exists to broaden and deepen student understanding of careers to which CTE and co-operative education provision commonly provides access. Notably, during Middle School (before important decisions are made concerning more vocationally-focused pathways through secondary education), it is possible to expand potential interest in fields commonly entered without the need for a four-year university degree. By providing students with the opportunity to see the actual

careers behind the CTE courses, through programmes of career talks, job fairs, workplace visits and digital tools, opportunity exists to broaden career interests and address potentially erroneous assumptions. Within High School, the expansion of WBL opportunities will provide students with deeper, first-hand experiences of potential future employment and access to social networks which can facilitate progression into employment. Such an objective would be facilitated through the availability of state-wide mechanisms that enable schools across the Commonwealth to connect employers and employee volunteers. Efforts can also made to better inform parents about the realities of employment in the skilledtTrades.

School provision in Virginia can do more to help young people in the process of identifying and applying for apprenticeship and training programmes while students are still in school. In all, 43% of young adults agreed that they would have welcomed *a lot* more help (and a further 37% wishing that they had had *some* more help) from their school in understanding 'how to get a formal job training program or apprenticeship'. Given the reputational challenges often associated with vocational programmes, it is important that students have opportunity to understand the careers to which they relate. This can be expected to be of particular importance to students from backgrounds which are underrepresented in such professions.

A number of models exist for consideration, including the Baker Clause in the UK which places a legal requirement for schools to enable stronger access to providers of post-secondary vocational training, and programmes in Australia which make it easy to invite apprentices into schools to talk about their experiences. Other approaches are also described in this report.

Introduction – Closer to what is needed

This chapter looks at how the career readiness system in Virginia can help improve the career planning of young people by better amplifying patterns of demand within the state's labour market. Efficient career readiness systems provide students with an informed understanding of how education and training provision relates to employment opportunities. They serve to amplify changing patterns of demand within the labour market providing students with realistic insights into different forms of employment.

Strengths of Virginia

> *Virginia emphasises the labour market responsiveness of the K-12 system and reliable, accessible and relevant labour market information*

Virginia emphasises the responsiveness of the K-12 system in relation to labour market opportunities and labour market signalling. In order to help students make informed choices, Virginia provides a list of high-demand and high-paying occupations and information on what pathways lead to those occupations, how to access those pathways, and what their outcomes are. This 'responsiveness' component in the career readiness system enriches the choices and pathways available to students. With the support of regularly updated labour market data, career development activities can help students make career choices that not only match their aspiration, interests, aptitudes, and abilities (Hoferi, Zhivkovikj and Smyth, 2020[1]), but which are also in demand.

One of Virginia's approaches to strengthening college and career readiness is to provide "reliable and transparent information" about career pathways, including where these pathways lead, how much each pathway costs to follow, what qualifications and skills are required, and what the gains are in terms of employment and wages. This approach also aims to increase communication with both students and

parents in order to raise awareness of alternative pathways to college or university degree enrolment and emphasise that these diverse pathways can also lead to stable and skilled employment with high wages.

Using this approach, the Virginia Office of Education and Economics (VOEE) built a data platform to provide uniform, reliable and accessible labour market data and evidence to inform and update career readiness efforts including CTE. With recent initiatives, such as hiring WBL Specialists at the regional level and requiring students to graduate with industry-recognised credentials, there is a recognition that schools and employers need to work more closely to support each other to better support students while addressing labour market shortages. VOEE creates a linkage between education and WFD and is trying to provide a uniform regional labour market information system that includes labour supply and demand as well as return on educational investments.

SCHEV administers the Workforce Credential Grant programme, which is designed to create and sustain a supply of credentialed workers to fill high-demand occupations. This grant programme provides a pay-for-performance model for funding a non-credit, non-degree workforce training that leads to a credential in a high-demand field. High school students can get a certificate through this grant programme (VDOE, 2022[2]).

In addition, as discussed in Chapter 2., workforce development efforts are being consolidated, which is expected to increase the connection between K-12 and the WBL. A new Department of Workforce Development and Advancement (DWFDA) is being created under the Secretary of Labor to consolidate existing WFD programmes, evaluation and data. VOEE is playing a role here to consolidate data.

Employers appear ready to be involved in contributing to career readiness in Virginia

The business community and wider employers in Virginia appear ready to be involved in contributing to implementing career readiness strategies and programmes, especially through providing WBL opportunities. This proactive stance from employers is partly due to the urgency in building the needed workforce, the foremost challenge for employers in the private and public sectors. Many initiatives are built to secure sufficient flows of talent. Larger industries or businesses in Virginia have established relationships with schools and offer a variety of opportunities such as apprenticeships and internships, although these opportunities often come after high school graduation due to age and safety restrictions.

There are several ways that employers in Virginia engage in CTE. Importantly, the VDOE collaborates with business and industry partners to develop CTE programmes and align these programmes with current workforce needs. Through these partnerships, employers engage directly with CTE teachers and students to offer real-world experiences. Employers serve on local CTE advisory committees, which aim to provide guidance and support for CTE programmes, including curriculum development, teacher training, and WBL opportunities. Employers can apply to join advisory committees, or they are appointed by local education agencies or VDOE. Employers participate in industry-specific advisory committees that provide guidance on CTE programmes related to their particular field or industry.

Employer input is already needed in many processes in the career readiness system. For example, when requesting VDOE approval of new CTE programmes or courses, school divisions must get approval prior to including any budget items in the CTE Local Plan and Budget Application. This application for a new CTE programme or course requires labour market and employment needs data, including information on future employment growth of relevant occupations and how they relate to the proposed programme or course request (see Application for New Career And Technical Education Program/Course; CTE Trailblazers).

There are also innovative ideas happening and a great deal of interest by larger industries to reach students from a younger age to present opportunities prior to them making a decision on their

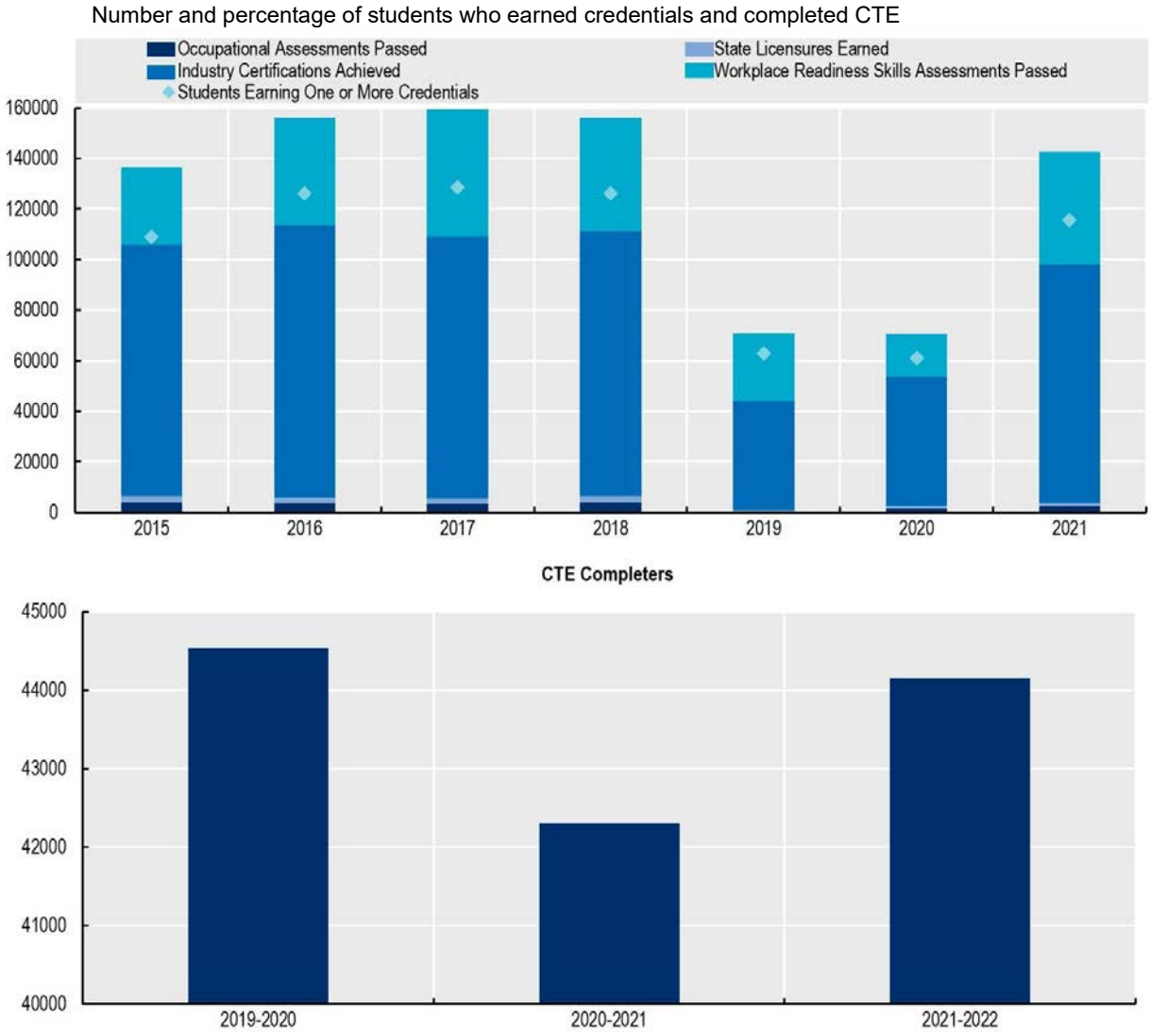
career pathway. For example, companies can launch competitions for students through Career and Technical Student Organizations (Box 2.1, Chapter 2.). Similarly, the Virginia Chambers of Commerce runs semester-long projects that offer high school students the opportunity to collaborate with industry partners to investigate and solve real-world issues relevant to business, called the K-12 Innovation Challenges. Industry partners present a challenge each year to the student teams and provide an overview of available resources, and also serve as competition mentors for schools in their region during the semester-long challenge. Student teams then present their findings at an event designed to recognise student achievement and industry collaboration (VA Chamber, 2020[3]).

Virginia is strengthening the Path to Industry Certification: High School Industry Credentialing

VDOE encourages more students to work toward selected industry credentials or state licenses while pursuing a high school diploma (VDOE, 2022[4]). VDOE evaluates industry credentials on an on-going basis against prescribed criteria for graduation requirements for the Standard Diploma and verified credit. Credentials that meet the criteria are presented to the Virginia Board of Education annually for approval (VDOE, 2022[4]). In this regard, CTE teachers are required to have an industry certification credential in the area in which the teacher seeks endorsement. If not, the Board may, upon request of the employing school division or educational agency, issue the teacher a provisional license to allow time for the teacher to attain such credential (VDOE, 2022[4]).

Virginia saw an increase of students who earned credentials between 2015 and 2017, with a slight decrease in 2018; while in 2019 and 2020 the number decreased by half, it was back up in 2021 (Figure 5.1).

Figure 5.1. Credentials and CTE in Virginia



Note: A CTE completer is a student who successfully completes a two-year career or technical education programme and who also completes all requirements for a high school diploma or for an approved alternative education programme, such as a high school equivalency.
Source: (VDOE, 2023[5]), https://schoolquality.virginia.gov/virginia-state-quality-profile#desktopTabs-4 ; https://p1pe.doe.virginia.gov/apex/f?p=248:1:104780846129826:SHOW_REPORT.

Key recommendations

Engaging employers to increase, strengthen, expand and promote work-based learning opportunities to enable real world interaction for students

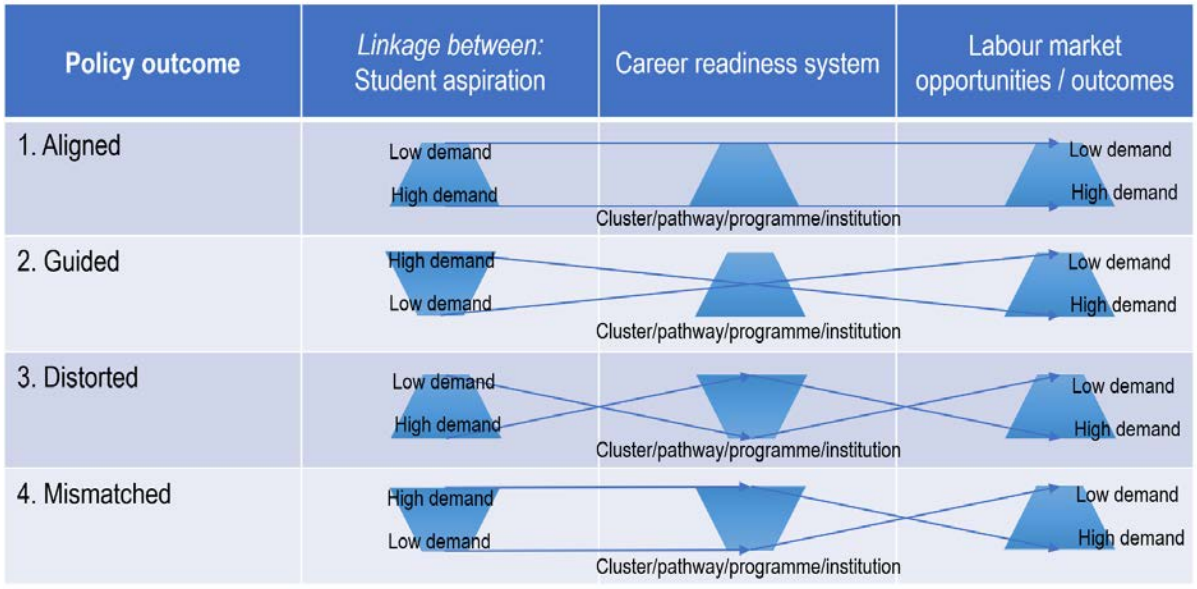
Challenge: The career readiness system in Virginia focuses more on programmes, pathways, credentials and institutions rather than the actual characteristics of careers

Career readiness strategies and programmes in Virginia tend to have a greater focus on immediate programme, pathway or institution selection rather than labour market outcomes to which they link – such as the characteristics of jobs, occupations and skills, aspirations and attitudes of persons in those jobs and occupations. Consequently, students approach high school course selection with limited insight into the professional pathways to which CTE and other provision leads.

While this approach may be easier to manage in terms of student interests and aspirations in an aggregated way given limited school resources, it may risk not adequately matching patterns of labour market opportunities with actual student interests and aspirations, especially when existing programmes, institutions, clusters or pathways are not agile enough to align with the labour market opportunities or guide student interest. In addition, students may have information, options and insight limited by the narrowness of what their school can offer.

To illustrate this issue, four policy outcomes are conceptualised below based on the linkage between student aspirations, the career readiness system, and labour market opportunities or outcomes (Figure 5.2). First, when the career readiness system accurately reflects student aspirations and at the same time smoothly matches student aspirations with labour market opportunities, the system is well aligned. Second, when the system effectively guides student aspirations, from those that are distant from labour market opportunities to those that are closer to those opportunities through offering adequate clusters, pathways and programmes, the outcome is well guided. Third, when the career readiness system corresponds neither with student aspirations nor with labour market opportunities, the system can distort both aspects, even if the two sides are actually well aligned. Fourth, even if clusters, pathways and programmes do a good job meeting student needs and aspiration, they may not function well enough to guide student aspirations to match labour market opportunities, which is unsuccessful from the labour market perspective.

Figure 5.2. Simple illustration of possible match or mismatch between student interest/aspiration and labour market opportunities



Source: Author's elaboration

In practice, such mismatches can happen due to the seasonality of certain jobs, a cyclic economy, changing labour market needs, increasingly specialised nature of jobs that require crossover and transferable knowledge and skills, among other reasons. For example, acquiring an accurate picture of the labour market demand for certain career clusters, such as the Agriculture, Food, and Natural Resources (AFNR), is particularly challenging due to evolving skills needs, seasonal fluctuations in employment and higher levels of self-employment (Rephann, 2023[6]). Moreover, career clusters, including AFNR, may not always closely align with the industry employment with which they are most commonly associated; most employment opportunities for the AFNR career cluster are outside the AFNR industry sector, with the

Professional, Scientific, and Technical Services sector accounting for 32% of employment. All of these factors can make it more difficult for CTE professionals and counsellors to gauge changes in career opportunities for the career cluster (Rephann, 2023[6]).

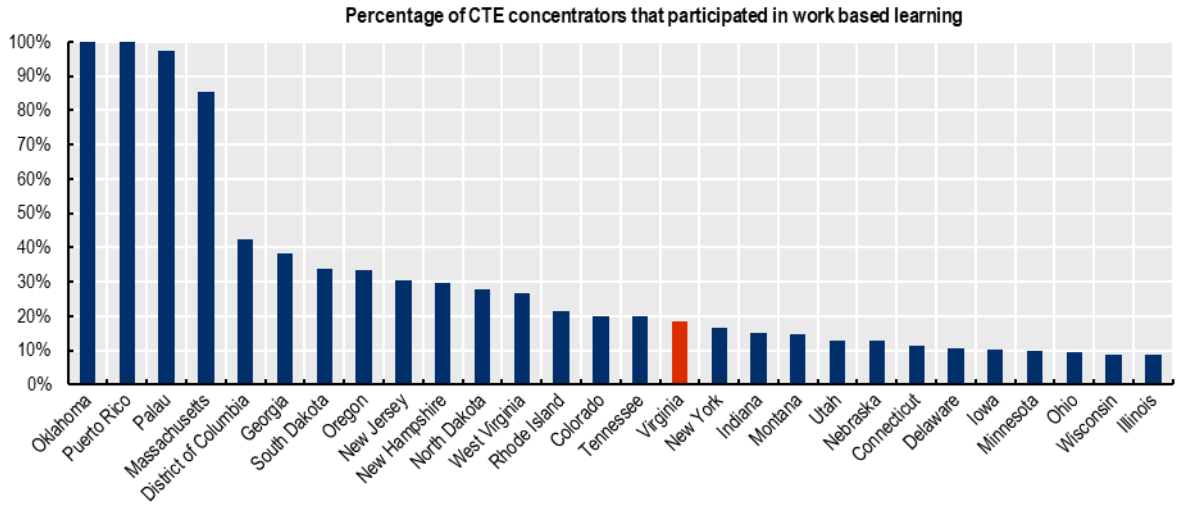
Another mismatch may come from the self-interest of particular institutions. For example, a skills system may be dominated by education and learning providers rather than the needs of employers and learners (Holland, 2016[7]). In this case, education providers including schools and training centres could be biased in favour of programmes that are less costly or easier to deliver, which may be due to teacher shortages or availability of resources within school division. There might end up being competition between different education and learning providers in seeking to "sell" programmes, as reported in Scotland's apprenticeship system (OECD, 2022[8]).

Labour market skills shortages can often signal that something is out of balance, whether it is a policy, incentive, or programme. According to the 2022 Northern Virginia Workforce Index, 71% of 237 regional business leaders reported that filling job openings has been more difficult in the previous 12 months than in the prior year. Primary barriers to hiring were mainly due an overall shortage of interested or available candidates (63%) despite the fact that work-based learning approaches such as internships and apprenticeships are underutilised and offer prime opportunities to expand recruitment. 49% of respondents reported employing at least one intern over the past 12 months and 15% recruit through apprenticeships. Moreover, employers rely heavily on formal educational credentials as part of the hiring process: 25% consider level of education to be very important or essential when making hiring decisions, and 42% are rarely or never willing to accept equivalent professional experience in lieu of education qualification. This kind of rigid stance can be a major but unnecessary cause of perceived skills shortages in a changing labour market. Many hiring approaches that could address these challenges remain underutilised however some proactive employers are approaching school students, from early as Grade 8, to influence their career exploration, experiencing and thinking process as a preliminary exercise to addressing future needs.

US state-level data show that Virginia has been relatively behind in student participation in WBL activities compared to other states. For example, 18% of CTE concentrators in Virginia participate in work-based learning compared to 38% in Georgia in 2020-21 (Figure 5.3). In addition, several CTE advisory committees reported that "guest speakers and industry demonstrations dominated the career experience activities" for students (e.g., Fairfax County, see Box 5.1) and OECD Career Readiness Survey of Young Adults in Virginia revealed that about half of respondents never participated in a worksite visits (51%), a job shadowing activity (49%) or internship (46%). While the Survey of Young Adults in Virginia finds positive relationships between higher levels of teenage engagement with employers through high school career development programmes (results that is also found in comparable UK studies – (Percy and Mann, 2014[9]) (Mann and Percy, 2013[10]) (Mann et al., 2017[11])), on average, young Virginian adults recall fewer than two such engagements. Among teenage students surveyed, 76% had not participated in a job shadowing and 66% had not participated in job fair. All this reflects a need to improve the level of employer engagement in Virginia. An effective guidance system will ensure that engagements with employers form a commonplace aspect of student progression through secondary education.

Figure 5.3. Virginia was relatively behind in the student participation in the WBL activities

Percentage of CTE concentrators that participated in work-based learning, 2020-21



Note: Student outcome data from the 2020-21 school year should be considered with caution due to the disruptions caused by the COVID-19 pandemic. For example, student participation in the state assessments used for the Perkins V academic indicators varied across states, and where student participation was low overall or uneven across student subgroups because of the pandemic, the assessment results may not be representative of the state or a particular subgroup.
Source: https://cte.ed.gov/pcrn/explorer/performance/perkins-v

Box 5.1. Examples of career development activities (Fairfax County)

Each county and city in Virginia host a number of career events and programmes. For example, regional Career Expo events serve 14 localities in Virginia.

As an example, Fairfax County – the biggest county in Virginia – hosted a job fair for students and parents to connect with potential employers and learn about local jobs. The Academy Speaker Series featured various guest speakers and industry demonstrations in different programmes. Various Fairfax County schools hosted career events in different CTE clusters, including:

- Occasional events for example, Criminal Justice and Cyber Security Career Fair, Cadaver Lab visit at Northern Virginia Community College, Dental Screening event, and Clinical Shadows.
- Career Prep Day: local businesses and organisations visited a school and shared information about health and medical careers and the educational requirements
- PATHS Mentor Program (virtual): students participate with their university student mentors in monthly Career Prep Group Workshops and mentors work individually with students on Career Exploration and Preparation, in addition to select students are participating in a research project with their mentor.
- West Potomac Pharmacy Tech students take an internship for credit course, being hired as employees through their internship and high school program.

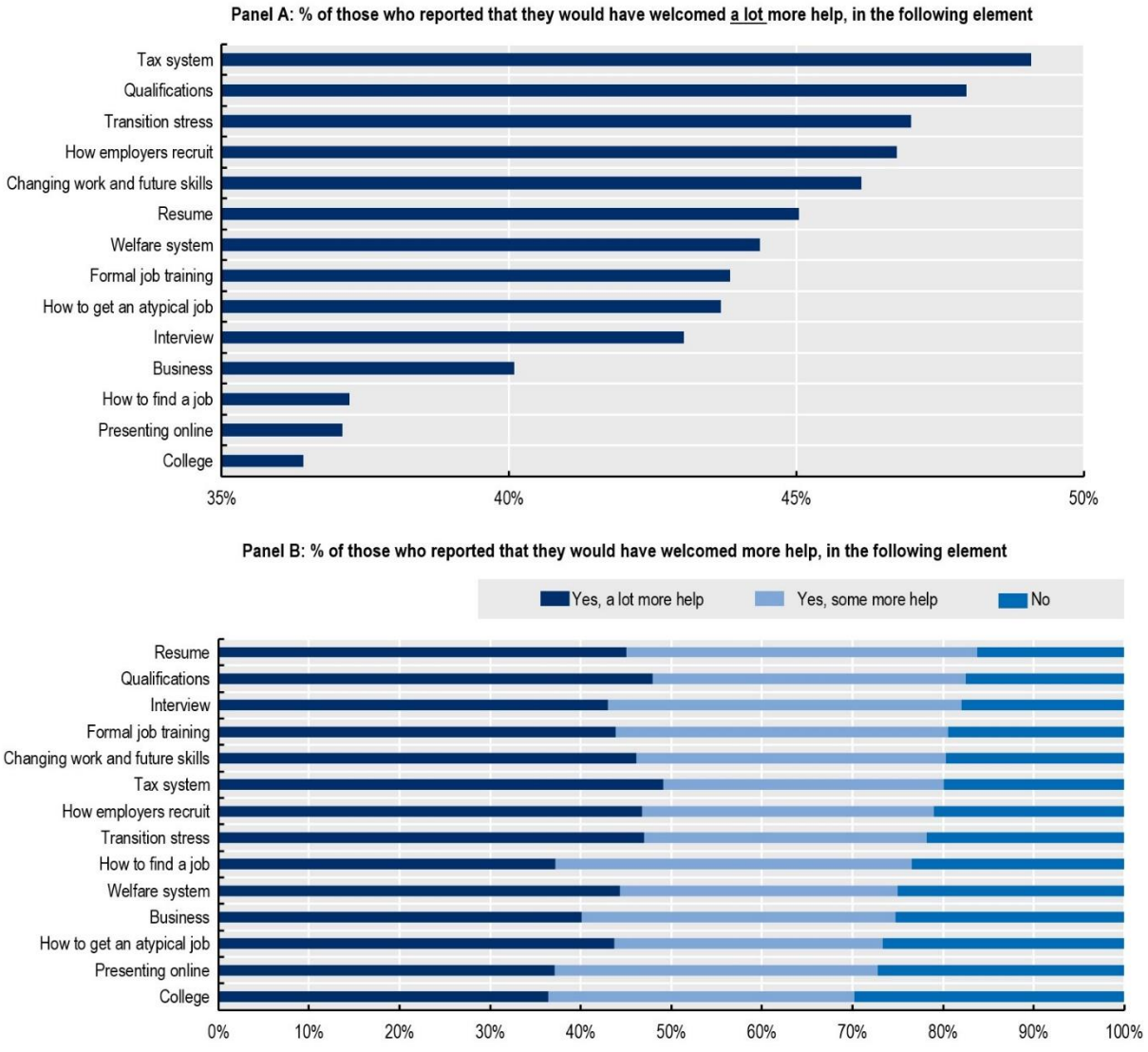
Source: FCPS (2023[12]), Career and Technical Education Highlights for April 2023, https://www.fcps.edu/sites/default/files/media/pdf/April2023Highlights.pdf

Evidence from the OECD Career Readiness Survey of Young Adults also suggests that there is a need to broaden or shift career readiness support in school, rather than focusing heavily on programme/pathway/institution selection.

- A large share of respondents reported that they would have welcomed **a lot** more help from their secondary school in preparing for working life, particularly in understanding the reality of the world of work. For instance, how the tax system works (49%), how employers/businesses actually recruit (47%), and how the world of work is changing, and which skills are likely to be in demand in the future (46%) (Figure 5.4 Panel A). This may reflect the need to broaden the approaches of career development activities while in high school and to bring them closer to labour market opportunities and demand.
- They also reported that learning practical employability skills would have been helpful. Most respondents would have welcomed more or a lot more help in how to create a good resumé or write a good job application (45% feeling that they would have benefited from a lot more support), how to perform well in an interview (43%), and how to get access to a formal job training programme such as an apprenticeship (44%) (Figure 5.4 Panel B). 46% would have welcomed a lot more help in areas that Virginian high school system already offers or is expected to offer including: how to find out what different jobs require in terms of skills, attitudes and qualifications (Figure 5.4 Panel B). This suggests strongly that opportunity exists to better prepare students for entry to the labour market as they approach the end of secondary schooling. It also suggests the need for a more concrete framework that articulates what learning and guidance each student should graduate with (see Theme 1, Chapter 4).
- A relatively large share of respondents (30%) suggested they would not have valued any further help in getting into college or university – among 14 survey questions listed in Figure 5.4, those who would have welcomed a lot more help on this matter were the smallest (36%).

This suggests that Virginia may need to shift from the focus on an immediate transition to tertiary education, to focus more on how to deal with the stress of transitioning (47% reported a lot more help needed), understanding the welfare system (44%), or how to get a job which people of their gender or background do not normally pursue (44%) (Figure 5.4 Panel A). This suggests the need for learning in the connection with mental health and career development altogether.

Figure 5.4. Young adults in Virginia would have welcomed more help for career readiness



Source: OECD Career Readiness Survey of Young Adults in Virginia 2023

The OECD review team witnessed during school visits in Virginia that access to a co-op programme, and thus part-time work experience. Analysis of multiple longitudinal datasets shows that teenager part-time working can be routinely linked with better employment outcomes in adulthood, even after controlling statistically for a range of other factors that influence transitions (OECD, 2021[13]; Covacevich et al., 2021[14]; Covacevich et al., 2021[15]). However, access to part-time work linked to programmes of study can be limited for certain students due to co-op regulations. A CTE teacher can only supervise those students enrolled in the cluster for which the teacher is certified. For example, in a high school, only students who

attend the business cluster can work part-time as part of co-op programme because only the business CTE teacher has the co-op certificate. Therefore, students in an engineering programme cannot have part-time work experience to broaden their career experience in relation to what they study, as part of CTE, even if they want to.

In conclusion, an over-emphasis on programmes, clusters, pathways, credentials or institutions can be an inefficient approach from the perspective of labour market outcomes. Based on continuous, close contact with local employers and industry representatives, CTE professionals and counsellors should be able to help students broaden or specialise more narrowly than the cluster or pathway to which the students are assigned or than programmes or courses that a student's school can offer. This flexible approach should of course be complementary to the existing, foundational system that aims to align the overall career readiness provision, including CTE, to regional labour market data (e.g., 17 career clusters, approval process of new CTE courses etc.) while offering interesting and meaningful choices for students. In addition, earlier interventions, notably at Middle School, would allow for more effective student decision-making. Students begin developing thoughts, assumptions and expectations about their futures in the working world from a young age, but frequently these perceptions are overly narrow and confused (Mann, 2020[16]) (Chambers et al., 2018[17]). In addressing such modes of thinking, opportunity exists to enhance transitions out of education into immediate employment again by prioritising the engagement of young people with employers and people in work.

Recommendation: Build a system or mechanism for connecting schools and employer who can offer work-based learning opportunities to allow students systemic, consistent and diverse exposure to employers

Important opportunity exists for Virginia to broaden and deepen young people's exposure to the world of work, enabling them to explore, experience and think about their potential futures in employment.

The limited employer engagement in Virginia, discussed above, reflects broader, systemic obstacles in engaging employers in career guidance (Musset and Kurekova, 2018[18]). Such transaction costs can be reduced to optimise the engagement of schools with employers.

Removing these obstacles can begin by making the business case to employers and employees as to why they would benefit from engaging in offering WBL or other career readiness efforts given that direct, immediate benefits may be limited. For example, during short work placements, students do not typically do productive work and there is no guarantee that those students would stay in the sector, in that occupation, or with the company. Employers also may not have sufficient motivation to engage in the provision of career guidance, and it is not always clear for the employers how they can benefit from participating in career guidance activities. However, in the long run, offering students such opportunities paves the way for a sustainable talent pipeline – which some employers have already recognised and acted upon (Mann, 2011[19]). Longitudinal studies show that the career aspirations voiced by younger teenagers often serve a predictive quality. (Tai, 2006[20]) for example, review the National Educational Longitudinal Study of 1988 to find that eighth grade students who express a plan to work in the sciences are more likely to do so than comparable peers. In this study, occupational expectation is more strongly linked with occupational outcomes than teenage Maths score. Moreover, evidence of better labour market outcomes for young people also strongly suggests that employers have much to gain through their engagement in career development. Where young adults are less likely to be unemployed, to earn more and to be more satisfied in work, evidence exists of better between employment opportunities and individual preferences and aptitudes underpinning productive engagement in work (OECD, 2022[21]). While the business case is important, many employers and people in work are open to working with schools through altruistic impulses, but only if it is made easy for them.

Box 5.2. CTE Credentials

CTE credential requirements do not always guarantee high quality access to career development activities. In Virginia, there has been a long-term effort to increase the number of graduates who earn CTE credentials – industry credential,[1] state licensure,[2] Workplace Readiness Skills assessment,[3] and National Occupational Competency Testing Institute (NOCTI) assessment.[4] All high school graduates can earn one of two diplomas, a Standard Diploma (SD: fewer course taking requirements) or an Advanced Studies Diploma (ASD: more course requirements to prepare for post-secondary education). Graduates who earn Virginia's SD are less likely to enrol in, persist in, or complete tertiary programmes. Disadvantaged students, such as Black, Hispanic, or English learners, are more likely to earn SD and thus less likely to enrol in college (Harris, Jonas and Schmidt, 2022[22]).

Against this backdrop, in 2013 the Virginia Board of Education added a CTE credential requirement to the SD for High School (HS) students. These CTE credentials are intended to provide HS graduates with additional preparation for college and careers. Graduates can complete this requirement by passing an approved assessment even if they have not enrolled on a related CTE programme (Harris, Jonas and Schmidt, 2022[22]). This policy change saw a positive outcome: from 2011 to 2017, the percentage of SD graduates who earned at least one CTE credential increased from 23% to 91%. A similar increase occurred among ASD graduates, even though the CTE credential requirement applied only to SD graduates. The attainment rates of CTE credentials increased for all groups of SD graduates, including groups based on demographic characteristics, federal programme participation, and academic achievement. While the percentages of SD graduates who earned a CTE credential increased consistently from 2011 to 2017, their college enrolment rates dropped. The percentage of SD graduates completing a CTE programme of study, which requires taking CTE courses that are not required to earn a credential but may still be helpful for later student outcomes, decreased in 2016 and 2017 (Harris, Jonas and Schmidt, 2022[22]).

While the question of whether this requirement of CTE credentials helps high school graduates to have career and college readiness and outcomes remains an empirical question (e.g., workforce outcomes for SD graduates depending on the credentials), there is a limitation to this approach. CTE credential requirements do not guarantee access to high quality career development activities. Another question is whether these CTE credentials have a value recognised by employers (Harris, Jonas and Schmidt, 2022[22]).

By increasing attainment rates of CTE credentials for SD graduates, Virginia expected to increase the options available to graduates for a pathway into and through careers. In implementing this policy, VDOE envisioned this happening by graduates earning one or more CTE credentials that are narrowly aligned to their selected career concentration, equipping them with relevant technical skills (VDOE 2016), or by encouraging more graduates to complete a CTE program of study, which requires CTE course taking and may lead to improved student outcomes but is not required for earning a CTE credential. Recognising the limited number of industry credentials available to secondary students, VDOE (2008-11) also emphasised the importance of CTE credentials as an entry point or stepping stone toward the completion of a certificate program at the post-secondary level and expected the policy to lead to more SD graduates enrolling in college (Harris, Jonas and Schmidt, 2022[22]). However, the outcome was the opposite (i.e., college enrolment dropped) – although their labour market outcomes are unknown.

Employers and schools often face technical, legal or information barriers that might deter them from mutual co-operation. In fact, internships and apprenticeships are still uncommon among high school students in Virginia, mainly due to legal age barrier but also related to health and safety regulations. Adjustments could be made to facilitate work-based learning (WBL) offerings, such as through experiential learning or other possible means.

Employers may lack knowledge and information on what schools and education providers need and what they, as employers, can in turn provide. On the other hand, schools may lack resources to cover the costs and time linked to reaching out to people in work. In this case, providing a way of engaging in strategic partnerships are helpful. Intermediary bodies and higher education institutions can also play an active role in connecting schools and employers. State-level (for example, through regional WBL co-ordinators) or school division level services can be also strengthened to support partnerships and collaboration. However, such initiatives are likely to be inefficient in cost terms and the provision made available to schools through them can be expected to be inconsistent.

In the UK and New Zealand, Inspiring the Future provides a low-cost model for easily connecting schools and employers at scale, initiated by the leading representative bodies of national educational and economic communities. Inspiring the Future makes use of online technology to connect the two sides. Working on the premise that in any community there are very many people willing to work with schools if only they were asked, the programme works through large employers, professional bodies, trade unions and other networks to enable individuals to register their willingness to be approached by a local school. Volunteers can register both where they live and work and provide details about their personal characteristics, the jobs they do and the education and training pathways they followed. All staff within state schools can then use the resource to identify and approach potential volunteers well suited to their needs to engage in a range of career development activities (OECD, 2022[21]). Since its launch in 2012, Inspiring the Future has been responsible for more than 2.5 million interactions between students and people in work. Operating at a national scale, the programme can be marketed through a single entry-point and action taken to tackle uneven patterns of growth in the volunteer community. National coverage also allows for the low-cost delivery of national campaigns linked to specific economic areas or student characteristics.

There are several examples that can inspire Virginia to increase, strengthen, expand, and promote specific WBL opportunities (also see Box 5.3 and Box 5.4). For example, Canada provides a good example. The country holds a career exploration event, called, Take Our Kids to Work. Launched in 1994 by The Learning Partnership (TLP) and now led by The Students Commission of Canada, Take Our Kids to Work (TOKW) is an experiential learning opportunity for Grade 9 and Secondary III (Quebec) students across Canada offering them the chance to see the world of work first-hand, explore a variety of careers and sectors, and look at what skills are important to thrive in the world of work. Students, their parents, educators, schools, and workplaces have access to a diverse range of options including pre-recorded virtual content to supplement the learning experiences being made available by employers across Canada. Students can participate in TOKW Day hosted by their parent/relative's employer (in-person or virtually) or in virtual TOKW Day events from home. Teachers can lead students through a virtual TOKW Day during the school day. Educators, employer, and family guides are available to prepare and support the event (TLP and The Students Commission, 2022[23]).

In New Brunswick, Canada, Centres of Excellence helps K-12 students to explore career opportunities and increase career readiness linked to specific strategically important economic areas through virtual and experiential learning opportunities by connecting classrooms with real-world expertise. A Centre of Excellence is a partnership between the education system, community, and industry partners. Currently four exist focused on Energy, Health, Entrepreneurship and Digital Innovation. Centres connect students to expert knowledge through virtual and experiential learning. Another example is Real World Labour Market Challenges (RW-LMIC) that help educators integrate their teaching plans and resources to real world labour market challenges. Supported by the learning resources designed by RW-LMIC, teachers can help their students to understand their role in the labour market and use labour market information to inform

career decision-making. It is developed and maintained jointly by the Government of New Brunswick's Departments of Education and Early Childhood Development, the Department of Post-Secondary Education, Training, and Labour, and the Canadian Career Development Foundation.

In addition, Virginia can consider starting career readiness earlier. Elementary school level is not too early to begin career development. It is not a matter of requiring students to select a career for their adult lives, but helping them to broaden their understanding of the world of work, so enriching learning and personal development while challenging stereotypical thinking (which begins as young as five) that may not be representative of the modern working world. In Canada, schools are encouraged to see career development at elementary school in the context of wider personal development (Cahill, 2017[24]) Programmes like Primary Futures in the UK and New Zealand and Little Ripples in Australia provide models of how such provision can begin in ways which are fun and informative for children by enabling connections with people in work and encouraging family discussions. Other models, popular during Middle School years include programmes of career talks with guest speakers and job shadowing. Such programmes can be delivered most efficiently where jurisdiction wide programmes systematically identify interested employers and people in work and make them easily available to schools either for face-to-face or online interactions with students.

By beginning career development earlier, students are given the opportunity to decide upon their course-taking in light of emerging career ambitions. Hence, the importance of enabling career exploration and reflection, enriched by first-hand encounters with workplaces and people in work, from a young age. In New Zealand, the WE3 Continuum adopted by some schools, expects students between the ages of 10 and 14 to engage in programmes of 'work exposure': activities that present ideas, information and concepts about the world of work and career development. Typical activities include career talks with people in work about the jobs they do (focused on the value they find in them) and workplace visits combined with discussions of parental occupations, the gendered character of work and the integration of workplace examples into related curricula. As students grow older, they engage in process of 'work exploration' (ages 13-16) where students engage in career talks more focused on how such employment can be accessed alongside job shadowing, career conversations, resumé development and student research into occupations of interest. As student reach the end of secondary schooling, they are expected to gain first-hand experience of work in fields of interest. Other systems also prioritise employer engagement within career development through secondary schooling. In England (UK), secondary schools serving students aged 11-18 are expected to meet the eight Gatsby Benchmarks which include:

- Every pupil should have multiple opportunities to learn from employers about work, employment and the skills that are valued in the workplace. This can be through a range of enrichment activities including visiting speakers, mentoring and enterprise schemes.
- Every pupil should have first-hand experiences of the workplace through work visits, work shadowing and/or work experience to help their exploration of career opportunities and expand their networks.

As High School concludes, the career readiness of students is reinforced if they are supported in their preparation for labour market entry and activation of the human capital that they have accumulated in education. In Armenia, in the penultimate year of education, high school students undertake a 15 hour individual research project designed to map out their transition and employment plans. Students present their plans in public, requiring them to reflect on their investments in education and training to date and providing new information to guide their final 18 months in education before entering post-secondary education or work. In Finland, the School-to-Work Group Method is a twenty hour programme aimed at final year students focused on more vocational studies. The programme is taught jointly by their school and the local Public Employment Service. Over a series of activities, they are helped to reflect on their own experiences of work and desires for employment through individual and team research and discussion alongside practical exercises related to the process of finding employment and socialisation into a new

organisation. The relevance of the programme is made clear through the involvement of the employment and engagements with local employers who are interviewed by students. Students are taught how to make use of social networks to secure information about employment, how to approach employers directly, how the complete job applications and resumés, present themselves at interview, identify marketable skills and to understand and respond to expectations of workplace social behaviour. They are taught to 'think like an employer' and to reflect on the challenges and barriers which they can expect to encounter in their search for attractive work. A randomised control trial followed 334 students from the final year of secondary education into their first year of employment. Divided into an intervention and control group, students in the former group took part in the full School-to-Work Group Method while their control group peers only received narrow advice on applying for a job. Results showed significant benefits accruing to participants on the Group Method programme. Ten months after leaving secondary school, compared to peers in control groups, programme participants were much more likely to be in employment and in a job that was linked to their educational qualifications and aligned with their career ambitions. They were also assessed to possess stronger mental health (Koivisto, 2007[25]) (Koivisto, 2015[26]). In New Zealand, the SpeedMeet programme is designed to help student activate their accumulated human capital by providing managed introductions to potential employers. Over one hour, final year students specialising in vocational study meet a series of local employers with jobs or apprenticeships to offer. The employer and student speak for several minutes and then rotate to a new encounter. At the end of the event, if the employer and student have both signalled, they would like to continue the conversation, contact details are exchanged.

One unresolved question in the research literature on employer engagement in education is how much is enough. Students can be seen to benefit in different ways at different ages from their engagement, building human, social and cultural capital of value to their ultimate transitions into work. Studies to date have yet to find a ceiling for interventions (Kashefpakdel and Percy, 2017[27]). Opportunity exists in Virginia to build knowledge by integrating greater elements of career development into longitudinal studies and to assess over periods of time the extent to which students are engaged in guidance activities that enables interactions with people in work. It is also possible to assess the effectiveness of interventions by asking students about their perceptions of usefulness. When employers and members of the economic community engage with schools, they are providing access to resources which are not easily found within educational systems. Through employer engagement, students have the opportunity to gain information that is new and useful to them and to develop skills and gain experiences that are fundamentally different to what they can learn in the classroom (Stanley and Mann, 2014[28]). A number of empirical studies support this supposition and have found a relationship between student agreement that provision was useful to them and enhanced later positive employment outcomes (Kashefpakdel and Percy, 2017[27]) (Covacevich et al., 2021[14]).

Box 5.3. Expanding CTE opportunities

Nebraska

The Nebraska Department of Education (NDE) has been working with Nebraska practitioners on expanding CTE opportunities for its students. Initiatives include development of a state plan for implementing the reauthorised Carl D. Perkins Career and Technical Education Act (Perkins V) that builds on a cohesive vision and policy framework to guide CTE in Nebraska and addresses gaps in access and opportunity. The Nebraska State Board of Education began conversations on Perkins V in spring 2019, anticipating the approval of a state plan in the spring of 2020. But when NDE began rethinking CTE in Nebraska in the early 2000s, it first developed the Nebraska Career Education Model to provide a framework for career awareness and for structuring CTE courses and programmes. The model defines six major career fields and are further broken down by career clusters, which map out the courses a student needs in order to pursue a career. For example, a student interested in skilled and technical sciences might be interested in the career cluster of architecture and construction. Within each career cluster are programmes of study. A programme of study is a specific series of courses designed to prepare students for post-secondary education and career opportunities. In Nebraska, a CTE concentrator is a student who has taken at least three courses in a program of study. Implementation of the Career Education Model (CEM) was in line with the earlier version of the Perkins Act, passed in 2006, and increased the focus on career clusters and programmes of study.

In a second phase, NDE developed Nebraska Career Connections, a free online career planning and information tool for students and teachers to learn about career fields and pathways. It also links to the Nebraska Department of Labor's workforce trends and information. Adult learners looking for a new career or pursuing post-secondary education also use Career Connections. To implement the CEM, NDE developed a process, in which schools and local communities analyse current career education programs, research school and community needs, and make the adjustments needed to prepare students for post-secondary education and careers. By the end of the 2018-19 school year, 122 Nebraska school districts (half of them) had engaged in the process. Its purpose is to bring new understanding, energy, and commitment to CTE as a vital education, workforce, and economic development strategy. The process relies on a collaborative work team of administrators, school counsellors, CTE teachers, core academic teachers, and representatives from area community colleges and the Nebraska Departments of Labor and Economic Development. Supported by NDE staff, the teams review and analyse school, programme, labour, and economic development data to identify key themes and areas for program development and improvement. The teams draw on several resources.

Source: Wise, Blomstedt and Foor (2019[29]), Rethinking Career Education in Nebraska, https://nasbe.nyc3.digitaloceanspaces.com/2019/09/Wise-Blomstedt-Foor_September-2019-Standard.pdf

Box 5.4. Insight from OECD Career Readiness work on career development activities that engage people in work

Career talks with guest speakers: a guide to delivering an effective career development activity

Career talks with guest speakers are typically undertaken through secondary education. Career talks allow students to hear directly from people in work about their jobs, careers and their pathways through education and training. Career talks are an easy and effective intervention that schools can introduce to enhance career guidance. This is a form of career guidance where evidence from national longitudinal studies consistently shows better long-term employment outcomes – as career talks enable human, social and cultural capital accumulation through employer engagement and access to new, useful and authentic information. For governments and employer associations, career talks represent a means of enabling greater amplification or signalling of job opportunities in strategically important economic sectors that have struggled to recruit sufficient numbers of interested, qualified young people.

During a career talk, a young person is given the opportunity to hear directly from a person in a particular field about their job, career and the pathways through education and training that they have followed. Career talks are similar to, but different from, job fairs and career carousels (where small groups of students engage with multiple employee volunteers), two related activities where students have the opportunity to interact with people in work. They are also different to more informal career conversations that students might have with people in work (discussed in OECD (2021[30])) and one-to-one discussions with guidance counsellors.

In studies from Canada, the United Kingdom and Uruguay evidence has been found of positive associations between career talks and employment outcome, especially when teenagers participated in multiple, useful career talks. (Percy and Kashefpakdel, 2018[31]) conclude that the volume and the perceived authenticity of external speakers drive wage premiums, but that such "speakers can only be at their most effective if teachers work with them to prepare their classes, brief the speaker and link the content to future in-school activities as appropriate". (Mann, Kashefpakdel and Percy, 2018[32]) found that less advantaged social groups gained much more wage premiums from participation in career talks delivered through their schools, compared to more advantaged ones.

While many schools find volunteer speakers through their social networks including parents and alumni (Rodriguez, 2020[33]), there is the risk that information received will be unduly narrow, reflecting geographic and potentially social circumstances. In this context, intermediary organisations can help schools to find employers and people in work to support a range of guidance activities, including career talks (e.g. Chicago Public Schools). Online technologies are making identification of appropriate volunteers easier: in the UK and New Zealand, Inspiring the Future programme recruits large numbers of volunteers at a national level and allows schools to contact potential speakers directly (Mann, 2020[16]); in the Canadian province of New Brunswick, four Centres of Excellence provide a range of career development activities, including face-to-face, virtual, live, and pre-recorded career talks.

Key factors in the more effective delivery of career talks with guest speakers:

- *Keep it real, authentic and interactive:* Students typically respond differently to information received from people in work to that coming from within the school (Rehill, 2017[34]). Encourage students to ask questions.
- *Provide multiple opportunities to hear from people in work about their jobs and career pathways:* positive benefits are linked to student participation in a larger number of talks (Kashefpakdel and Percy, 2017[27]) (Rehill, 2017[34]).
- *Make it relevant to connect with students with different personal characteristics and focuses*: it is important for schools to link career talks to a school's curriculum and seek out volunteer speakers who are underrepresented in their field.
- *Deliver career talks within a continuum of practice* and *prepare students to engage critically*: A member of school staff can act as an intermediary between the speaker and their audience, helping students to interpret the talks' content and to draw connections with the wider school curriculum, further career development activities and students' progress. In New Zealand, the WE3 continuum programme changes the emphasis of career talks as students become older.
- *Enhance equity*: Speakers for Schools recruits leading figures in public life and uses online technologies to enable any school to invite them to speak to students about their career and professional life. Fondation L'Oréal supports a network of female scientists in France who are available as speakers to secondary schools.
- *Delivering career talks online: Schools can take advantage of free online resources and videoconferencing tools*. For example, in the UK the Icould library and See it Be it records videos with people in work, notably green careers, who are atypical (given their gender, ethnicity and/or social class) of people working in their profession. In France, Les Métiers en direct is managed by Onisep, provide live sessions with volunteer speakers from their workplaces.

Source: OECD (2023[35]), Career talks with guest speakers: a guide to delivering an effective career development activity, https://doi.org/10.1787/93594cb3-en; (Covacevich et al., 2021[14])

Setting up systemic and consistent collaboration among key stakeholders to make connection quick and easy

Challenges: Existing collaboration and coordination among key stakeholders is rather ad hoc

Collaboration and coordination between stakeholders are key to operating a career readiness system, given that the system lies at the intersection of education and workforce development, as discussed in Chapter 2.. While collaboration between school and employers and communities and coordination among state agencies are happening in Virginia, notably with regard to the development of CTE programmes, this is happening in an ad hoc fashion and is largely dependent on the capacity of the school, division, agency and employer.

This ad hoc approach may be in part due to a lack of information, given that no data are available on what specific career readiness instruments that benefit from employer engagement are available in each school division, how each school division uses those instruments and what the quality and impact of those instruments are, as discussed in Chapter 2..This may prevent the sharing of information and responsibility

among stakeholders. Addressing the relevance of career readiness instruments – whether CTE, industry-recognised credentials, career investigation courses, WBL or otherwise – requires all stakeholders to be able to engage directly and efficiently, including schools, divisions, teachers and counsellors, students and parents, as well as state agencies, employers and higher education institutions.

Recommendation: Enable systemic and consistent collaboration among stakeholders, particularly with employers, to make connections quick and easy

A more formalised, systemic and consistent process and approach to working collaboratively to support career readiness would remove barriers to improvement. Evidence shows that increasing employer engagement enhances the quality and quantity of career guidance (OECD, 2021[36]). As demonstrated in this report, students in Virginia who interact more with employers can expect better employment outcomes than comparable peers. Virginia is aware of the importance of employer engagement, and it is increasing, but significant opportunities for improvement remain (see Chapter 3).

In many countries, career guidance systems benefit from organisational structures that bring together stakeholders. In Norway for example, the National forum for career guidance consists of representatives from 28 different organisations and provides advice to government on the design of guidance provision. In Estonia, a working group called 'career guidance forum' is the main mechanism for coordinating career guidance services. Members include representatives from ministries, youth and student organisations, schools, the career counsellors' association, and employers (OECD, 2021[37]). In Scotland, the recent review of career guidance provision was developed by a board where with representation from secondary and tertiary education, workforce development, national and local government and employer. Other initiatives also benefit from partnership working. The Inspiring the Future programme for example was initially overseen by a partnership board with senior representatives from national organisations representing education and employers in the UK. By securing engagement, from both educational and economic communities, early in the development of new approaches, it is more likely that ultimate provision will be both effective and embraced by key stakeholders.

Parents can be both a resource and a barrier for students when considering future possible careers, however parents often need assistance to understand their role in helping to guide their children for thinking, exploring and experiencing. Many parents are not well-equipped to support their children in the school to work transition, and institutional programmes and partnerships can assist in building connections and taking advantage of the strong parent-child relationship (OECD, 2020[38]; OECD, 2022[39]). Providing support to parents and guardians is key in the process of student guidance in the school-to-work transition. For example, in Canada, Canadian Gap Year Association launched a collaborative project that had recent high school graduates speak about their career pathways, focusing on exploring pathways that are not college or university. The panellists did a live virtual presentation in the evening so that students and parents could watch and participate together in break out room discussions. Then it was recorded and made into a classroom/teaching resource with lesson plans (Canadian Gap Year Association, 2021[40]). In Scotland, in a website dedicated to career guidance, parents can also make use of the different online tools available and find information on how to help their children discover their interests and find a pathway that aligns with their skills and knowledge. For example, a webinar series dedicated to parents is available with information about students starting secondary school and their option choices (Skills Development Scotland, 2022[41]).

A recent OECD work provides other useful policy pointers and good examples of facilitating students to make use of family support (Jeon et al., 2023 forthcoming[42]):

- In Scotland, Skills Development Scotland (SDS) developed the Engaging Families programme, a professional development intervention for the SDS staff to increase their capacity to work with families. The programme brought together experts and practitioners for open and creative discussions about how to work with families. Critical to the programme's success was the opportunity for practitioners to hear directly from parents and parental representatives about to best engage parents. The programme also identified examples of good practice like the Discover and Connect programmes which had successfully engaged parents in a specific area, but the impact of which remained confined to local areas. Engaging Families represents a serious attempt to shift practice around career guidance work with families at a national level through professional development (Cameron and Edwards, 2021[43]).
- The Parents Turn intervention in the Netherlands brought parents and their children together in a series of after-school sessions for learning about post-secondary options (Oomen, 2018[44]). The findings of a robust evaluation of the programme suggested that a school-initiated career intervention involving parents can build and enhance parent capacity to be involved in and support the career development of their child. The argument is made that increasing this kind of parental support can make a contribution to social justice by educating and empowering parents to support their children.
- In France, researchers found that a programme of career discussions between parents and school staff was able to reduce dropout and grade repetition by 25-40% (Goux, Gurgand and Maurin, 2017[45]). In this intervention school principals selected the 25% of students who were most likely to dropout and invited them to attend two collective meetings during the second term. During those meetings, principals discuss the aspirations of the family and the child and relate them to the academic performance of the child. This discussion enabled the school to stimulate career thinking and provide feedback on the realism of aspirations, based on current performance. This resulted in improve relations between families and schools, increased engagement from the students and more career focused educational choice making, as well as a reduction in dropouts.

Box 5.5. A global practice of Inspiring the Future – a model for state-wide provision

The UK, New Zealand, Australia and Ireland

Launched in 2012, Inspiring the Future is a programme of Education and Employers, an independent UK-based charity. The programme provides secondary school students (ages 11-18) with opportunities to meet and interact with volunteers who work people in a wide and diverse range of careers and backgrounds – 'from apprentices to CEOs, app designers to zoologists' – to inform, inspire and motivate them.

These activities are hosted by schools and include informal career insight talks, job fairs, mentoring, job shadowing, interview practice and CV workshops. The programme's unique delivery model facilitates these interactions by connecting UK secondary schools for free to volunteers via a secure online match-making platform. The system is designed to allow prospective volunteers to easily register online, selecting geographic areas where they will be available to schools and the activities they would like to be involved in. Schools can then select from a large and diverse pool of volunteers to meet their needs.

Inspiring the Future's scope and national coverage allows it to run a number of concurrent campaigns and themed weeks. One example is Inspiring Women – a national campaign with some 24 000 female volunteers, focused on breaking down gender stereotypes and challenging assumptions. In addition, there are Inspiring the Future campaigns showcasing occupations where knowledge of foreign languages is important (Inspiring Languages) and identifying potential candidates willing to serve on school governing board (Inspiring Governance). The approach has also been used to identify apprentices and people in work who oversee apprenticeships to provide schools with access to individuals well placed to provide authentic insight into such work-based training programmes.

In response to the COVID-19 pandemic, Inspiring the Future began delivering employer engagement activities virtually as a safer alternative to its in-person activities. Prior to its rollout, Inspiring the Future conducted more than 200 meetings with schools and consulted with experts regarding best practices for online engagement. As a result, the programme has also produced and disseminated learning guides and resources for teachers, parents, and volunteers on virtual activities. As of 2022, 85% of secondary schools in England have signed up to Inspiring the Future, which has facilitated more than 2.5 million interactions between young people and volunteers from the world of work (OECD, 2022[21]).

Source: https://www.inspiringthefuture.org/; https://www.educationandemployers.org/inspiring-the-future/; https://www.inspiringthefuture.org.nz/#/, https://www.inspiringthefuture.org.au/; https://inspiringthefuture.ie/
OECD https://www.oecd.org/education/career-readiness/examples-of-practice/collapsecontents/Example%20of%20Practice%20Inspiring%20the%20Future.pdf

Strengthen career development activities that lead to aspiration for skilled employment (ISCO 6-8)

Challenge: Students in Virginia have limited exposure to the breadth of the labour market, undermining progression towards important occupational areas, including the skilled trades

Systemic collaboration with sectors and trade associations can also benefit students, schools, and employers by encouraging student awareness of and progression towards employment in the skilled trades. According to the analysis of OECD Career Readiness Survey of Teenage Students, only 9% students who named an expected future occupation named one within ISCO-08 6-8. Earlier OECD work on Virginia suggested that there is a risk that the state's strategy skews towards the promotion of

credentials in the field of computer science and related fields, at the expense of other areas of high demand, such as health-related occupations, teaching and the skilled trades, or valuable non-technology-related degrees (OECD, 2020[46]). Involving sectors and trade associations could address this issue by exposing not only students to the trades, but also parents, schools, career guidance workers, and other stakeholders.

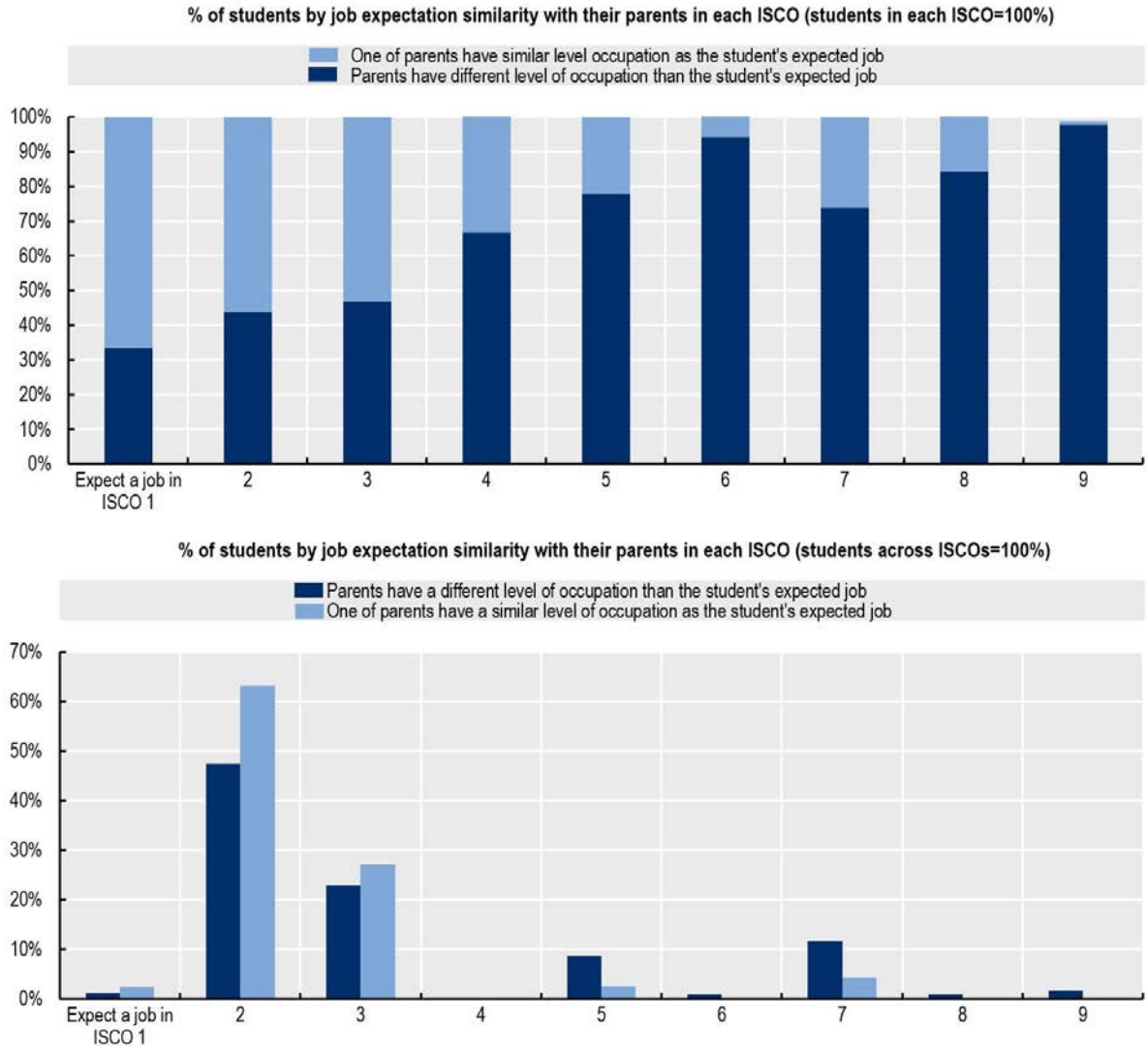
Students are most often only being exposed to the labour market demands of their limited region of Virginia. More often, students are making career-related decisions based on the available programmes in their limited region or their parents' expectation rather than on what may have been their preferred career pathway.

The OECD Career Readiness Teenage Student survey reveals that many students in Virginia did not have an opportunity to explore careers in a diversifying way. The majority (88%) never spoke to an advisor outside of their school. Only a third of students (36%) spoke to a career counsellor at their school. A quarter of surveyed students participated in job shadowing (24%) and a third of students (34%) participated in a job fair. OECD Career Readiness Young Adult survey also reveals that more than half of 19-26-year-olds never spoke to an advisor outside of their school (52%). This lack of broad exposure may lead to narrow career orientation. For example, only about 9% of surveyed teenage students with a clear idea about their future occupation named a medium-skilled occupation of ISCO 6, 7 or 8 (respectively, Skilled Agricultural, Forestry and Fishery Workers; Craft and Related Trades Workers; and Plant and Machine Operators and Assemblers), which is also relatively rare among parents' jobs.

While students in Virginia tend to be influenced by parents' occupation, mainly when parents have high-skilled occupation. Students whose parent work in a high skilled occupation (ISCO 1-3) are more likely to expect to work in a similar level of occupation, compared to those whose parent work in a mid to low-skilled occupation. For example, 67% of students who expect to work in a managerial occupational group have at least one parent who works in that occupational group while 26% of those students who expect to work as craft and trades worker have one of parents who work in that occupational group. Overall, 33% of surveyed students whose either parent has a high skilled occupation tend to expect to work in a high skilled occupation. This means to inspire and diversify students to consider the skilled trades, career readiness provision at school is more important than it is for managerial or professional occupations. Moreover, this implies the need for a continuum of learning framework for career readiness – students are choosing from what they know and have been exposed to and therefore starting in kindergarten students need to be exposed to more than the occupations they see in their homes and community.

Figure 5.5. While students' job expectations are associated with parental occupations in Virginia in managerial and professional occupations, the role of school is important in providing students with opportunities for exploring and experiencing the skilled trades

% of grade 10-11 students (15-17) in Virginia who named an occupation they want to do at the age of 30



Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see Annex 2.A for details).
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023

Consequently, while the skilledtTrades (construction and manufacturing) is one of the five Virginia's most in-demand industries, (together with Early Childhood Education, Healthcare, Information Technology and Public Safety) and offer many attractive careers, student interest is limited and major initiatives targeting or prioritising students of tertiary education. For example, to address skills shortages, Virginia provides G3 tuition assistance for students living in Virginia who qualify for state financial aid with a household income less than USD 100 000 and who study tertiary education in those most in-demand industries. While 46% of G3-aligned occupations (middle-skills focus) typically require educational attainment lower than an associate degree level (42% require high school diploma) (VOEE, 2023[47]), there is no specific initiative

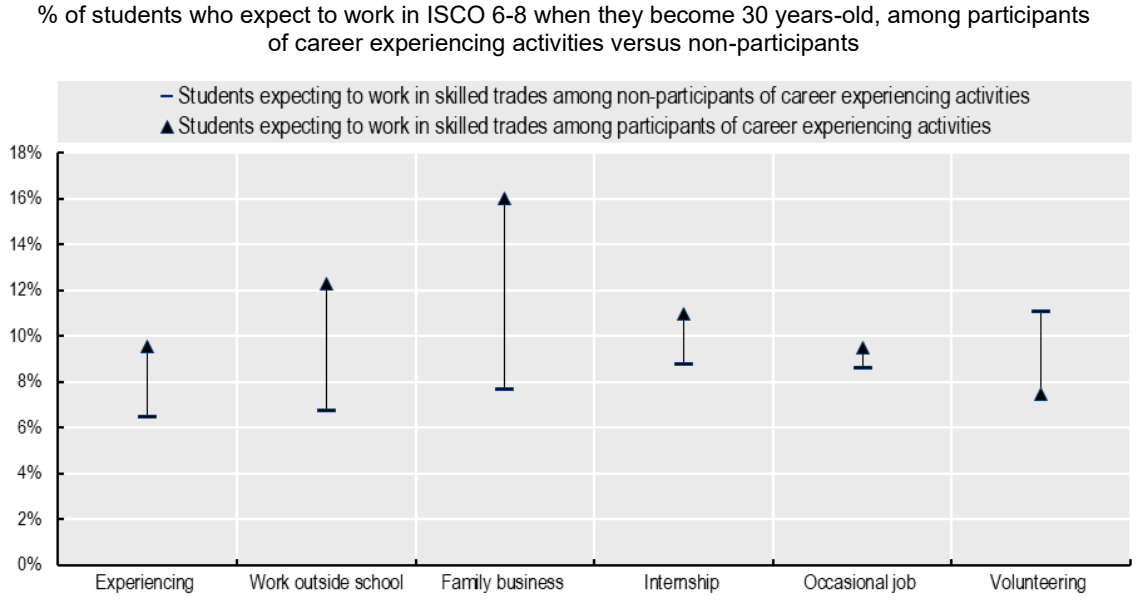
focused on guiding K-12 students to the skilled trades yet other than Workforce Credential Grant programme through which high school students can get a relevant certificate in high-demand occupations (VDOE, 2022[2]). This programme aims to supply a sufficient number of credentialed workers to fill high-demand occupations: 109 occupations (43% of G3-aligned occupations) are common to both programmes, which are administered by SCHEV (VOEE, 2023[47]).

While CTE and co-operative education programmes offer valuable introductions to skilled employment, opportunity exists to expand student interest. Lack of interest may be for one of two reasons. Students may not have a fully informed understanding of relevant professions and decide that their career ambitions lie elsewhere. Alternatively, it is possible that student understanding is partial and insufficient to make an informed decision about CTE provision or the professions to which it is related. While the education system has limited capacity to address the attractiveness of occupations, it can take steps to address information asymmetry in collaboration with the economic community.

Recommendation: Provide students with more diverse career perspectives, in particular on the skilled trades

In this context, a systemic, consistent and diverse exposure to employers and people in work, especially those of mid and low-skilled occupations, needs to be guaranteed for all students before they leave high school, which will be achieved notably by increasing and expanding the WBL opportunities, especially for the skilled trades. As seen in Chapter 3. , students who are engaged in career experiencing activities tend to expect more to work in the skilled trades (Figure 5.6). While the contribution of career development activities (CDA) in high school to preventing college or university dropouts is not evidenced, CDA in high school can guide the way to fulfilling employment in the skilled trades as an alternative to tertiary education for those who have high probability to dropout. As discussed in Chapter 3, employment and earning wages are the main reasons for going to tertiary education and likewise the main reasons for dropping out.

Figure 5.6. Students who are engaged in career experiencing activities tend to expect more to work in the skilled trades



Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see Annex 2.A for details). 'Experiencing' refers to (non-)participation in any of the five activities.
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023

A number of models exist for consideration. In the UK, Baker Clause makes it a legal requirement that schools enable post-secondary vocational training providers to engage with students between the ages of 13 and 18 to inform them about apprenticeships and other forms of vocational training. It is required that students have at least six encounters with such providers through their secondary education. Importantly, engagement begins prior to key decision-making points where students choose the specific pathways through education and training they wish to pursue.

In a number of countries, such as Australia and Denmark, networks of apprentices (and apprentice recruiters) are recruited through models like Inspiring the Future to enrich guidance activities through first-hand testimony about the character of post-secondary training. Alumni of CTE and co-operative education programmes can be powerful advocates of programmes that lead towards careers in the skilled trades. However, while many schools make use of such people on a volunteer basis, alumni programmes are not systemised in relation to vocational and technical education. In Europe, technical schools in a number of countries have piloted new approaches to alumni development, moving away from fundraising to focusing on how alumni can support curriculum design, delivery and student transitions. Engaging with alumni can also be an important means of helping students to gain first-hand experience of work (important in professions which may be misunderstood) through internships and part-time working.

As seen in Figure 5.6, students in Virginia who engage in such career experiences tend to be more likely to expect to work in the skilled trades. For students from backgrounds that are underrepresented in skilled trades professions, such experiences can be particularly powerful. However, due to safety concerns, opportunities for worksite visits and hands-on experiences can be limited. In other jurisdictions, such as New Brunswick, Canada, schools are now integrating use of virtual reality kits (based on the same tools that are used in training) to provide students from a young age with a taste of what it is like to operate heavy machinery with provision linked to easily accessed labour market information about related professions. School provision in Virginia can also do more to help young people in the process of identifying and applying for apprenticeship and training programmes while students are still in school. In all, 43% of young adults agreed that they would have welcomed a lot more help (and a further 37% wishing that they had had some more help) from their school in understanding 'how to get a formal job training programme or apprenticeship'

Indeed, mobile, experiential, and virtual learning can be an effective way to attract young people's interest to these sectors and occupations (see Theme 3, Chapter 6). The OECD team visited a company in rural Virginia that provides such learning options that can lead to a diverse set of occupations in the aviation industry, including the skilled trades. The company addresses challenges linked to the uneven distribution of related industries across the commonwealth by sponsoring a mobile learning resource which allows students the opportunity to practice on flight simulators and gain access to information about the industry from individuals with first-hand experience of the industry. In New Brunswick, Canada, the Department of Education and Early Childhood Development has partnered with welding sector bodies to build a portable welding trailer to give high school students – both urban and rural – experiential learning opportunities (Government of New Brunswick, 2021[48]).

Moreover, Virginia can make a more active use of non-degree credential programmes for high school students and graduates while clarifying what pathways and outcomes those programmes can lead to. One way is to build career and education pathways beyond high school level qualifications to show that this option is not a dead end. Some skilled workers want and need further specialist training in their occupational field, rather than more general higher education. The development of higher-level professional qualifications to which those completing non-degree credential programmes may aspire can help develop a skills system that reinforces entry-level training with a career structure and aspiration. In the German-speaking countries in Europe, this is partly addressed through the Meister, or "master craftsperson" qualification, which allows acquiring higher-level professional skills, including skills to train the next generation of skilled trade workers (OECD, 2022[8]).

Notably through CTE and co-operative education, Virginian schools offer some attractive means of supporting students on journeys towards ultimate work in the skilled trades. However, it must be recognised that in many countries, such employment suffers from a comparatively poor reputation and misunderstanding. Such stigma is often felt more strongly by discrete groups of students. It has been noted that 9 in 10 young Americans at age 15 expect to continue into post-secondary tertiary education. Effective systems recognise that students from a young age need to be exposed to the skilled trades in order to be in a position to have a view on whether they would wish to pursue a relevant High School programme of study. One of the strengths of US education is its capacity to allow students to explore vocational areas of interest while still in general secondary education. This model encourages and enables exploration without closing off options for students. In many other countries, students have to change institution altogether if they are to explore such vocational interests. However, even within the US system, vocationally-focused programmes of study, notably co-operative education which demands 50% of student school time, are designed in ways to enable easier progression into careers of choice. Here, effective guidance will focus as much on that career as the related programme of study. Students are being asked to make important commitments with significant opportunity costs and consequently it is essential that they are able to express a confident understanding of related professions before making a final choice. It can be expected that certain groups of students, notably girls, may have greater hesitancy in exploring vocationally-focused pathways. As discussed below, additional initiatives can be taken to address concern that a particular pathway into anticipated occupations will be right for all students (OECD, 2018[49]).

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Notes

[1] VDOE's definition of industry credentials includes broad CTE credentials that can apply to a wide range of occupations and industries (for example, the National Career Readiness Certificate) and narrowly aligned CTE credentials that support preparation for a specific occupation or industry (for example, the ServSafe Manager Certification). This definition differs from the way many other states define an industry credential (Harris, Jonas and Schmidt, 2022[22]).

[2] State licensure is a state-recognised professional license, such as a license to practice as a cosmetologist, that counts as a CTE credential (Harris, Jonas and Schmidt, 2022[22]).

[3] An assessment option that VDOE helped develop to align with the state-wide WRS (Workplace Readiness Skills) framework. The assessment covers three domains that Virginia employers and educators identified as essential for success in the workplace: personal qualities, people skills, and professional abilities. This is a broad CTE credential that can apply to a wide range of occupations and industries (Harris, Jonas and Schmidt, 2022[22]).

[4] According to NOCTI (2020), its Job Ready assessments assess occupational technical skills; measure aspects of occupational competence such as factual and theoretical knowledge; and, as a group, aim to assess the skills at the secondary and postsecondary level. NOCTI offers both broad CTE credentials that can apply to a wide range of occupations and industries (for example, the 21st Century Skills for Workplace Success credential) and narrowly aligned CTE credentials that support preparation for a specific occupation or industry (for example, the Accounting-Basic credential) (Harris, Jonas and Schmidt, 2022[22]).

Chapter 6. Theme 3: Equity in career readiness: Ensuring equitable access to career development activities in Virginia

This chapter assesses the equity dimension of the career readiness system in Virginia (the United States). It presents Virginia's strengths and explores challenges, concluding with a set of policy recommendations to enhance equitable access to career development activities for young people with different backgrounds and characteristics. The chapter integrates and builds upon data analysis from Chapter 3, which presents the results of the OECD Career Readiness Survey of Young Adults (aged 19-26) and Teenagers (aged 15-16). It focuses on disparities between different groups of students that experience varying access to, and benefit from, career development activities in Virginia and provides examples of practices from other jurisdictions that can help address those disparities.

Key recommendations for equity in career readiness: Ensuring equitable access to career development activities in Virginia

One of the goals of a career readiness system and strategy is to provide young people from all backgrounds with relevant information and experiences to broaden and raise aspirations to make appropriate educational, training and occupational choices, and to support their transitions into fulfilling employment. This is accomplished through building the human, social and cultural capital that enables employment regardless of the student's existing challenges or characteristics, school or community of residence. By consequence, equitable guidance systems will not be based on one size fitting all. Participation in career development activities (CDA) can assist in breaking negative intergenerational cycles of disadvantages and gender and racial/ethnic disparities by recognising and addressing structural barriers.

In this regard, Virginia offers multiple pathways and programmes for diverse segments of its population, for example through well-integrated CTE, co-operative education and dual enrolment. In particular, integration of vocationally focused provision within general high schooling keeps options open for all students and reduces reputational risks. School divisions have autonomy to make customised selections of programmes and introduce specialised institutional approaches, such as the Career Academies programmes. While this autonomy can make it difficult to set state-level standards and work toward balanced implementation, it can act positively and swiftly to adjust provision and options based on student needs and local labour market demand. Overall, Virginia is putting significant effort into reducing existing gaps and this study shows is performing well in several equity indicators, but there remains a case for strong minimum standards for all (as articulated within a revised framework and standards) and targeted interventions to support students who face additional barriers in converting their human capital into successful employment.

Reducing gender, race/ethnicity and socio-economic disparities

Recommendation 6: Virginia should consider providing greater support to students facing additional barriers within career development and labour market participation to create more equitable outcomes for youth.

The variation in career exploration, experiences and thinking of students who share comparable levels of academic achievement and social characteristics helps to explain similar variation in their work and study status as young adults. The two OECD Career Readiness Surveys show that disparities among different groups remains an issue in Virginia, although positive cases were highlighted, such as better access to CDA for historically marginalised populations compared to the majority population.

Personalisation in career guidance is a challenge in all countries. In Ireland and Canada, guidance systems explicitly articulate aspects of provision which should be available to *all* students, while other initiatives are reasonably targeted at *some* or just a *few* students. In this way, personalisation is increasingly built into the provision of guidance, enabling students to explore and experience a wider range of occupations and addressing known barriers preventing confident transitions. Here, as discussed below, digital technologies are of considerable importance.

Making the issue of equity more explicit in the career readiness policy agenda can help close further gaps in the transition process and expand the careers that are being considered by all students beyond limiting boundaries, with a goal of narrowing labour market outcome disparities. Virginia can build upon other country examples and research that shows how to help raise and broaden the career aspirations of young people from disadvantaged backgrounds, both to make them more informed and better aligned with future opportunities, and to overcome structural inequalities. A striking finding of the Career

Readiness Survey of young adults was the high percentage of respondents who expressed the wish that their school had done more to help them understand jobs which people of their gender or background do not normally do (44% wished that they had had *a lot* more help). There is appetite among young Virginians to broaden the range of what is thought possible within career progression and opportunity exists to better respond to these desires within the education system while addressing skills shortages across the state. Models for consideration include programmes of job shadowing (Girls' Days and Boys' Days originating in Germany) that allow students to spend a day exploring what it would be like to work in a field where their gender is underrepresented.

Reviewing equity-related data highlighted particularly strong patterns of concern in relation to the socio-economic status and geographic location of students. With relation to the second issue, significant scope exists to enhance the availability of online resources (discussed below). With regard to the former, options exist and are discussed in the report for targeted interventions. Perhaps most striking in international practice is the example of Ireland which in recognition of greater needs, provides more than double the level of standard funding for career guidance provision in schools serving the lowest-income populations.

Increasing provision through the use of digital technologies to overcome regional disparities and enhance personalisation in career development

Recommendation 7: Virginia should consider ways in which it can take greater advantage of digital technologies, notably to address geographic variations in access to career development.

Both access to CDA and the quality of them vary across schools and districts. Students are often bounded by what schools or school districts can offer and the availability of local employment and employers. Transportation is also a significant issue not only because of the cost but also of the lost instruction time. It is striking that in Virginia that the career aspirations of young people are particularly strongly influenced by parental occupation. In Virginia, 20% of students say that their parents' opinions are *very important* in their career planning, compared to an OECD average of 13.5%.

Virginia can broaden the aspirations of young people and address the barriers presented by geography through greater use of digital resources, building on such notable innovations as CTETrailblazers. These new tools also underpin innovative models of guidance that explicitly recognise that equitable guidance will not be characterised by a one size fits all approach.

Virginia can benefit from increasing the use of digital technologies and the innovative approaches they enable. Virginia is already heading in this direction, for example by delivering Career Investigation Courses online. Virginia can build upon examples from other countries as well drawing on examples from the OECD Observatory on Digital Technologies in Career Guidance for Youth (ODiCY). This is particularly relevant with regard to guidance activities such as online career talks, workplace visits, job shadowing and work placements that are increasingly being developed online. However, as evaluation of such digital tools in guidance is currently severely limited, attention is required to ensure positive outcomes are ensured across student cohorts.

Introduction – Closing existing disparities

This chapter focuses on questions related to inequalities among students. Recent analysis of data from multiple countries drawn from the OECD Programme for International Assessment of Adult Competencies (PIAAC) has shown that similarly educated young people with different shared characteristics face additional obstacles when they enter the labour market. In varying, but comparable ways, young people from low socio-economic backgrounds, women and of migrant status (and minority ethnic origins) can all be seen to face greater hurdles in transforming the human capital that they developed in secondary education into paid employment. They are more likely to be NEET, earn less, have a less secure work contract, and to a lesser extent be dissatisfied with their job (Jeon et al., 2023 forthcoming[1]). Those young adults from such disadvantaged positions are often overrepresented in low-paying and low-skilled jobs although a higher level of education moderates this tendency (Jeon et al., 2023 forthcoming[1]).

This chapter explores data from surveys of young Virginian adults and Grade 10 and 11 students to explore the impact of such inequalities within the Commonwealth. In addition, it considers disadvantages that may relate to geographic location – notably, rural residency.

Many governments expect career guidance systems to play a role in challenging such inequalities and enabling fairer processes of human capital activation (Stanley, 2014[2]). In so doing, governments give voice to a desire for greater social equity within communities, but also recognise that more equitable systems can be expected to be more efficient in enabling the integration of young people into the labour market. For example, professions which overwhelmingly recruit from just a proportion of the population can expect greater challenges in meeting recruitment needs than counterparts which recruit only from one gender (Bryant, 2011[3]). Equally, enabling easier access to a wider range of professions provides young people with greater opportunity to secure employment which they find personally more fulfilling. While it is clear that guidance systems can do much to respond to social inequalities, it cannot be expected that they will resolve what are societal issues. Multiple studies over different times and in different countries which use experimental measures to explore recruitment practices have shown that discrimination related to applicant ethnicity is significant and widespread in hiring decisions in the United States and elsewhere (Quillian, 2019[4]). However, by recognising such barriers, guidance systems can still provide support to young people.

In considering the role of inequalities within career development, it is helpful to recognise the means by which employers actually recruit and the value that they ascribe to the human, social and cultural capital accumulations of potential employees. Education systems have it in their power to enhance these human resources (Jones, Mann and Morris, 2015[5]) (Stanley and Mann, 2014[6]). They have scope to ensure that the accumulation of individual qualifications, credentials and experience is undertaken in light of considered and informed career reflection. As (Holland, 2016, pp. 261-278[7]) and (Deming, 2012[8]) among others demonstrate, it is easy for young people without access to appropriate guidance to be caught out by marketized post-secondary systems, investing limited personal finance in post-secondary vocational programmes of learning that do not ultimately lead to desired employment. Secondary schools can also enhance the social capital of young people, providing access to employers and people in work well placed to provide reliable information and offer advice, support, recommendations, temporary, part-time or permanent employment. And through these means, young people can develop a confident sense of personal agency as they navigate decisions related to education and training and develop a sense of vocational identity and behaviour which makes them attractive to potential employers (Tomlinson, 2013[9]; Jones, Mann and Morris, 2015[5]). However, access to these resources is not limited to the school. They are also found to an uneven extent within families and communities. For example, the children of managers who regularly hire people are better positioned than the children of parents without this experience, to advise on how to prepare well to succeed in a recruitment process. In the United States, where PISA 2018 shows that 76% of teenage girls and 57% of teenage boys plan on working in one of the professions (ISCO

major category 2), but just 26% of women and 20% of men do so. Where students are the children of such professionals, opportunities are greater to gain first-hand insider advice about the nature of the occupation and how it can be secured. Students are also at a significant advantage in gaining access to job shadowing and work placement opportunities. Schools consequently have the capacity to act as institutions that democratise access to important opportunities and resources which address factors related to the inequitable development of human, social and cultural capital (Mann, Kashefpakdel and Percy, 2018[10]).

Evidence on equity from the OECD Career Readiness Surveys

Understanding how backgrounds shape how young people think about themselves and their futures is essential to the effective design of career readiness activities and strategies. It is also crucial to the identification of those young people in need of more support from their schools in developing their career readiness and combatting the effects of discrimination in the labour market and hiring norms (Covacevich et al., 2021[11]). The variation in career exploration, experiences and thinking of students who share comparable levels of academic achievement and social characteristics can explain variation in their work and study status as young adults (Mann, Denis and Percy, 2020[12]) (Brown, 2020[13]) (Jeon et al., 2023 forthcoming[1]).

This section presents results of the two OECD Career Readiness Surveys focusing on equity. The results are based on the analysis presented in Chapter 3 and focuses on gender, race/ethnicity, socio-economic status (SES), and school region and type of residency (urban/suburban/rural). Each section draws together results from the survey of Grade 10 and 11 students and that of young adults in Virginia.

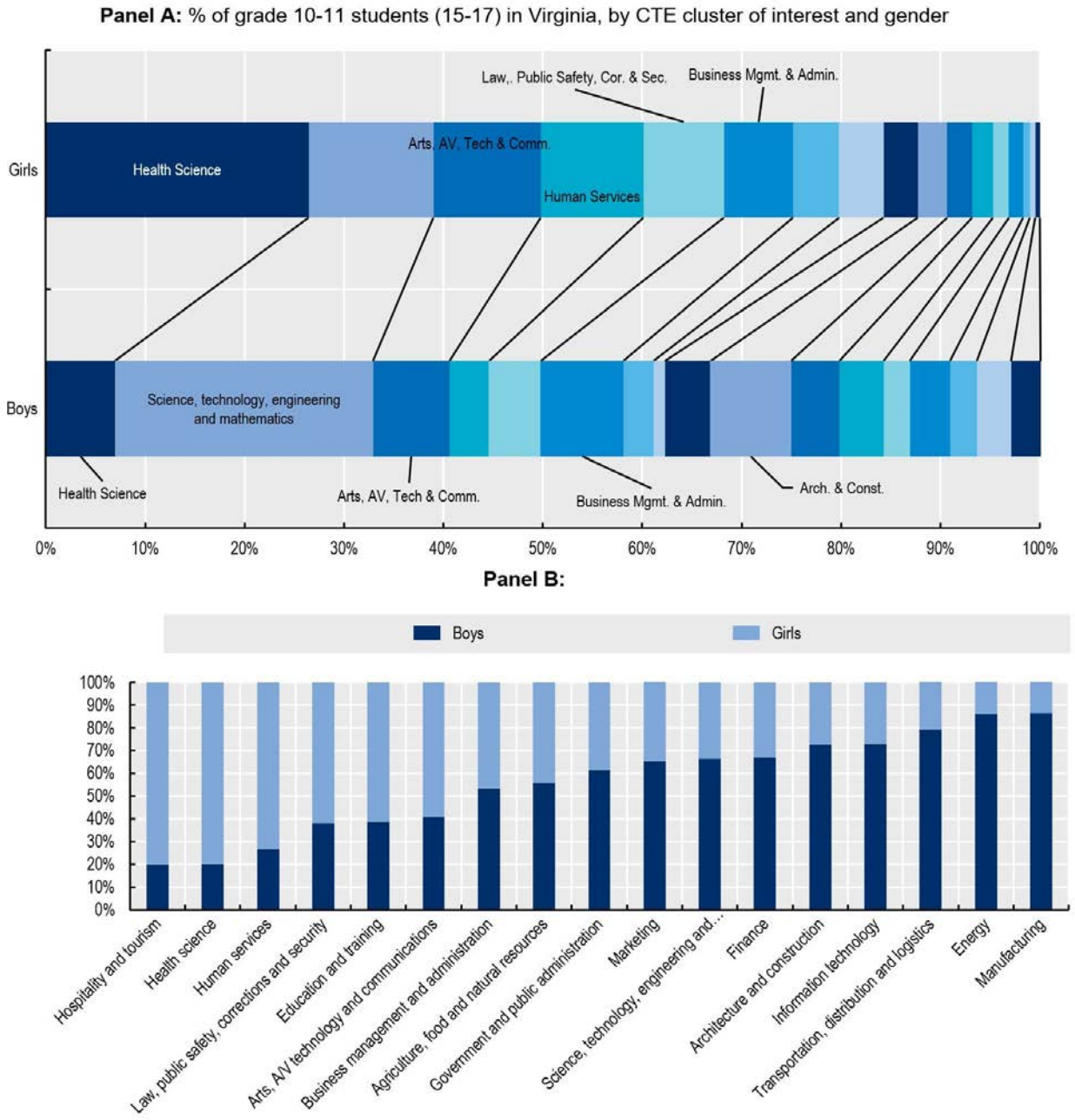
Evidence on equity from the OECD Career Readiness Survey of Teenagers

Gender

Among a representative sample of 9 353 teenage students in Virginia, about 47% gave their gender as male and 49% as female. The rest of respondents answered ‘other’ or ‘prefer not to say’.

In terms of their CTE interest, girls are relatively more interested in Health science (26% of girls), STEM (13%), and Arts, AV, Tech & Communication (11%) while boys are more interested in STEM (26%), Business Mgmt. & Admin (8%) and Architecture and construction (8%) (Figure 6.1 Panel A). Hospitality and tourism, Health science and Human services were over-represented among girls while Manufacturing, Energy, Transportation, distribution and logistics, and Information technology were over-represented among boys.

Figure 6.1. Health Science was the most popular cluster among girls and STEM among boys

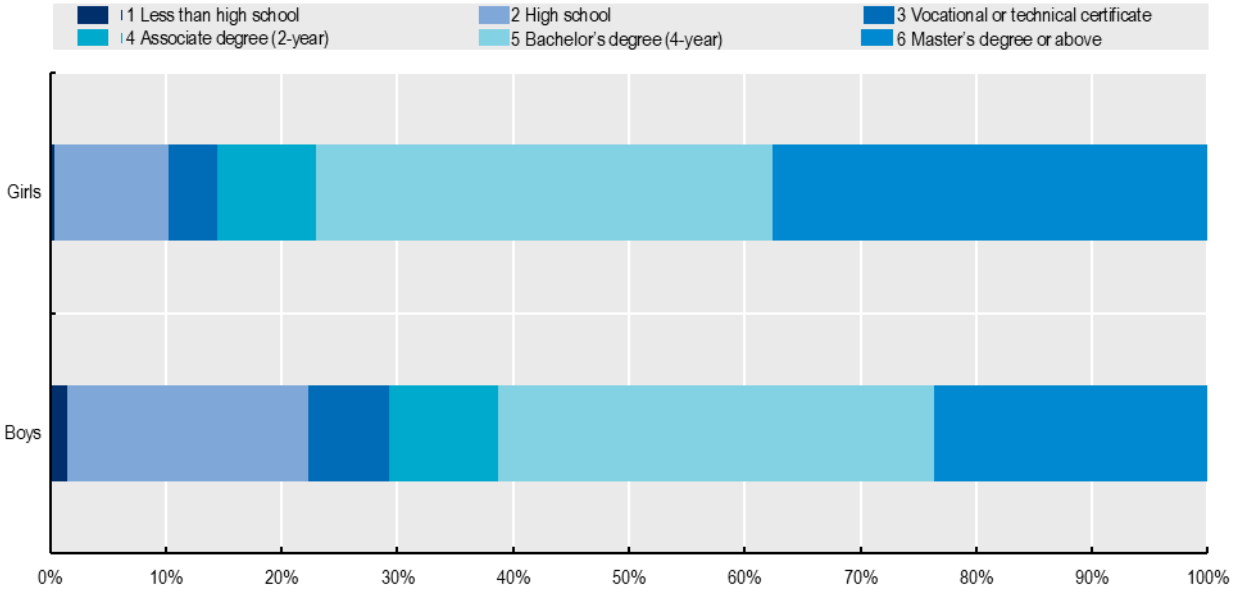


Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see Annex 2.A. for details).
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023

In terms of highest education attainment, more girls tend to expect to complete higher education than boys. 86% of girls expect to complete an associate degree or a bachelor's degree or above while 71% of boys do so. 21% of boys and 10% of girls expect to complete only high school. 7% of boys expect to complete vocational or technical certificate compared to 4% of girls.

Figure 6.2. More girls tend to expect to complete higher education than boys

% of grade 10-11 students (15-17) in Virginia, by highest expected educational attainment and gender

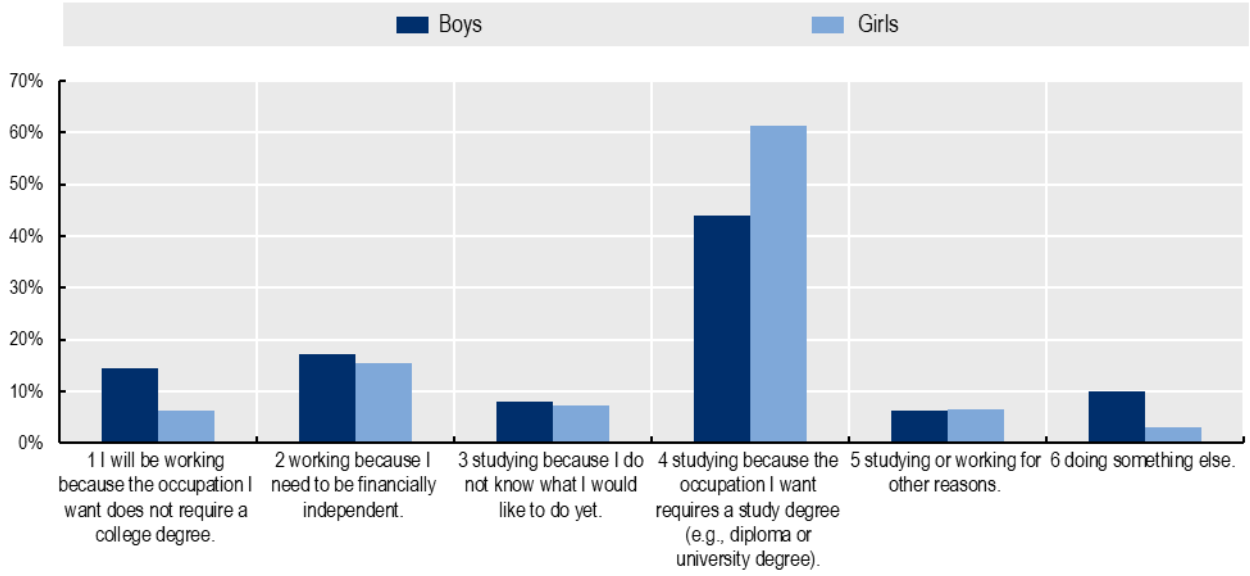


Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see Annex 2.A for details).
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023

The survey also asked students about what they would be doing in 5 years' time. 61% of girls answered that they would pursue a diploma or university degree required for the occupation they want, compared to 44% of boys. Boys tend to plan to work because they need to be financially independent (17%) or the occupation they want does not require a college degree (15%).

Figure 6.3. More girls than boys in Virginia expect to pursue a degree required for occupation they want when they are at early 20s

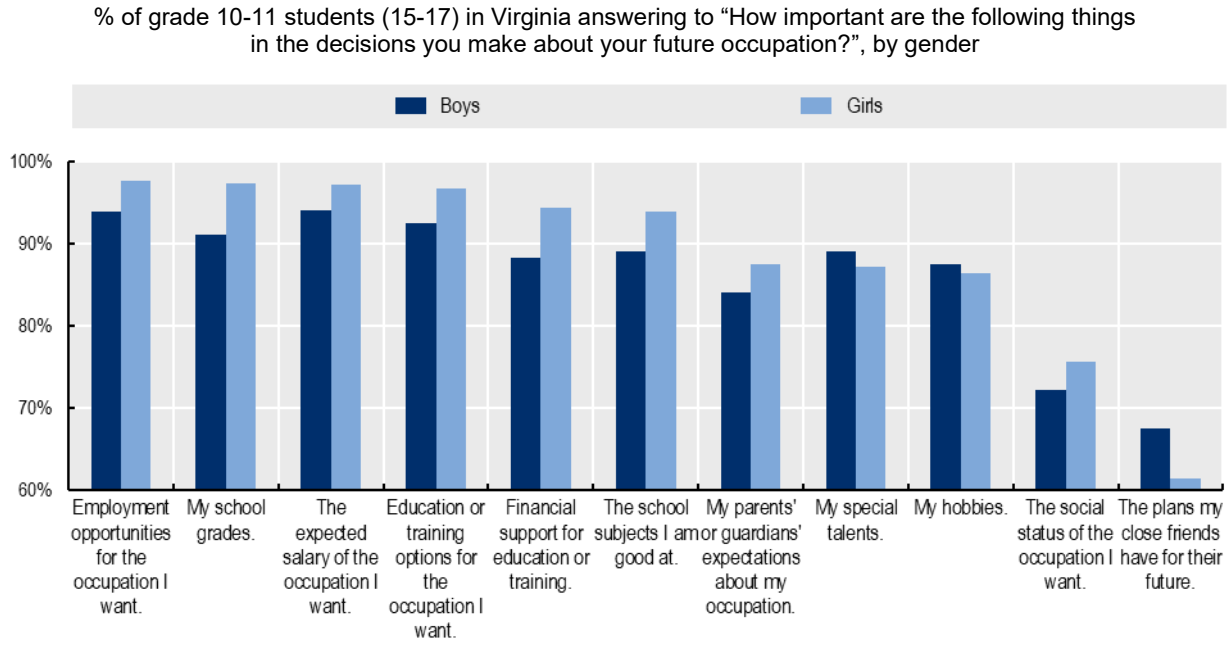
% of grade 10-11 students (15-17) in Virginia answering to "What do you think you will be doing 5 years from now?", by gender



Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see Annex 2.A for details).
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023

The majority of surveyed students are keen to make a career decision based on labour market needs, conditions and options rather than due to the influence of their parents, society or friends. Girls tend to consider most elements (including grades, subjects and parents' expectation) important more than boys, although boys tend to consider their own talents and hobbies and their friends' plans important more than girls.

Figure 6.4. Girls in Virginia consider labour market options and conditions important in their career decision making more than boys

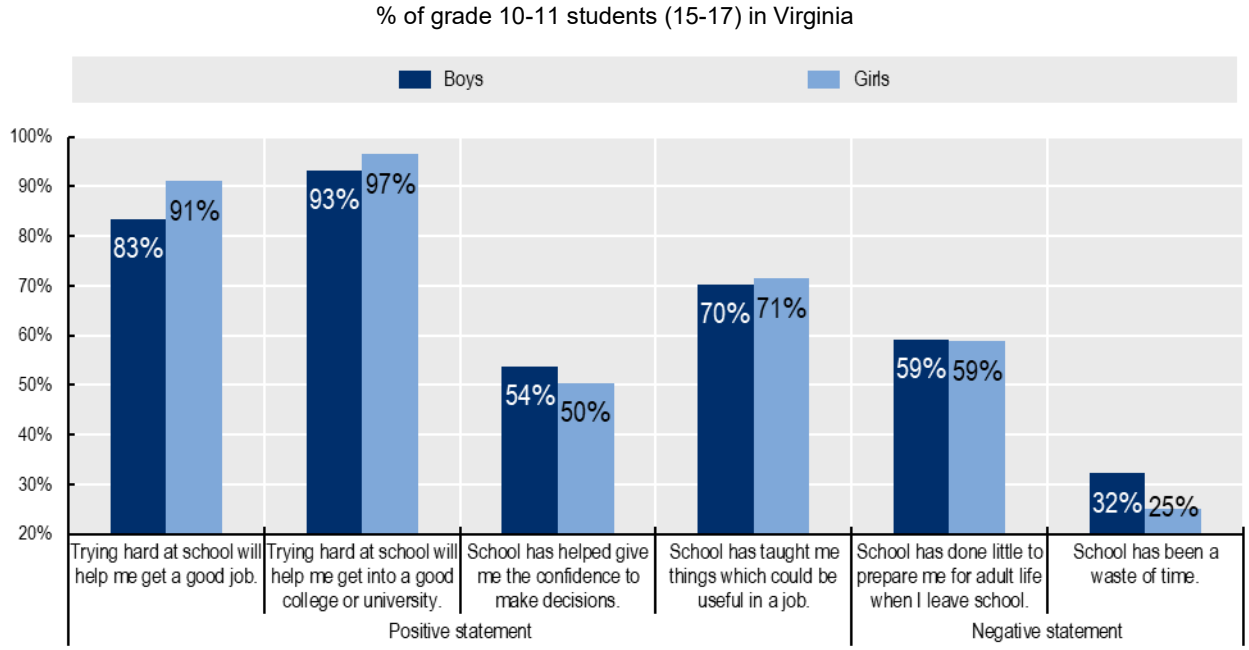


Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see Annex 2.A for details).
The answer (%) includes 'somewhat important', 'important' and 'very important', excluding 'not important'.
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023

Perception of how well schools are preparing students to be career ready

The majority of Virginian girls in the sample agreed that trying hard at school will help them get a good job, more than boys, but less so in terms of giving them confidence to make decisions. More boys were more likely to agree that school has been a waste of time (32%) than girls (25%).

Figure 6.5. Compared to boys, more girls agreed that trying hard at school will help them get into a good next step in their careers



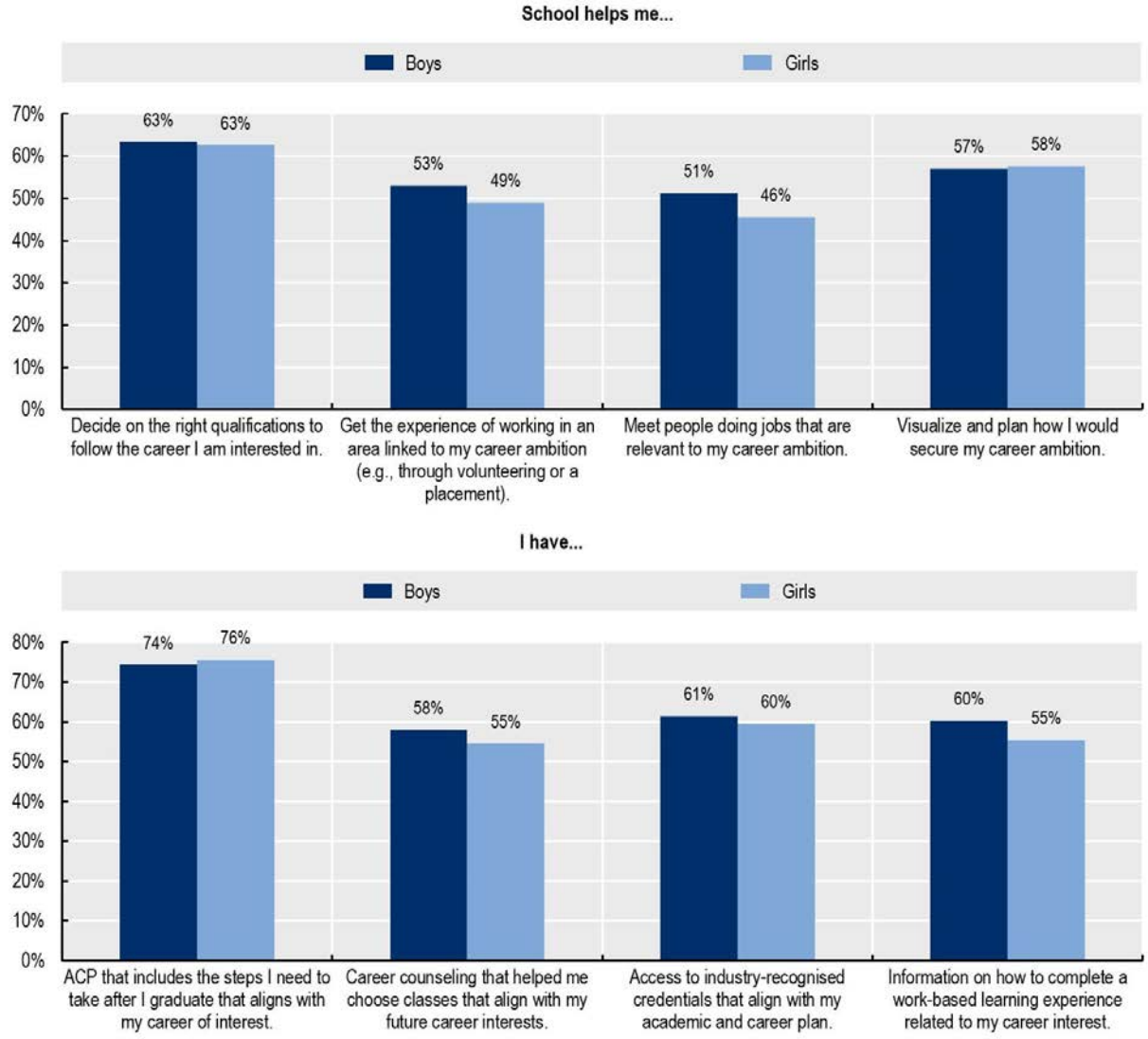
Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see Annex 2.A for details).
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023

Students' perception of how well their high school was helping them prepare for their future careers was generally positive. However, slight fewer girls than boys agree that schools help them to get the experience of working or meet people doing jobs that are relevant to their career ambition.

In terms of specific career guidance at school, the perception of girls and boys is generally similar. However, slightly more boys tend to agree that they have access to career guidance. In particular, more boys (60%) agree that they have information on how to complete a work-based learning experience related to their career interest, compared to girls (55%).

Figure 6.6. Slightly more boys tend to agree that school helps them prepare for their future careers and that they have access to support related to career preparation in Virginia

% of grade 10-11 students (15-17) in Virginia agreeing the following statement



Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see Annex 2.A for details).
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023

Participation in CDA

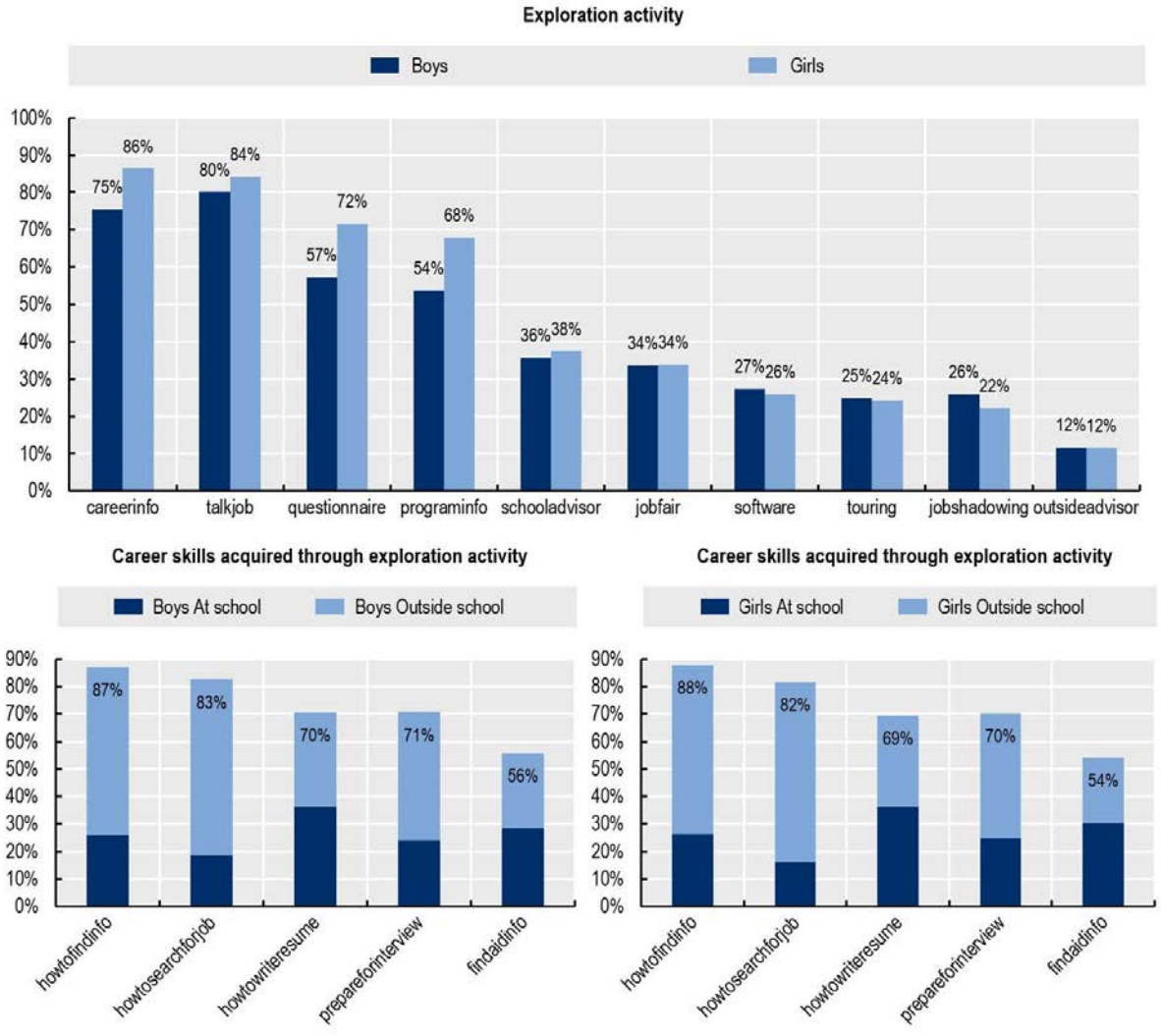
All boys and girls in Virginia from the sample participated in a career exploration activity, including learning skills necessary to career preparation and exploration. The most common activity was learning how to find information on jobs they are interested in (87% among boys and 88% among girls). Among girls, career information (86%) and talking someone about the job they would like to do when they finish their education (84%) were common, more than boys (75% and 80% respectively). Job shadowing was more common

among boys (26%) than girls (22%) while career questionnaires and higher education programme information were much more commonly reported among girls than boys.

When controlling for grades, age, school region, place of birth and residence, SES and race: girls are significantly more likely than boys to talk about future jobs (1.2 times), conduct a career-related questionnaire (1.8 times), search for career information (2 times) and higher education programmes information (1.9 times). However, girls are also slightly less likely than boys to participate in job shadowing (0.8 times), college/university touring (0.9 times) and use career-related software (0.9 times) (see Annex 2.A.).

Figure 6.7. More girls participated in research-oriented career exploration activities than boys, Virginia

% of grade 10-11 students (15-17) in Virginia who participated in career development activities, by gender



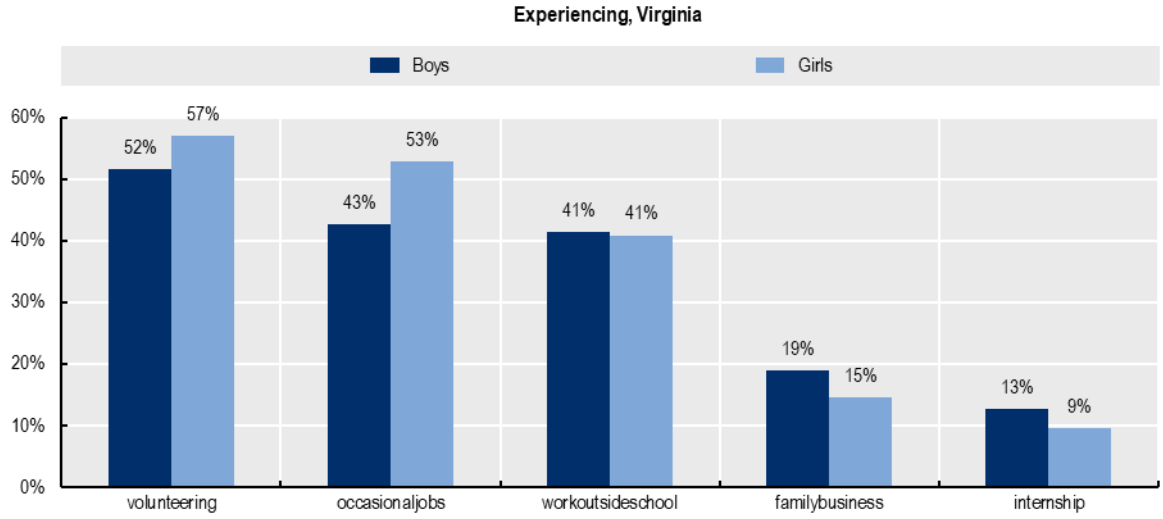
Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see Annex 2.A for details).

Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023

Girls engaged in volunteering (57%) or worked occasional informal jobs (53%) more than boys (52% and 43% respectively) but reported lower levels of participation in a family business (15%) or an internship (9%) than boys (19% and 13% respectively). Overall girls are 1.3 times more likely to engage in experiencing activities than boys, mainly due to occasional informal jobs (1.4 times) and volunteering (1.2 times), even when controlling for grades, age, school region, place of birth and residence, SES and race. They are 0.7 times less likely to participate in an internship or a family business than boys (see Annex 2.A.).

Figure 6.8. While volunteering, occasional jobs are more common among girls, family business and internship experience are more common among boys

% of surveyed grade 10-11 students (15-17) in Virginia who participated in career development activities, by gender



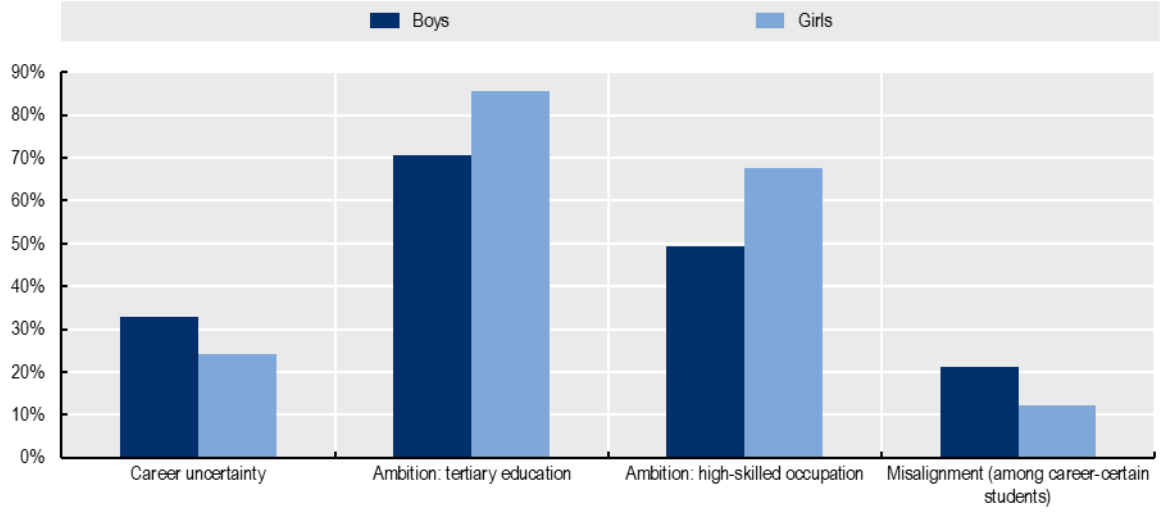
Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see Annex 2.A for details).
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023 and OECD PISA 2018

Career thinking

Similar to the findings across OECD (OECD, 2021[14]) boys in Virginia are more likely to be uncertain about their future occupation (33%), less likely to expect to complete tertiary education (71%) or take up a high-skilled occupation (49%), and more likely to misalign their educational expectations with the typical requirements of their occupational expectation (21%). This is similar to the OECD average: 27% of boys were uncertain about their career expectations.

Figure 6.9. Boys are more likely to be career-uncertain and misaligned and less likely to expect to complete tertiary education and work in a high-skilled occupation

% of grade 10-11 students (15-17) in Virginia, by gender

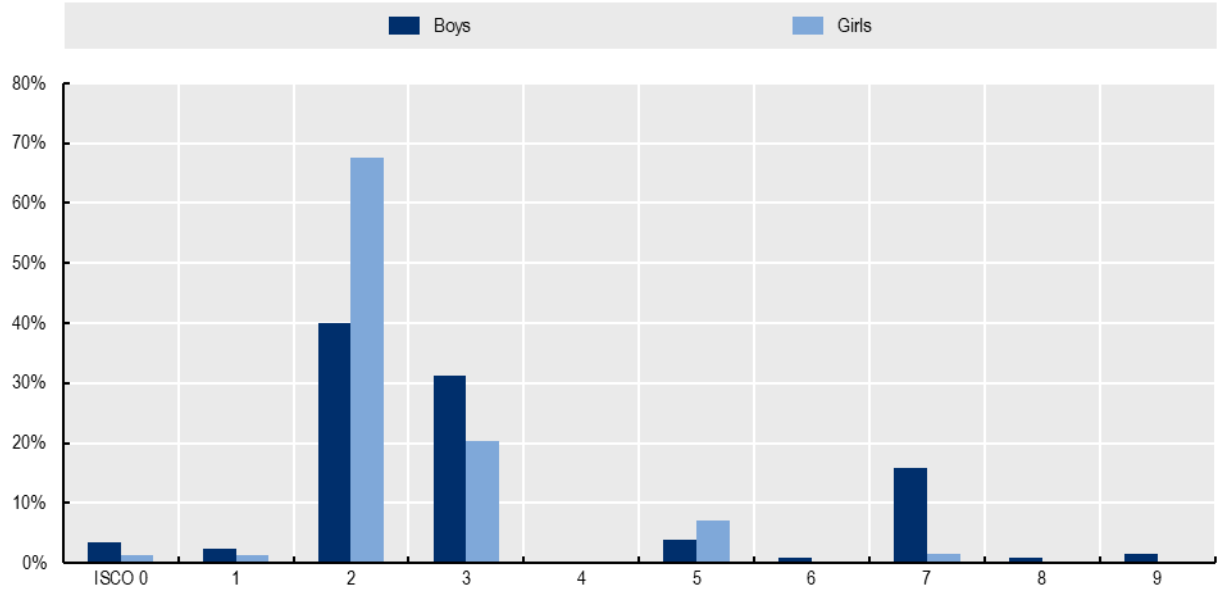


Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see Annex 2.A for details).
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023 and OECD PISA 2018

Among those who could name an expected occupation, 73% of boys and 89% of girls are concentrated in high-skilled occupations (ISCO-08 1-3). Unsurprisingly, very few teenagers in Virginia (9% in all) express interest in working in skilled employment typically entered through programmes of CTE/Vocational Education and Training (ISCO-08 major groups 6, 7 and 8). Interest from girls is especially low. Only 2% of girls named an occupation among those skilled trades while 18% of boys did so.

Figure 6.10. Most boys and girls expect to work as professionals (ISCO 2-3)

% of grade 10-11 students (15-17) in Virginia who named an occupation they want at the age of 30, by gender



Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see Annex 2.A for details).
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023

Among those who named an occupation, which is then coded from a list of 43 occupational areas using ISCO-08 at the two-digit level, 78% of boys and 91% of girls in Virginia chose a professional group which was among the most popular 10 occupational groups of their peers by gender. Such a high level of concentration in career aspirations is common. PISA 2018 codes occupational expectations at a more granular level using a four-digit ISCO-08 classification level and finds an OECD average (48% and 52% respectively for all OECD countries and 47% and 59% for the United States). (Mann, 2020[15]) (Covacevich et al., 2021[11]), meaning a direct comparison requires caution due to different survey methodology.[1] In Virginia, 36% of girls named one in Health professional group (ISCO 22) and 17% in Legal, Social and Cultural Professionals (ISCO 22). 15% of boys named on in Science and Engineering Associate Professionals (ISCO 31).

Table 6.1. Ten most popular expected occupations by gender

% of grade 10-11 students (15-17) in Virginia who named an expected occupation at the age of 30, by gender

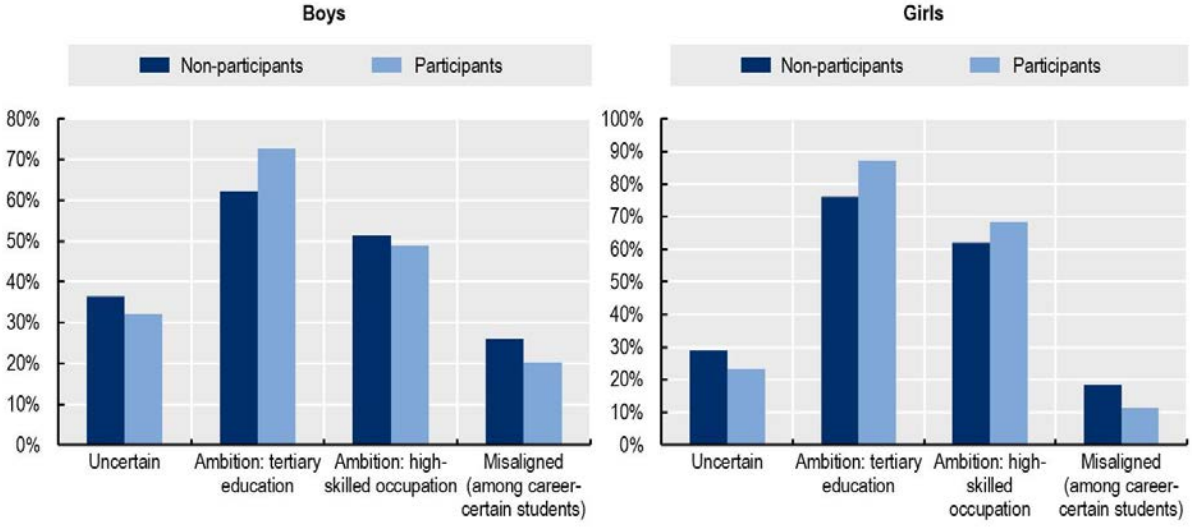
Rank	Top ten ISCO-08	Boys	Top ten ISCO-08	Girls
1	31 Science and Engineering Associate Professionals	15%	22 Health Professionals	36%
2	22 Health Professionals	9%	26 Legal, Social and Cultural Professionals	17%
3	72 Metal, Machinery and Related Trades Workers	9%	32 Health Associate Professionals	7%
4	25 Information and Communications Technology Professionals	9%	21 Science and Engineering Professionals	6%
5	26 Legal, Social and Cultural Professionals	9%	51 Personal Services Workers	6%
6	21 Science and Engineering Professionals	8%	31 Science and Engineering Associate Professionals	5%
7	34 Legal, Social, Cultural and Related Associate Professionals	7%	23 Teaching Professionals	4%
8	33 Business and Administration Associate Professionals	5%	34 Legal, Social, Cultural and Related Associate Professionals	4%
9	74 Electrical and Electronics Trades Workers	3%	33 Business and Administration Associate Professionals	4%
10	35 Information and Communications Technicians	3%	25 Information and Communications Technology Professionals	3%

Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see Annex 2.A for details).
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023 and OECD PISA 2018

Both boys and girls who participated in a career experiencing activity tend to less uncertain about their future occupation, expect more to complete tertiary education and less misaligned between education expectation and career expectation, compared to their non-participant counterparts respectively. However, among boys, non-participants are slightly more likely to expect to have a high-skilled occupation.

Figure 6.11. Participants of career experiencing activities tend to be less certain about their future job, expect more to complete tertiary education and less misaligned, compared to non-participants

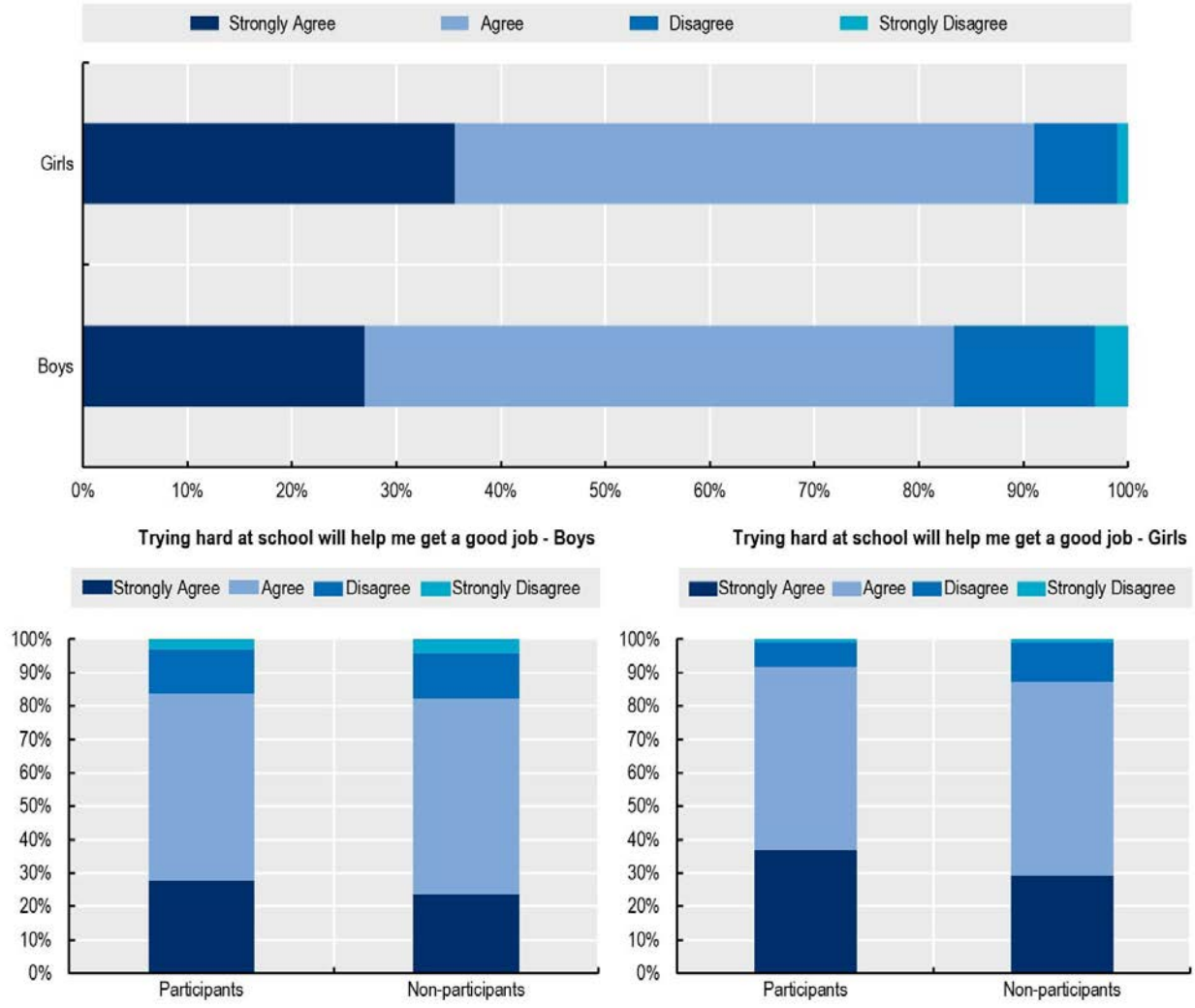
% of grade 10-11 students (15-17) in Virginia, by gender



Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see Annex 2.A for details). The subsample for 'misaligned' is students who are certain about their occupation at the age 30.
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023

In terms of instrumental motivation measured by survey questions like “Trying hard at school will help we get a good job” (see Chapter 3), more girls (91%) tend to agree than boys (83%). The survey data also show that participants of career experiencing activities tend more to have instrumental motivation than non-participants both for boys (84% vs 82%) and girls (92% vs 87%).

Figure 6.12. The majority of students in Virginia agreed that trying hard at school will help them get into a good job



Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see Annex 2.A for details).
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023 and OECD PISA 2018.

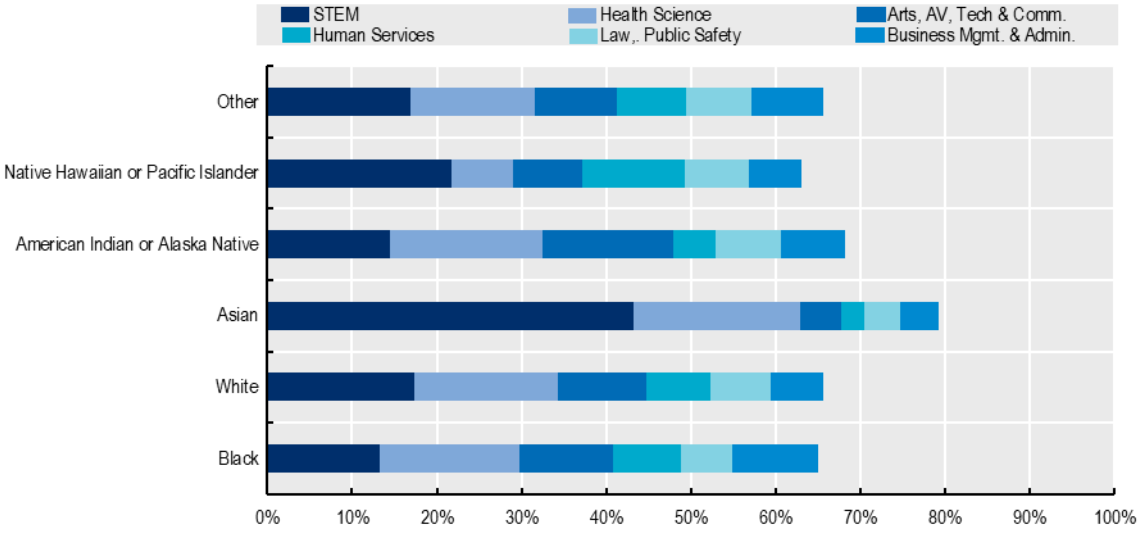
Race/ethnicity

Among a representative sample of 9 353 teenage students in Virginia, 46% were White, 23% Black, and 11% are Asian. Across all races, 20% of respondents had Hispanic background.

In terms of their CTE interest, measured by requiring students to choose one of 17 possible career clusters, STEM and Health Science were the most popular clusters, in particular, among Asian students (43% and 20% respectively). White students showed similar level of interest in these two clusters (17% and 17% respectively).

Figure 6.13. STEM and Health Science were the most popular clusters, in particular among Asian students

% of grade 10-11 students (15-17) in Virginia, by CTE cluster of interest (top 6) and race/ethnicity

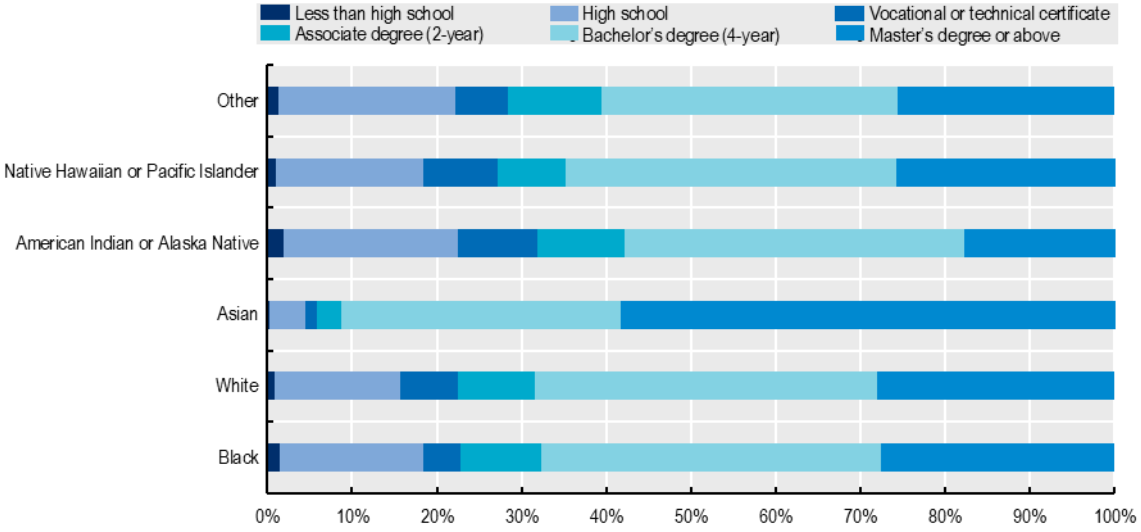


Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see Annex 2.A for details).
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023

In terms of highest education attainment, relatively more Asian students are particularly likely to expect to complete higher education: 91% of Asian students expect to complete bachelor's degree or above while 68% White and Black students and fewer students from other racial groups do so.

Figure 6.14. Relatively more Asian students tend to expect to complete higher education than other race groups

% of grade 10-11 students (15-17) in Virginia, by highest expected educational attainment and race

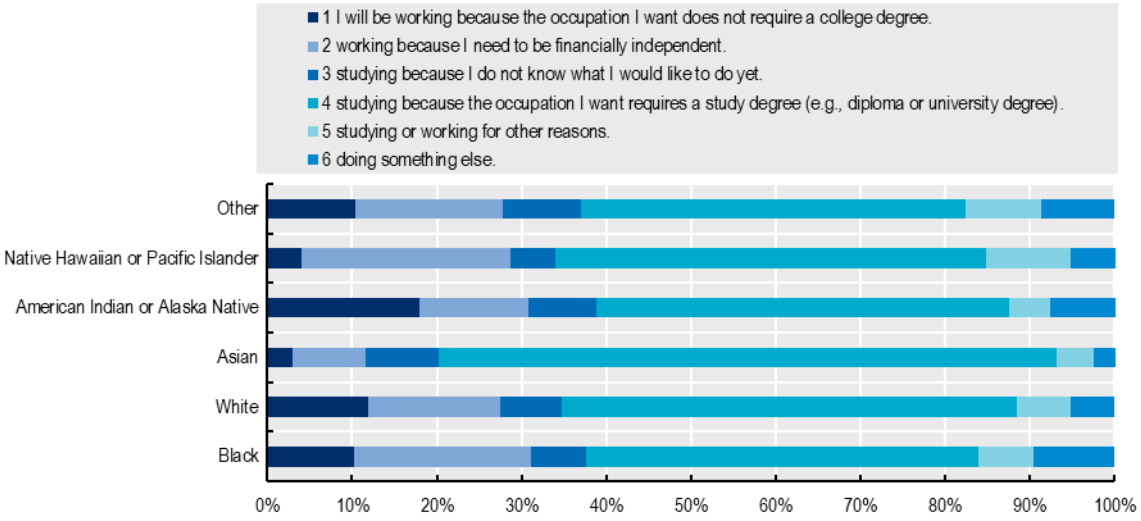


Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see Annex 2.A for details).
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023

In line with the expected educational attainment, Asian students are most likely to be studying in five years' time largely because the occupation they want requires a study degree. Relatively more Black students (21%) and Native Hawaiian or Pacific Islander students (25%) are planning to work as they need to be financially independent. Similarly, more American Indian or Alaska Native students (18%) are planning to work because the occupation they want does not require a college degree.

Figure 6.15. Asian students are more likely to pursue a degree required for occupation they want when they are at early 20s

% of grade 10-11 students (15-17) in Virginia answering to "What do you think you will be doing 5 years from now?", by race

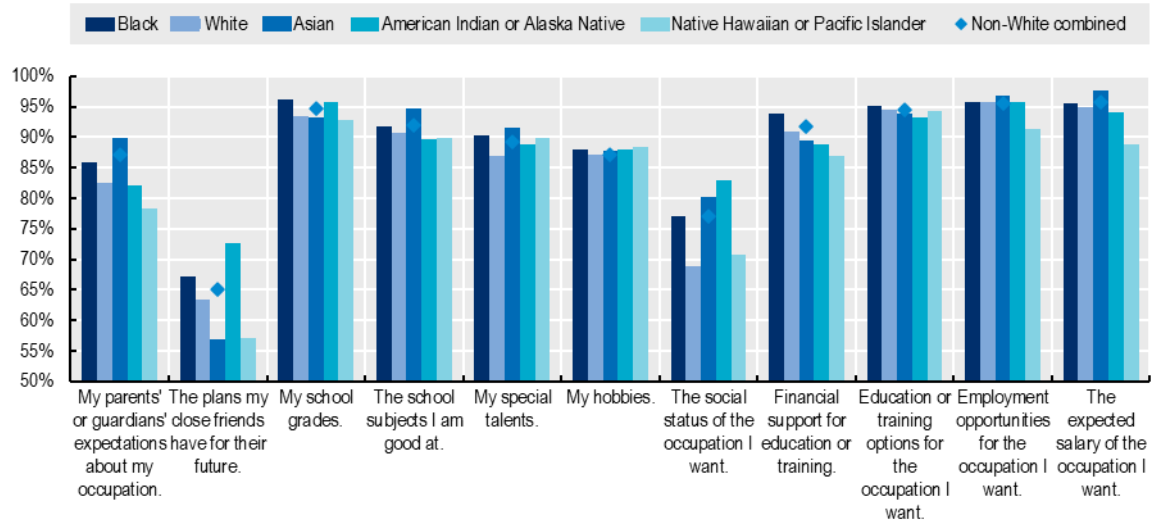


Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see Annex 2.A for details).
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023

Relatively more non-White students agree that their parents' or guardians' expectation (87%) and the social status (77%) of the occupation they want are important in the decisions they make about their future occupation than White students (82% and 69% respectively).

Figure 6.16. Parents' expectation and social status of the occupation influence decision among non-White students more than White ones

% of grade 10-11 students (15-17) in Virginia answering to "How important are the following things in the decisions you make about your future occupation?", by race



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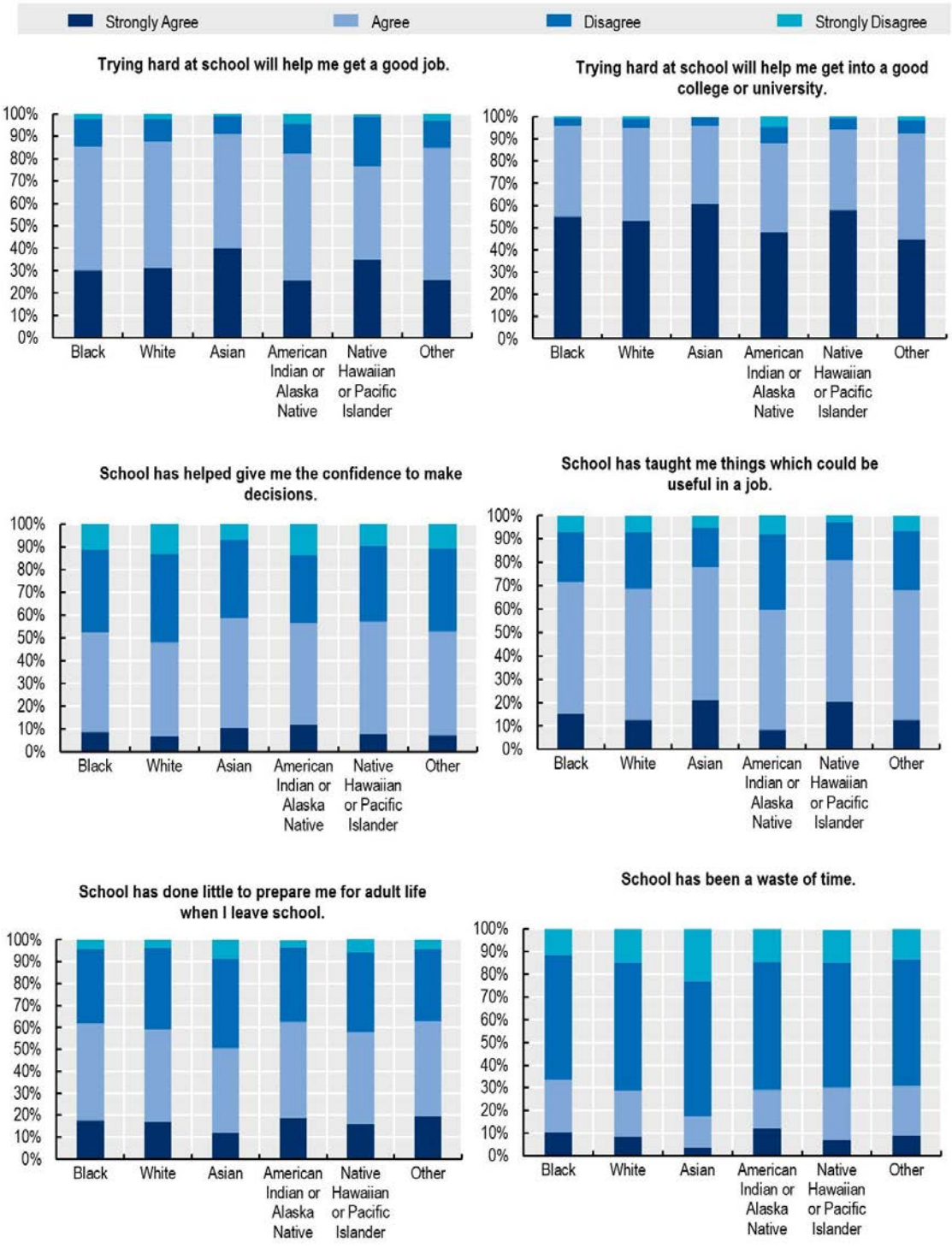
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023

Perception of school preparing students career ready

Relatively more Asian students tend to have positive perception of school preparing them to be career ready while relatively fewer American Indian or Alaska Native tend to have this positive perception. Averaging positive perception from six statements (i.e., average percentage of students who agree and strongly agree positive statements and disagree and strongly disagree negative statements), 76% of Asian students have positive perception of school, followed by Native Hawaiian or Pacific Islander (70%), White (69%) and Black (68%).

Figure 6.17. Relatively more Asian students have positive perception of school preparing them to be career ready

% of grade 10-11 students (15-17) in Virginia, by race/ethnicity



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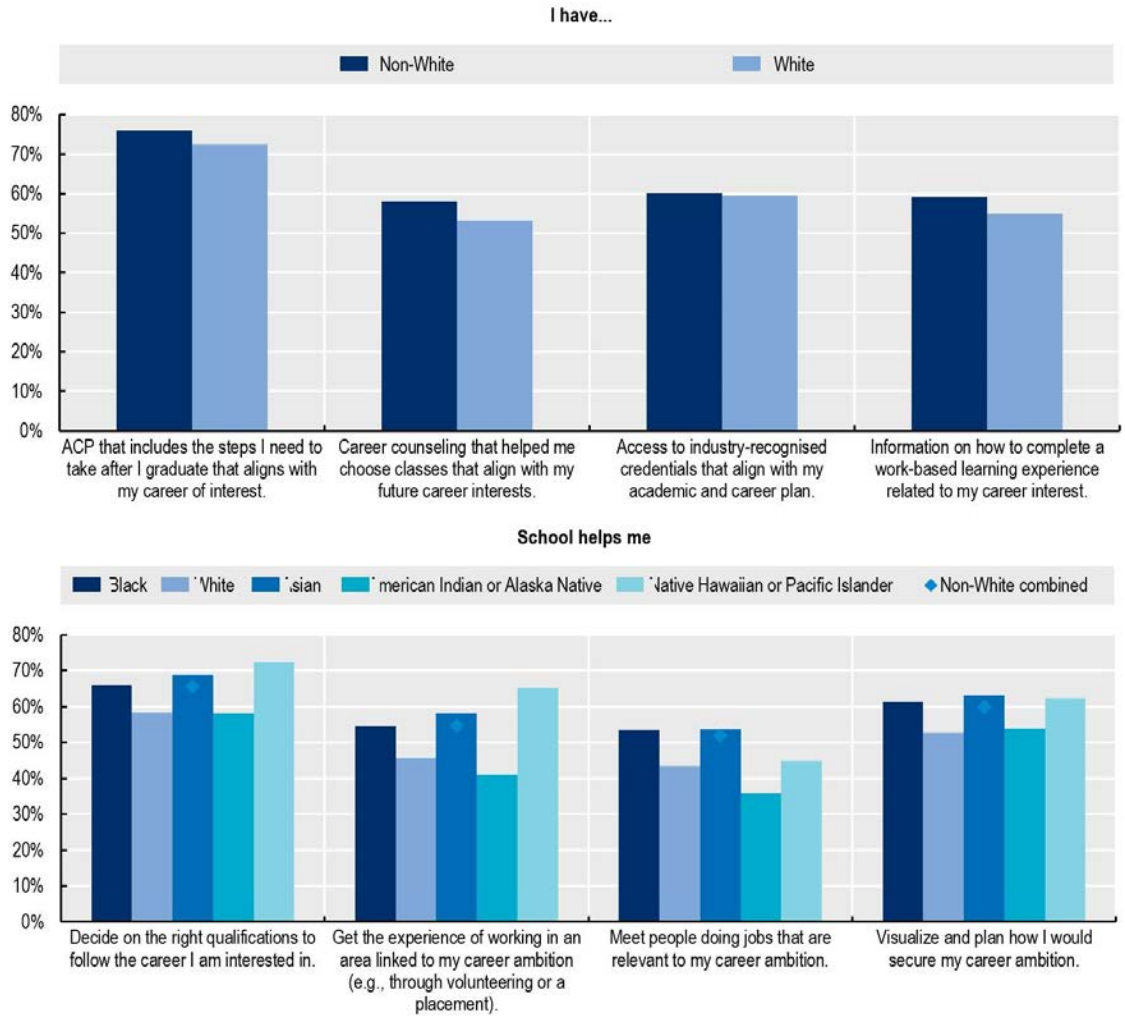
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023

Students' perception of how well their high school is helping them prepare for their future careers was generally positive for both White and non-White students, but more so among non-White students.

Figure 6.18. Perception of how well high school is helping students for their future careers by race in Virginia

% of grade 10-11 students (15-17) in Virginia agreeing the following statement, by race/ethnicity



Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see Annex 2.A for details).
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023

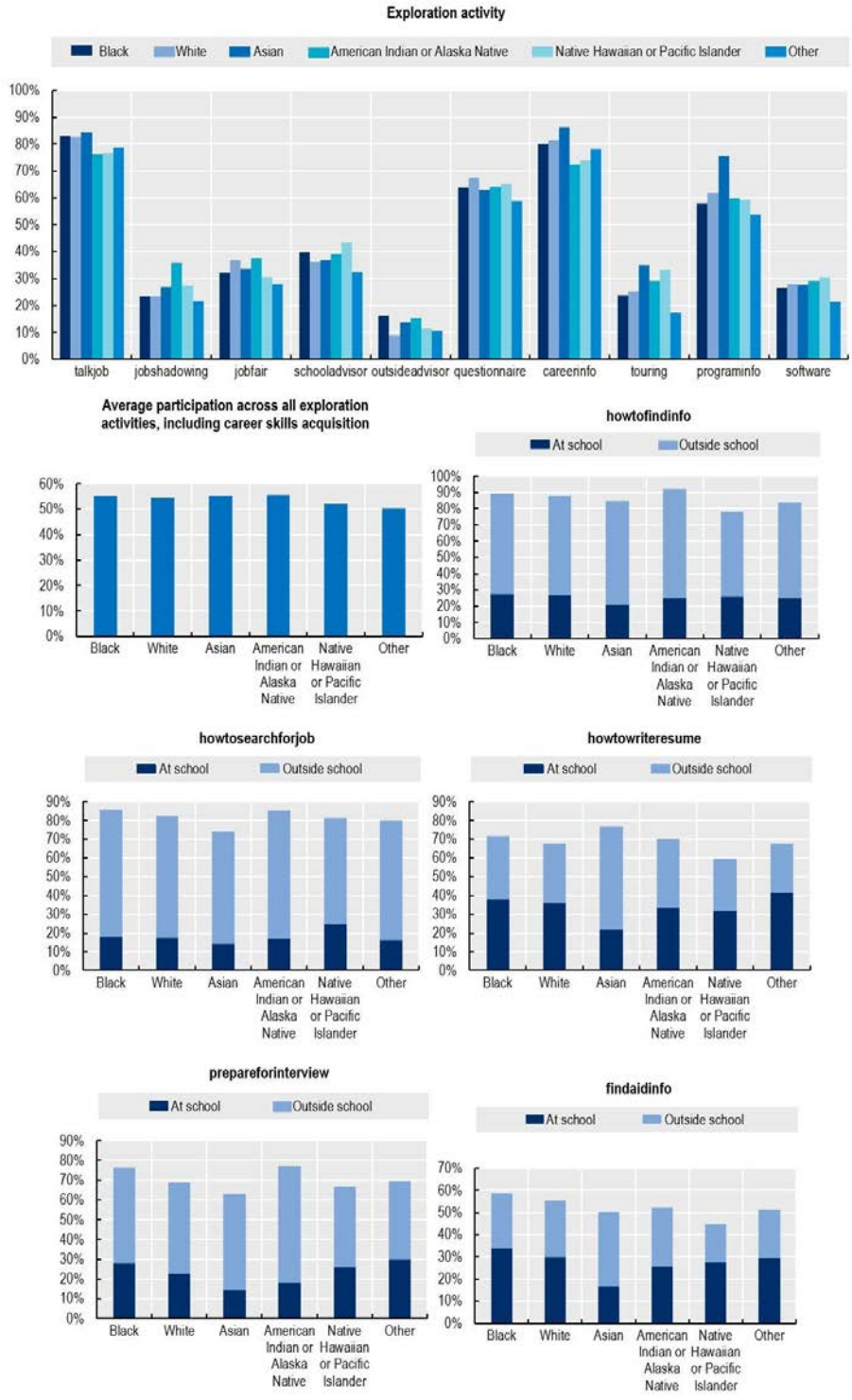
Participation in career development activities

Across the racial/ethnic groups, the difference in participation in career development activities was negligible. The average of participation rate in CDA, including career skills acquisition is about 50-56%, although 'Other' group was slightly low at 37%.

When controlling for grades, age, school region, place of birth and residence, SES and gender: Black students are significantly more likely than White students to talk with a school advisor (1.3 times) and an advisor outside school (2 times), but slightly less likely to search for higher education programme information (0.9 times) (see Annex 2.A.).

Figure 6.19. Participation in career exploration activities by race, Virginia

% of grade 10-11 students (15-17) in Virginia who participated in career development activities, by race

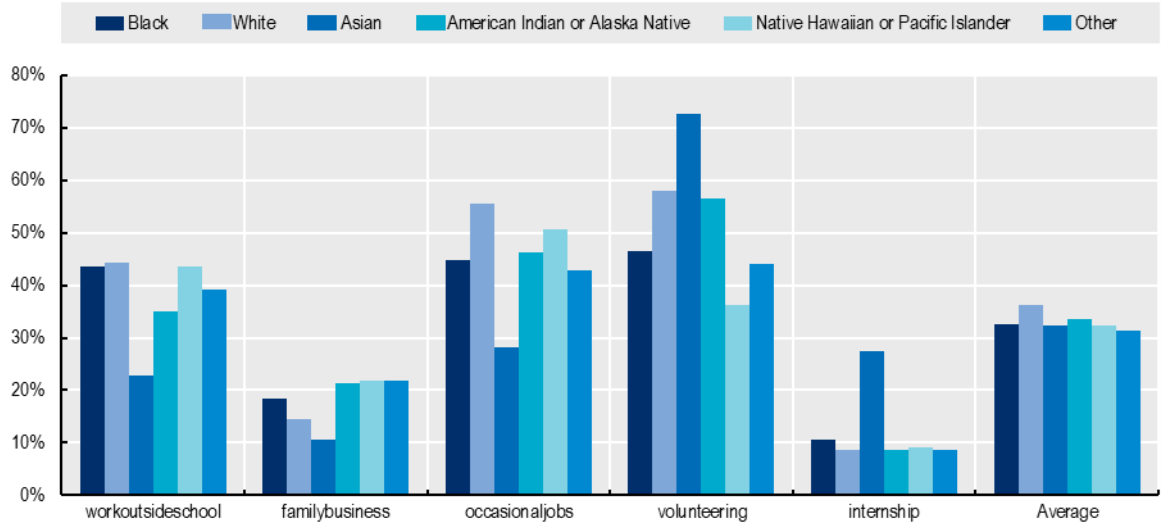


Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see Annex 2.A for details).
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023

On average across racial/ethnic groups, 31-36% of students participated in experiencing activities, although White students showed the highest average participation rate (36%). Asian students stand out in terms of participation in volunteering and internship while their participation in other experiencing activities was relatively low. Overall Black students are 0.8 times less likely than White students to engage in experiencing activities, mainly due to lower participation rates in occasional informal jobs (0.7 times) and volunteering (0.7 times), even when controlling for grades, age, school region, place of birth and residence, SES and gender. However, they are 1.3 times more likely to participate in internship and family business than White students (see Annex 2.A.).

Figure 6.20. White students show the highest average participation in career experiencing activities, but Asian students stand out in volunteering and internship

% of surveyed grade 10-11 students (15-17) in Virginia who participated in career development activities, by race



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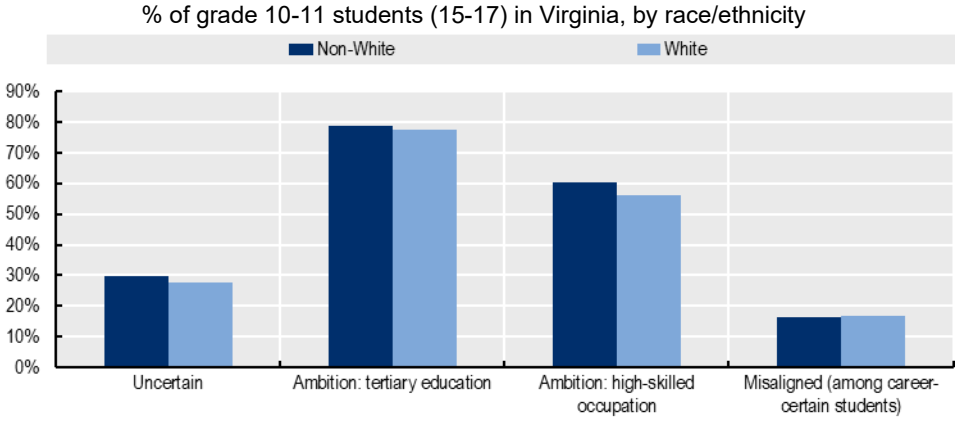
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023 and OECD PISA 2018

Career thinking

Non-White students are slightly more likely to be career-uncertain and misaligned, but are more likely to expect to complete tertiary education and work in a high-skilled occupation than White students.

Figure 6.21. Non-White students are slightly more likely to be career-uncertain and misaligned, but more likely to expect to complete tertiary education and work in a high-skilled occupation, than White students



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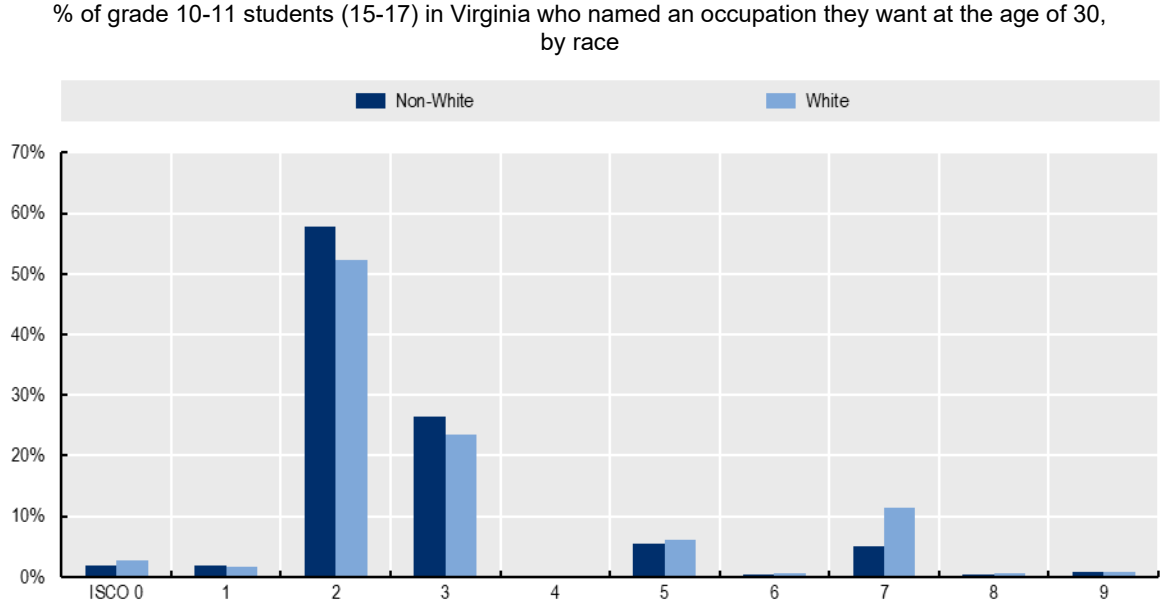
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023 and OECD PISA 2018

Figure 6.22. Relatively more non-White students expect to work as professionals (ISCO 2-3) while more White students expect to work as skilled workers (ISCO 5-8)



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Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023

Among those who named one occupation, 84% of non-White students and 80% of White students named one among top ten most popular occupations among their peers. 25% of non-White students named one in Health professional group and 14% in Legal, Social and Cultural Professionals, compared to 21% and 13% of White students respectively.

Table 6.2. Ten most popular expected occupations by race/ethnicity

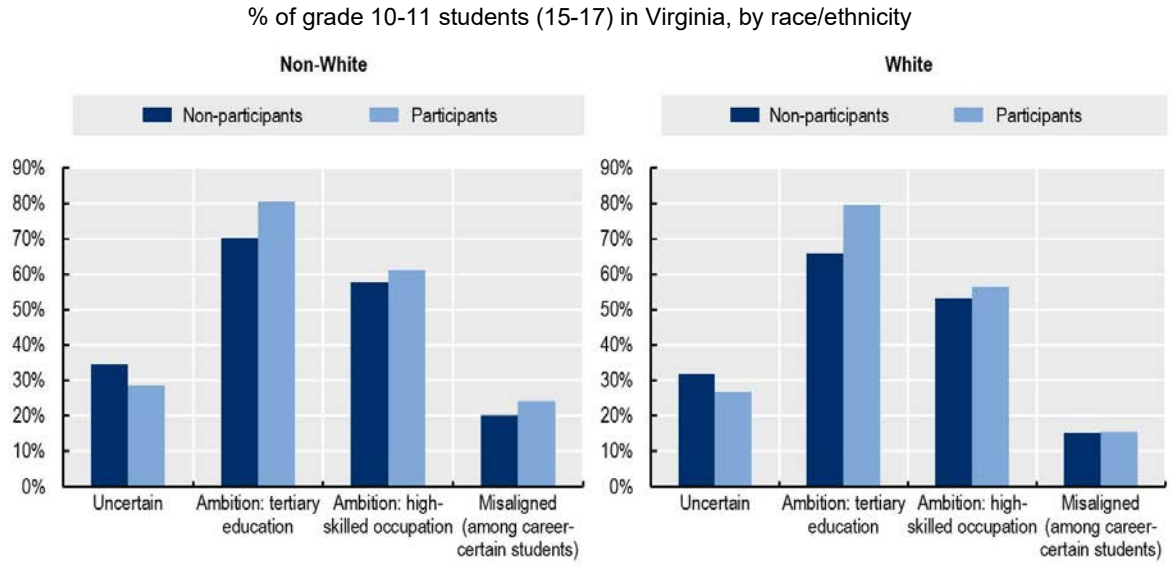
% of grade 10-11 students (15-17) in Virginia, by race/ethnicity

Rank	Top ten ISCO-08	Non-White	Top ten ISCO-08	White
1	22 Health Professionals	25%	22 Health Professionals	21%
2	26 Legal, Social and Cultural Professionals	14%	26 Legal, Social and Cultural Professionals	13%
3	31 Science and Engineering Associate Professionals	10%	31 Science and Engineering Associate Professionals	9%
4	21 Science and Engineering Professionals	7%	72 Metal, Machinery and Related Trades Workers	7%
5	25 Information and Communications Technology Professionals	7%	21 Science and Engineering Professionals	7%
6	34 Legal, Social, Cultural and Related Associate Professionals	6%	23 Teaching Professionals	5%
7	33 Business and Administration Associate Professionals	5%	32 Health Associate Professionals	5%
8	51 Personal Services Workers	4%	25 Information and Communications Technology Professionals	5%
9	32 Health Associate Professionals	3%	34 Legal, Social, Cultural and Related Associate Professionals	4%
10	72 Metal, Machinery and Related Trades Workers	3%	51 Personal Services Workers	4%

Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see Annex 2.A for details).
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023 and OECD PISA 2018

Participants in career experiencing activities from both racial groups tend to be less career-uncertain and misaligned; and expect more to complete tertiary education and work in a high-skilled occupation, compared to non-participants.

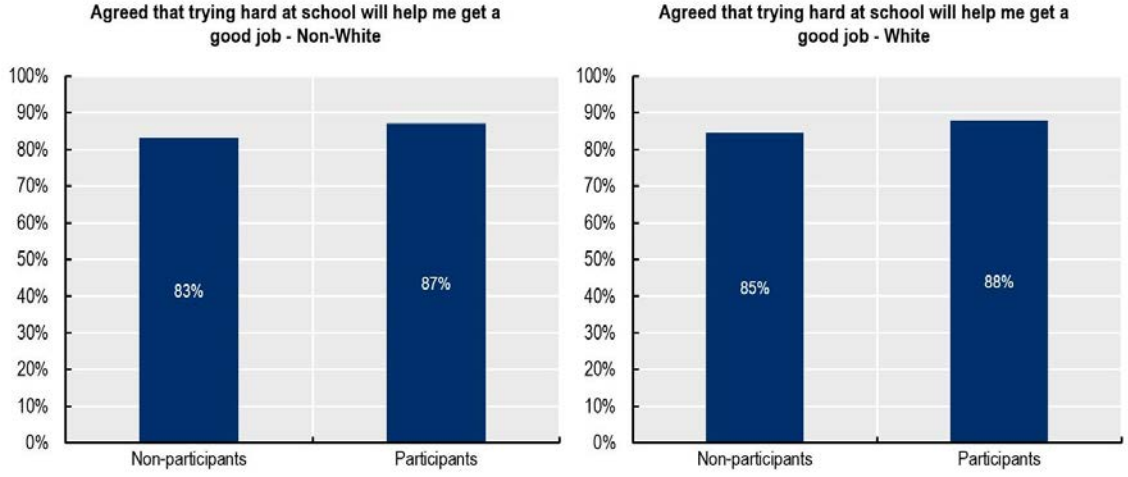
Figure 6.23. Participants of career experiencing activities tend to be less certain about their future job, expect more to complete tertiary education and less misaligned, compared to non-participants, for both White and non-White students



Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see Annex 2.A for details).
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023

In terms of instrumental motivation measured by survey questions like “Trying hard at school will help me get a good job” (see Chapter 3.), participants of career experiencing activities from both racial groups tend to agree that trying hard at school will help them get into a good job than non-participants.

Figure 6.24. Participants of career experiencing activities from all ethnic groups are more likely to agree that trying hard at school will help them get into a good job, than non-participants



Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see Annex 2.A for details).
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023 and OECD PISA 2018.

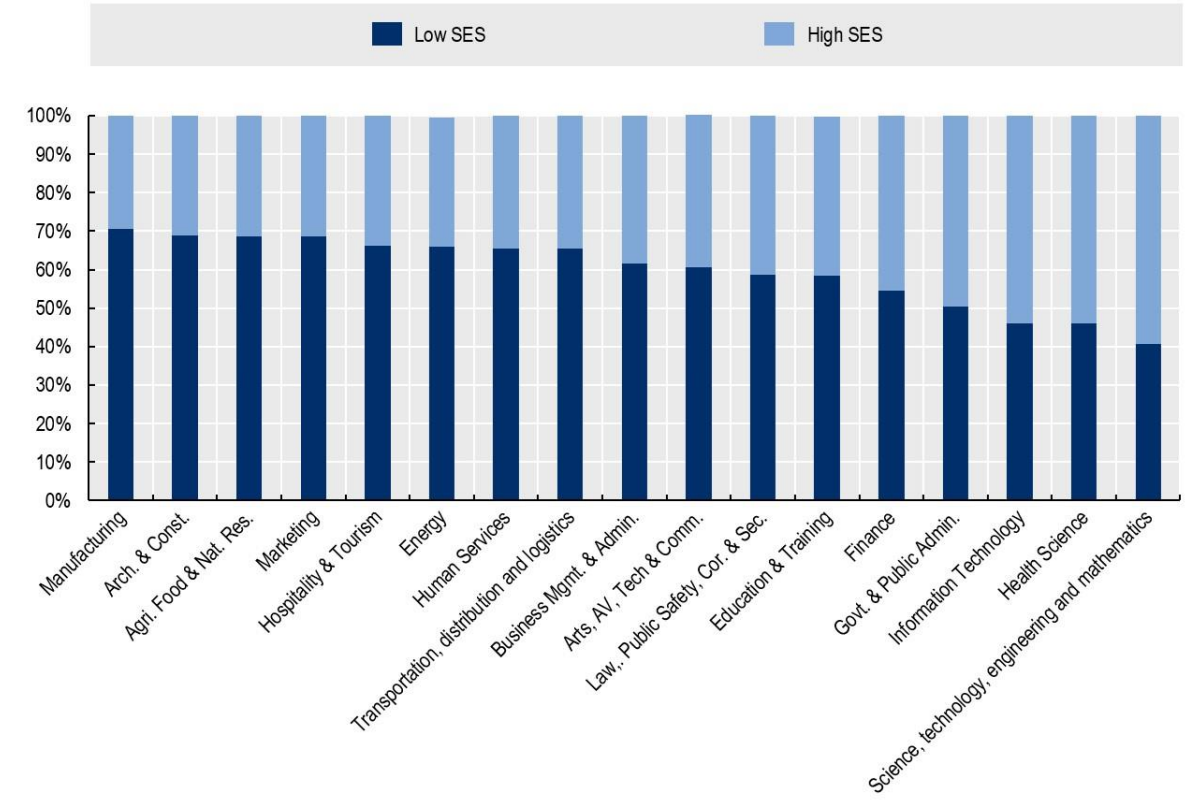
Socio-economic status

Among a representative sample of 8 207 teenage students in Virginia, about 45% of students are from high SES (respondents whose parents, at least one, has attained tertiary education, and at least one parent has a high-skilled job).

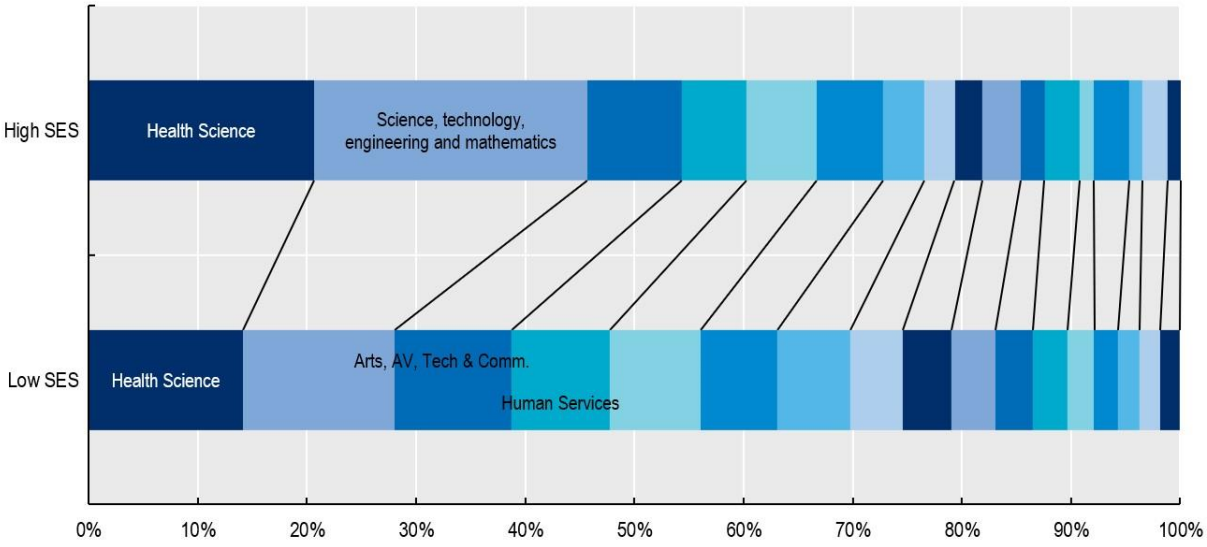
In terms of their CTE interest, measured by asking directly the career cluster of interest, students from low SES are relatively more interested in Health science (14% of low SES students) and STEM (14%). Students from high SES show similar level of interest in those clusters but at a higher percentage in STEM (25%) followed by Health science (21%) (Figure 6.25 Panel A). Students from low SES were over presented in Manufacturing, Architecture and construction and Agriculture, food and natural resources, while students from high SES were overrepresented in STEM, Health science and IT clusters in terms of their interest (Figure 6.25 Panel B).

Figure 6.25. STEM and Health Science were the most popular clusters among students from both SES but overrepresented among students from high SES

Panel A: % of grade 10-11 students (15-17) in Virginia, by CTE cluster of interest and SES



Panel B:

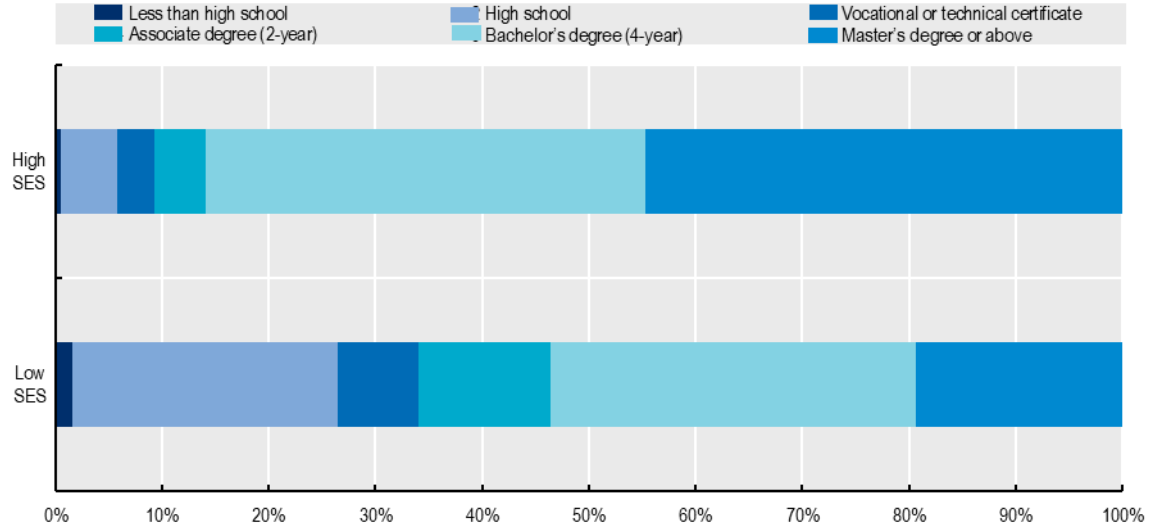


Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see Annex 2.A for details).
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023

In terms of highest education attainment, more students from high SES tend to expect to complete higher education than those from low SES. 91% of students from high SES expect to complete associate degree, bachelor's degree or above while only 66% of those from low SES do so.

Figure 6.26. Relatively more students from high SES tend to expect to complete higher education than those from low SES

% of grade 10-11 students (15-17) in Virginia, by highest expected educational attainment and SES

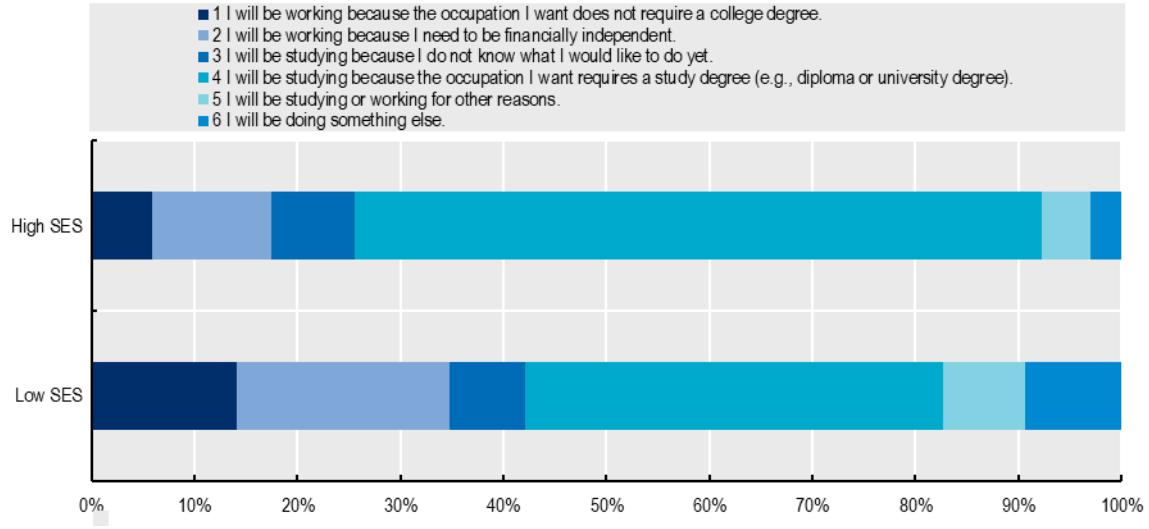


Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see Annex 2.A for details).
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023

Students were asked about what they would be doing 5 years from now. 67% of those from high SES answered that they would pursue a diploma or university degree required for the occupation they want, compared to 41% of those from low SES. More students from low SES tend to plan to work because they need to be financially independent (21%) or the occupation they want does not require a college degree (14%), compared to those from high SES (12% and 6% respectively).

Figure 6.27. Students from high SES are more likely to pursue a degree required for occupation they want when they are at early 20s

% of grade 10-11 students (15-17) in Virginia answering to "What do you think you will be doing 5 years from now?", by SES

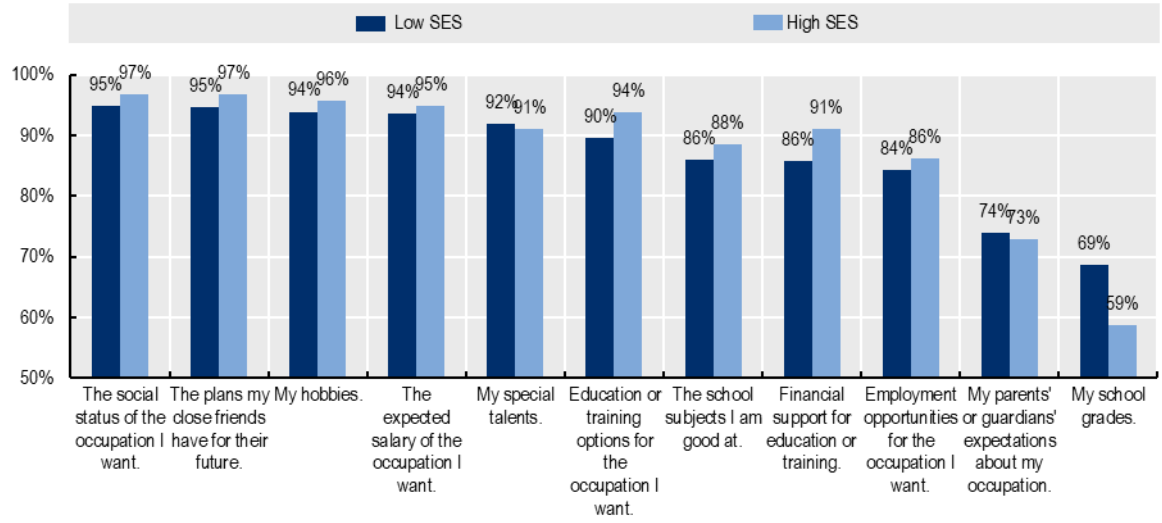


Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see Annex 2.A for details).
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023

There was no significant difference by SES in terms of factors that influence their career decision making. However, relatively more students from high SES consider financial support for education or training important than students from low SES (91% vs 86%). Relatively more students from low SES consider school grades important than those from high SES (69% vs 59%).

Figure 6.28. Factors in decisions, by SES

% of grade 10-11 students (15-17) in Virginia answering to "How important are the following things in the decisions you make about your future occupation?", by SES



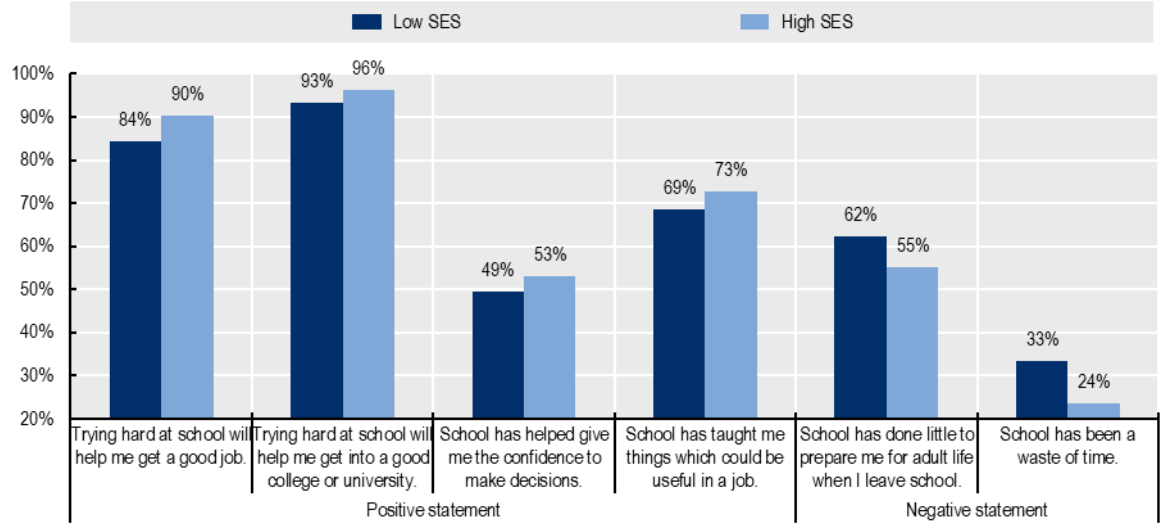
Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see Annex 2.A for details).
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023

Perception of school preparing students career ready

Relatively more students from high SES tend to have positive perception of school preparing them to be career ready, compared to those from low SES. For example, while 90% of students from high SES agree that trying hard at school will help them get a good job, 84% of students from low SES agreed. Relatively more students from low SES agree that school has done little to prepare them for adult life (62%) and school has been a waste of time (33%), compared to those from high SES (55% and 24% respectively).

Figure 6.29. Compared to students form low SES, relatively more students from high SES agreed that trying hard at school will help them get into a good next step in their careers

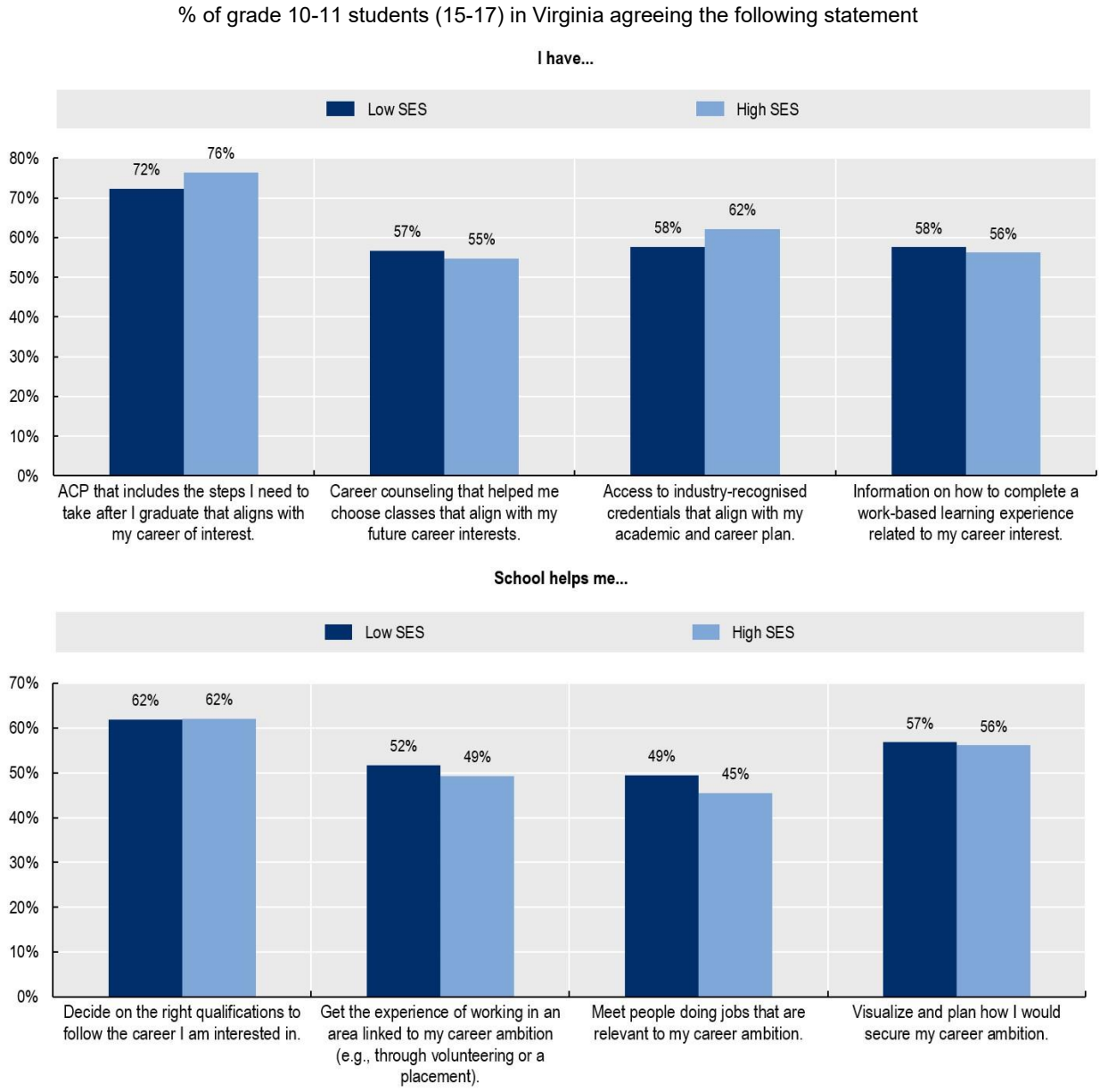
% of grade 10-11 students (15-17) in Virginia, by SES



Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see Annex 2.A for details).
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023

Students' perception of how well their high school is helping them prepare for their future careers was generally positive for both groups of students. By 4 percentage points more students from high SES agreed that they have access to ACP and industry-recognised credentials, than those from low SES. However, relatively more students from low SES tend to agree that school helps them.

Figure 6.30. Specific career guidance at school by SES in Virginia



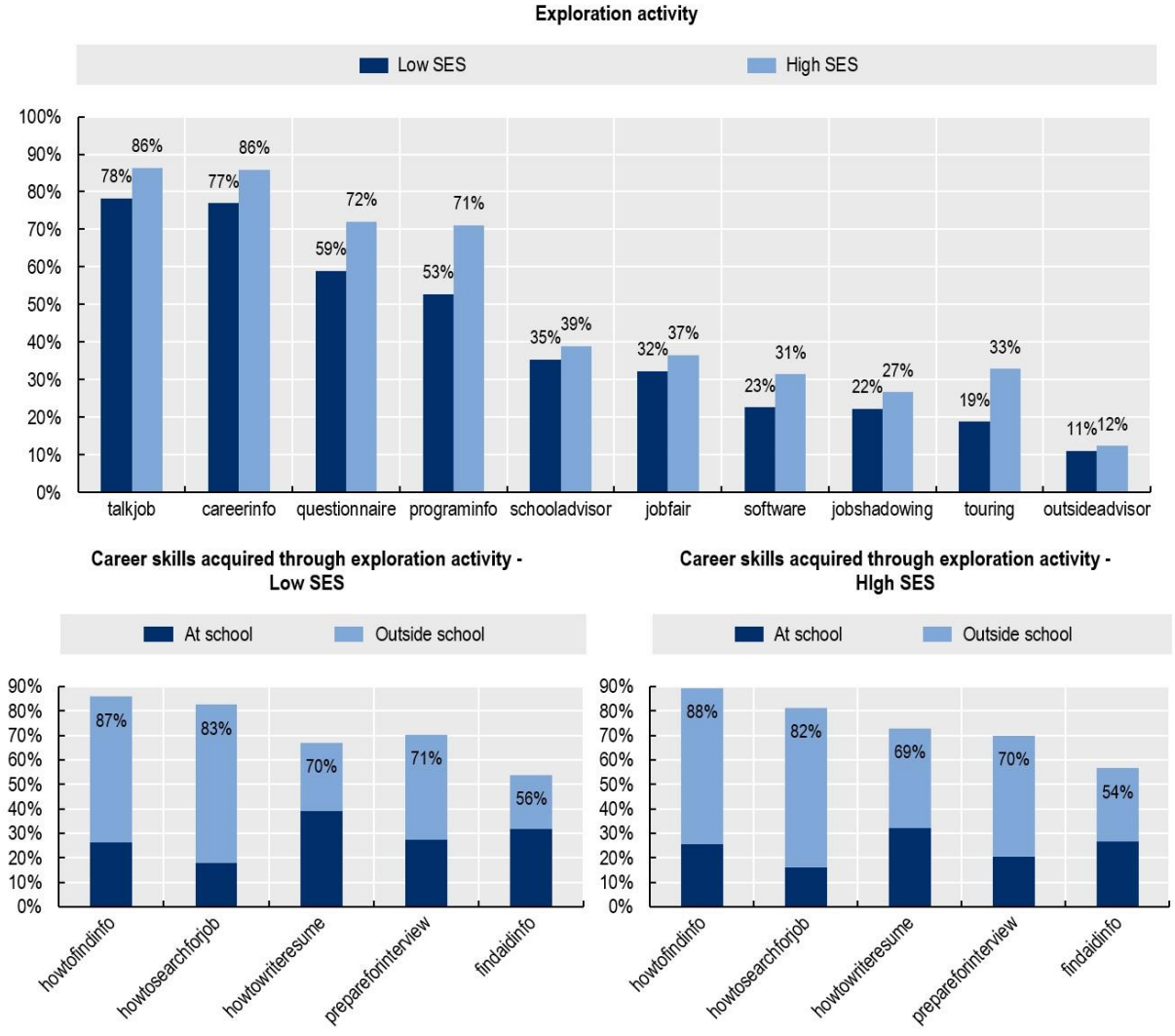
Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see Annex 2.A for details).
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023

Participation in career development activities

High SES students are consistently more likely than low SES students to report that they had taken part in career exploration activities across all those investigated. Low SES students are also more dependent on their schools for the development of career competencies than their high SES peers, being more likely to report that they had learn skills about job searching, resume development, interview skills and financial aid in school rather than outside of school.

Figure 6.31. More students from high SES participated in career exploration activities than those from low SES, Virginia

% of grade 10-11 students (15-17) in Virginia who participated in career development activities, by SES

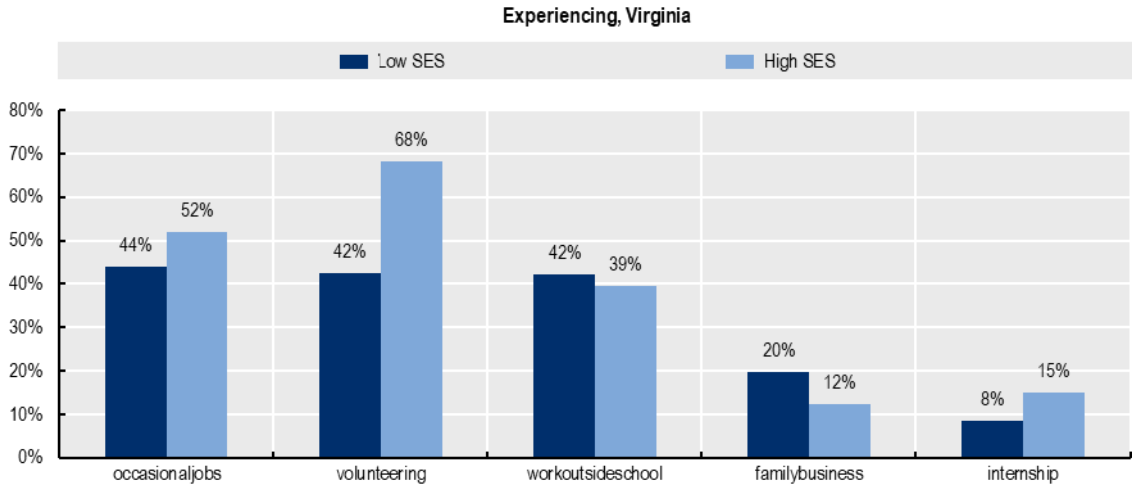


Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see Annex 2.A for details).
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023

Relatively more students from high SES tend to participate in volunteering (68%) and work occasional informal jobs (52%) than those from low SES (42% and 44% respectively). They are almost 2 times more likely to participate in an internship (15%) than those from low SES (8%). Relatively more those from low SES backgrounds however worked in a family business (20%) than those from high SES (12%). For comparison, PISA 2018 shows that the US average for volunteering is higher than the Virginia average for both groups (57% among low SES and 86% among high SES).

Figure 6.32. Relatively more students from high SES tend to participate in volunteering, internship or work occasional informal jobs, than those from low SES

% of surveyed grade 10-11 students (15-17) in Virginia who participated in career development activities, by SES



Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see Annex 2.A for details).
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023

The results remain the same even when controlling for grades, age, school region, place of birth and residence, race and gender. Students from high SES are significantly more likely than those from low SES to participate in exploring activities as well as experiencing activities, except family business. The difference in working outside school is statistically insignificant (see Annex 2.A.).

Table 6.3. Students from high SES are more likely to participate in career development activities

Relative likelihood (odds ratio) of students from high SES to participate in following activities, in reference to low SES

	High SES in reference to low SES	Standard error
experiencing	**2.048*** **	-0.203
familybusiness	**0.688*** **	-0.0591
occasionaljobs	**1.442*** **	-0.124
volunteering	**2.292*** **	-0.157
internship	**1.562*** **	-0.196
talkjob	**1.521*** **	-0.0841
jobshadowing	**1.311*** **	-0.0882
jobfair	**1.216** **	-0.0975
schooladvisor	**1.162*** **	-0.0574
outsideadvisor	**1.189** **	-0.0982
questionnaire	**1.500*** **	-0.116
careerinfo	**1.456*** **	-0.0972
touring	**1.879*** **	-0.103
programinfo	**1.763*** **	-0.0943
software	**1.465*** **	-0.077

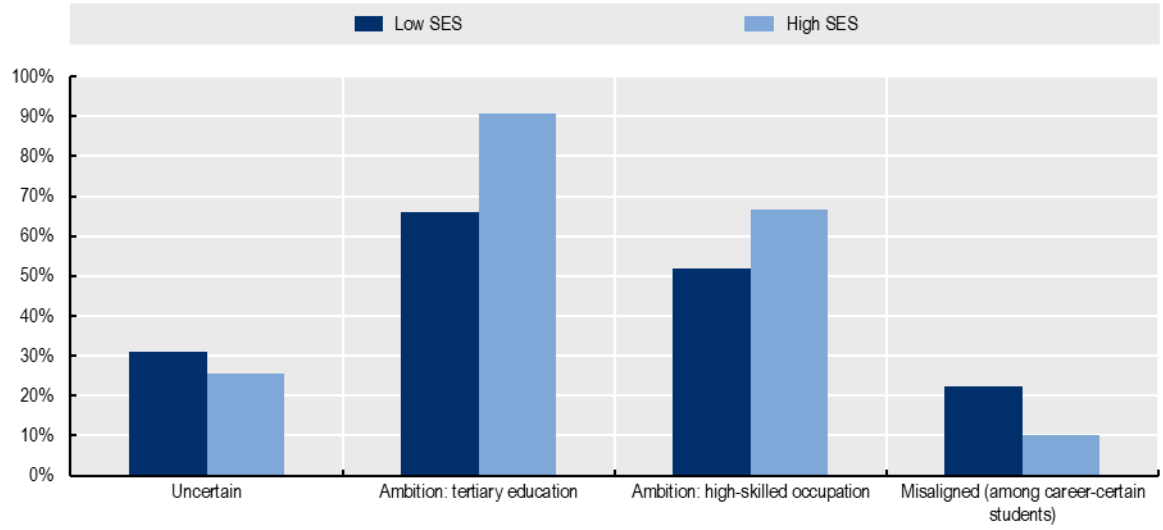
Note: The number of unweighted observations is 8 129 (weighted 8 207). Only statistically significant results are shown. Statistical significance levels are marked by *** p<0.01, ** p<0.05, * p<0.1. This analysis controls for grades, age, school region, place of birth and residence, race and gender.
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023

Career thinking

Similar to the findings across the OECD, students from low SES in Virginia are more likely to be career-uncertain (31%) and misaligned (22%), and less likely to expect to complete tertiary education (66%) and work in a high-skilled occupation (52%) than their peers from high SES backgrounds.

Figure 6.33. Students from low SES are more likely to be career-uncertain and misaligned, and less likely to expect to complete tertiary education and work in a high-skilled occupation

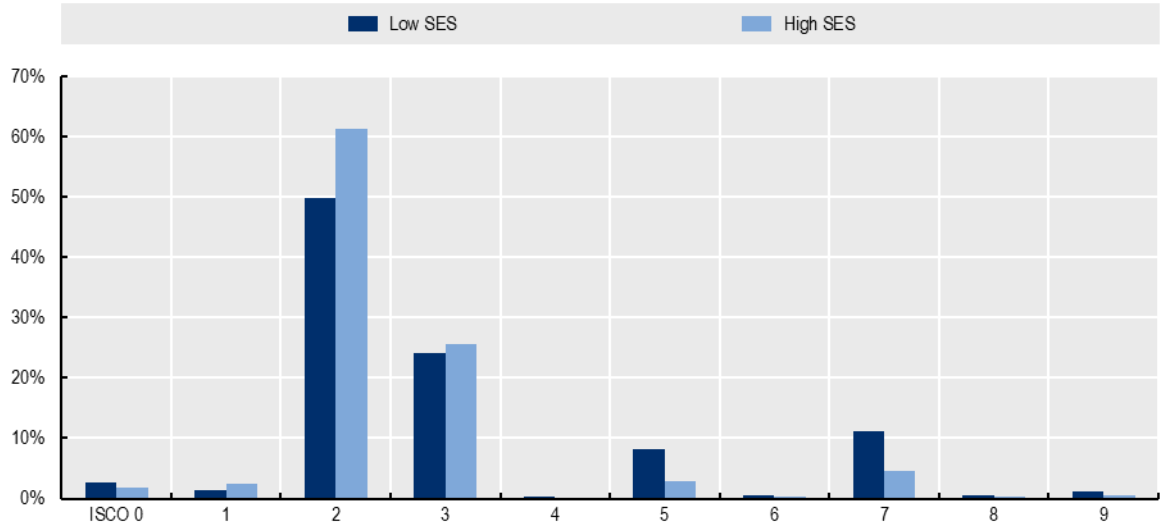
% of grade 10-11 students (15-17) in Virginia, by SES



Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see Annex 2.A for details).
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023

Figure 6.34. Relatively more students from high SES expect to work as professionals (ISCO 2-3) while those from low SES expect to work as skilled workers (ISCO 5-8)

% of grade 10-11 students (15-17) in Virginia who named an occupation they want at the age of 30, by SES



Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see Annex 2.A for details).
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023

Among those who named an expected occupation, 80% of students from low SES and 85% of students from high SES backgrounds named one that was among the top ten occupations named by each group of students. 26% of students from high SES named a profession in Health professional group and 13% among Legal, Social and Cultural Professionals, compared to 22% and 13% of students from low SES respectively.

Table 6.4. Ten most popular expected occupations by SES

% of grade 10-11 students (15-17) in Virginia, by SES

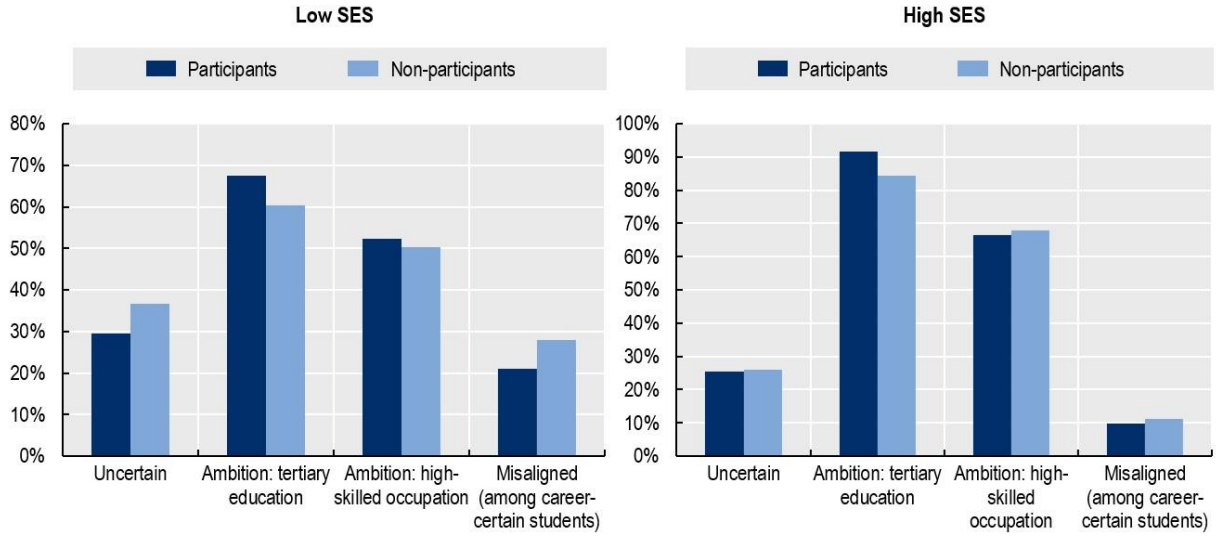
Rank	Top ten ISCO-08	Low SES	Top ten ISCO-08	High SES
1	22 Health Professionals	22%	22 Health Professionals	26%
2	26 Legal, Social and Cultural Professionals	13%	26 Legal, Social and Cultural Professionals	13%
3	31 Science and Engineering Associate Professionals	7%	31 Science and Engineering Associate Professionals	12%
4	72 Metal, Machinery and Related Trades Workers	7%	21 Science and Engineering Professionals	9%
5	34 Legal, Social, Cultural and Related Associate Professionals	6%	25 Information and Communications Technology Professionals	7%
6	51 Personal Services Workers	6%	32 Health Associate Professionals	4%
7	21 Science and Engineering Professionals	5%	34 Legal, Social, Cultural and Related Associate Professionals	4%
8	33 Business and Administration Associate Professionals	5%	23 Teaching Professionals	4%
9	32 Health Associate Professionals	4%	72 Metal, Machinery and Related Trades Workers	3%
10	25 Information and Communications Technology Professionals	4%	33 Business and Administration Associate Professionals	3%

Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see Annex 2.A for details).
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023

Participants of career experiencing activities from both low and high SES tend to be less uncertain about their future job, expect more to complete tertiary education and less misaligned, compared to non-participants. This was more pronounced among low SES than high SES. For example, while participants and non-participants from high SES backgrounds were similar in terms of career uncertainty and misalignment, participants from low SES backgrounds were 7 percentage points less likely to be career-uncertain and misaligned than non-participants from similar SES.

Figure 6.35. Participants of career experiencing activities tend to be less certain about their future job, expect more to complete tertiary education and less misaligned, compared to non-participants – more so among low SES

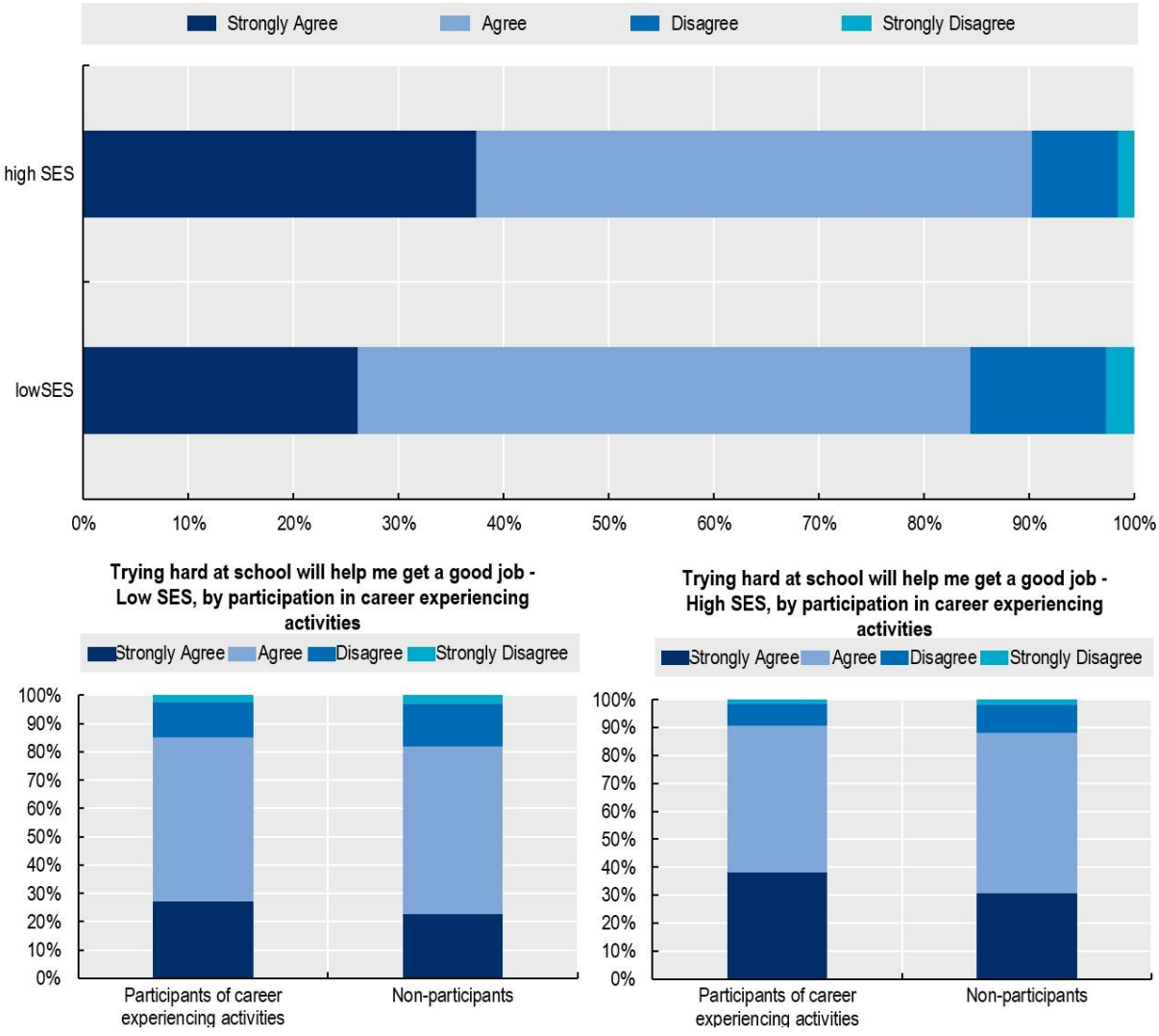
% of grade 10-11 students (15-17) in Virginia, by SES



Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see Annex 2.A for details).
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023

In terms of instrumental motivation measured by survey questions like “Trying hard at school will help we get a good job” (see Chapter 3.), relatively more students from high SES backgrounds in Virginia agreed that trying hard at school will help them get into a good job (90%), than those from low SES backgrounds (84%). The survey data also show that participants of career experiencing activities tend more to have instrumental motivation than non-participants both for low SES (85% vs 82%) and high SES (91% vs 88%).

Figure 6.36. Relatively more students from high SES in Virginia agreed that trying hard at school will help them get into a good job, than those from low SES



Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see Annex 2.A for details).
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023 and OECD PISA 2018.

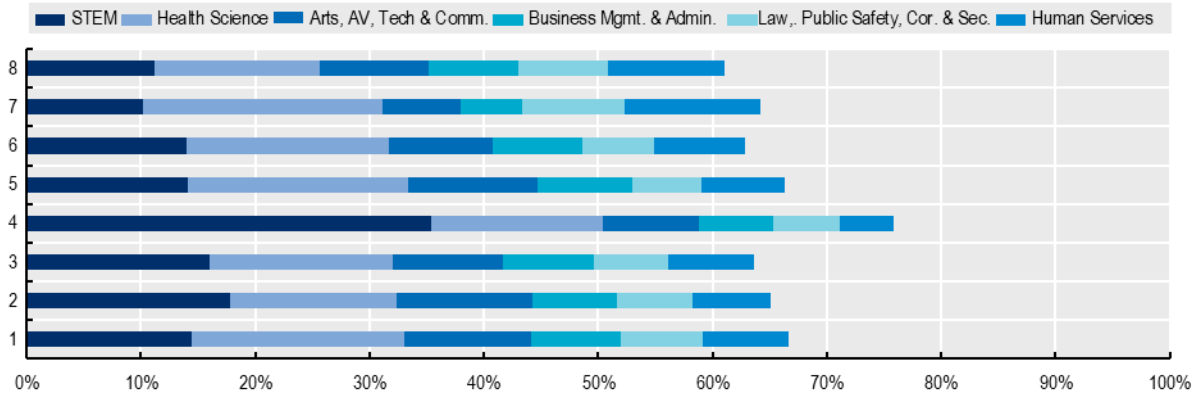
School region

The Virginian teenage survey sample includes students from all eight school regions in the Commonwealth with the sample size ranging from 21% of the sample drawn from Northern Virginia (Region 4) and 16% from Central Virginia (Region 1) to 7% from Southside (Region 8) and 6% from Southwest (Region 7).

In terms of CTE interest, measured by asking directly students' career cluster of interest, STEM and Health Science were the most popular clusters. In Northern Virginia (Region 4), more than half of students were interested in these two clusters (35% in STEM and 15% in Health Science) while about a third of students in other regions were.

Figure 6.37. STEM and Health Science were the most popular clusters, in particular in Northern Virginia

% of grade 10-11 students (15-17) in Virginia, by CTE cluster of interest (top 6) and school region

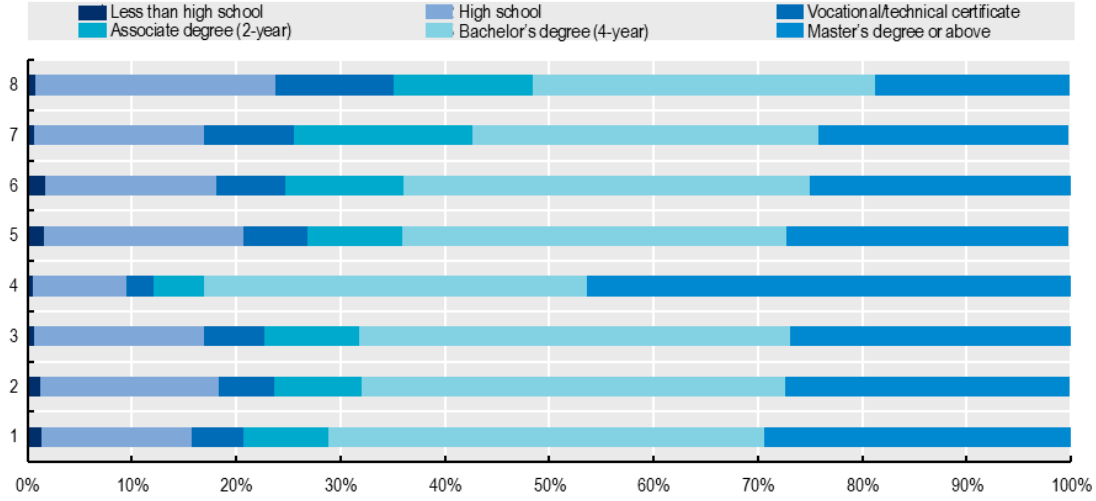


Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see Annex 2.A for details). School regions: 1. Central Virginia, 2. Tidewater, 3. Northern Neck, 4. Northern Virginia, 5. Valley, 6. Western Virginia, 7. Southwest, 8. Southside.
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023

In terms of highest education attainment, relatively more students from the Northern Virginia school region tend to expect to complete higher education than those in other regions. 83% of students from Northern Virginia expect to complete bachelor's degree or above, while 51%-71% of students in other regions do so.

Figure 6.38. Relatively more students in Northern Virginia (Region 4) tend to expect to complete higher education than those in other regions

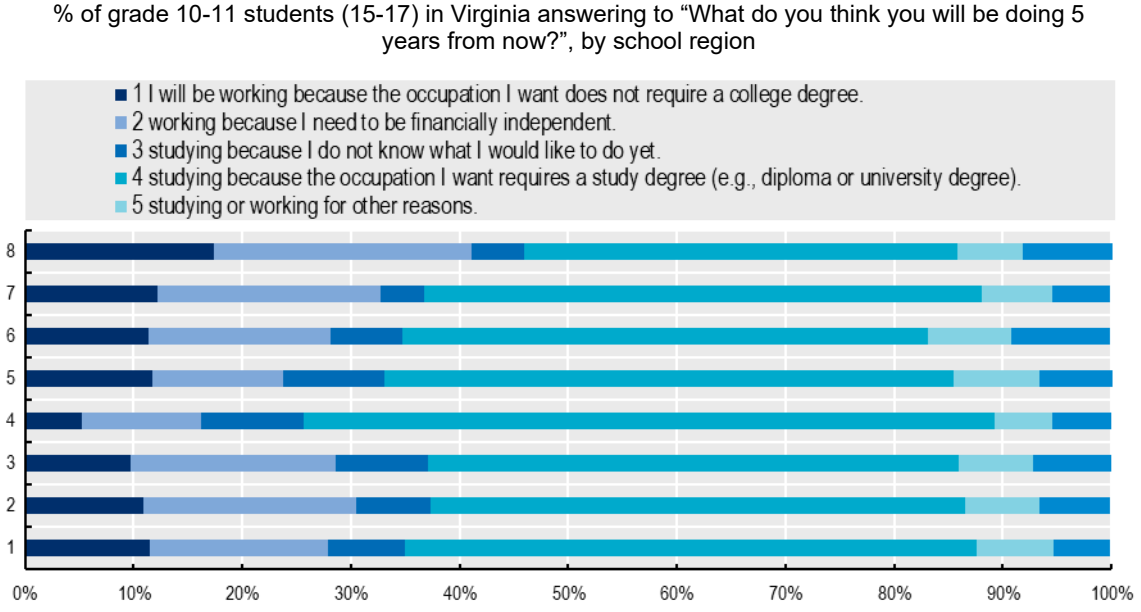
% of grade 10-11 students (15-17) in Virginia, by highest expected educational attainment and school region



Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see Annex 2.A for details). School regions: 1. Central Virginia, 2. Tidewater, 3. Northern Neck, 4. Northern Virginia, 5. Valley, 6. Western Virginia, 7. Southwest, 8. Southside.
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023

In line with the expected educational attainment, students from the Northern Virginia school region are most likely to be studying in five years' time largely because the occupation they want requires a study degree (64% versus 40-53% in other regions). Relatively more students from Southside (Region 8) are planning to work as they need to be financially independent (24%) or because the occupation they want does not require a college degree (17%).

Figure 6.39. Students from Northern Virginia school region are more likely to pursue a degree required for occupation they want when they are at early 20s

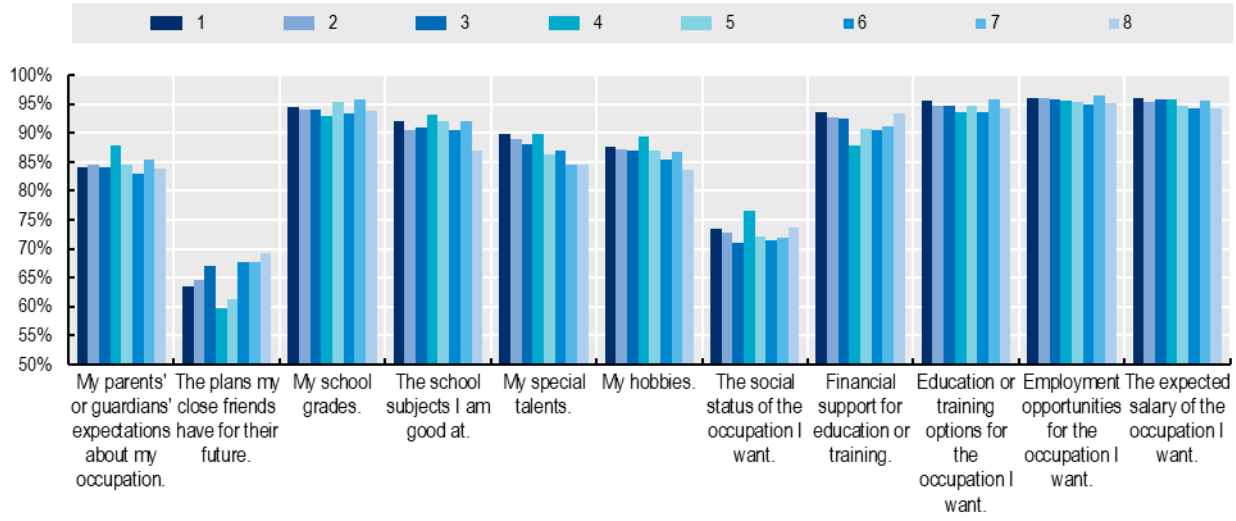


Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see Annex 2.A for details).
School regions: 1. Central Virginia, 2. Tidewater, 3. Northern Neck, 4. Northern Virginia, 5. Valley, 6. Western Virginia, 7. Southwest, 8. Southside.
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023

Relatively more students from Northern Virginia school region agree that their parents' or guardians' expectation (88%) and the social status (77%) of the occupation they want are important in the decisions they make about their future occupation than students in other regions.

Figure 6.40. Parents' expectation and social status of the occupation influence decision among students from Northern Virginia more than those in other regions

% of grade 10-11 students (15-17) in Virginia answering to "How important are the following things in the decisions you make about your future occupation?", by school region



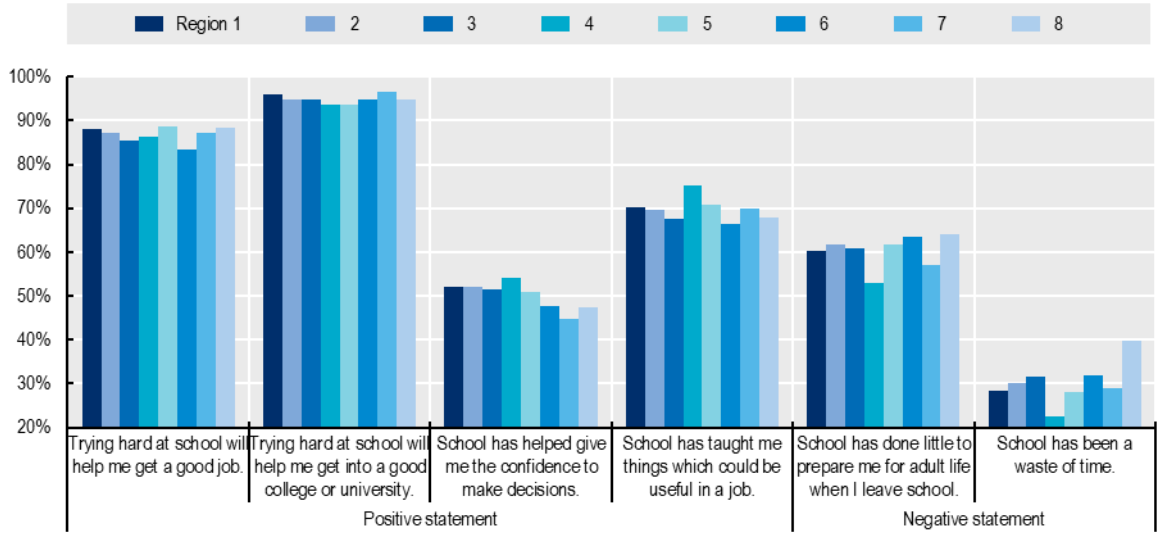
Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see Annex 2.A for details).
School regions: 1. Central Virginia, 2. Tidewater, 3. Northern Neck, 4. Northern Virginia, 5. Valley, 6. Western Virginia, 7. Southwest, 8. Southside.
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023

Perception of school preparing students career ready

While students' perceptions of how well school was preparing them to be career ready were generally similar across school regions, the variation was pronounced in agreeing 'school has been a waste of time', ranging from 23% of students agree in Northern Virginia (Region) 4 to 40% in Southside (Region 8) (17 percentage point difference).

Figure 6.41. Students' perception of school preparing them to be career ready were generally similar across school regions

% of grade 10-11 students (15-17) in Virginia who agree the following statement, by school region

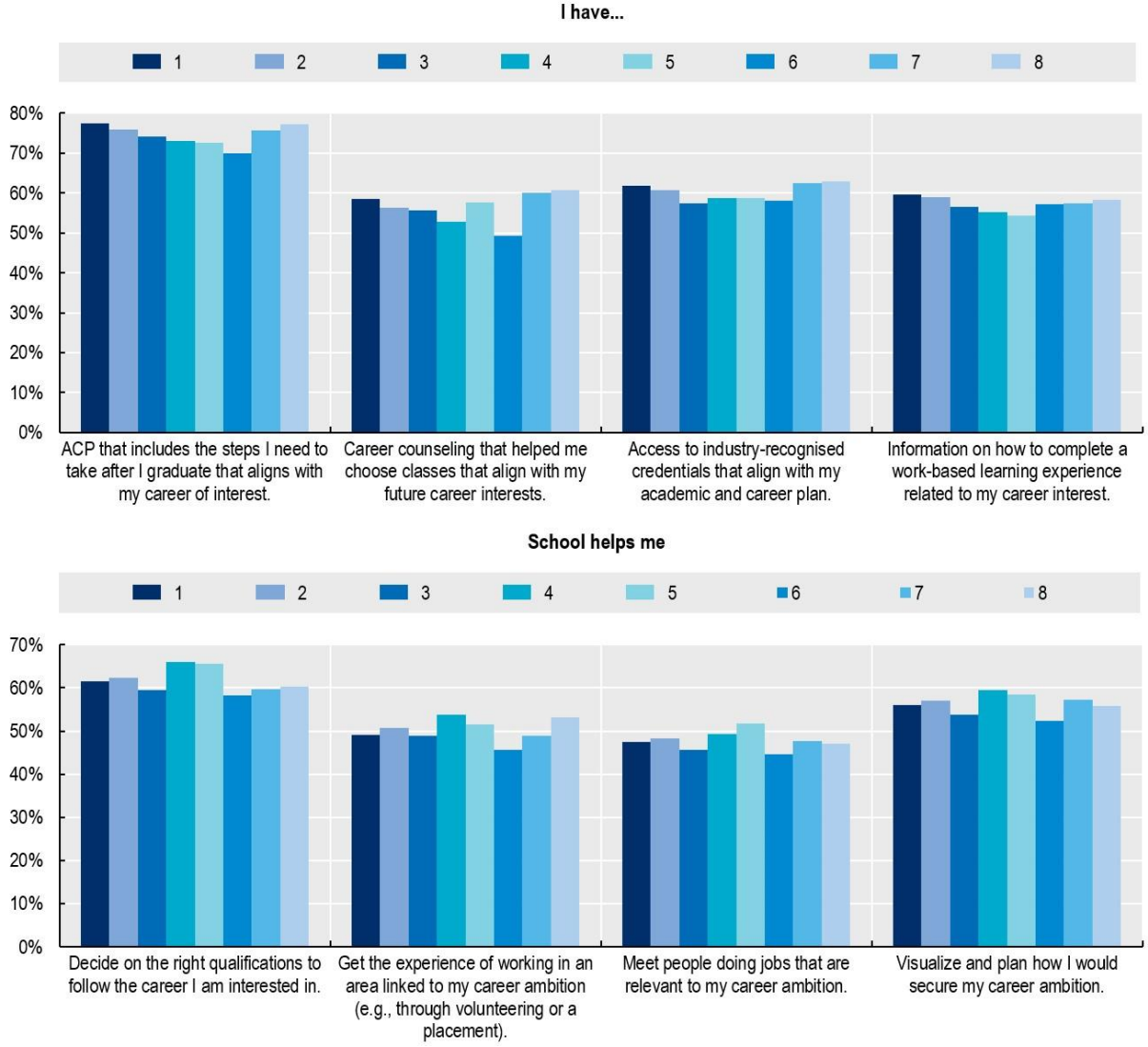


Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see Annex 2.A for details).
School regions: 1. Central Virginia, 2. Tidewater, 3. Northern Neck, 4. Northern Virginia, 5. Valley, 6. Western Virginia, 7. Southwest, 8. Southside.
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023

Students' perception of how well their high school is helping them to prepare for their future careers is generally positive for all the school regions, with a slight variation. For example, relatively fewer students from Western Virginia school region (Region 6) agree that they have ACP (70%) and career counselling (49%) compared to Southside region (77% and 61% respectively). Relatively more students from Northern Virginia agree that school helps them decide on the right qualification (66%), get the experiment of working (54%) and visualise and plan future careers (59%) than other regions.

Figure 6.42. Perception of how well their high school is helping them prepare for their future careers is generally positive but with a variation across school regions, Virginia

% of grade 10-11 students (15-17) in Virginia agreeing the following statement, by school regions



Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see Annex 2.A for details).
School regions: 1. Central Virginia, 2. Tidewater, 3. Northern Neck, 4. Northern Virginia, 5. Valley, 6. Western Virginia, 7. Southwest, 8. Southside.
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023

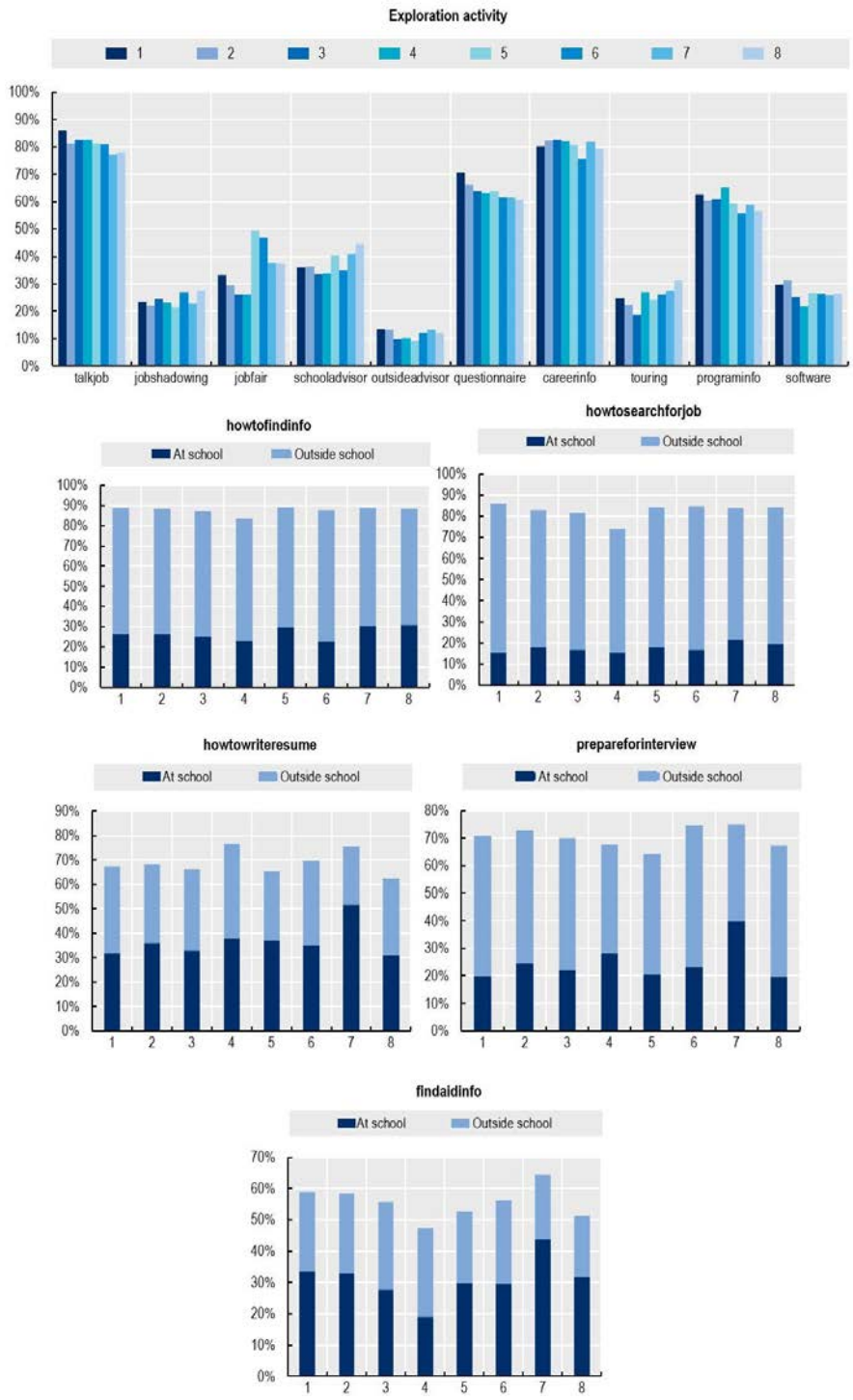
Participation in career development activities

The results illustrate widespread variations in the extent to which students are participating in career development activities. The gap in participation rates is greatest with regard to student engagement in job fairs where students in parts of the state are nearly twice as likely as some peers elsewhere to participate in a guidance activities which is commonly found to be linked with better long-term employment outcomes (Covacevich et al., 2021[16]): a 24 ppt difference between students in the Northern Neck (Region 3) at 26% and those in Northern Virginia (Region 4). Notable variations between highest and lowest participation levels are also found with regard to speaking with a career advisor in school (11 ppt), completing a career questionnaire (10 ppt), speaking with someone about jobs of interest (9 ppt), researching the internet for information on educational programmes (9 ppt), using a career planning software programme (9 ppt), job shadowing/workplace visits (6 ppt), researching careers on the internet (6 ppt) and speaking with career advisor outside of school (5 ppt).

Important variations are also apparent in terms of where important career competencies were developed. In terms of learning how to complete a resume, students in Region 7 are 20 ppt more likely to have learned the skill in school, compared to students in region 1. With regards to learning how to prepare for an interview, students in Region 1 are 20 ppt more likely to have learned the skill in school compared to students in Regions 1, 3 and 5. The development of such recruitment skills in school are associated in longitudinal studies with better employment outcomes (Covacevich et al., 2021[16]). Access to information about financial aid for post-secondary education is also an important aspect of career readiness and here variations were particularly large: students in Region 7 are 25 ppt more likely than studies in Region 4 to have undertaken such provision within school.

Figure 6.43. Participation in exploring activities varies across school regions, particularly in job fair and college/university touring, Virginia

% of grade 10-11 students (15-17) in Virginia who participated in career development activities, by school region



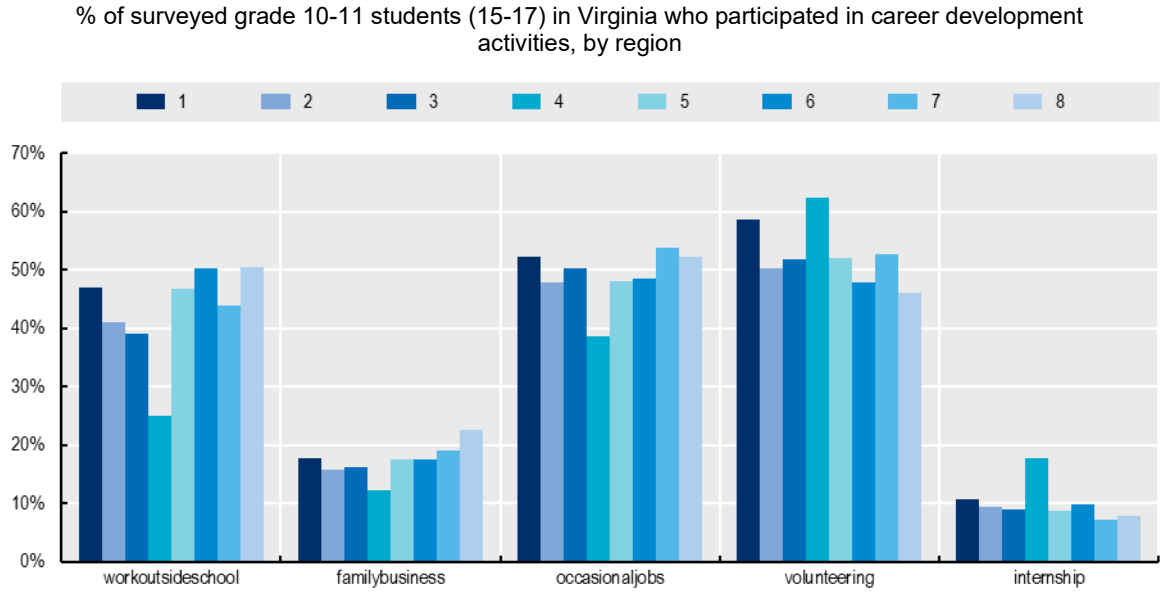
Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see Annex 2.A for details). School regions: 1. Central Virginia, 2. Tidewater, 3. Northern Neck, 4. Northern Virginia, 5. Valley, 6. Western Virginia, 7. Southwest, 8. Southside.

Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023

Among experiencing activities and across school regions, the difference in working outside school was the highest. While 51% of students in Southside (region 8) worked outside school, only 25% of students in Northern Virginia (region 4) did so. Even for the other activities, the difference between the region with high participation and that with low participation is over 10 percentage points.

When controlling for grades, age, SES, place of birth and residence, race and gender, in reference to students in Northern Virginia, those in all other school regions were significantly more likely to work outside school hours.

Figure 6.44. Participation in experiencing activities varies across school regions, Virginia



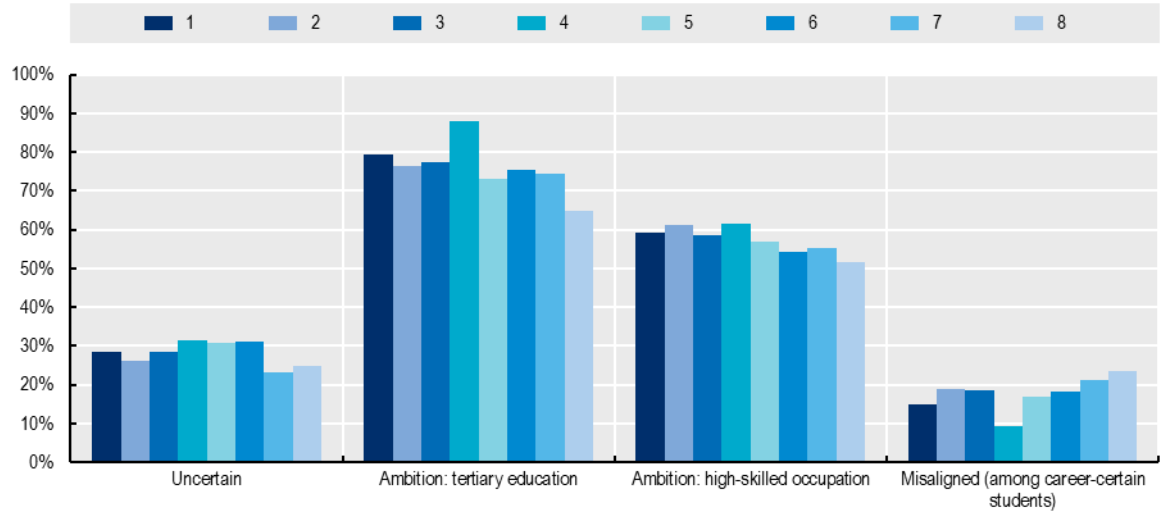
Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see Annex 2.A for details).
School regions: 1. Central Virginia, 2. Tidewater, 3. Northern Neck, 4. Northern Virginia, 5. Valley, 6. Western Virginia, 7. Southwest, 8. Southside.
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023 and OECD PISA 2018

Career thinking

Relatively more students from Northern Virginia tend to be ambitious and less misaligned, compared to other school regions especially Southwest and Southside regions. Also, relatively more students in Northern Virginia expect to work as professionals (ISCO 2-3) while more students in Southwest and Southside expect to work as skilled workers (ISCO 5-8). Variation in plans to attend tertiary education is especially high with a 23 ppt difference in expectation between regions 4 and 8. Variation in student misalignment is striking. Across the Commonwealth, large proportions of students expect to work in the professions (ISCO major category 2). However, while ambitions are relatively similar across the state, intentions to pursue the education levels usually required for entry vary. Whereas only 9% of students in region 4 expect to work in an occupation that typically requires tertiary qualifications but do not expect to proceed to post-secondary education, this figure is above 20% in regions 7 and 8, an indication of confusion about how education can enable progression towards career ambitions.

Figure 6.45. Relatively more students from Northern Virginia tend to be ambitious and less misaligned, compared to other school regions especially Southwest and Southside regions

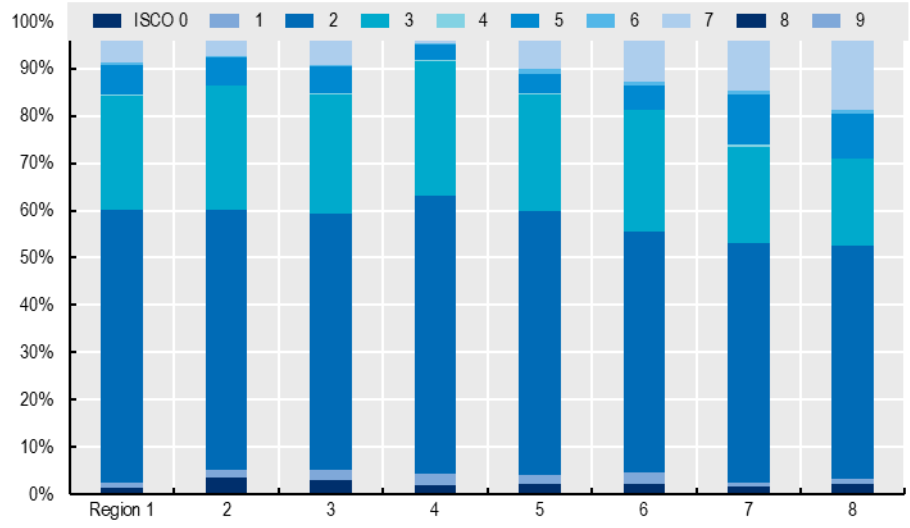
% of grade 10-11 students (15-17) in Virginia, by school region



Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see Annex 2.A for details). School regions: 1. Central Virginia, 2. Tidewater, 3. Northern Neck, 4. Northern Virginia, 5. Valley, 6. Western Virginia, 7. Southwest, 8. Southside.
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023

Figure 6.46. Relatively more students in Northern Virginia expect to work as professionals (ISCO 2-3) while more students in Southwest and Southside expect to work as skilled workers (ISCO 5-8)

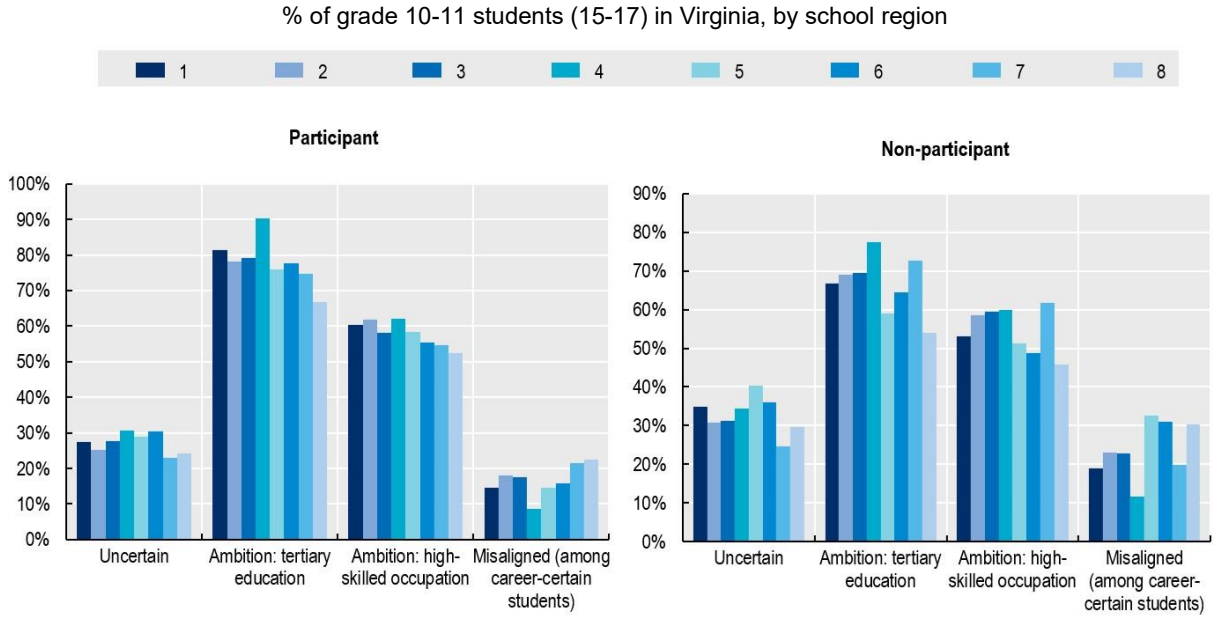
% of grade 10-11 students (15-17) in Virginia who named an occupation they want at the age of 30, by school region



Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see Annex 2.A for details). School regions: 1. Central Virginia, 2. Tidewater, 3. Northern Neck, 4. Northern Virginia, 5. Valley, 6. Western Virginia, 7. Southwest, 8. Southside.
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023

Participants of career experiencing activities across regions tend to be less career-uncertain and misaligned; and expect more to complete tertiary education and work in a high-skilled occupation, compared to non-participants.

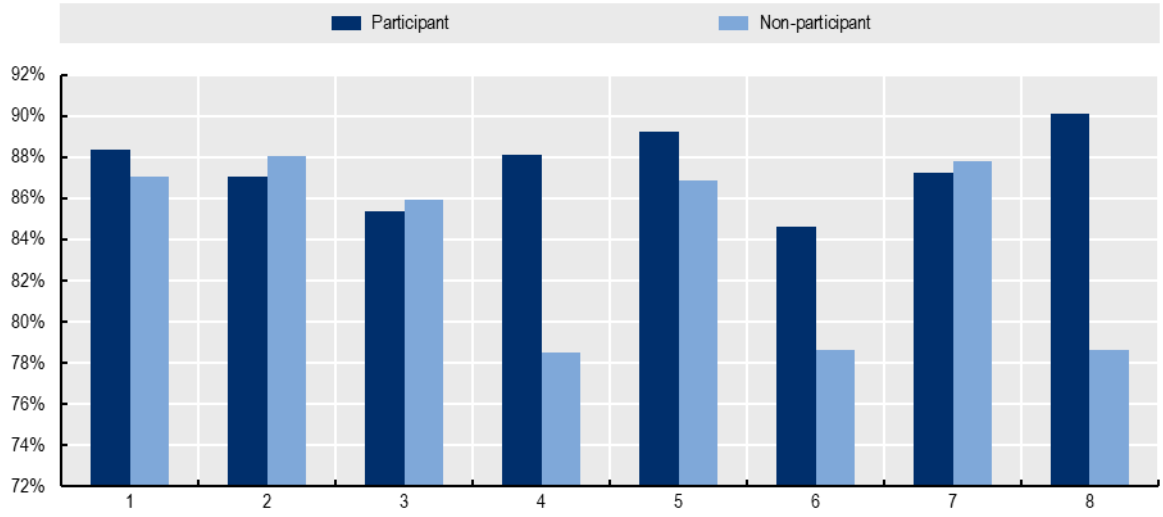
Figure 6.47. Participants of career experiencing activities tend to be less certain about their future job, expect more to complete tertiary education and less misaligned, compared to non-participants



Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see Annex 2.A for details).
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023

In terms of instrumental motivation measured by survey questions like 'Trying hard at school will help we get a good job' (see Chapter 3.), relatively more participants of career experiencing activities from most school regions tend to agree that trying hard at school will help them get into a good job than non-participants. The difference is particularly pronounced in regions 4, 5, 6 and 8.

Figure 6.48. Participants of career experiencing activities from different school regions tend to agree that trying hard at school will help them get into a good job, than non-participants



Note: The sample includes grade 10-11 students in Virginia who completed the OECD survey and were born in 2006-08; from schools with more than 22 respondents or 14% student participation, which is a total of 9 333 students from 46 schools (9 353 with weight) (see Annex 2.A for details).
Source: OECD Career Readiness Survey of Teenage Students in Virginia 2023 and OECD PISA 2018.

Evidence on equity from the OECD Career Readiness Survey of Young Adults

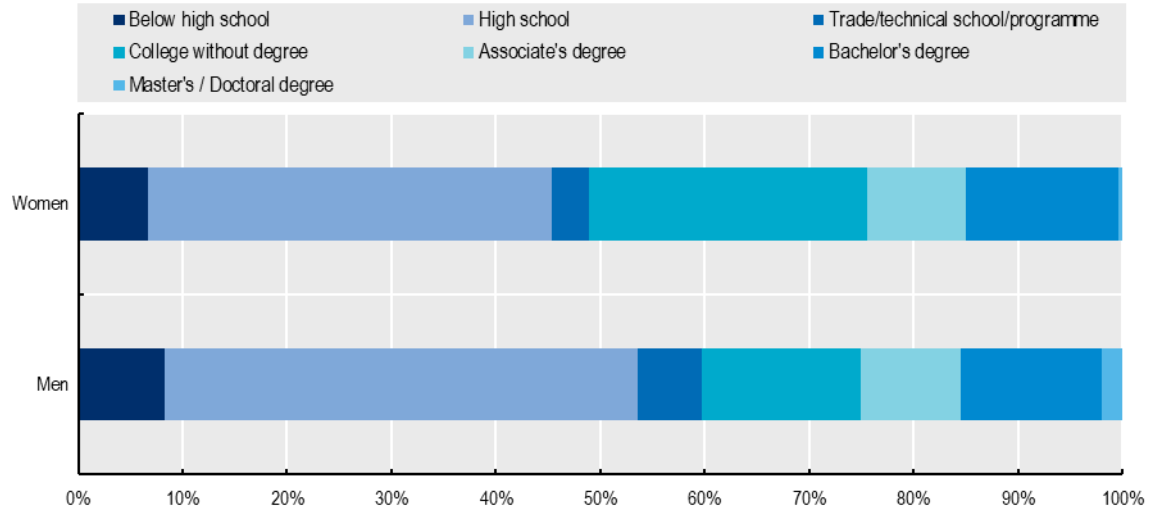
Gender

Among a representative sample of 977 young adults who had attended a high school in Virginia (including distance learning and home-schooling), about 46% gave their gender as male and 43% as female. The rest of respondents answered ‘other’ or ‘prefer not to say’.

In terms of their highest education attainment, more young women tend to attend college without degree yet than young men. Compared to young women, more young men tend to have not completed high school yet but also more attained master’s and doctor’s degree as well as more attended trade/technical programme such as apprenticeship or a CTE programme.

Figure 6.49. Highest educational attainment by gender

% of surveyed young adults (19-26) who attended a high school in Virginia, by highest educational attainment and gender

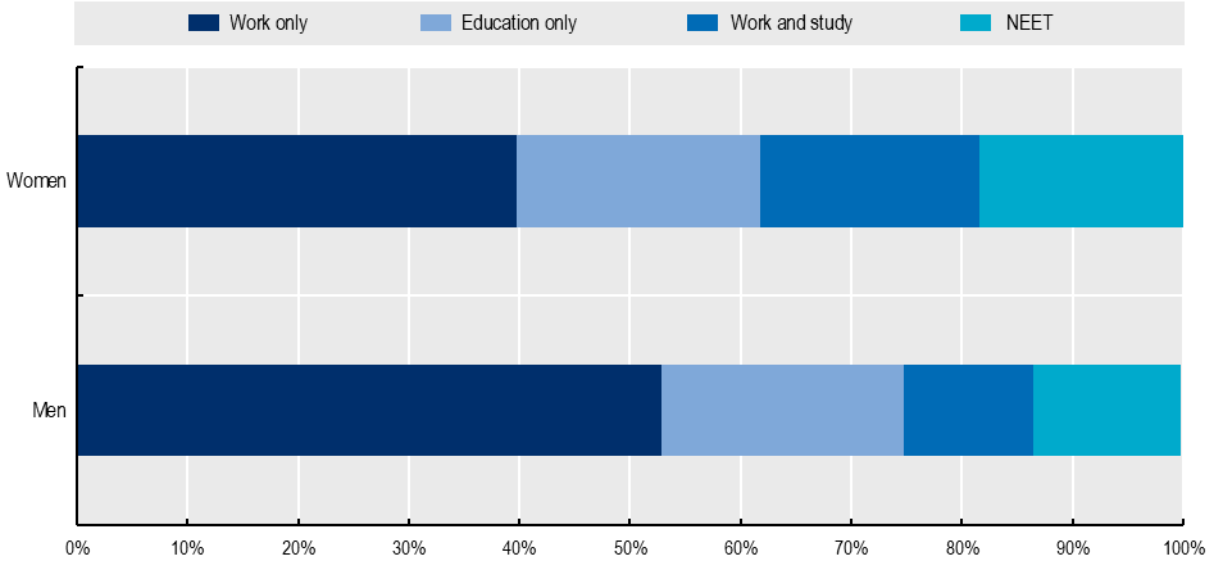


Source: OECD Career Readiness Survey of Young Adults in Virginia 2023

More young women are not in employment, education or training (NEET) in Virginia. 18% of young women and 13% of young men were NEET. While 87% of young men were in work or study at the time of the survey (45% were working full-time), 82% of young women were so (35% were working full-time).

Figure 6.50. More young women were not in employment, education or training in Virginia

% of surveyed young adults (19-26) who attended a high school in Virginia, by work and study status

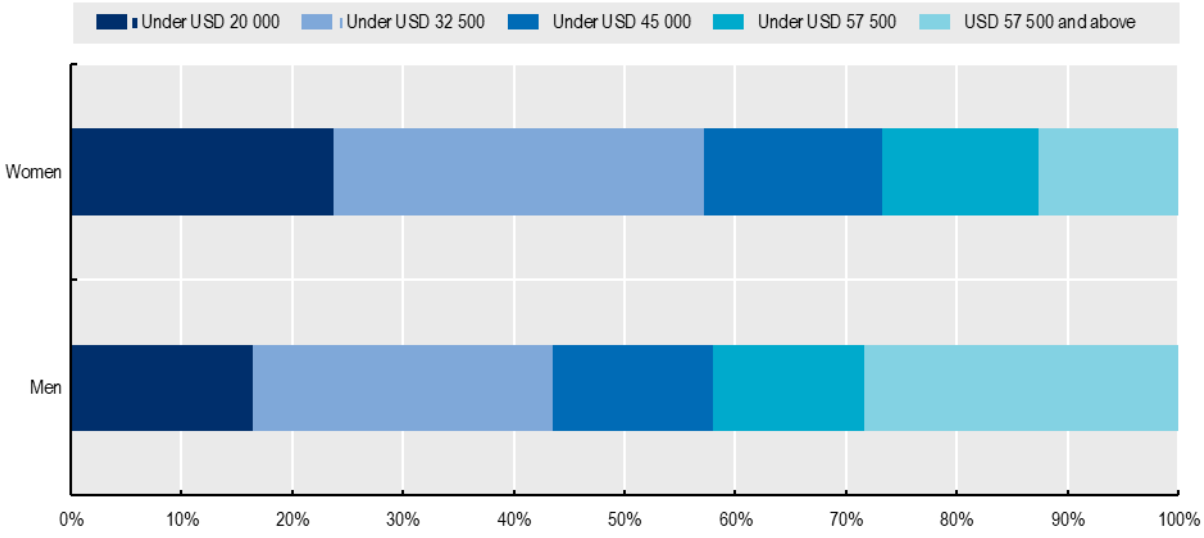


Source: OECD Career Readiness Survey of Young Adults in Virginia 2023

Among those in work, a large share of both young women (89%) and men (90%) reported that their job is secure. Among those who reported their gross pay, 57% of young women were earning less than USD 32 500 and 13% greater than USD 57 500. However, 43% of young men were earning less than USD 32 500 and 28% greater than USD 57 500.

Figure 6.51. Young women tend to have lower earning than young men in Virginia

% of surveyed young adults (19-26) who attended a high school in Virginia and were in work at the time of the survey, by income quintile



Source: OECD Career Readiness Survey of Young Adults in Virginia 2023

Perception of career progress and satisfaction and how helpful high school was for career readiness

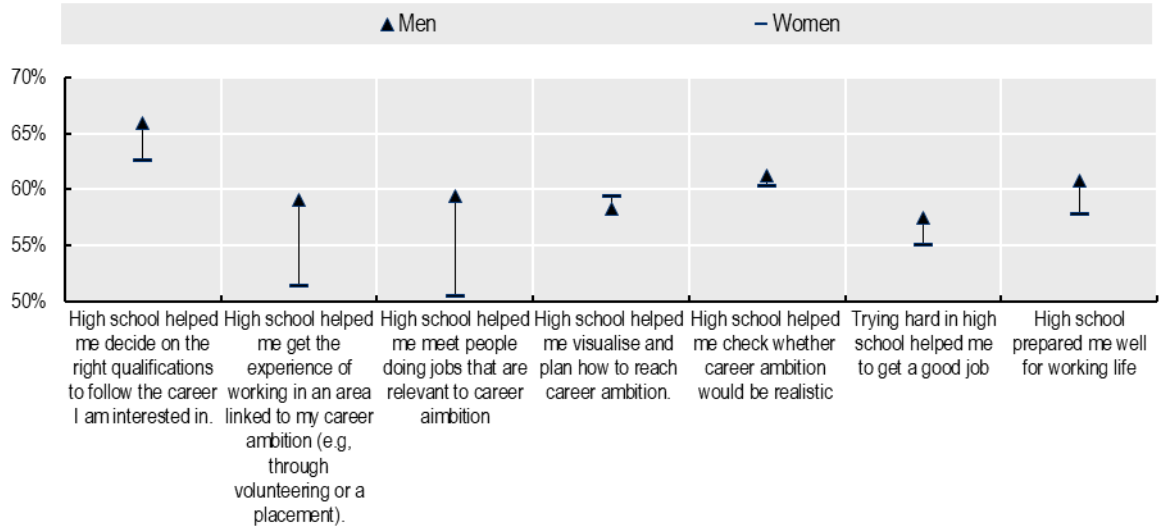
There was little gender difference in perception of career progress and satisfaction. The majority of the surveyed young women and men who attended high school in Virginia felt satisfied with how career was going and agreed that it had been easy for them to make progress in their education or work since leaving high school. 75% and 74% of young men and women respectively reported 'satisfied' with the way career is going (27% and 24% respectively reported very satisfied). In term of making progress in education or work since leaving high school, 67% of young women and 70% young men agreed that it had been easy or very easy while 33% and 30% respectively said difficult or very difficult.

Perception of how well high schools in Virginia had helped them prepare for career transition was generally positive for both genders, however the positive shares were consistently lower for young women (Figure 6.52). The difference was pronounced in the high school helpfulness in getting the work experience and meeting people in work. For example, 59% of young men and 51% young women agreed that high school helped them get the experience of working in an area linked to my career ambition (e.g., through volunteering or a placement). 59% and 50% respectively agreed that school helped them to meet people doing jobs that are relevant to my career ambition.

Statistical analysis of the survey shows that young men were more likely to report a positive perception on high school career support than their comparable female peers, even when controlling for educational attainment, high school grades, race/ethnicity, SES, migrant status, age and school region. Young men were 1.5 times more likely to agree that high school helped them get the work experience and meet people in work. They were 1.3 times less likely to agree that high school prepared them well for working life.

Figure 6.52. Perception of high school helpfulness in career transition was generally positive for both genders except getting the work experience and meeting people in work

% of surveyed young adults (19-26) who attended a high school in Virginia and agreed the following statement



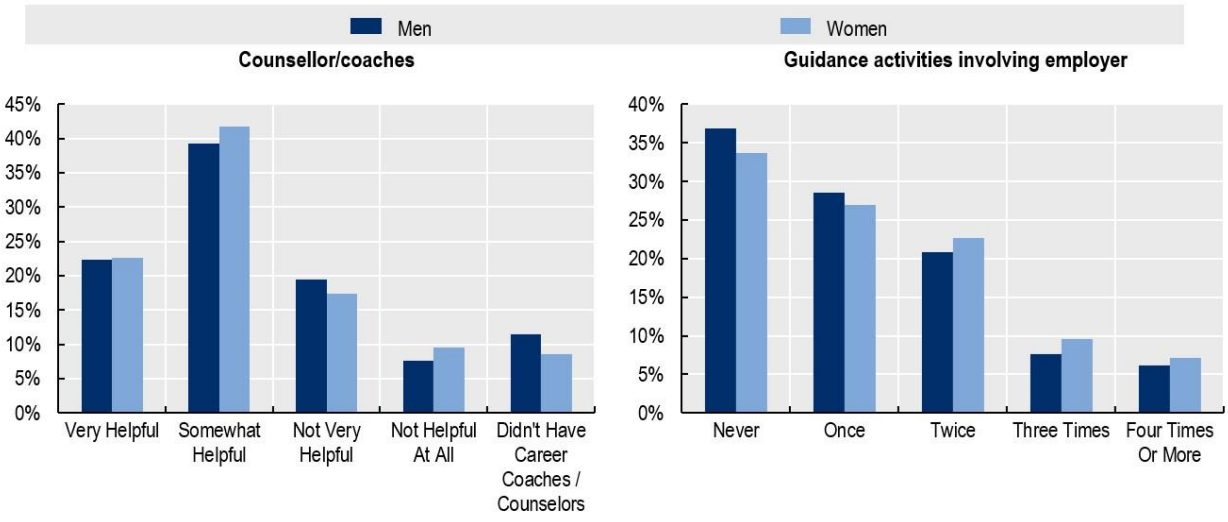
Source: OECD Career Readiness Survey of Young Adults in Virginia 2023

Participation in career development activities while in high school

The survey asked young adults if they recalled taking part in a range of career development activities while in high school (see Chapter 3. for the categories of these activities). The majority of the surveyed young women and men who attended high school in Virginia participated in at least one type of career development activities while in high school. Almost all (99%) participated in at least one career exploring activity such as learning how to search for job or write a resume. 73% of young men and 72% young men regularly participated in at least one career exploring activity. 93% of young men and 88% of young women participated in at least one career experiencing activity while in high school (see details in Chapter 3. Participation in career experiencing activities of teenage students). 89% of young men and 91% of young women had access to career coaches or counsellors.

Relatively fewer young adults said that they participated in an employer-involving exploring activity. 37% of young men and 34% of young women reported that their high school never arranged for them to take part in any career guidance activities which involved them meeting with employers or local business people. More young women reported that they had access to career coaches or counsellors and that they were helpful, compared to male peers (Figure 6.53).

Figure 6.53. Relatively more young women tend to have access to career counsellors or coaches and employer-involving career development activities



Source: OECD Career Readiness Survey of Young Adults in Virginia 2023

While there is no strong evidence of gender difference in access to CDA, surveyed young men were more likely to participate in experiencing activities (1.8), vocational programme (1.3) and worksite visits (1.6) while in high school, compared to the surveyed young women. They were less likely than young women to participate in employer-involving exploring activities and research higher education programme information.

Table 6.5. Young men were more likely to participate in some CDA than young women while in high school

Likelihood (odds ratio) of young men to participate in CDA while in high school in reference to young women

	Experiencing	guidanceactivities	programinfo	Vocational program	worksitevisits
Regular participation	**1.783****	**0.787***	**0.728****		
	(0.491)	(0.0981)	(0.101)		
Regular or occasional participation			**0.551*****	**1.315****	**1.556****
			(0.0913)	(0.163)	(0.319)

Note: Only statistically significant results are shown. Statistical significance levels are marked by *** p<0.01, ** p<0.05, * p<0.1. This analysis controls for high school grades, age, migrant status, SES, race/ethnicity, school region and type of residency.
Source: OECD Career Readiness Survey of Young Adults in Virginia 2023

Race/ethnicity

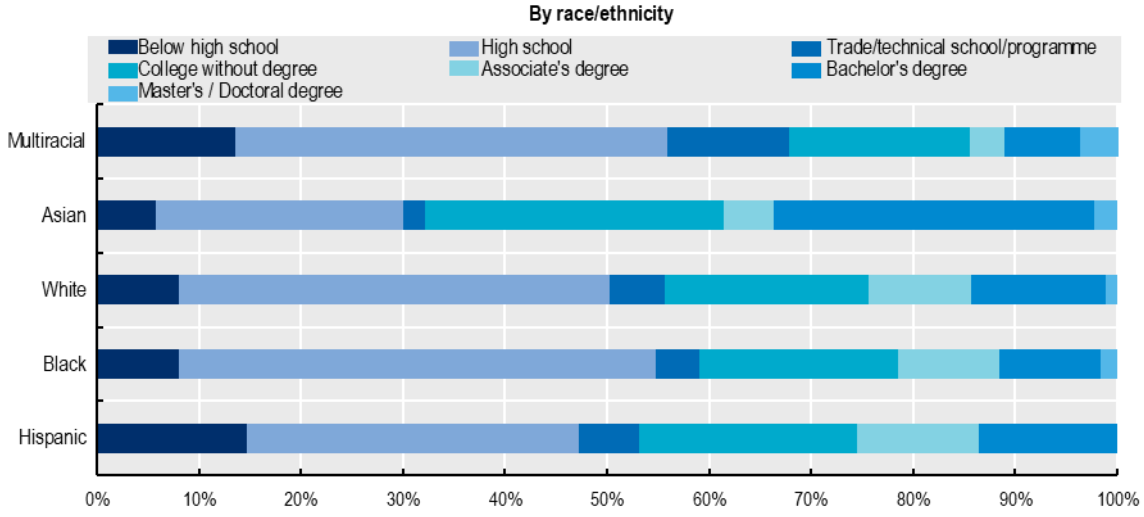
In terms of race/ethnicity, 54% of surveyed young adults were White, 22% Black, 13% Hispanic and 5% are Asian. While the majority of the sample were White respondents who had graduated a public school, White respondents were overrepresented in non-public high schools: 3% of the sample were private school graduates and 63% of them were White; 0.4% of the sample were distance learners and 58% of them were White; 1.1% of the sample were home-schoolers and 85% of them were White.

About 7% of the sample were foreign-born. While this was included in the statistical analysis presented in this report, no significant result was found in any of analysis.

In terms of their highest education attainment, more Hispanic and multi-racial young adults reported that they have not completed high school. Relatively more multiracial young adults reported that they attended trade/technical school/programme such as such as apprenticeship or a CTE programme. Asian young adults reported relatively more that they attained a tertiary degree.

Figure 6.54. Highest educational attainment by race/ethnicity

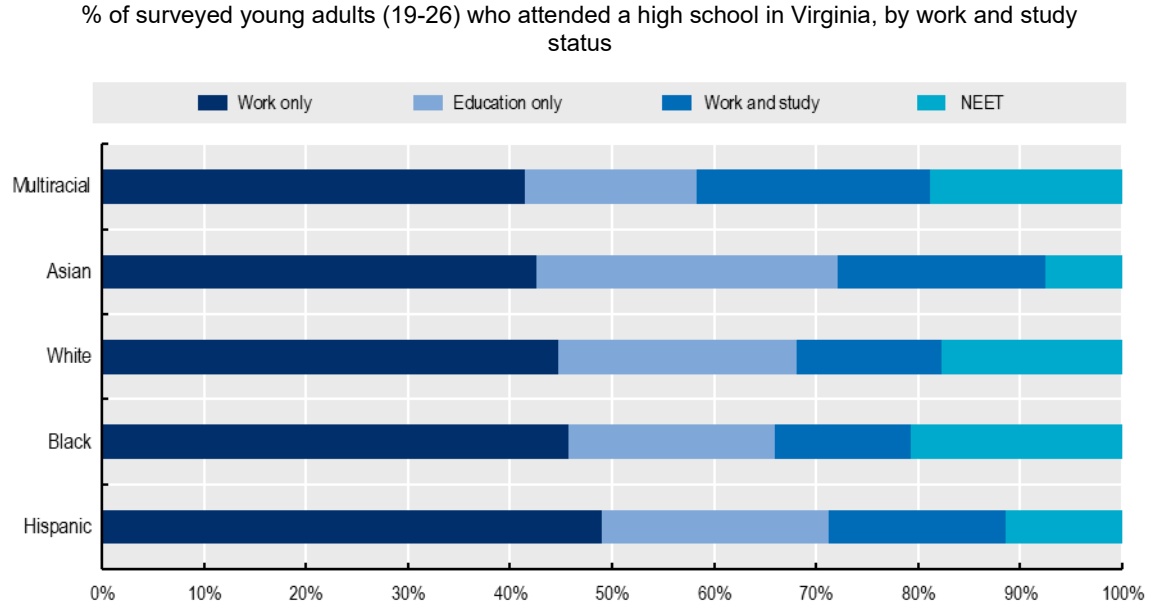
% of surveyed young adults (19-26) who attended a high school in Virginia, by highest educational attainment and race/ethnicity



Source: OECD Career Readiness Survey of Young Adults in Virginia 2023

Relatively more Black respondents were not in employment, education or training (NEET) in Virginia. 21% of Black and 25% of other race/ethnic groups were NEET compared to 18% of White, 11% of Hispanic and 8% of Asian. Relatively fewer Black young adults were working full time (18%), compared to Hispanic (25%), White (24%), Asian (40%) and Multiracial (31%).

Figure 6.55. Relatively more Black young adults were not in employment, education or training in Virginia



Source: OECD Career Readiness Survey of Young Adults in Virginia 2023

Among those in work, the level of job security did not differ significantly by race/ethnicity. Among those who reported their gross pay, income distribution by race/ethnicity did not differ significantly when considering gender and other effect.

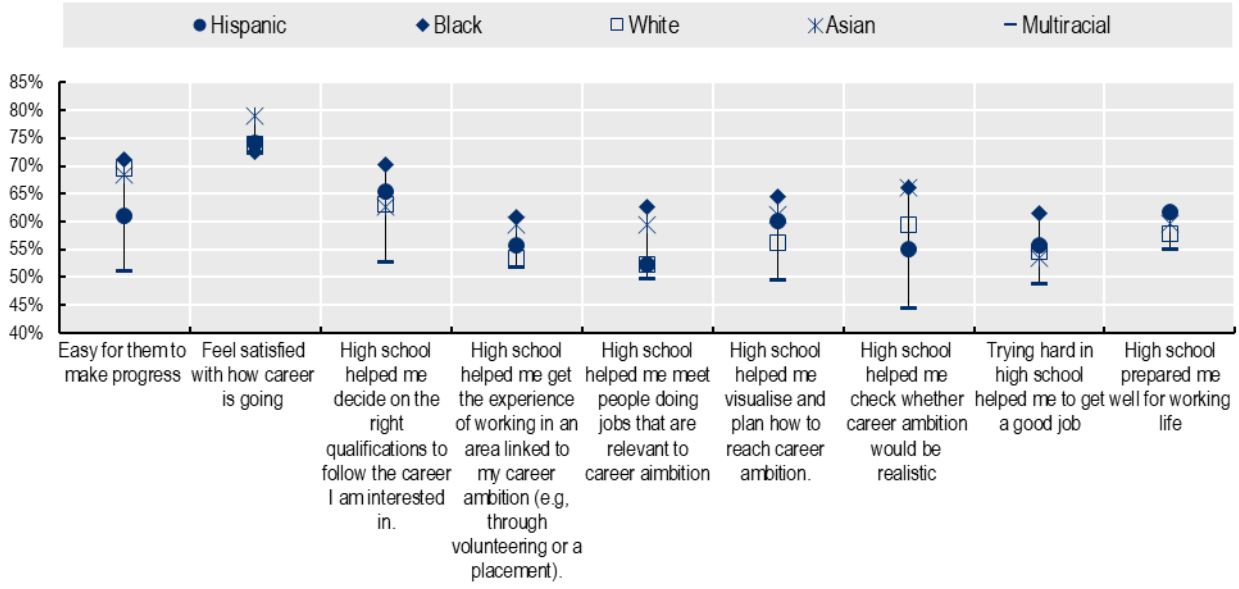
Perception of career progress and satisfaction and how helpful high school was for career readiness

Regarding career progress and satisfaction and how helpful high school was for career readiness, relatively fewer Hispanic and multi-racial respondents expressed a positive perception compared to Black, White and Asian peers. For example, fewer multi-racial (51%) and Hispanic (61%) respondents agreed than others (Black 71%; Asian 68%) that their career progress had been easy.

Statistical analysis of the survey shows that Black young adults were more likely than their comparable White peers to report a positive perception, controlling for educational attainment, high school grades, gender, SES, migrant status, age and school region. They were 1.4 to 1.6 times more likely than their comparable White peers to agree that high school helped them decide on the right qualifications for careers; meet people in work; trying hard in high school helped them to get a good job.

Figure 6.56. Relatively fewer Hispanic and multiracial groups had positive perception than Black, White and Asian

% of surveyed young adults (19-26) who attended a high school in Virginia and agreed the following statement



Source: OECD Career Readiness Survey of Young Adults in Virginia 2023

Table 6.6. Black young adults were more likely to appreciate the helpfulness of high school, compared to White young adults

Relative likelihood (odds ratio) of Black young adults to agree the following statement, in reference to White respondents

	High school helped me decide on the right qualifications to follow the career I am interested in.	High school helped me meet people doing jobs that are relevant to career ambition.	Trying hard in high school helped me to get a good job.
Black	**1.461***	**1.554****	**1.406****
	(0.312)	(0.293)	(0.174)

Note: The number of unweighted observations is 872 (weighted 853). Only statistically significant results are shown. Statistical significance levels are marked by *** p<0.01, ** p<0.05, * p<0.1. This analysis controls for educational attainment, high school grades, gender, migrant status, SES, age and school region.
Source: OECD Career Readiness Survey of Young Adults in Virginia 2023.

Participation of career development activities while in high school

Compared to White respondents, Black, Hispanic and multi-racial respondents were more likely to have participated in CDA while in high school.

Table 6.7. Black and Hispanic respondents were more likely to regularly participate in CDA, compared to White respondents

Likelihood (odds ratio) of young adults to regularly participate in CDA, in reference to White respondents

VARIABLES	Hispanic		Black		Asian		Multi-racial		Others (2%)	
speakingtoteachers			**1.691****	(0.421)					**2.531***	(1.226)
guestspeakers					**0.259***	(0.187)				
howtoapply									**2.488****	(1.071)
volunteering									**3.410****	(1.890)
worksitevisits			**1.555***	(0.377)						
jobfair			**1.705****	(0.360)						
schooladvisor			**1.487***	(0.331)						
outsideadvisor	**2.014****	(0.534)							**2.228***	(1.002)
careerinfo					**0.475****	(0.138)				
programinfo					**0.504***	(0.193)				
occasionaljobs	**3.425*****	(1.258)								
howtofindinfo			**1.820****	(0.478)			**3.877***	(3.051)		
howtowriteresume			**1.683***	(0.496)						
prepareforinterview			**1.895***	(0.618)			**4.448****	(2.416)		
findaidinfo	**1.979***	(0.673)								
coaches			**1.808****	(0.444)						
re_experiencing	**4.572***	(3.517)								
re_exploring					**0.376****	(0.157)				

Note: Only statistically significant results are shown. Statistical significance levels are marked by *** p<0.01, ** p<0.05, * p<0.1. This analysis controls for high school grades, gender, migrant status, SES, age, school region and type of residency.
Source: OECD Career Readiness Survey of Young Adults in Virginia 2023

Table 6.8. Black respondents were more likely to regularly or occasionally participate in CDA, compared to White respondents

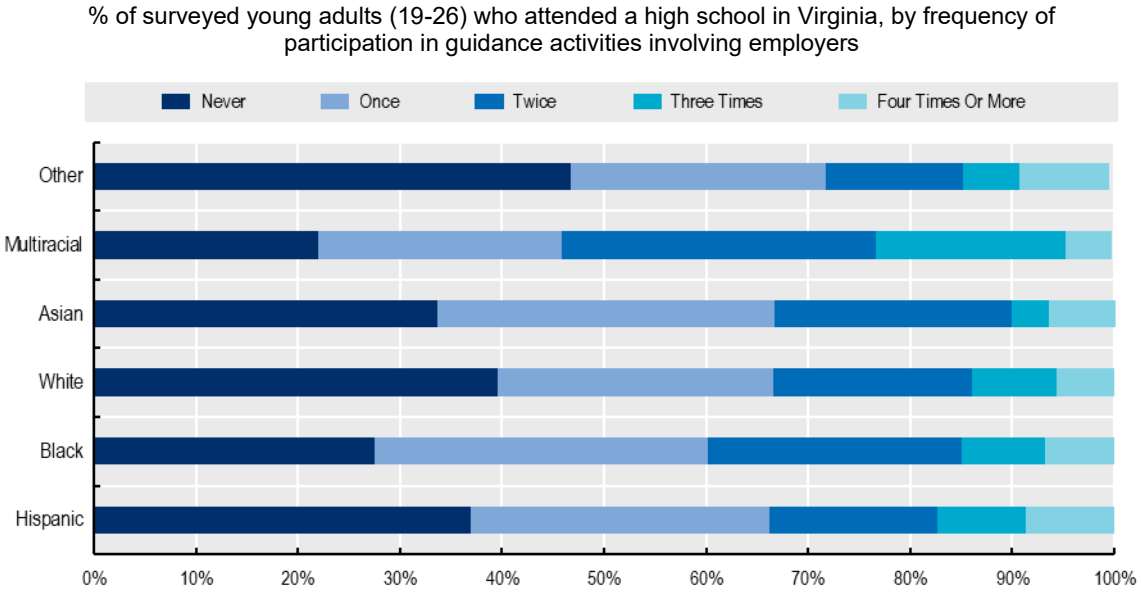
Likelihood (odds ratio) of young adults to regularly or occasionally participate in CDA, in reference to White respondents

	Black		Multiracial		Other	
hear guest speakers	**1.755*****	(0.335)	**4.045****	(2.372)		
learn how to apply	**1.694****	(0.326)				
attend vocational programme	**1.491***	(0.338)				
internship	**1.644***	(0.415)				
Job shadowing	**1.438***	(0.297)				
Worksite visits	**1.458***	(0.301)			**2.685***	(1.410)
Job fair	**1.529****	(0.304)				
speak to schooladvisor					**4.077***	(3.232)
speak to outside of school advisor					**2.628***	(1.421)
Research career info					**5.506***	(5.185)
Touring	**1.397***	(0.272)				
Employer-involving exploring activities	**1.596*****	(0.248)				

Note: Only statistically significant results are shown. Statistical significance levels are marked by *** p<0.01, ** p<0.05, * p<0.1. This analysis controls for high school grades, gender, migrant status, SES, age, school region and type of residency.
Source: OECD Career Readiness Survey of Young Adults in Virginia

Regarding the guidance activities involving employers, the frequency of participation varies across race/ethnicity.

Figure 6.57. Frequency of participation in guidance activities involving employers varies across race/ethnicity



Source: OECD Career Readiness Survey of Young Adults in Virginia

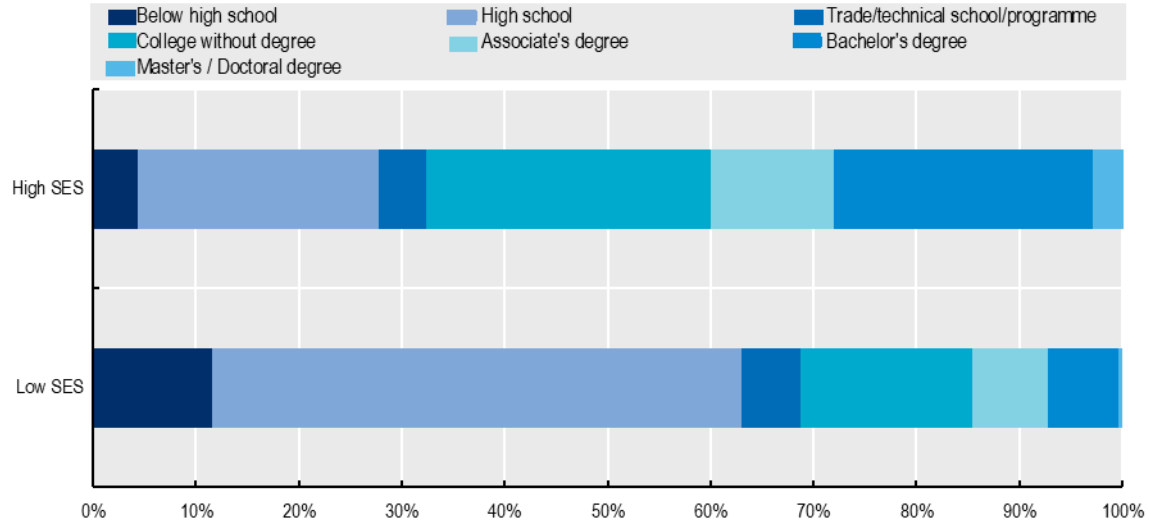
SES

Socio-economic status (SES) is defined by the occupation and educational attainment of respondents' parents. Respondents were categorised as high SES; if at least one of their parents had attained tertiary education, and at least one parent was employed in a high-skilled job (manager, professional or associate professional). The rest of respondents were categorised as low SES. Among a representative sample of 951 young adults who had attended a high school in Virginia (including distance learning and home-schooling) and have SES information, a third of young adults (33%) were from high SES. Private school graduates tended to have parents with a high-skilled occupation more so than public school graduates.

Young adults from low SES backgrounds are underrepresented in higher education. About 40% of respondents from high SES attained an associate degree or above while 14% of those from low SES did so (Figure 6.58).

Figure 6.58. Highest educational attainment by SES

% of surveyed young adults (19-26) who attended a high school in Virginia, by highest educational attainment and SES

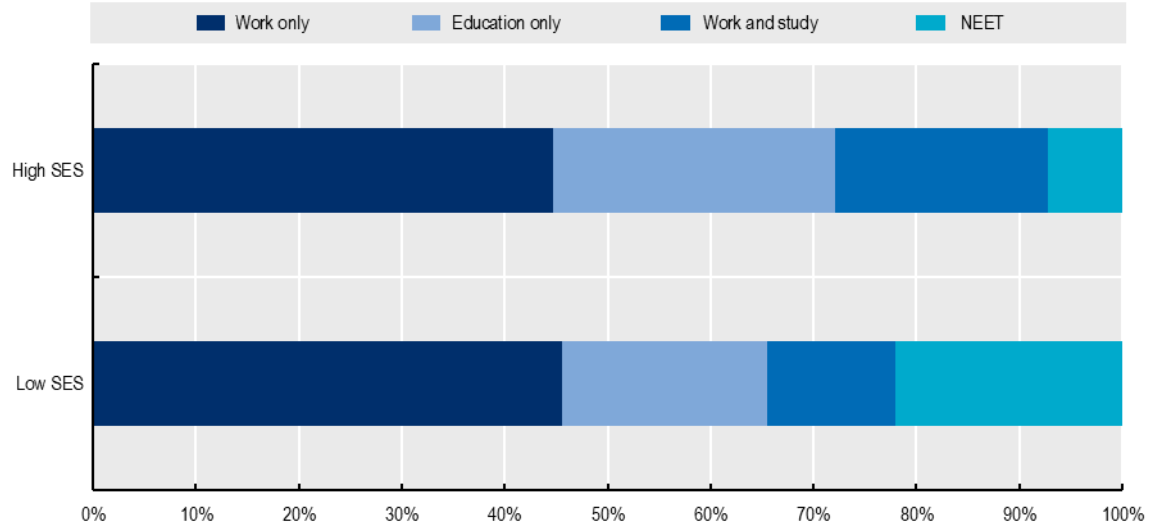


Note: High SES refers to respondents who have at least one of parents having attained tertiary education, and at least one parent having a high-skilled job (manager, professional or associate professional).
Source: OECD Career Readiness Survey of Young Adults in Virginia 2023

Relatively more young adults from low SES backgrounds are not in employment, education or training (NEET) in Virginia. 22% of disadvantaged young adults were in NEET while only 7% of advantaged young adults were in NEET.

Figure 6.59. Relatively more young adults from low SES were not in employment, education or training in Virginia

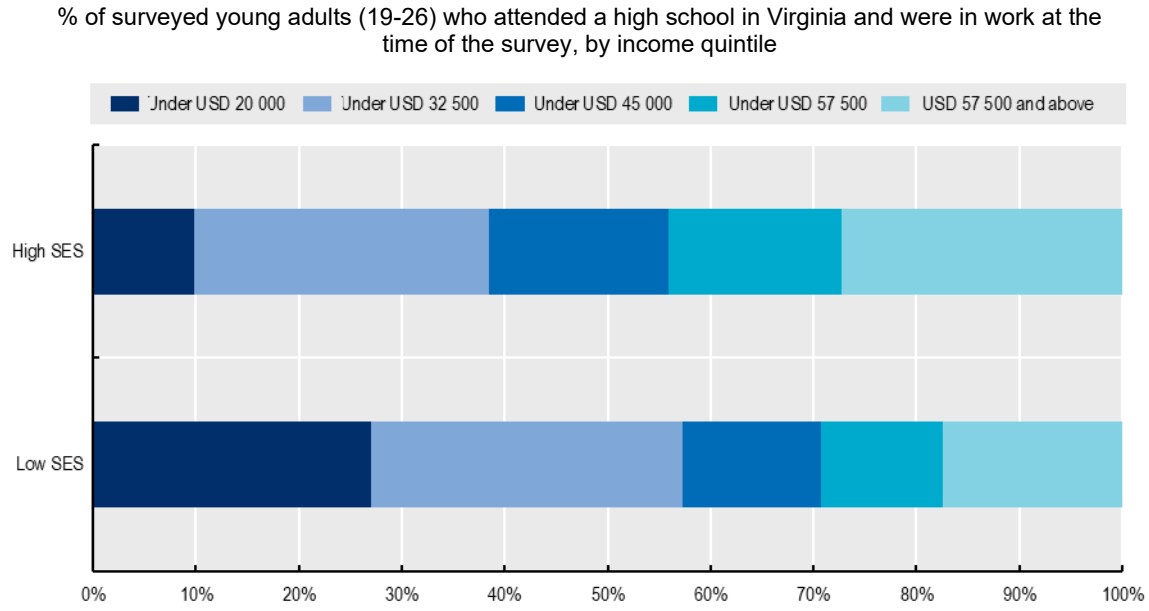
% of surveyed young adults (19-26) who attended a high school in Virginia, by work and study status



Source: OECD Career Readiness Survey of Young Adults in Virginia 2023

Among those in work, a large share of both groups (88%) reported that their job is secure. Among those who reported their gross pay, 57% of low SES were earning less than USD 32 500 and 17% greater than USD 57 500 while 38% of high SES were earning less than USD 32 500 and 27% greater than USD 57 500.

Figure 6.60. Low SES tend to have lower earning than high SES in Virginia



Source: OECD Career Readiness Survey of Young Adults in Virginia 2023

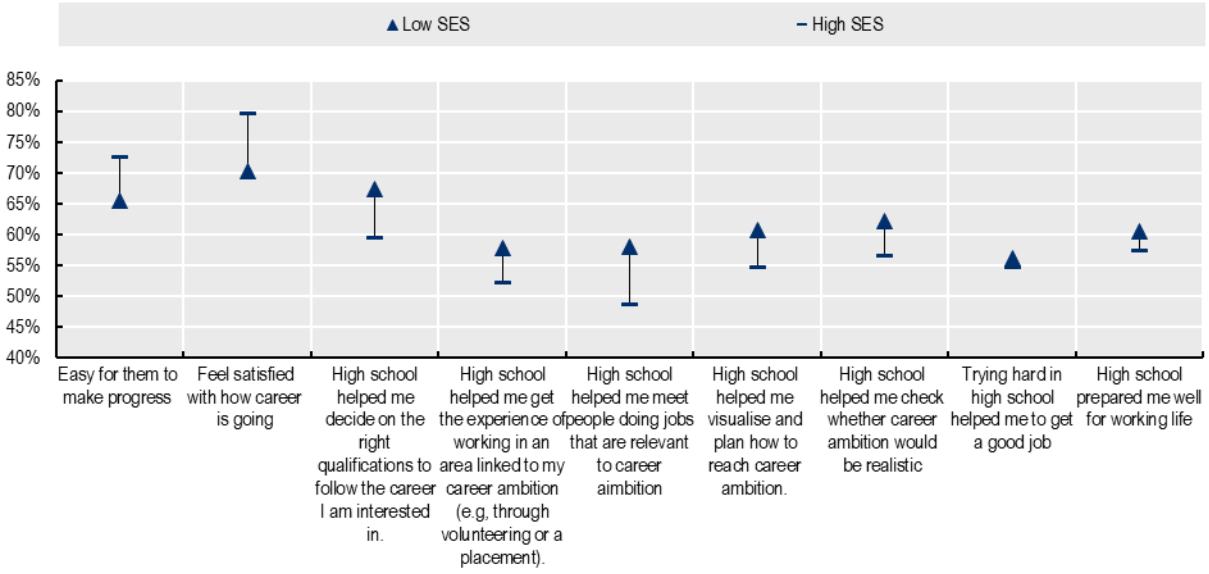
Perception of career progress and satisfaction and how helpful high school was for career readiness

While relatively fewer respondents from low SES had positive perception of career progress and satisfaction than those from high SES, more of them had positive perception of how helpful high school was for career readiness. Respondents from low SES experienced more difficulty in making career progression and felt less satisfied with how career was going; at the same time, they appreciated high schools more than those from high SES in supporting them in career preparation.

Statistical analysis of the survey confirms that those from low SES were more likely to appreciate helpfulness of high school, compared to those from high SES.

Figure 6.61. Perception of high school helpfulness in career transition was generally positive for both genders except getting the work experience and meeting people in work

% of surveyed young adults (19-26) who attended a high school in Virginia and agreed the following statement



Source: OECD Career Readiness Survey of Young Adults in Virginia 2023

Table 6.9. Young adults from high SES were less likely to appreciate helpfulness of high school, compared to those from low SES

Likelihood (odds ratio) of young adults from low SES to agree the following statement, in reference to high SES

	High school helped me decide on the right qualifications to follow the career I am interested in.	High school helped me meet people doing jobs that are relevant to career ambition.	High school helped me visualise and plan how to reach career ambition.	High school helped me check whether career ambition would be realistic.
Low SES compared to high SES	**1.766****	**1.494***	**1.607****	**1.561****
	(0.438)	(0.320)	(0.311)	(0.310)

Note: The number of unweighted observations is 872 (weighted 853). Only statistically significant results are shown. Statistical significance levels are marked by *** p<0.01, ** p<0.05, * p<0.1. This analysis controls for educational attainment, high school grades, gender, migrant status, race/ethnicity, age and school region.
Source: OECD Career Readiness Survey of Young Adults in Virginia 2023.

Participation in career development activities while in high school

Compared to low SES, high SES were less likely to participate in CDA such as speaking to teachers, advisors outside of school, hearing from guest speakers, learning how to apply or how to search for job, attending vocational programme, job shadowing, worksite visits. They were more likely to engage in volunteering, work in occasional jobs and employer-involving exploring activities. They were also more likely to complete a questionnaire related to career interests and to tour a high education institution.

Table 6.10. Young adults from high SES tend to engage more than those from low SES in experiencing activities such as volunteering or occasional jobs

Likelihood (odds ratio) of young adults from high SES to regularly or occasionally participate in CDA, in reference to respondents from low SES

VARIABLES	Regularly		Regularly or occasionally	
Speaking to teachers	**0.560***	(0.171)		
Guest speakers	**0.527*****	(0.0956)		
How to apply	**0.585****	(0.144)	**0.720***	(0.119)
volunteering	**1.419***	(0.289)	**1.714****	(0.371)
Job shadowing	**0.574***	(0.157)		
Vocational program			**0.624****	(0.105)
Worksite visits			**0.648****	(0.119)
Outside advisor	**0.467****	(0.127)	**0.639****	(0.131)
Occasional jobs	**1.855*****	(0.374)		
How to search for job	**0.574****	(0.118)		
questionnaire			**1.537***	(0.377)
touring			**1.540***	(0.361)
Employer-involving exploring activities			**1.451****	(0.199)
Coaches			**1.887***	(0.618)

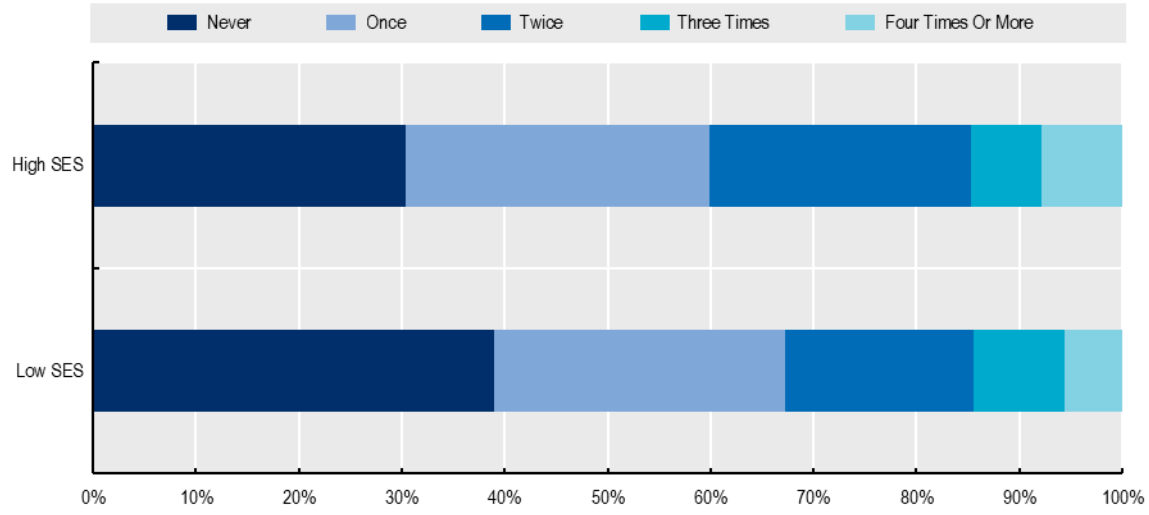
Note: Only statistically significant results are shown. Statistical significance levels are marked by *** p<0.01, ** p<0.05, * p<0.1. This analysis controls for high school grades, gender, migrant status, race/ethnicity, age, school region and type of residency.
Source: OECD Career Readiness Survey of Young Adults in Virginia 2023

In addition, participating in a career exploring activity more on a regular basis was relatively more common for those who graduated a private high school (82%) than those who graduated a public high school (72%). However, public schools appear to offer more consistently across activities than private schools and other learning types, including activities that involve employers, such as vocational programmes, internships, job shadowing, worksite visits and job fairs. Private school graduates tend to say career coaches or school counsellors in school were helpful (69%) more than public school graduates (62%). A higher share of public school graduates (10%) reported that they had no such activity than private school graduates (5%), however a higher share of public-school graduates say that they regularly participated in such activity (74%) more than their peers (71%).

Regarding the guidance activities involving employers, young adults from high SES tend to have participated more in guidance activities involving employers, while in high school, more frequently than those from low SES.

Figure 6.62. Young adults from high SES tend to have participated in guidance activities involving employers, more frequently than those from low SES

% of surveyed young adults (19-26) who attended a high school in Virginia, by frequency of participation in guidance activities involving employers



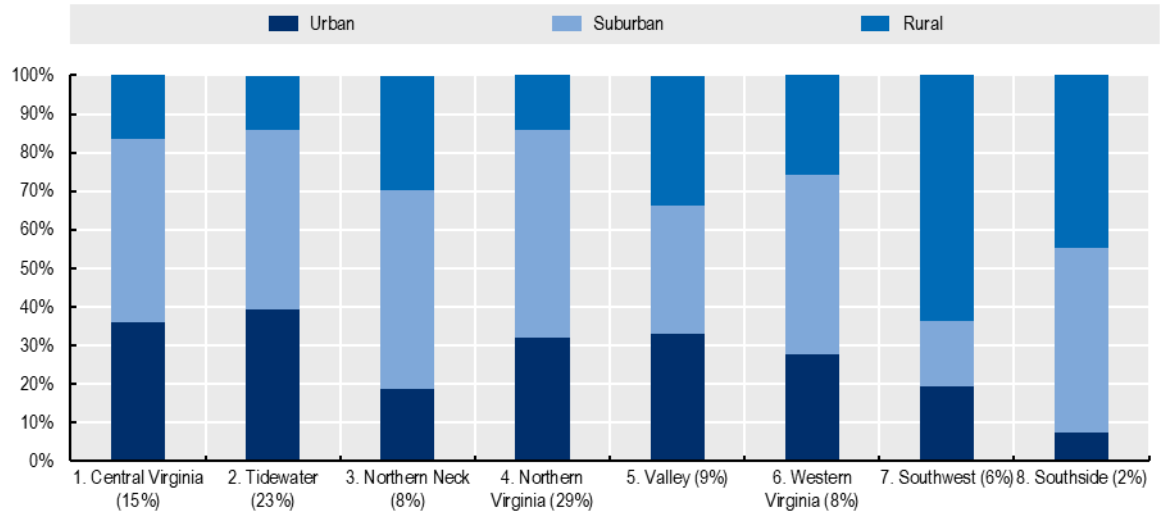
Source: OECD Career Readiness Survey of Young Adults in Virginia

School region and location of residency

Surveyed young adults were living different areas at the time of the survey and attended high school from different regions before the time of the survey. A third (32%) of surveyed young adults were living in urban areas, 22% in rural areas and the remainder (46%) in suburban areas. Private high school graduates were overrepresented in urban areas (43%) and suburban areas (48%) while home-schoolers were mostly in suburban areas (49%) and rural areas (40%). Across the representative sample of 906 young adults who had information on high school district (i.e., who attended a public school), 29% attended high school in Northern Virginia region. 14% of those who attended high school in Northern Virginia region were living in rural areas at the time of the survey. Among those who attend high school in Southwest region (less than 2% of the sample), 64% were living in rural areas.

Figure 6.63. Residency type of respondents differs across the eight school regions in Virginia

% of surveyed young adults (19-26) who attended a public high school in Virginia



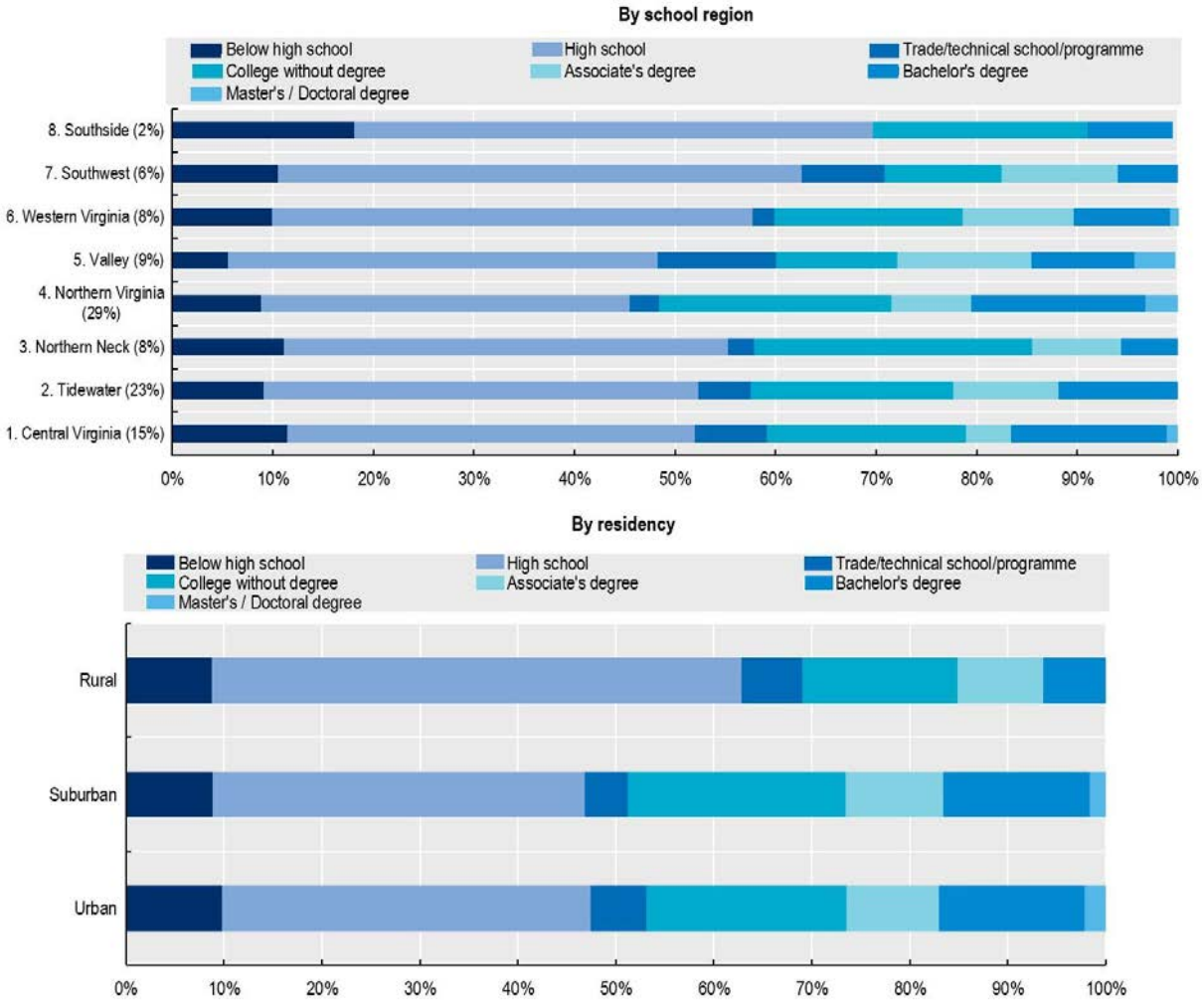
Note: The data only includes public high school graduates
Source: OECD Career Readiness Survey of Young Adults in Virginia 2023

Relatively more respondents who attended high school in Northern Virginia and Valley regions attained an associate degree or higher qualification (29% and 28% respectively). In comparison, relatively more respondents from the Southside (less than 2% of the sample) only graduated high school (52% of those from Southside) or below (18% of those from Southside). The Valley region had the highest share of those who attended trade/technical programme such as apprenticeship or a CTE programme (12%), compared to other regions.

Relatively more respondents who were living in urban or suburban attained an associate degree or higher (26% and 27%). In comparison, relatively more respondents from rural areas only graduated high school (54%) or below (9%).

Figure 6.64. Highest educational attainment by school region and residency

% of surveyed young adults (19-26) who attended a high school in Virginia, by highest educational attainment



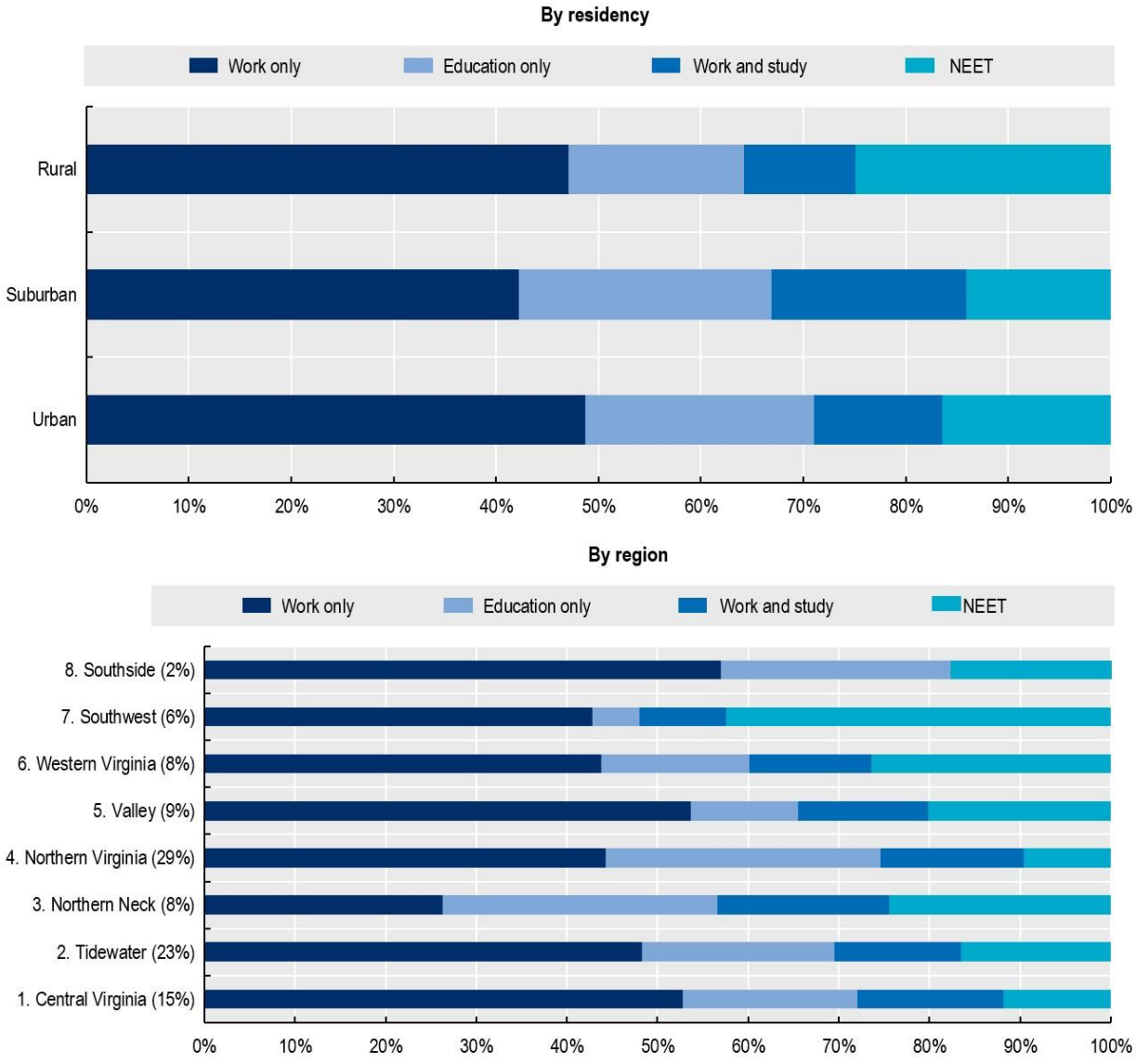
Source: OECD Career Readiness Survey of Young Adults in Virginia 2023

Relatively more young people who were living in rural areas and who attended high school in Southwest (6% of the sample; 64% of Southwest is rural) were not in employment, education or training (NEET). 25% from rural areas (compared to 16% in urban areas; 14% in suburban areas) and 42% from Southwest were NEET (compared to 10% in Northern Virginia).

Among those in work at the time of the survey, fewer in urban areas were full-time employed (56%) than those in suburban (63%) and rural (64%) areas. Those who attended high school in Northern Neck (8% of the sample) were working full time (75% of those from Northern Neck) more than those from other regions.

Figure 6.65. More rural respondents were not in employment, education nor training in Virginia

% of surveyed young adults (19-26) who attended a high school in Virginia, by work and study status



Source: OECD Career Readiness Survey of Young Adults in Virginia 2023

Among those in work, a large share of young people (88-89%) reported that their job is secure, regardless residency type. Among those who reported their gross pay, almost 70% of young adults who attended high school in Western Virginia (8% of the sample) and Southwest (6% of the sample) were earning less than USD 32 500 and 5-6% were earning greater than USD 57 500. In contrast, a relatively lower share of young adults who attended high school from Northern Neck (37%) and Northern Virginia (43%) were earning less than USD 32 500 and respectively 24% and 33% were earning greater than USD 57 500.

Figure 6.66. Rural young adults have lower earnings than their urban counterparts in Virginia

% of surveyed young adults (19-26) who attended a high school in Virginia and were in work at the time of the survey, by income quintile

Note: The sample size of each region is in the bracket.
Source: OECD Career Readiness Survey of Young Adults in Virginia 2023

Perception of career progress and satisfaction and how helpful high school was for career readiness

Relatively more young adults from rural areas feel difficulty in transition. Statistical analysis confirms that young adults from rural areas were 0.7 times less likely to report that making career progress was easy and that high school helped them get the experience of working in an area linked to my career ambition, when controlling for education attainment, high school grades, gender, SES, place of birth, race/ethnicity and age.

In terms of school region, respondents who attended high school in Northern Neck were less likely than those who attended high school in Central Virginia to have positive perception of their transition and helpfulness of school, when controlling for education attainment, high school grades, gender, SES, place of birth, race/ethnicity and age. Those who attended high school in in Tidewater and Valley regions were less likely to have positive perception of helpfulness of school in terms of qualification decision or realistic check. In contrast, those who attended high school in Southwest and Southside had more positive perception of school helpfulness in one element each, compared to those who attended high school in Central Virginia.

Table 6.11. Respondents from more rural and resource-poor school regions tend to have less positive perception of high school in assisting career readiness

A. Likelihood (odds ratio) of young adults who attended high school from the following regions to agree the following statement, in reference to those who attended high school in Central Virginia

	Easy to make progress	High school helped me decide on the right qualifications to follow the career I am interested in.	High school helped me visualise and plan how to reach career ambition.	High school helped me check whether career ambition would be realistic.	Trying hard in high school helped me to get a good job.	High school prepared me well for working life
2. Tidewater (23%)		**0.703***				
		(0.121)				
3. Northern Neck (8%)	**0.344****	**0.436****		**0.485*****		**0.350*****
	(0.176)	(0.131)		(0.109)		(0.0989)
5. Valley (9%)		**0.557****		**0.559*****		
		(0.141)		(0.142)		
7. South					**1.924***	

west (6%)						
					(0.723)	
8. Southside (2%)			**3.113***			
			(2.026)			

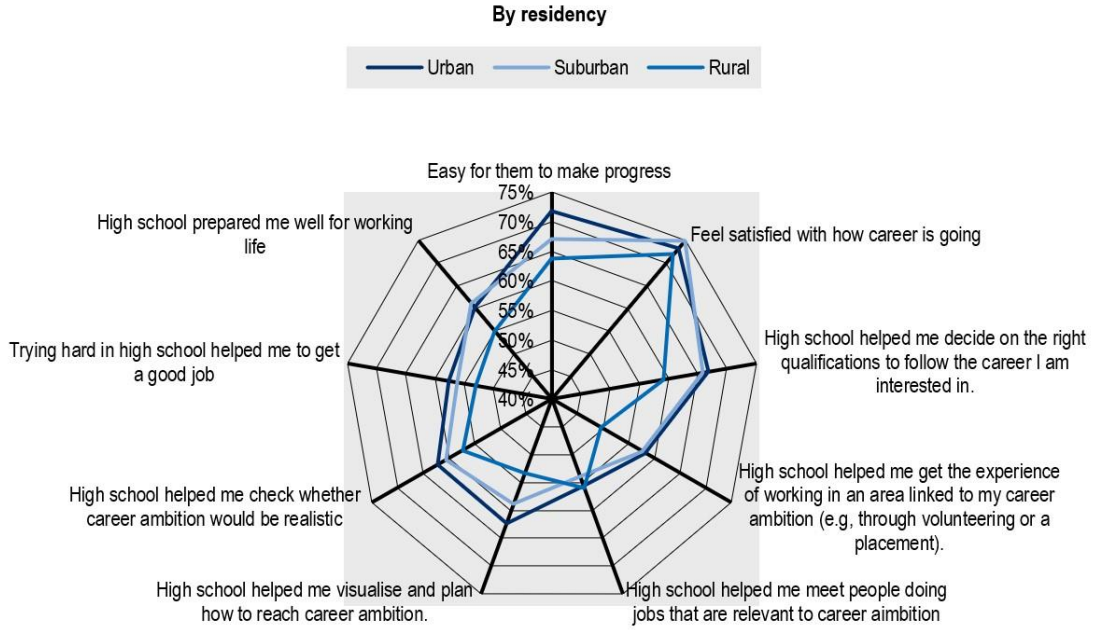
B. Likelihood (odds ratio) of young adults from rural areas to agree the following statement, in reference to those from urban areas

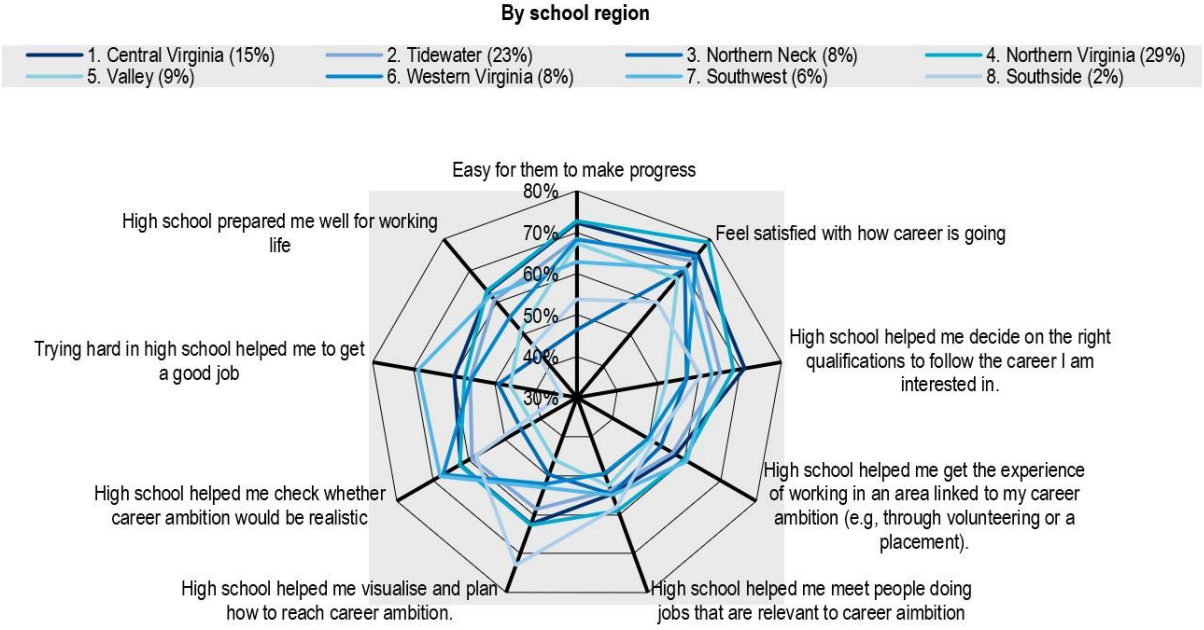
VARIABLES	makeprogress	areastatement
Rural	**0.692***	**0.660***
	(0.131)	(0.153)

Note: Only statistically significant results are shown. Statistical significance levels are marked by *** p<0.01, ** p<0.05, * p<0.1. This analysis controls for educational attainment, high school grades, gender, migrant status, SES, age and school region.
Source: OECD Career Readiness Survey of Young Adults in Virginia 2023.

Figure 6.67. While relatively more young adults from rural areas feel difficulty in transition, no statistically significant difference was found

% of surveyed young adults (19-26) who attended a high school in Virginia and agreed the following statement





Source: OECD Career Readiness Survey of Young Adults in Virginia 2023

Participation in career development activities while in high school

Compared to those who attended high school in Northern Virginia that is relatively better off, all other school regions tend to see relatively lower, regular student participation in CDA. There were two exceptionally cases where those who attended high school in Valley region were more likely to participate in job fair and find financial aid information compared to those who attended high school in Northern Virginia (Table 6.12, A). The results were similar when looking at regular or occasional participation (Table 6.12, B).

Table 6.12. Compared to those who attended high school in Northern Virginia that is relatively better off, all other school regions tend to see relatively lower student participation in CDA

A. Relative likelihood (odds ratio) of young adults who attended high school from the following regions to participate regularly in the following CDA, in reference to those who attended high school in Northern Virginia

VARIABLES	1. Central Virginia (15%)	2. Tidewater (23%)	3. Northern Neck (8%)	5. Valley (9%)	6. Western Virginia (8%)	7. Southwest (6%)	8. Southside (2%)
speakingtoteachers			**0.283***				**0.172***
guestspeakers		**0.620****	**0.327****				
howtoapply		**0.689***	**0.390*****		**0.557****		
volunteering		**0.615****		**0.571***			
vocationalprogram			**0.401***				
jobfair		**0.583****	**0.323*****	**1.666***			**0.124****
schooladvisor		**0.483*****	**0.211*****		**0.517***		
outsideadvisor			**0.232*****		**0.217****		
questionnaire		**0.698***	**0.307****				
careerinfo		**0.631****	**0.300*****			**0.415****	
touring		**0.618****	**0.315*****		**0.449*****		
programinfo		**0.503*****	**0.290*****	**0.493****	**0.322****		
howtofindinfo			**0.437*****				
howtosearchforjob	**0.574****		**0.357****				
findaidinfo			**0.578***	**1.664***			**7.642***
coaches	**0.522****	**0.502*****	**0.392*****		**0.580*****		
re_experiencing		**0.310*****	**0.331***	**0.459***	**0.352****		
re_exploring		**0.479*****	**0.217*****		**0.334*****		
guidanceactivities	**0.547****						

B. Likelihood (odds ratio) of young adults who attended high school from the following regions to participate regularly or occasionally in the following CDA, in reference to those who attended high school in Northern Virginia

VARIABLES	1.hs_region8doe	2.hs_region8doe	3.hs_region8doe	5.hs_region8doe	6.hs_region8doe	7.hs_region8doe	8.hs_region8doe
guestspeakers		**0.631****	**0.573***	**0.518****	**0.544***	**0.407****	
howtoapply		**1.452***					
volunteering		**0.552*****			**0.584***		
Vocational program						**2.416****	
worksitevisits		**0.738****					**2.290****
jobfair		**0.631****	**0.472****				
outsideadvisor			**0.616***				
questionnaire		**0.660***					
touring		**0.526****	**0.518***				
programinfo	**0.521*****	**0.404****	**0.387***	**0.301****		**0.439***	

Note: Only statistically significant results are shown. Statistical significance levels are marked by *** p<0.01, ** p<0.05, * p<0.1. This analysis controls for high school grades, gender, migrant status, race/ethnicity SES, age and type of residency.
Source: OECD Career Readiness Survey of Young Adults in Virginia 2023.

Compared to those who were living in rural areas at the time of the survey, those from urban and suburban respondents were more likely to participate in CDA. Overall, those from urban areas were 2.5 times more likely than those from rural areas to participate in career exploring and experiencing activities.

Table 6.13. Young adults in urban and suburban areas are more likely to participate in CDA compared to those in rural areas

Likelihood (odds ratio) of young adults who were living in urban and suburban areas at the time of the survey to participate in the following CDA, in reference to those who were living in rural areas

	Urban, regularly		Suburban, regularly		Urban, regularly and occasionally		Suburban, regularly and occasionally	
speakingtoteachers	**3.147*****	(1.020)	1.476	(0.425)				
guestspeakers	**1.598***	(0.406)	**1.817****	(0.445)				
howtoapply	**1.691*****	(0.299)	1.199	(0.217)				
volunteering	**2.484*****	(0.499)	**1.634****	(0.384)	**2.037*****	(0.446)	**1.881*****	(0.367)
vocationalprogram	**1.855***	(0.557)	1.469	(0.510)	**1.721****	(0.410)	**1.618***	(0.429)
internship	**2.033****	(0.535)	1.611	(0.492)	**1.935*****	(0.395)	**1.593****	(0.311)
jobshadowing	**2.151****	(0.698)	1.244	(0.321)	**1.543****	(0.302)	1.184	(0.212)
worksitevisits	**1.556***	(0.352)	**1.449***	(0.308)	**1.737*****	(0.257)	**1.760*****	(0.294)
touring					**1.417****	(0.195)	1.087	(0.223)
schooladvisor	**1.761****	(0.382)	1.328	(0.269)				
careerinfo	**1.615****	(0.290)	1.006	(0.183)				
Work outside school hours	**1.483****	(0.281)	**1.586****	(0.323)				
howtosearchforjob	**1.918****	(0.525)	1.186	(0.411)				
findaidinfo	**2.235*****	(0.532)	1.529	(0.476)				
re_experiencing	**2.460****	(0.975)	1.357	(0.390)				
re_exploring	**2.449*****	(0.703)	1.289	(0.325)				

Note: Only statistically significant results are shown. Statistical significance levels are marked by *** p<0.01, ** p<0.05, * p<0.1. This analysis controls for high school grades, gender, migrant status, race/ethnicity SES, age and school region.
Source: OECD Career Readiness Survey of Young Adults in Virginia 2023.

Strengths of Virginia

A range of possible pathways offer varied opportunities to diverse segments of the population, for example through well-integrated vocationally focused provision and dual enrolment

Within an equitable guidance system, one size will not fit all and Virginia offers a range of pathways that can respond to diverse student interests between Grades 6 and 12. For example, different forms of CTE are universally available in schools, such as through a comprehensive high school model that offers different pathways in the same school or through students being able to commute from their home high school to attend other types of schools that offer other available pathways that may interest them. Other options that offer basic and core academic instruction without needing to change home school (typically half and half time) are provided by Governor's schools (which often focus opportunities for high-performing students), Magnet schools (public schools that focuses on a particular area of study, such as performing arts or science and technology, but also offer regular school subjects), Technical Centers (which offer technical and vocational opportunities for students that are more suited for hands-on experience and learning), and in the near future, Lab schools.

Magnet school partnership programmes in the United States often support progression to post-secondary education in socio-economically deprived schools by building a network of partnerships with post-secondary providers in the area. Providers can include social work services, community health organisations, and college access programmes, all of which are able to help build college-relevant provision (Duncheon and Relles, 2019[17]).

Equity is also addressed through dual enrolment programmes which provide opportunity for high school students to experience colleges and obtain college credits to accelerate graduation once they enter college. Dual enrolment provides advantages and opportunities that can broaden a young person's vision of their potential and preferred future and lowers the costs of tertiary education by allowing tertiary credit accumulation in secondary education. A recent study of the outcomes of students enrolled on CTE programmes offering dual enrolment in North Carolina found positive results in terms of progression to tertiary education, contributing to a reduction in disparities between students from low income and high income backgrounds (Edmunds, 2022[18]).

Another example is co-operative education, which allows some participating student to earn both a wage and academic credits while at a work placement that is closely linked to what they are learning and specialising in at school. This is a common form of work-based learning in the United States and Canada, enabling student engagement with professionals and workplaces relevant to emerging career aspirations (Covacevich et al., 2021[16]) (Mann, Denis and Percy, 2020[12]). While students complete their upper secondary education general high school diploma, they have opportunity to pursue vocational interests which allow them to develop skills, social contacts and familiarity with occupational cultures that allow for smoother transitions into employment – without closing off all their options. Such programmes are commonly linked with better employment outcomes than would otherwise be expected (Covacevich et al., 2021[16]) of students with similar levels of academic achievement and comparable backgrounds (Jeon et al., 2023 forthcoming[1]).

Integration of vocational focused provision within general high schooling keeps options open for all students and reduces reputational risks

Historically and across countries, vocational education and training (VET) has suffered from a reputation that it leads to lower wages, manual, blue-collar jobs as opposed to higher wage, white-collar jobs. However, despite often enabling access to attractive employment demanding high levels of technical skills the VET pathways often lead into such professions are commonly considered less attractive by students

(OECD, 2018[19]). Due to this reputation, VET programmes often attract disadvantaged young people who do not have high career aspirations or the necessary resources to enter higher education, and this poor reputation is further entrenched in society.

One way out is to allow VET experience within general schooling and programmes instead of dividing the programme orientation. Some states in the United States take this approach, including Virginia. While European countries such as Germany, Switzerland and Denmark orient students in upper secondary schools into VET versus general programmes, these countries also offer more integrated programmes.

At upper secondary levels, CTE programmes in Virginia are integrated within general high schooling. This keeps vocational options open for all students and provides all students with vocational experience. This approach can reduce the risk of vocational pathways being considered a last resort and also encourages the integration of general subjects with vocational experience and opportunities.

School divisions have autonomy to make customised selections of pathways and programmes available

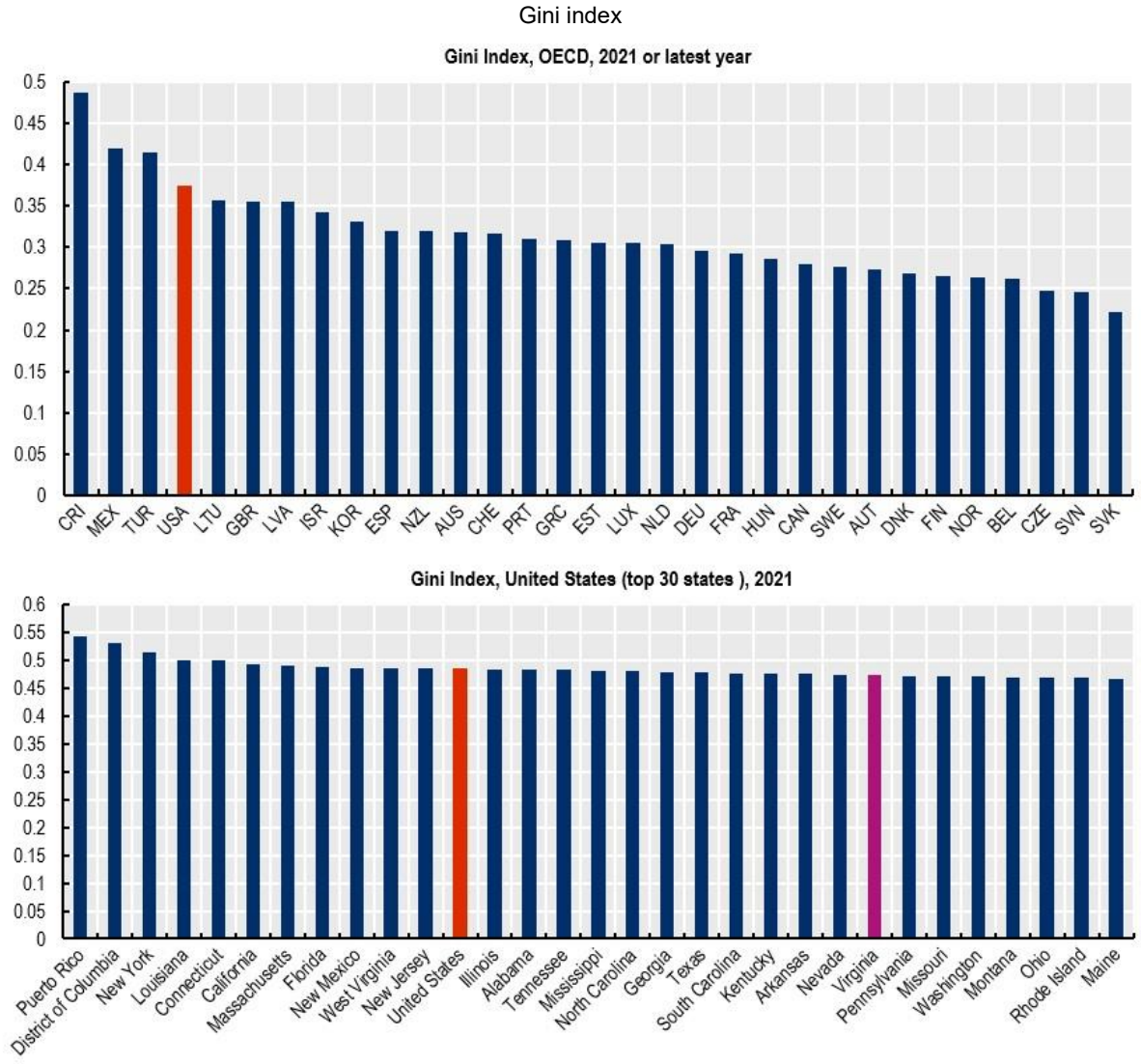
School divisions have autonomy in the provision of education and career readiness activities. They can prepare customised selections of pathways and programmes and make necessary transformations or combine school types and programmes to fit student as well as local labour market needs. For example, the Standards of Quality in the Code of Virginia permits local school boards to prescribe additional diploma requirements (e.g., local credit requirements, allocations of electives including CTE), provided that they are approved by the Board of Education (8VAC20-131-51). A local school division may offer, as an option to students, the opportunity to pursue concentrated courses of study by taking related courses in a specialty area (e.g., CTE), or to choose to take a variety of elective courses. Offering such options does not require Board approval so long as choosing a particular concentration of elective courses is not mandatory for graduation (SOA guidance document).

This diversity of choice in educational provision increases the opportunity for students to broaden and deepen career thinking while within school. It actively encourages and enables a curious interaction with potential futures in work. It can also act positively and swiftly to adjust provision and options based on student needs and local labour market demand. School division autonomy however can make it difficult to set state-level standards and work towards balanced implementation. This helps explain the variation in career development observed across the commonwealth and underpins the importance of clarity in the minimum entitlements that all students should expect of their provision.

Virginia is on its way to reduce existing gaps, including historically marginalised populations having better access to career development activities

Virginia performs relatively well overall in terms of equity based on macro indicators. While the United States (US) has a relatively high Gini index – a measurement of income inequality - among OECD countries, Virginia's index is below the national level and ranks 24th among the US states.

Figure 6.68. Virginia ranks 24th among the US states in terms of Gini index



Source: OECD from https://data.oecd.org/inequality/income-inequality.htm. US data from ACS 2021.

Historically marginalised populations such as Black and Hispanic young adults have better access than White young adults to career development activities while in high school, according to the OECD Career Readiness Survey of Young Adults (ages 19-26). The OECD Career Readiness Survey of Teenage Students (ages 15-17; grade 10-11) reveals that the difference in terms of participation in experiencing activities among Hispanic and Black students from other race and ethnic groups of students is fairly small. While the OECD does not collect data by the ethnicity of students, it does in terms of their migrant status and across participating countries in PISA 2018 similarly, native and foreign-born students can anticipate comparable levels of engagement in guidance activities.

Equity challenges within the Virginia guidance system

The OECD Survey of Young Adults in Virginia reveals that young women and students from low SES, non-white and rural backgrounds commonly face greater hurdles in succeeding in the early labour market than comparable peer groups. They are more likely to be NEET and if in work can expect to earn lower

wages than would be expected. Despite some laudable outcomes in Virginia, such as the fact that historically marginalised groups are in an advantageous position in terms of participation in most career development activities (CDA), access to better labour market outcomes for across these disadvantaged groups remains an issue. Students from low SES and rural areas in particular expressed the view that their transitions had been more difficult than high SES and urban counterparts. Reviewing the data highlights specific challenges which are experienced by different groups to varying degrees in relation to their career development.

Career concentration. Where very high proportions of students express the intention of working in a small number of occupations, concerns are raised (Covacevich et al., 2021[16]). In Virginia, in keeping with international evidence, female students are more concentrated in their occupational expectations than their male counterparts, expressing very strong interest in the professions (ISCO major category 2) and little interest in the skilled trades (ISCO major category 7). Certain ethnic groups, notably Asian youth also expressed highly concentrated career plans. In terms of occupational expectations, White Virginian teenagers were twice as likely as young Virginians of colour to anticipate working in the skilled trades (ISCO major category 7).

Career thinking. International data also aligns with the Virginian experience in that male students within the commonwealth commonly demonstrate less mature career thinking than female students. They are more likely to be uncertain, misaligned in their plans and less ambitious than female students. This was also the case for low SES students who, again in keeping with international evidence, expressed much greater confusion in their thinking about the future than high SES peers. For both groups, analysis of data from PISA 2018 shows that greater engagement in CDA is related to career thinking that is linked with career thinking that is more closely associated with better employment outcomes (Covacevich et al., 2021[11]).

Employer engagement within career development activities. Although there was little gender difference in perception of career progress and satisfaction, compared to young women, young men agree that high school helped them get the experience of working in an area linked to their career ambition and helped them to meet people doing jobs that are relevant to their career ambition. While there was no gender difference in career exploration activities, including access to career coaches and counsellors, relatively fewer young women tend to recall participating in experiencing activities in high school. Even when controlling for high school grades, race/ethnicity, SES, migrant status, age, school region and type of residency, surveyed young men were more likely, while in high school, to regularly speak to teachers related to their careers (1.3 times) and participate regularly in career experiencing activities (1.8) and regularly or occasionally in vocational programme (1.3) and worksite visits (1.5), compared to the surveyed young women. The results speak to differences in the effectiveness of the guidance system in enabling the development of human and social capital relevant to career progression and Virginia is not alone in facing this challenge. Across the OECD, female students routinely engage less in opportunities to connect directly with people in work than male students. This represents a particular challenge as such employer engagement is strongly associated with better employment outcomes (Covacevich et al., 2021[16]) (OECD, 2021[14]). Equally, in contrast to international data (Jeon et al., 2023 forthcoming[1]), compared to low SES students, high SES students were less likely to participate in CDA but more likely to engage in high value activities such as volunteering, work in occasional jobs, or participate in employer-involving exploration activities.

An interesting lesson here is that those who needed the most career guidance activities to enhance their human, social and cultural capital appreciate the school support the most. For example, while relatively fewer respondents from low SES had positive perception of career progress and satisfaction than those from high SES, more of them had a positive perception of how helpful high school was for career readiness. They appreciated their high schools more than those from high SES backgrounds in supporting them in career preparation. Statistical analysis of the survey confirms that those from low SES backgrounds were more likely to appreciate the helpfulness of high school, compared to those from high SES. Also compared

to White young adults, Black young adults were 1.4-1.6 times more likely to report a positive perception of the usefulness of high school compared to White peers, controlling for educational attainment, high school grades, gender, SES, migrant status, age and school region. From these results, it is clear that disadvantaged students are more dependent on their schools for support and take greater advantage of them within their career development. The findings underpinned the critical importance of schools in addressing inequalities linked to education and labour market outcomes. The next level of equity policy goals for Virginia should go beyond input-oriented policies and attempt to reach outcome-oriented policies, so that Virginia can expand and diversify the workforce.

Key recommendations

Reducing gender, race/ethnicity and socio-economic disparities

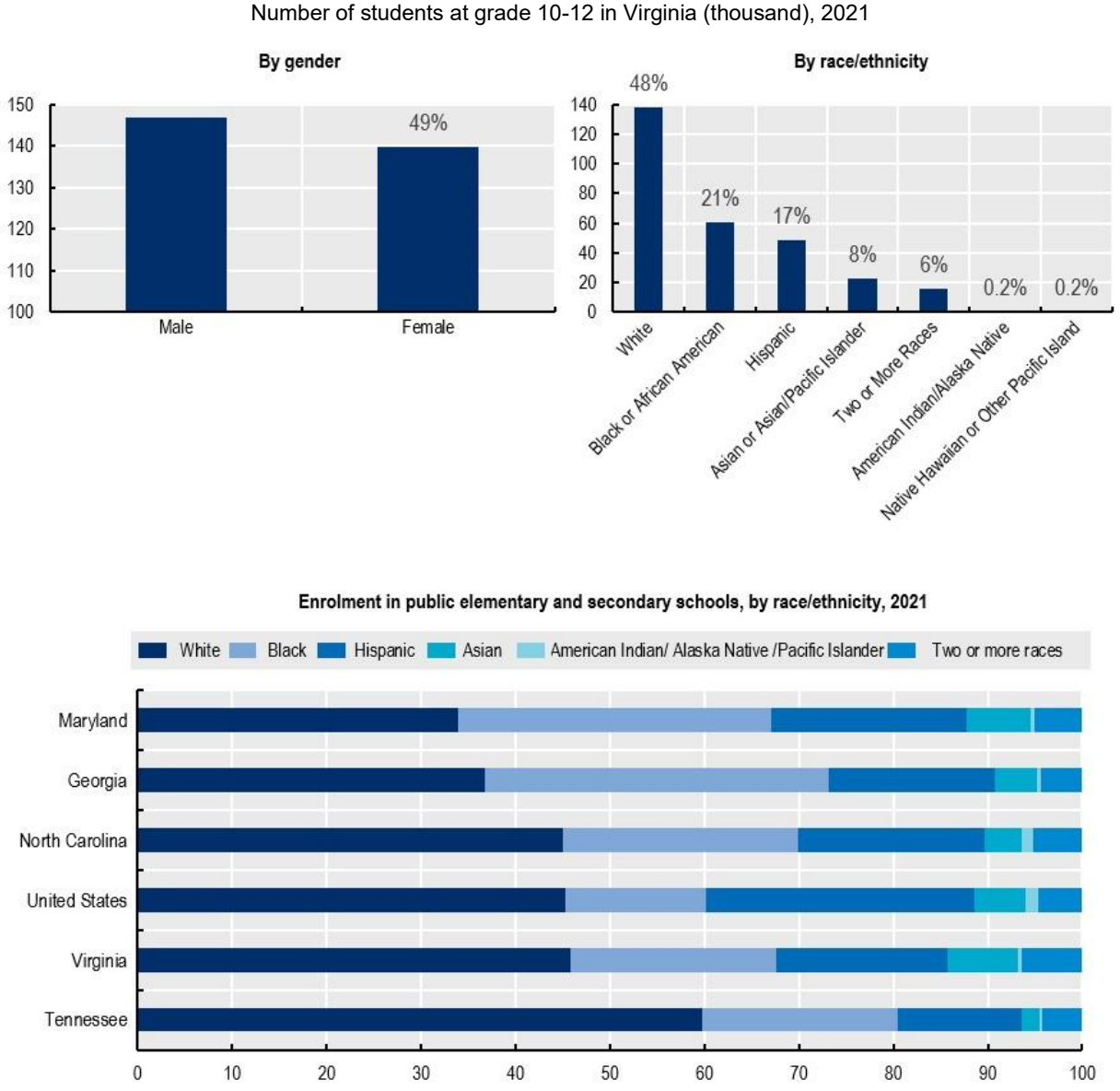
The results of the OECD Career Readiness Surveys show however that disparities among different groups remains an issue in Virginia, although there are positive examples to highlight. Making equity more explicit in the policy agenda of the career readiness system, including standards and programmes, can help close gaps further in the transition from education to employment and expand the careers that students consider possible, beyond their limited preconceptions, with a goal of narrowing the labour market outcome disparities.

> *Challenge: While the student population declines and becomes more diverse, disparities in terms of gender, race/ethnicity and socio-economic status remains an issue in Virginia*

Virginia is a state of diversity – the 17th most diverse state in terms of school student race and ethnicity. In 2021, 45.8% of school students were White in Virginia (down from 54.1% in 2010), close to the US average (45.2%) (NCES, 2022[20]) (Figure 6.69). In 2021, White students made up 48% of upper secondary students (grade 10-12, typically ages 15-18), followed by Black or African American (21%) and Hispanic (17%) students (Figure 6.69). The population of HS graduates in Virginia is expected to become more diverse in terms race and ethnicity in the future (41% estimated White in 2029-30) (Massa, 2021[21]). In the context of the declining number of HS graduates in Virginia, which is expected after 2026 (Massa, 2021[21]), it is particularly more important to better support students from diverse ethnic backgrounds.

Such growing diversity has implications for the flow of skills into the labour market. One important finding from the OECD Career Readiness Survey of Teenagers relates to the concentration of occupational expectations by race/ethnicity. For example, White students are more than twice as likely as students of colour (11% v. 5%) to plan on working in a skilled occupation (ISCO-08 Major Category 7). Once in the labour market however, Black and Hispanic students are more likely than White students to have wished that their high school had provided a lot more information about how to get a formal training programme like an apprenticeship.

Figure 6.69. Demographic of school students in Virginia



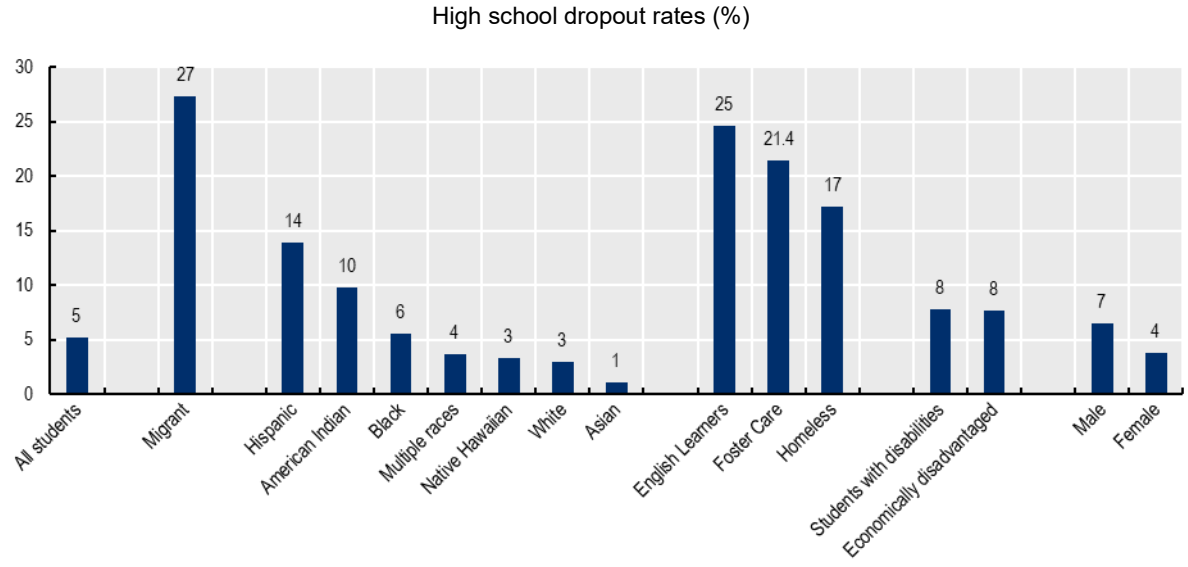
Source: National Center for Education Statistics - http://nces.ed.gov/ccd/elsi. (NCES, 2022[20])

While the rate of high school (HS) dropouts in Virginia is low at 5% in 2022 and the lowest among the US states in 2015-19, disadvantaged groups drop out at higher rates. Dropout rates in Virginia are higher among migrants[2] (27%), Hispanic (14%) and English learners (25%) (Figure 6.70). Comparing the status dropout for Hispanics (2015-19), Virginia shows a similar rate (8.6%) to the US average (8.5%) and is ranked 17th highest rate among the US states.

The importance of high-school graduation varies by student, location and school. In places with higher inequality or fewer opportunities, there could be a perception that the cost of dropping out might be perceived to be much lower. The concept of a "high school dropout" might have a heterogeneous meaning in terms of expected income if the student attended either a high-performing or an under-performing high school (Kearney and Levine, 2016[22]). The relative cost of dropping out depends on the student background and expected income. In other words, if a student perception on the relative cost of dropping

out is considered to be high given potential future opportunities, they are more likely to complete high school.

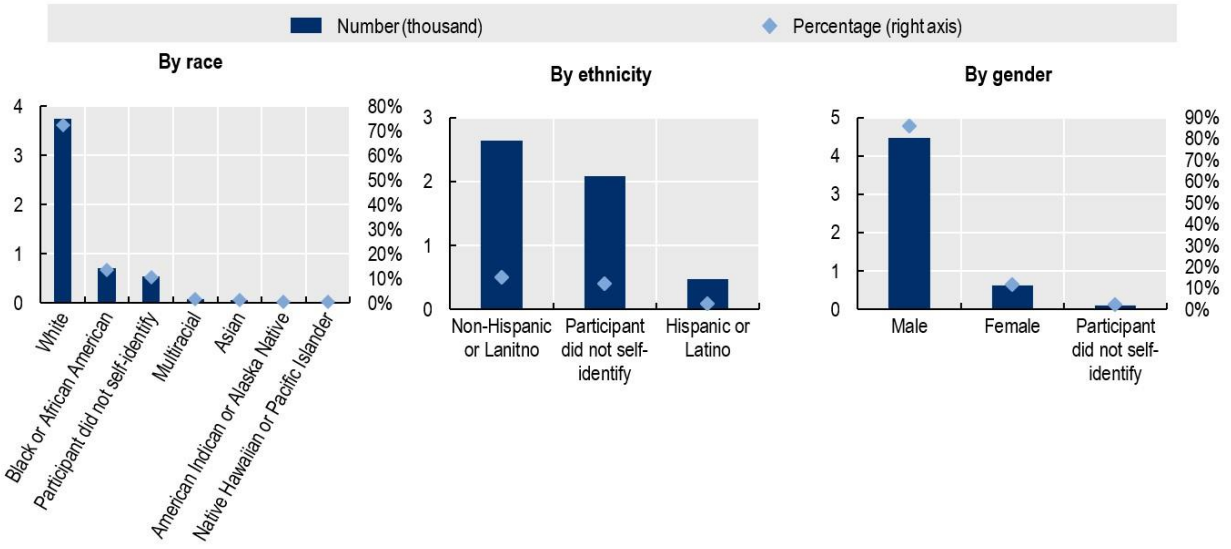
Figure 6.70. Disadvantaged groups among have higher dropout rates in Virginia, 2022



Note: Dropout rate of first-time 9th grader in the year 2018-19 who dropped out school for the period of 2018-22 (4-year rate).
Economically disadvantaged refers to students who: 1) is eligible for Free/Reduced Meals, or 2) receives TANF, or 3) is eligible for Medicaid, or 4) identified as either Migrant, experiencing Homelessness, Foster, or Head Start. Migrant refers students who are or whose parents or spouses are migratory agricultural workers, including migratory dairy workers or migratory fishers, and who, in the preceding 36 months, in order to obtain or accompany such parents or spouses in order to obtain temporary or seasonal employment in agricultural or fishing work (A) have moved from one local education agency (LEA) to another; (B) in a state that comprises a single LEA, have moved from one administrative area to another within such LEA; or (C) reside in an LEA of more than 15 000 square miles, and migrate a distance of 20 miles or more to a temporary residence to engage in a fishing activity.
Source: http://schoolquality.virginia.gov/; https ://www.doe.virginia.gov/data-policy-funding/data-reports/statistics-reports/graduation-completion-dropout-postsecondary-data/virginia-cohort-reports-713

While state and national-level data on student participation in career development activities is scarce, other than the OECD Career Readiness Surveys in Virginia, apprenticeship data shows disparities in the participation. For example, a large majority of participants in apprenticeships are White and male, as are participants in CTE programmes.

Figure 6.71. Disparity in apprenticeship participation between ethnicity, race and gender in Virginia (ages 24 and under)

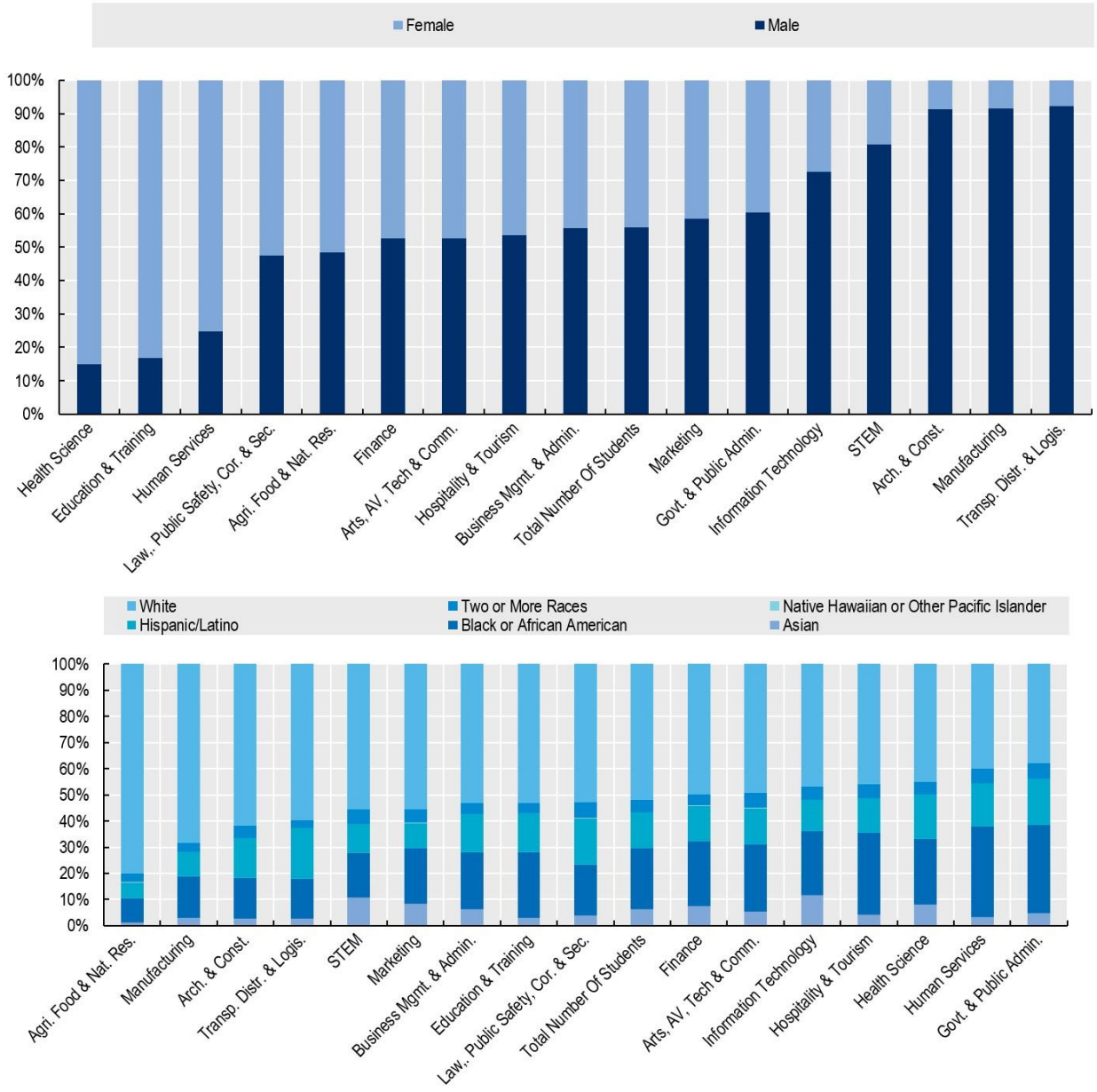


Source: https://www.apprenticeship.gov/data-and-statistics

Looking at CTE enrolments which often provide a pathway into apprenticeships and other forms of post--secondary training, the majority of CTE participants are male and White. Male participants are overrepresented in particular, in Transportation, Manufacturing, Architecture and Construction, STEM, and Information Technology. Across all clusters, White are over-represented and particularly in Agriculture, Food and Natural Resources, Manufacturing, Manufacturing, Architecture and Construction, and STEM (Figure 6.72).

Figure 6.72. The majority of CTE participants are male and White

Share of CTE participants by sector, 2020-21



Source: U.S. Department of Education (2023), The Perkins State Plans and Data Explorer, https://cte.ed.gov/dataexplorer/build_enrolment; U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD) (2022), "State Nonfiscal Survey of Public Elementary/Secondary Education," 2020-21; and Department of Defense Education Activity (DoDEA) Data Center, Enrolment Data, 2020, retrieved July 7, 2022, from https://www.dodea.edu/datacenter/enrolment.cfm. https://nces.ed.gov/programs/digest/d22/tables/dt22_203.45.asp.

In addition, a recent study reported that there is intersectionality between school districts, SES and race. Schools with concentrations of student poverty, which strongly overlap with the issue of race and socio-economic status, receive fewer resources for higher needs, on average (Siegel-Hawley et al., 2021[23]). In Virginia, the share of Virginia students eligible for Free or Reduced Priced Lunch (FRL) rose by 126 000 students, from 36% to 44% of the overall enrolment, between 2009 and 2018. In those schools

with student poverty, nearly 60% of students qualify for FRL and race distribution of students is skewed (Siegel-Hawley et al., 2021[23]).

Recommendation: Make the issue of equity more explicit in the career readiness policy agenda to close further gaps and expand the thinking of students of possible careers beyond preconceived and limited ideas

While there is a pattern of structural inequality that suggests that children end up in similar types of occupations as their parents (OECD, 2018[24]), country variations demonstrate that there is nothing inevitable about individual characteristics shaping young people's career thinking and education and labour market outcomes. Even if one acknowledges a clear structural inequality, there are ways to challenge this link, especially through policies and programming. Not all students with disadvantaged characteristics are equally vulnerable with regards to career thinking about their futures in work. Findings from how inequalities influence the career thinking, exploration, and experiencing of young people could be used to design interventions tailored to address each career readiness indicator with a focus on the groups of students that are known to be more misaligned, less ambitious, more uncertain, and to be already overrepresented in certain careers. Career readiness systems and policies are particularly important in bridging the link from education to work where socio-economic backgrounds play a significant role, and therefore have the potential to contribute to social mobility (Jeon et al., 2023 forthcoming[1]).

Given that socio-economic and regional variation is evident in Virginia in terms of high school dropouts and the transition to and graduation from higher education, Virginia could benefit from a more explicit policy agenda for equity in career readiness systems and strengthen the public school policy agenda and programmes for equity in the career readiness system. State efforts in terms of enabling school choices and pathways appear to largely benefit or be aimed at high performing and achieving students in better-off situations – nor sufficient attention to the skilled trades (see Theme 2 Chapter 5). This may be because there is no state-level data on career guidance participation by regions and socio-economic group, which is a recommendation in Chapter 4. Given the decreasing student population and increasing diversity as well as labour market shortages and out migration being key concerns in Virginia, attention could be given to those that could be part of the solution if given the adequate resources and support. This requires a recognition of the unique needs of individual students regarding career development participation and how they can connect and apply their career development experience to real labour market outcomes.

Making the issue of equity more explicit in the career readiness policy agenda can help close further gaps in the transition process and expand the careers that are being considered by all students beyond their limiting boundaries, with a goal of narrowing labour market outcome disparities. While the Virginia Administrative Code examined above broadly emphasises the issue of equity, no specific standards, framework or intended outcomes were mentioned or defined.

> *8VAC20-131-140: "experiences that will motivate disadvantaged and minority students to prepare for a career or postsecondary education"*
>
> *8VAC20-120: defines "Special populations" by (i) individuals with disabilities; (ii) individuals from economically disadvantages families, including foster children; (iii) individuals preparing for non-traditional fields; (iv) single parents, including single pregnant women; (v) displaced homemakers; or (vi) individuals with limited English proficiency."*
>
> *8VAC20-120-100 (Access to CTE programs): "CTE programs administered by local education agencies receiving federal or state education funds shall be made equally available and accessible to all persons and specifically prohibits discrimination on the basis of sex, race, colour, national origin, religion, age, political affiliation, or veteran status, or against otherwise qualified persons with disabilities." (in addition: 8VAC20-120-130. Individualized programs for students with disabilities).*

To make the issue of equity more explicit in the career readiness policy agenda, Virginia can first define clearly the career readiness standards, framework and intended outcomes. A learning framework for

career guidance starting in kindergarten, or even pre-kindergarten, will need to work to remove stereotyping of occupations and existing barriers that reinforce inequality earlier and with more frequency (see also Theme 1, Chapter 4.). There is then ample opportunity for schools to identify students in later grades who require additional supports in career guidance based on evidence of learning and assessment associated with the framework. For example, the evaluation of the Academic Career Plan, if well established, will allow for schools to identify gaps and/or need for additional interventions (e.g., fewer girls are interested in STEM or skilled trades than boys; or students with a disadvantaged background are not interested in going to a college or university despite their interest or potential). Studies that used VLDS are available in Virginia, particularly in the field of engineering (Matusovich et al., 2020[25]). Virginia also has opportunity to work on this right as the state is planning to evaluate high schools through College, Career, and Civic Readiness Index (CCCI) (see Box 1.5).

Virginia can build upon other country examples and research that shows how to help raise the career aspirations of disadvantaged young people, both to make them more realistic and better aligned with future opportunities, and to overcome disparities posed by social background, gender and geography.

In New Brunswick, Canada, Hopeful Transitions model serves schools to ensure that each learner from grade 6-12 is actively engaged in planning for their postsecondary life, given that the transition planning from K-12 and career decision making have not been equitable in their access or delivery and a variety of barriers and factors prevent a universal approach to transition planning from being accessible to all students. The resources that will be available to help students with transition planning will be built by using a Response to Intervention model (also used in Ireland) adopted from other fields of learning. The model works on the basis that *all* students should expect a comparable level of entitlement to career development, but that *some* or a *few* students will require greater support at particular times in their school careers related to their personal characteristics and/or to the character of their career ambition. In Australia for example, programmes exist to help female students explore whether work in the construction industry would be appropriate for them personally. Given concerns over the poor representation of women in the industry and the risk of the industry representing a hostile atmosphere for female workers, additional support would ensure that girls gain access to authentic insights into the occupational area, notably through first hand experiences and hearing directly from women with relevant work experience. In New Brunswick, the Response to Intervention model is designed to help schools in delivering, assessing, scaffolding, and supporting the individual career development needs of students. An online tool will provide resources, lessons, activities, interventions, checklists to support the facilitation of transition planning for each learner in grades 6-12 (see New Brunswick Department of Education and Early Childhood Development (2017[26]) and (Government of New Brunswick, n.d.[27]) for details). Policy and programming should recognise and be tailored to the diverse and specific needs of students. The province of New Brunswick moreover has introduced a new Career Education Framework that explicitly recognises that certain students in certain circumstances will face additional hurdles in achieving their occupational goals (New Brunswick Department for Education, 2023[28]).

In Canada, CMEC Reference Framework for Successful Student Transitions provides benchmarks for student transitions (policies, programs, and implementation strategies) based on international and national evidence-based research.

> *Services and programming to support transitions are tailored to individual student needs and interests. Student diversity is considered, programs are respectful of cultural perspectives, address attitudinal barriers that implicitly or explicitly limit career choice. Wraparound supports (e.g., supports that are community-based, culturally relevant, individualized, strength-based, and family-centered) are made available to disadvantaged/marginalised groups. Career education programming actively seeks to challenge stereotypes and raise aspirations among disadvantaged and under-represented groups.*
>
> *An evaluation system for career- and transition support services is established and used to collect data on, and improve outcomes for, all students…A system of post-services/graduation follow-up ensures that youth not in education, employment, or training (NEETs) are actively linked back into supports as needed (CMEC, 2017[29])*

During the OECD review team's visit to Virginia, notably in more rural areas students commonly expressed the desire to follow in the occupational footsteps of their parents. This reflects a structural issue linked to the narrowness of career thinking. Virginia can help students to expand their thinking about possible careers beyond preconceived ideas by making more interventions through school career readiness programmes, starting from elementary school level (e.g., role models for boys for nursing; girls for STEM; engineering careers for students in farming community). Virginia could make targeted investments to help students who are struggling the most (Goren and Kenneth, 2023[30]), starting from for example new initiatives such as Lab schools. A good start can also include small grants to support students from low-income families for costs related to specific testing or credentialing to achieve the graduation requirements.

Young people from different social backgrounds have access to different levels of resources to inform and support their career planning. In Ireland, state funding recognises the social sources of such disparities in providing considerably greater resource to schools located in the most disadvantaged areas to support a greater range of career development activities. In other countries, programmes are in place to engage and support families in the career development of their children. In Australia, the Little Ripples programme encourage career conversations, to begin a process of curious investigation, from a young age. In Scotland, parents can make use of the different online tools in a website dedicated to student career guidance (e.g., a webinar series dedicated to parents). Scotland also developed the *Engaging Families* programme to increase guidance workers' capacity to work with families. The *Parents Turn* intervention in the Netherlands brought parents and their children together in a series of after-school sessions for learning about post-secondary options. In France, a programme of *career discussions between parents and school staff* was found to reduce dropout and grade repetition by 25-40%. Other programmes such as Speakers for Schools and Inspiring the Future in the UK leverage institutional social capital and make it available to students.

A striking finding of the Career Readiness Survey of young adults was the high percentage expressing interest in occupations which are not traditionally undertaken by people of their gender or background. Of young Virginian adults surveyed, 44% would have welcomed a lot more help in understanding how to get such a job, with an additional 34% wishing that they had has some more help. In this response, young women and Black and Hispanic young adults were more likely than young men and White adults to have wished for a lot more help for their schools. Such data on how young adults feel about potentially working in non-traditional areas is comparatively rare, but does point towards similarly substantial population segments expressing such interest. In the UK for example, 21% of young adults (aged 19-24) and 25% of young women agreed that they wished their school had provided a lot more help in understanding how common it was to do a job that someone of the gender does not normally do (Mann, 2017[31]) and a survey of 15 year old students found that many were interested in non-traditional careers, but rarely had the opportunity to gain experience of them while still in school (Francis, 2005[32]). In order to facilitate progression towards non-traditional careers, there is an onus on schools to help students explore such professions from a young age, broadening the range of what is considered possible and allowing students to see for themselves what such working experiences are actually like.

In Germany and many other countries, annual Girls' Days and Boys' Days enable student to spend a day job shadowing in a profession where their gender is underrepresented. This forms an important element in strategies to address skills shortages and allows a student to see for themselves whether they could see themselves flourishing in a profession which many may feel goes against social norms and may offer a hostile environment. A forthcoming OECD work paper also provides useful policy pointers and good examples (Jeon et al., 2023 forthcoming[1]). It highlights the need for students to be supported in critical exploration of how the labour market is segmented by gender. A joint **Estonia/Iceland/Lithuania** project has developed a handbook for career guidance counsellors to help them to address gender stereotypes (Kinkar, 2019[33]). The ***BREAK!*** project was funded by the European Union and focuses on how career guidance counsellors can disrupt gendered career outcomes by building young people's career

management skills and engaging them in discussion about the labour market. The handbook makes use of relevant media e.g., TV shows to provide relatable scenarios that students can discuss and reflect on. It then provides a series of practical ideas, activities and discussions for career guidance counsellors to run with groups of students to help them to reflect on the issues. The ***BREAK!*** programme encourages and enables students to reflect critically on how gender shapes labour market participation, providing a theoretical overview of the nature of gender stereotypes as well as practical support to students.

Recent studies also inform ways to promote gender balance. For example, Kessel et al. (2021[34]) find that telling experimental participants about the gender gap in willingness to compete, and advising them about potential earnings implications decreases the gap by increasing women's willingness to compete. One possibility to apply this insight would be to include a similar informational intervention about math-intensive study programmes into the career counselling of high-ability girls (Buser, Peter and Wolter, 2022[35]). A randomised mentoring intervention that exposes low-SES children to predominantly female role models causally affect girls' willingness to compete and narrows both the gender gap in competitiveness as well as the gender gap in earnings expectations. Together, the results highlight the importance of the social environment in shaping career aspiration, including willingness to compete and earnings expectations, at a young age (Boneva et al., 2021[36]) (Alan and Ertac, 2018[37]).[3]

It is also worthwhile to highlight how career development activities can engage learners in social justice. Hearing from those under-represented in their career pathway about the challenges they faced and how they have worked to overcome these can be a powerful tool. A number of studies provide insight on designing and delivering effective and social justice-oriented K-12 career development programmes (Bright, 2022[38]) (Hooley, 2019[39]).

Box 6.1. Shedding light on unequal access to preparation for engineering career aspirations

Using a mixed-method research design, the study examined data from the Virginia Longitudinal Data System (VLDS) to explore high school and college enrolment student records for every Virginia high school student. It also conducted in-depth qualitative interviews of key school stakeholders (e.g., teachers, school counsellors) at select high schools; collecting student survey data at the same select high schools to determine alignment between what interviewees say are influences versus what students say drive them toward or away from engineering; and collected survey data from key stakeholders to complement the qualitative interview data.

Outcome expectations and factors influencing students' post-secondary educational plans

Using a single-case-study approach and in-depth interviews with teachers, administrators, and counsellors, the study examined similarities and differences in outcome expectations and environmental factors at three high schools within a single school district. Outcome expectations are the ''imagined consequences of performing particular behaviours''. Environmental factors include "contextual supports and barriers encountered during the pursuit of one's career choice goals. The study found that: (i) relationships between outcome expectations and environmental factors vary across schools within the same system, (ii) proximity to a postsecondary institution is not just about physical distance, and (ii) messaging regarding career pathways matters.

Source: (Matusovich et al., 2020[25])

Box 6.2. Useful policy pointers and examples to close existing gaps

- ***Beginning young with richer career development activities for disadvantaged students:*** As young people develop their career identities, aspirations and career thinking early in life and that early aspirations are influenced by socio-economic status, starting institutional career education and guidance early can disrupt the process of social and occupational reproduction that may be locked in by the later years of secondary school. For example, in Australia the Little Ripples scheme help develop the career thinking of children from the first years of primary education through conversation cards, activity sheets, posters and ebooks (Australian Government, n.d.[40]). Similarly, Primary Futures in the UK and New Zealand (Inspiring the Future, n.d.[41]) connects primary schools with employers and working people and talk to children about their working lives. Welcome to the university! in Sweden seeks to break the cycle of education reproduction among primary school grades three to six (age 9-12) (Ahlroos, 2021[42]).
- ***Leveraging institutional social capital:*** UK programmes such as Inspiring the Future and Speakers for Schools connect public schools with workplace volunteers and with elite public figures in a way that institutional social capital can be leveraged to the advantage of students lacking appropriate networks within their social networks. In Japan school mediated job-search systems (Furuya, 2020[43]) creates a meritocratic mechanism to increase the chances of finding a relatively stable and high prestige job for high school graduates from economically disadvantaged backgrounds.
- ***Enabling human capital activation:*** In Finland, the School-to-Work Group Method was introduced to prepare young people to first find and then stay in employment (Mann, Denis and Percy, 2020[12]). The programme was organised as a twenty-hour programme delivered over five days in the final year of secondary education and jointly taught by a vocational school teacher and a representative of the local public employment service (PES). Working to a standardised curriculum, young people are encouraged to reflect on their own experiences of work and desires for employment through individual research, collaborative working with student peers and practical exercises related to the process of finding employment and socialisation into a new organisation. A randomised control trial followed 334 students involved in the programme and demonstrated that significant benefits accruing to participants on the Group Method programme including a greater likelihood of being in employment and in a job that was linked to their educational qualifications and aligned with their career ambitions (Koivisto, 2007[44]). In South Korea, most schools have developed career education programmes to develop the capabilities of students and increase their understanding of the labour market and post-secondary pathways (Lee et al., 2021[45]). Such career education programmes typically include career and vocational classes, the administration of vocational interest tests, career counselling, job shadowing, and club activities focused on career development. Engagement and satisfaction with the career education programmes weakened the link between student's career development competencies and parental education level.
- ***Providing targeted and intensive support:*** In Ireland, schools serving more disadvantaged students have access to greater financial resource to deliver career guidance than other schools. Within the Delivering Equality of Opportunity in Schools (DEIS) programme, eligible secondary schools receive funding to provide for 44 hours of weekly dedicated staff time to support career guidance and counselling activities, compared to more advantaged schools that receive 18-hours-per-week worth funding. Such activities include engagement with employers and tertiary institutions, greater integration of career learning within academic subjects and engagement of families (OECD, 2023[46]). In Canada, recent analysis of a long-term

Randomised Control Trial where high school students engaged in a four-year programme of additional support in their career development and planning for higher education provides potentially the strongest evidence yet of long-term benefits linked to a specific programme of intervention. While the analysis has yet to appear in the peer-review literature, building as it does on other public evaluations, the new results have been met with considerable interest. The Explore Your Horizons programme was conducted in 30 New Brunswick high schools and involved over 4 000 students who were randomly assigned to two groups. A first group participated in 20 after-school workshops designed to help them understand the importance of career planning, explore educational and career options, and transition from high school to college. The workshops actively engaged parents, included a focus on resilient life skills and engaged post-secondary students. The high school students also had access to media materials about career planning. A second group simply received additional financial on enrolment in tertiary education. Following the students up to age 29, significant positive results were identified in relation to tertiary enrolment, graduation rates and average earnings of the first group. That group was divided moreover into two halves based on parental income. Linked to the intervention, the enrolment rates of higher income students was seen to drop a little, while that of lower income students rose significantly, leading to a substantial decrease in the gap between the two groups in enrolment in four-year programmes of tertiary education (Renée, 2023[47]). See also: (Social Research and Demonstration Corporation, 2009[48])

Increasing provision through the use of digital technologies to overcome regional disparities and enhance personalisation in career development

Challenge: Access to career development activities and their quality vary across schools and districts, depending on their resources

The evidence presented in the section 3.3.2 in this chapter clearly shows the regional divide in Virginia in terms of transition outcomes and access to career development activities. 25% of young adults in rural areas were NEET compared to 16% in urban areas and 14% in suburban areas. The NEET rate goes up to 42% in Southwest region where 64% of respondents reported living in rural areas, compared to 10% in Northern Virginia. Those who live in rural areas are less likely to attain higher education and earn high wages. Respondents from more rural and resource-poor school regions tend to have less positive perception of high school in assisting career readiness. Compared to those who attended high school in Northern Virginia that is relatively better off, all other school regions tend to see relatively lower student participation in career development activities (CDA), even when controlling for high school grades, gender, migrant status, race/ethnicity SES, age and urbanicity. At the same time, compared to those who were living in rural areas at the time of the survey, those from urban and suburban respondents were more likely to participate in CDA. Overall, those from urban areas were 2.5 times more likely than those from rural areas to participate in career exploring and experiencing activities.

The situation is similar among those who are currently attending school. Relatively more students from Northern Virginia school region (83%) tend to expect to complete higher education than those in other regions (51-71%). In line with this, relatively more students from Northern Virginia school region are most likely to be studying in five years' time largely because the occupation they want requires a study degree (64% versus 40-53% in other regions). However, access to CDA among current students appear to be improved compared to previous students. When controlling for grades, age, SES, place of birth and residence, race and gender, in reference to students in Northern Virginia, those in all other school regions were significantly more likely to work outside school hours; and there was no significant difference in other experiencing activities.[4] But still, participation in several exploration activities show a large difference across school regions, especially job fair and college/university tour. In addition, relatively more students

from Northern Virginia tend to be ambitious and less misaligned, compared to other school regions especially Southwest and Southside regions. Also relatively more students in Northern Virginia expect to work as professionals (ISCO 2-3) while more students in Southwest and Southside expect to work as skilled workers (ISCO 5-8).

When the OECD review team spoke with students in Virginia, they often seemed bounded by what schools or school districts can offer and the availability of local employment and employers. Transportation was a significant issue not only because of the cost but also of the lost instruction time, reducing efficiency in the system.

Recommendation: Increasing provision through the use of digital technologies to overcome regional disparities and increase personalisation in career development

Where the access to a variety of career development and skills learning options is limited, the use of digital technologies can be optimised and not just for youth in rural areas, though impact there can be expected to be particularly strong. While to date, little empirical work has been undertaken to compare the efficacy of digital delivery in comparison to face-to-face provision, there is good reason to believe that the use of digital technologies can make access to guidance more effective, efficient and equitable. The OECD Observatory on the use of Digital technologies in Career guidance for Youth brings together examples of practice from around the world to broaden the scope of what is possible within delivery. It includes a number of models that can considered within Virginia for providing more personalised support to students, notably where distance prevents easy access to face-to-face opportunities.

The use of digital technologies has a potential to make career development activities more accessible for a larger number of students. Most of career development activities can be held remotely: job shadowing, career talks, meeting/speaking to professionals or counsellors, career counselling and mentorship, job fairs. For example, virtual mentorship, online job fairs and alumni/guest speakers, virtual job shadowing and work placements could all be expanded with the use of digital technology. Furthermore, students can access mentors and employers anywhere and not be limited to their region. Moreover, the use of virtual reality, adapting programmes designed to train professionals, can now be used to provide students with a taste of working in fields which may be inaccessible due to distance or legal age restrictions. Career exposure (career talks, meet the experts, professional network and interaction) can be more accessible through digital technologies such as career talks via videoconferencing, and in-person career fairs can be easily replaced by online talks if facing any constraints. Digital technologies can be used to enable schools to connect with potential employers and people in work located far away from the educational institution.

Moreover, digital technologies can enhance access to relevant and timely labour market information for students and counsellors. Digital technologies can easily provide information of the education and skills requirements of specific jobs, so reducing career misalignment. Recognising this benefit, Virginia has implemented various policies and practice taking advantage of digital technologies (Box 6.3) but could expand more. Virginia can expand more actively the use of digital technologies in the provision of career readiness programmes, building on the existing distance/virtual or mobile offerings. Virginia has an advanced IT industry, which career readiness programmes can rely upon and benefit from. Digital technologies can offer not only more effective and efficient opportunities for career exposure, experience, and expertise but also more equitable provision, especially in rural areas or areas where little exposure and experience opportunities exist for certain sectors and occupations. While the scope for digital technologies within career development is substantial, education systems are advised to build evaluation programmes into their design and delivery, working with practitioners, students and their families to ensure that maximum benefits are secured.

Box 6.3. Virginia's use of digital technologies in delivering career development activities

Delivering Career Investigation Courses online

Virginia's Middle School Career Investigations (MSCI) content is now available online. The Virginia Department of Education (VDOE) partnered with WHRO Education and Commonwealth Cascades to enable the partially or fully online delivery of the Career Investigations curriculum. The course delivers interactive resources in a format that are compatible and fully functional on a desktop computer, laptop, tablet, mobile device, or a smartphone. Additionally, the content can be modified to meet the needs of local school divisions and individual students. The Middle School Career Investigation (MSCI) content files and supporting documents are available for download by school divisions (VDOE, 2022[49]).

Given that a wide range of career exposure can allow learning about a more diverse range of careers, online visits to workplaces that are geographically distant from where students are can be promoted. With the rise of remote working and training opportunities, students' career exploration and experiencing do not need to be confined to professions available in their immediate geographical area. This provides school counsellors with wider options to recommend to their students who may be considering an overly narrow set of career options. Parent engagement can be also enhanced through digital means – not only to inform them but also to engage them into delivery and provision of career development activities both as parents and people in work.

Virginia can broaden the aspirations of young people and address the barriers presented by geography through greater use of digital resources, building on such notable innovations as CTETrailblazers.

Virginia is already heading in this direction and can build upon examples from other countries as well as from the OECD Observatory on Digital Technologies in Career Guidance for Youth (ODiCY) (Box 6.5). For example, Finland's TET-Tori, France's Onisep, and Norway's Utdanning have developed their own online platform to provide opportunities for virtual career exploration and experience, labour market information and skills assessments, allowing students from both urban and rural areas to engage on a more equal basis with a variety of employers and industries (see Box 6.4). Many jurisdictions now provide career portals – see for example, Ireland and Norway – which bring together many resources, such as psychometric questionnaires, in a single online location. Within the United States, career village is an example of an online career advice programme where students can ask people in work for advice on specific questions. In France, e-mentoring systems allow students to engage with professionals in careers of interest through a safe exchange of messages (Box 6.5). Another example is the use of online tools through which young people can engage with volunteers and schools can easily be matched with individuals, organisations, and businesses who can be invited to interact with learners, such as Inspiring the Future, as featured in the above Thematic chapters.

Although very limited research still points to relatively higher impact and effectiveness of in-person career development activities (CDA) over online, more so for younger students (Percy and Amegah, 2021[50]),[5] virtual CDA is an important compliment to many schools and students, allowing higher accessibility and diversification, and can be only means to some.

The expansion of internet access, the growing number of teenagers with the widespread use of mobile phones and social media create new opportunities for the design of a broad variety of career counselling services and programmes in schools. For instance, schools can organise more career fairs, or group discussions between employers and students by using video conferencing tools. Moreover, schools can administer online career questionnaires, simulate recruitment activities and personalise and tailor provision based on students' skills and interests. Support staff can more actively encourage and assist students to use online career portals, career navigation tools or chatbots that provide resources and advice, facilitating informed career and study decisions. More advanced solutions could include the use of real-life data to

design virtual games that simulate different career paths or specific occupations. These digital solutions would allow schools to deliver career counselling in a more modern, cost-effective and inclusive manner, by better reaching out to students in remote or isolated areas.

Nonetheless, it is important to stress that for technology enabled career counselling to achieve its maximum impact certain prerequisites must be met, namely, the expansion of internet access in schools in remote and rural areas and the provision of digital equipment required for the service delivery. It is also key to engage in dialogue about the career counselling providers' needs and to ensure that career guidance practitioners receive recurrent training for their skills and knowledge to be up-to-date with the constantly changing digital landscape (Kettunen, 2017[51]). In addition, educators and practitioners will need skills and understanding how to manage and protect personal data and how to engage students through digital tools.

In order to implement all these plans using digital technologies, Virginia should first increase broadband access to all. Despite recent efforts,[6] there are still challenges to achieving universal access, particularly in rural areas. The lack of broadband access in rural areas can limit access to career readiness resources mentioned above. Therefore, the efforts to provide universal broadband needs to be strengthened also from the viewpoint that every young Virginian can have better access to career development activities and tools, including academic and career plan (ACP)-related tools and tools provided by VDOE and the intermediary agencies (Morales, 2023[52]). In this, it is important that all young people are well supported in developing the capacities required to make effective use of digital technologies. As PISA data show, it cannot be taken for granted that all students understand and are experienced in using digital technologies in learning and wider life (Loh, 2023[53]) (OECD, 2019[54]).

Box 6.4. Delivering digital career development activities and resources

Finland: Online platform for careers and work experience (TET-tori programme)

TET (which originates from the Finnish phrase "Getting to know working life" or "Työelämään tutustuminen") is an online platform designed to assist students in grades 7-9 and upper secondary school, in finding work experience opportunities. It serves as a hub for gathering and sharing educational and labour market information and facilitating direct contacts between companies and students. Secondary school students can access information about local employers and one week work experience placements by geographic regions, simplifying the search for opportunities during the TET periods – all Finnish students can work for 1-3 weeks during this practical work-experience period (Jyväskylän yliopisto, 2023[55]; Kettunen and Vuorinen, 2021[56]; TET-tori, 2023[57]). TET also now enables virtual work placements.

France: Online guidance and information platform (Onisep)

Onisep is a government agency that provides online guidance and information on education, careers, professions and associated career opportunities to students, parents, and the general public. It offers a range of services to support individuals in making informed decisions about their educational and professional futures, including:

- Creating guidance and orientation resources such as career guides, brochures, and online resources that provide comprehensive information on academic programmes, vocational training, apprenticeships, requirements and career prospects in various fields of study.
- Developing online tools and platforms for exploring different careers and professions including job profiles, required skills, qualifications, salary ranges, and professional development pathways.
- Organising regional and national events such as education fairs, career forums, and open days to bring together students, parents, educational institutions, and industry professionals and foster direct interactions and information exchange about education and career opportunities.
- Collaborating with schools, colleges, and universities as well as teachers, counsellors, and education professionals to provide support and resources for career guidance, integrate guidance materials into curriculum and offer up-to-date information on career trends and opportunities.
- Providing digital platforms and mobile applications that offer personalised career guidance, self-assessment tools, and access to educational and professional resources (Onisep, 2023[58]).

Norway: Online platform for career information (Utdanning)

Utdanning serves as Norway's official online platform for comprehensive career information. It aims to facilitate informed decision making by providing guidance and up-to-date information on different educational pathways, vocational training, and career opportunities in the country, for students, job seekers, parents, and educational institutions. Information includes admission requirements, available courses, career prospects, and further study options within each field. Utdanning offers tools and resources to assist individuals in exploring different career paths and occupation profiles such as job descriptions, required qualifications, salary ranges, and potential career progression. The platform also offers self-assessment tools to evaluate users' interests, skills, and aptitudes and discover suitable educational and career pathways (Cedefop, 2023[59]; UTDanning, 2023[60]).

Box 6.5. OECD Observatory on Digital Technologies in CareerGguidance for Youth

The Observatory on Digital technologies in Career guidance for Youth (ODiCY) is an open-access repository launched by OECD in 2023 that shows how digital technologies like artificial intelligence, virtual reality, gamification and online video conferencing are helping to make career guidance more accessible to a wider range of students.

ODiCY provides case studies that can be filtered by the Career Readiness Indicators or by technology or age group or country. For example, in France, JobIRL's E-mentoring programme has been set up to virtually connect students (or mentees) with trained mentors. Mentees can get help in searching for an internship and are linked with mentors in the professional area that they are interested in from any geographical area. In Canada, Virtual Reality Career Modules get new insights into careers where work-visits and work placements are very difficult due to safety considerations. Accessing the same virtual reality tools used by professionals who operate heavy machinery in the skilled trades, students get a taste of work in high-demand careers without leaving their classrooms. CiCi, the careers chatbot in England (the United Kingdom), supports personalised career exploration for young people and links with up-to-date labour market information as well as artificial intelligence to help to guide students to the most useful resources.

ODiCY also shows that video streaming technology is utilised in many systems to link students with employers or other experiences in the labour market. For example, Primary Futures is a programme in the United Kingdom, Australia, New Zealand and Switzerland that links volunteers from the workplace to schools so that those in the world of work "enter" the classroom and provide an opportunity for children to expand their outlooks and explore the world of work over video links in a fun and engaging way (OECD Forum, 2023[61]).

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Notes

[1] Due to time and resource constraints, it was not possible for the occupational expectations of Virginian teenagers to coded at the four digit ISCO level.

[2] A flag that identifies persons who are or whose parents or spouses are migratory agricultural workers, including migratory dairy workers or migratory fishers, and who, in the preceding 36 months, in order to obtain or accompany such parents or spouses in order to obtain temporary or seasonal employment in agricultural or fishing work (A) have moved from one LEA to another; (B) in a state that comprises a single LEA, have moved from one administrative area to another within such LEA; or (C) reside in an LEA of more than 15 000 square miles, and migrate a distance of 20 miles or more to a temporary residence to engage in a fishing activity.

[3] The treatment reduces the gender differences in competitiveness by 0.38 standard deviations. Girls in the treatment group are 0.18 standard deviations more competitive compared to girls in the control group.

[4] Caution is needed when comparing the results from the young adult survey with the student survey, as the urbanicity or place of residence is not the same for the two surveys. Young adult survey had a question on urbanicity of residence while for the student survey the respondent's zip code was coded based on RUCA (Rural-Urban Commuting Area) classification.

[5] A study found that around 32% of primary school teachers reported in-person CDA to be "highly impactful", while only about 6% found that to be the case for virtual activities (Percy and Amegah, 2021[50]).

[6] In 2018 when the former Governor Northam took office, 660 000 Virginians did not have access to high-speed internet. Therefore, the Governor set the goal of achieving universal access to broadband within 10 years. Since 2021, Virginia has invested more than USD 846 million to connect more than 429 000 Virginia homes, businesses, and communities to broadband service (source). Department of Housing and Community (DHCD) administers the VATI (Virginia Telecommunication Initiative) programme, which provides targeted financial assistance to extend broadband service to areas that are currently unserved by a provider. However, as of May 2022, an estimated 210 039 locations are classified as unserved and below 100/20 speed, according to the service territory data submitted by internet service providers (source).

Career Readiness Review: The Commonwealth of Virginia, United States

This report assesses how the United States Commonwealth of Virginia is preparing young people for their working lives through career development. It builds on OECD longitudinal analyses which identify forms of career development that can be most confidently associated with better employment outcomes for young people. Collecting data from current secondary school students and young adults in the labour market, the report provides an oversight of career development in Virginia. It then explores the extent to which students are being effectively, efficiently and equitably prepared for their working lives through career guidance programmes. Career readiness is a policy of high importance and the report identifies many strengths within the Virginia system. In order to enhance provision however, there is need to update career readiness standards, frameworks and instruments, and to engage employers and people in work more systematically within guidance activities. Opportunity exists to better amplify labour market signalling, particularly with regard to the skilled trades. The report highlights international practice that can be expected to reduce inequalities in provision, linked especially to the socio-economic backgrounds of students and their geographic location. Here, scope exists notably to draw on digital technologies to enhance provision.

NEW SKILLS AT WORK

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