



CAREER READINESS AND GREEN CAREER CHOICES

AUSTRIAN EUROGUIDANCE CONFERENCE

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600 000 students

representing about **32 million** 15-year-olds
in the schools of the **79 participating**
countries and economies sat the **2-hour**
PISA test in 2018

but also responded to questions about the world around them, their
career aspirations and engagement in guidance activities





A 2018



Insights from PISA on student perspectives on green futures (OECD countries)

- Students cite school as the place where they learn about the environment (PISA 2006) and 88% of school principals report that global warming/climate change is covered in the school curriculum (PISA 2018)
- 72% of students say they could explain why some countries suffer more from global climate change than others; 65% say they could discuss the consequences of economic development on the environment; and 63% say they could explain how carbon dioxide emissions affect global climate change (PISA 2018)
- 78% of students agree or strongly agree with the statement that “looking after the global environment is important to me”(PISA 2018)
- 71% say they reduce the energy they consume at home by turning the heating or air-conditioning down in order to protect the environment; around 45% choose certain products for ethical or environmental reasons even if they are more expensive (PISA 2018)



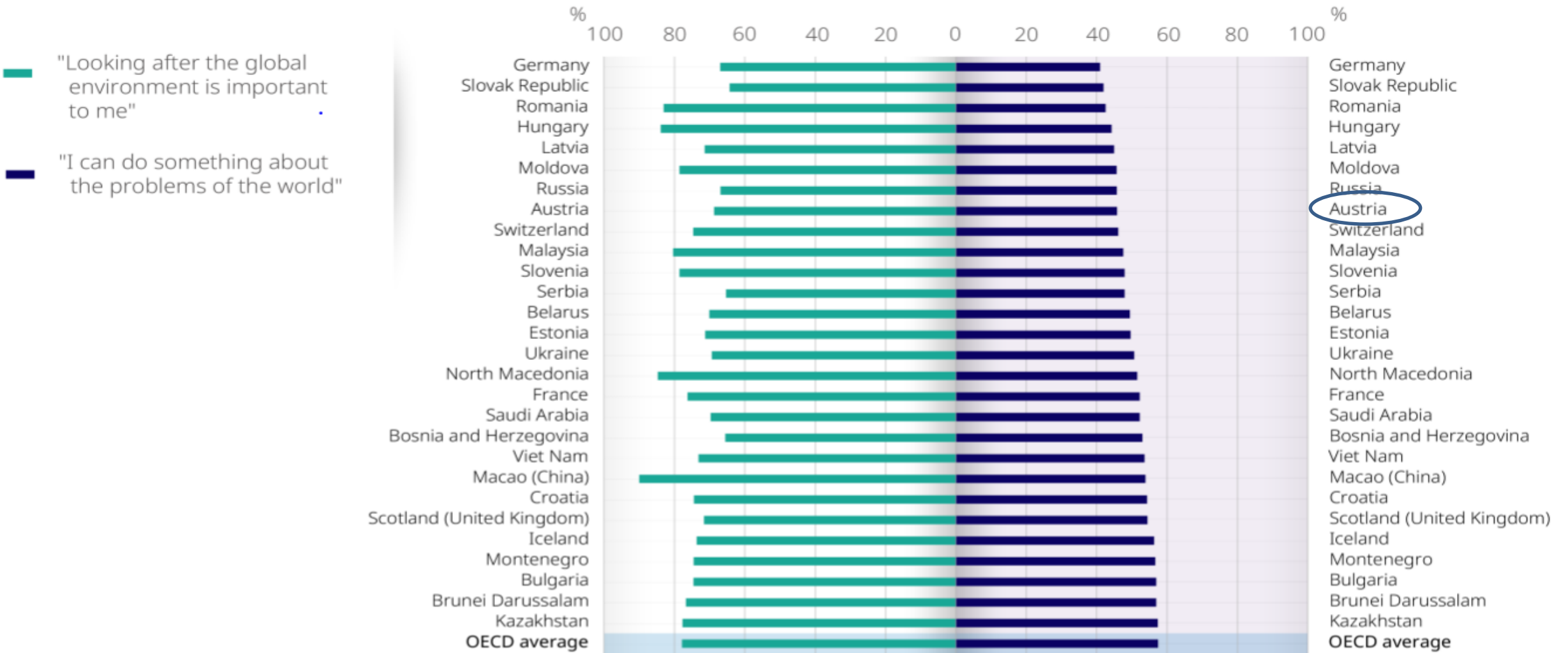
Insights from PISA on students perspectives on green futures (OECD countries)

- Students participate in:
 - activities in favour of environmental protection (39%),
 - boycott products or companies for political, ethical or environmental reasons (27%), and
 - sign environmental or social petitions online (25%) (PISA 2018)
- But... students with poorer knowledge and skills around environmental science often report an almost naïve optimism that the environmental challenges will go away in the future. Better knowledge enables students to realistically assess the magnitude of the challenges that lie ahead.



Insights from PISA on students perspectives on green futures (OECD countries)

Young people care about climate change but feel unable to make a difference (% agreeing/strongly agreeing)





Do young people aspire to 'green' careers?

Occupational expectations of young Austrians at age 15. PISA 2018.

1 Teachers	15.5	1 Engineers	7.3
2 Doctors	10.0	2 ICT professionals	6.6
3 General office clerks	5.0	3 Doctors	4.3
4 Psychologists	4.6	4 Teachers	4.3
5 Nursing associate professionals	4.1	5 Motor vehicle mechanics and repairers	3.7
6 Shop sales assistants	3.4	6 Plumbers and pipe fitters	2.7
7 Lawyers	3.4	7 Police officers	2.6
8 Designers	2.9	8 Market-oriented skilled agricultural workers	2.3
9 Architects	2.7	9 Sportspeople	2.3
10 Hairdressers	2.2	10 Managers	2.2
Total	53.8	Total	38.4



Do young people aspire to 'green' careers?

We are not sure...

The International Standard Classification of Occupations (ISCO) is widely used to classify occupations, but...

“Few occupations defined in the ISCO classification system are specifically associated with improving sustainability. Environmental professionals and refuse sorters are about the only ... classifications that are specifically green, and even jobs in refuse sorting will not be green where the work produces damaging emissions or waste, or where it fails to comply with standards for decent work. Most green jobs are in occupations that also cover non-green jobs. For example, a mechanical engineering technician working in renewable energy or waste processing may be regarded as being in a green job, while a mechanical engineering technician with broadly similar skills working in manufacturing or a fossil-based energy industry is not, unless the job is focused primarily on process improvement.” (ILO 2015)



Looking for green engineers?

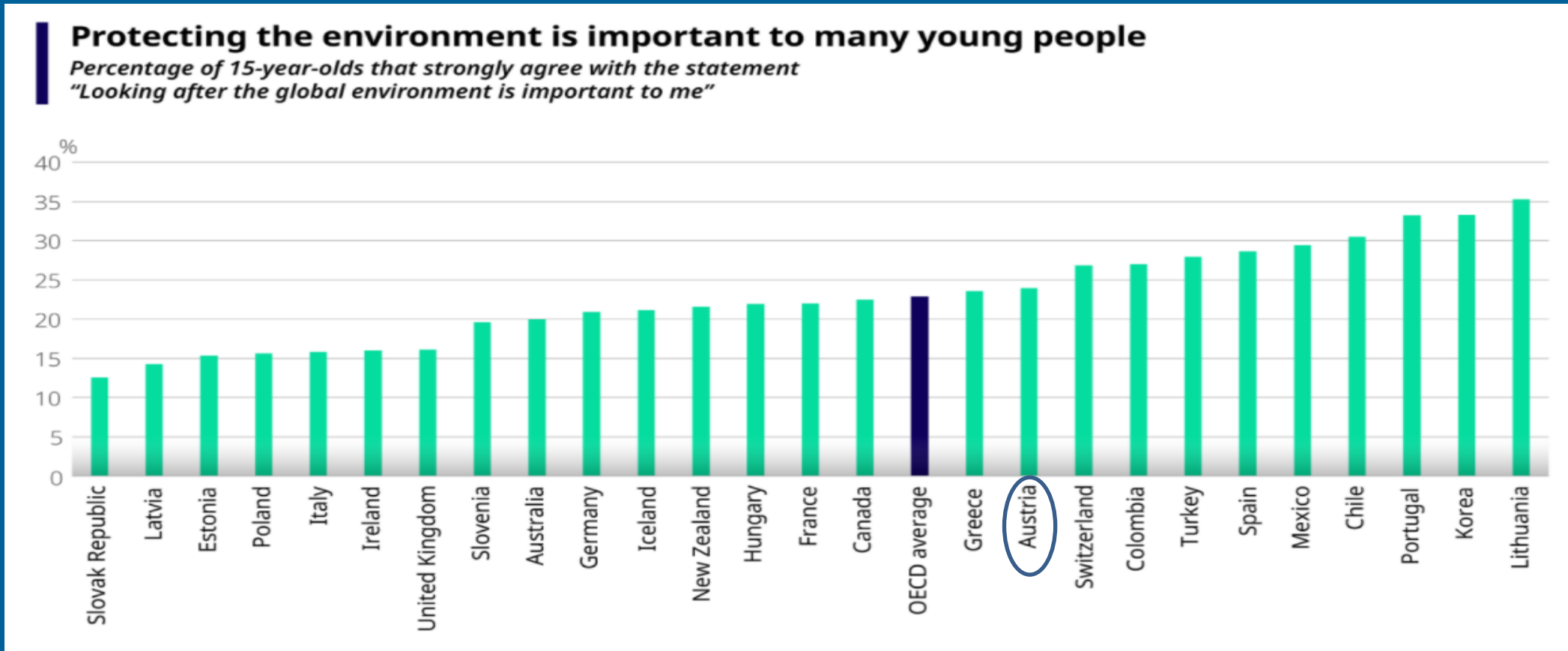
Responding to climate change demands restructuring of transportation, manufacturing, construction, energy production and energy conservation.

PISA 2018 tells us that many students are interested in becoming engineers: on average 7.7% of boys and 1.8% of girls across OECD countries.



Looking for green engineers?

Is there a relationship between interest in protecting the environment and engineering?





Looking for green engineers?

Is there a relationship between strong interest in protecting the environment and engineering?

No, engineering has yet to acquire a significant green character among students.

4.4% of all 15-year-olds who agreed strongly that that looking after the global environment was important to them anticipated working as an engineer by age 30, compared to 4.3% of students less concerned by green issues.

In Austria, 3.3% of all 15 year-olds who agreed strongly that looking after the global environment was important to them anticipated working as an engineer by age 30 compared to 4.3% of students less concerned by green issues.





Effective career guidance: the OECD Career Readiness study

- Review of national longitudinal datasets to identify teenage indicators of career readiness – predictors of better employment outcomes
- Three working papers:
 - 1: Reviews existing literature, that exists mainly in Australia, the United Kingdom and the United States
 - 2: Incorporates new analyses of data from Australia, Denmark and Switzerland focusing on *thinking about the future*
 - 3: Incorporates new analyses of data from Australia, the United Kingdom and the United States, as well as from Canada, China, Germany, Korea, and Uruguay.
- Exploring relations between career-related experiences, activities and attitudes at c.15 and employment outcomes at c.25 with controls for academic achievement, gender, social background etc.



Overview of results: Career Readiness Indicators confirmed in 3+ countries

Better employment outcomes (lower unemployment, higher wages, greater job satisfaction) are associated with the following teenage attitudes and experiences by the age of 15 :

Exploring the future	Experiencing the future	Thinking about the future
Career conversations – inc. with teachers	Part-time working	Career certainty
Engaging with people in work through career talks or job fairs	Volunteering	Career ambition
Workplace visits or job shadowing		Career alignment
Application and interview skills development activities		Instrumental motivation towards school
Occupationally-focused short programmes		



Exploring the future

Indicator	Studies that find beneficial and significant associations	Positive associations found in	Examples
Career conversations – inc. with teachers	7 out of 10 studies from 6 countries	Australia, Canada, United Kingdom, United States	In the United States, individuals who had conversations about their future after leaving compulsory education by the age of 15 with their mother, father and adult close relative, were 1.48 times less likely to be NEET at age 25
Engaging with people in work through career talks or job fairs	4 out of 6 studies from 6 countries	Australia, Canada, United Kingdom, Uruguay	In Uruguay, individuals who had attended a career talk by age 15 were 3 percentage points less likely to be NEET at age 25
Workplace visits or job shadowing	4 out of 6 studies from 6 countries	Australia, Canada, Korea, United States	In Korea, individuals who had visited a job site or factory at 15 were 1.23 times less likely to be NEET at 25
Application and interview skills development activities	3 out of 4 studies from 4 countries	Australia, Canada, United Kingdom	In the United Kingdom, individuals who felt they had working knowledge of completing job application forms by age 16 experienced an average of 1.5 months less unemployment by the age of 26
Occupationally-focused short programmes	11 out of 14 studies from 3 countries	Australia, Canada, United States	In Canada, individuals who participated in occupationally-focused short courses by age 15 earned 3% more at age 30



Experiencing the future

Indicator	Studies that find beneficial and significant associations	Positive associations found in	Examples
Part-time working	18 out of 25 from 6 countries	Australia, Canada, United Kingdom, United States	In the United States, individuals who worked part-time at ages 14-15 earned 6% more at ages 27-28
Volunteering	8 out of 9 studies from 5 countries	Australia, Canada, Germany, United Kingdom, United States	In Australia, teenagers who volunteered at age 15 earned 8% more at age 26
...and probably			
Work placements	2 out of 5 studies from 4 countries		



Thinking about the future

Indicator	Studies that find beneficial and significant associations	Positive associations found in	Examples
Career certainty	15 out of 21 studies from 9 countries	Australia, Canada, Denmark, Switzerland, United Kingdom, United States	In the United States, individuals who were certain as teenagers earned 11% more than the average earnings at age 25
Career ambition	15 out of 19 studies from 9 countries	Australia, China, Korea, Switzerland, United Kingdom, United States	In Korea, ambitious teenagers earned 5% more at age 25/26
Career alignment	9 out of 11 studies from 7 countries	Australia, Canada, China, Korea, United Kingdom, United States	In Australia, individuals who were aligned as teenagers earned 8% more at age 25/26 than the average earnings
Instrumental motivation towards school	13 out of 15 studies from 8 countries	Australia, Canada, Denmark, Korea, United Kingdom, United States	In the United Kingdom individuals who strongly agreed that school was a waste of time at age 14 were 9 percentage points more likely to be NEET at age 25/26 (than those who strongly disagreed)



Explaining beneficial impacts: enabling personal agency

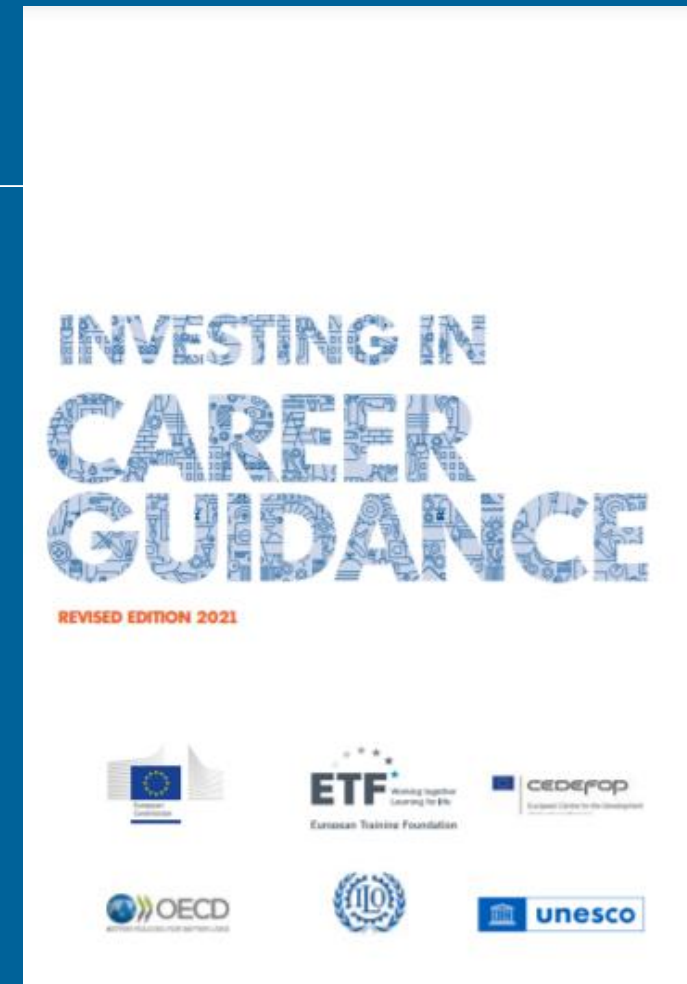
Around the world, young people are staying in education longer than ever.

They have more decisions to make than ever before.

Those decisions are becoming more difficult because the labour market is becoming more turbulent.

Societies expect young people to show personal agency through their transitions, but they need access to guidance resources to do so effectively.

The Career Readiness Indicators highlight resources that make a difference in transitions.



https://www.oecd.org/education/career-readiness/collapsecontents/Investing%20in%20CG_booklet_EN.pdf



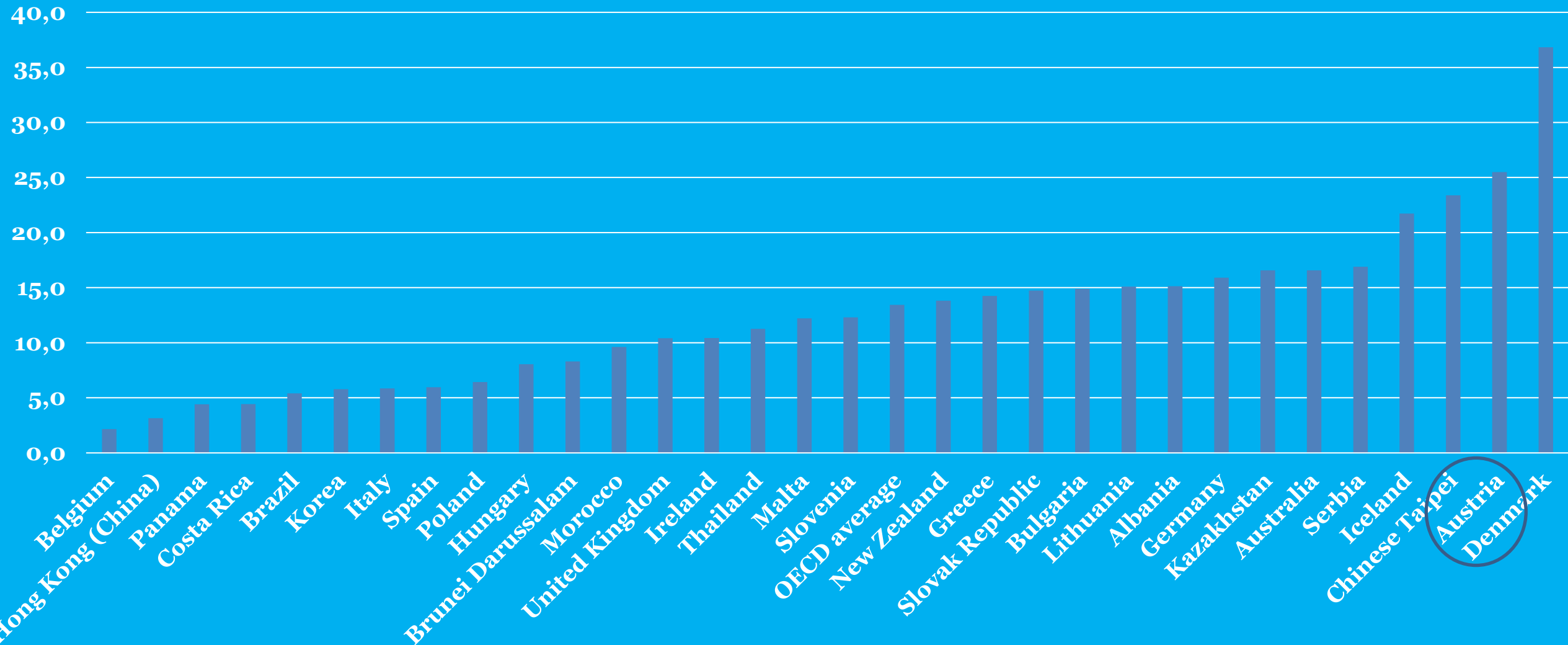
Effective career guidance in relation to green jobs

- Broadens and raises career aspirations
- Challenges stereotypical thinking
- Provides confidence in understanding, and enabling access, to routes into desired employment - notably through authentic work-related insights and experiences that drive critical reflection
- Especially important during times of labour market turbulence
- If employers are not signalling well, education systems must intervene and do it for them



Career Readiness indicators: three core exploration activities (career advisor + workplace visit + job fair).

Student participation in three core career exploration activities. PISA 2018.





Stay in touch with the OECD's work on Career Readiness

A continuing Career Readiness project will focus on:

- the characteristics of effective delivery, linked to indicators
- the use of digital technologies in guidance, and
- the use of guidance to enhance access to 'green jobs'
- the use of guidance to enhance access to address inequalities.

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Project website: <https://www.oecd.org/education/career-readiness/>



Further reading

Covacevich, C., et al. (2021), "Indicators of teenage career readiness: An analysis of longitudinal data from eight countries", *OECD Education Working Papers*, No. 258, OECD Publishing, Paris

OECD (2009), *Green at Fifteen?: How 15-Year-Olds Perform in Environmental Science and Geoscience in PISA 2006*, PISA, OECD Publishing, Paris

OECD (2020), *PISA 2018 Results (Volume VI): Are Students Ready to Thrive in an Interconnected World?*, PISA, OECD Publishing, Paris

OECD (2021), "Career Readiness in the Pandemic: Insights from new international research for secondary schools", *OECD Education Policy Perspectives*, No. 44, OECD Publishing, Paris