

1 Key insights and recommendations

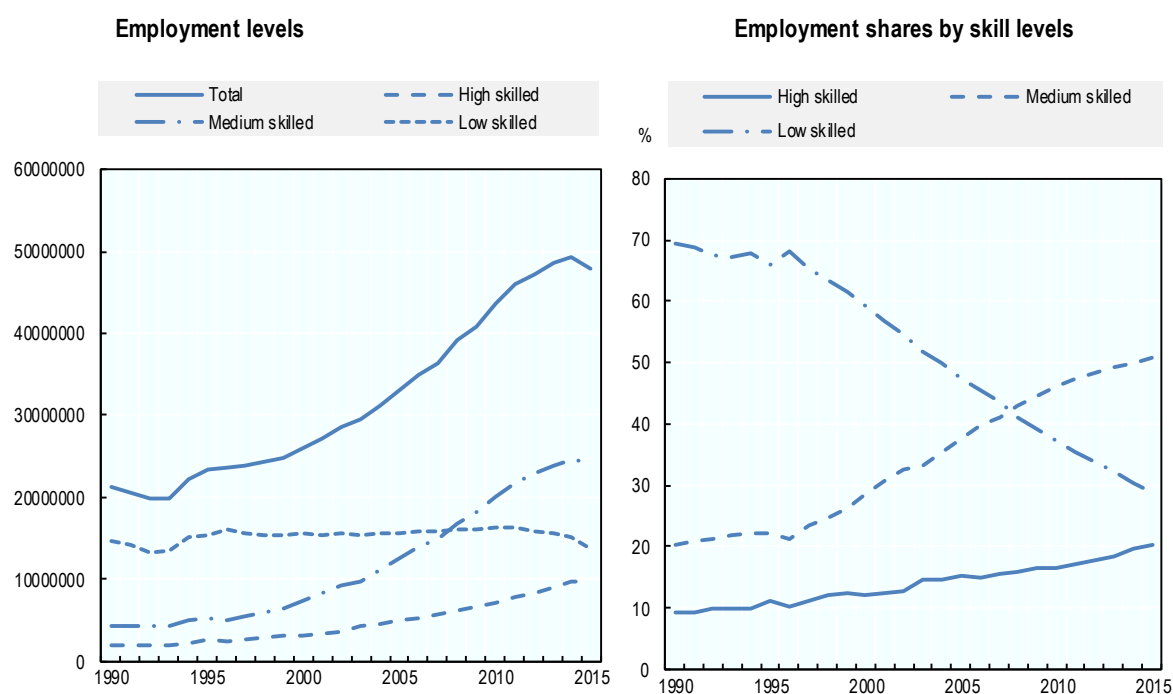
This chapter provides an overview of the education system in Brazil and describes main characteristics of its vocational education and training (VET). It discusses a reform of VET that is currently rolled out and that intends to considerably expand provision of VET in Brazil. The chapter points to challenges Brazil may face during the reform process and summarises suggestions for policy advanced in later chapters of the report. Subsequent chapters examine different issues by presenting the topic, describing other countries' approaches, and briefly discussing implications for Brazil.

Economic and labour market context in Brazil

Brazil was only slowly recovering from the previous economic downturn when the pandemic hit in 2020. During a recession young people with limited work experience and vulnerable populations are at a higher risk of being unemployed or excluded from the labour market. Income inequalities have been high in Brazil and the current economic slowdown has exacerbated them further. Education promotes social mobility and boosts economic activities by equipping individuals with knowledge and skills necessary to thrive in the labour market and in other domains of social life. Increasing access to and improving outcomes from education is thus a priority. This report focuses on a specific type of education, mainly vocational education training (VET) in initial schooling, and more precisely how Brazil can expand it and make it more relevant to the labour market.

The structural changes Brazil is facing makes educational reform, including its VET component, even more urgent. In the past, high commodity prices and a favourable demographic situation with a rising working age population boosted economic growth. However, in 2019 the trend was reversed and the share of 15-64 year olds in the total population started to fall. It is expected that the Brazilian population will age faster than the majority of OECD countries and partner economies, and the economic growth generated by the favourable demography will be reversed in the next 25 years (OECD, 2020_[1]). Over time, the structure of employment has dramatically changed, with rising demand for higher-level skills. Jobs relying on low skills rapidly declined whereas the share of jobs with high and medium level skills increased (see Figure 1.1) investment in the skills of young people and the current labour force is thus necessary to help the country recover from the recession and boost economic activity.

Figure 1.1. Trends in total employment and employment share by required skills in Brazil

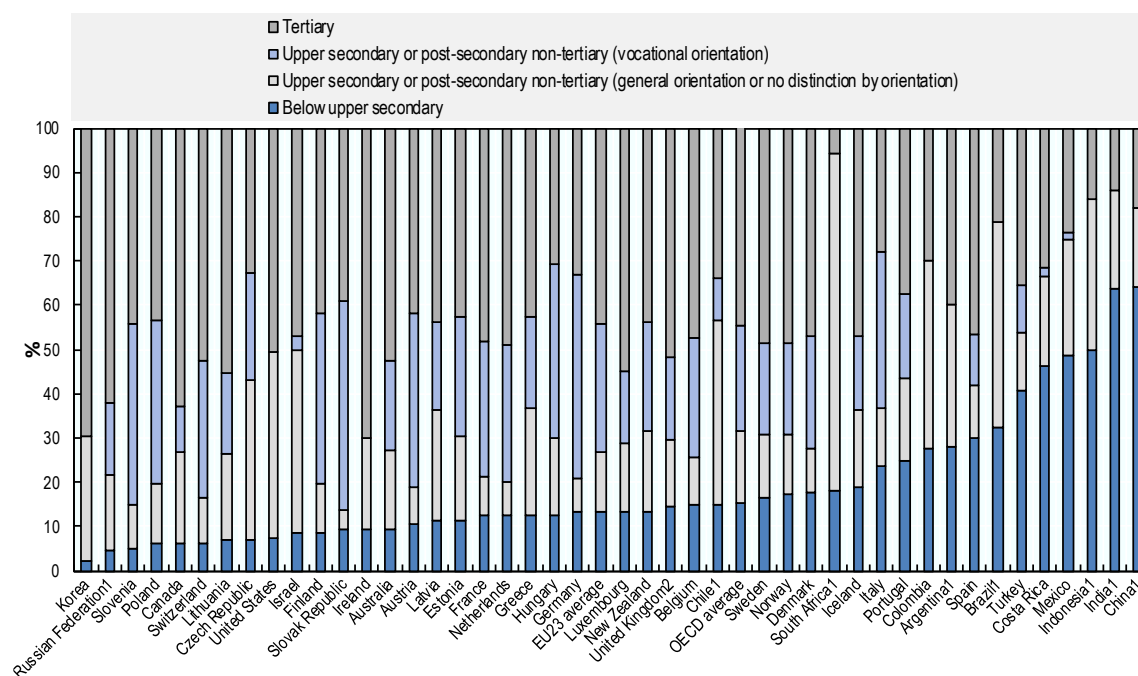


Note: Skill level is defined according to educational attainment of workers: upper secondary not completed (low skilled), secondary completed and tertiary non-completed (medium skilled) and tertiary completed (high skilled).

Source: OECD (2020_[1]), *OECD Economic Surveys: Brazil 2020*, <https://dx.doi.org/10.1787/250240ad-en>.

Brazil managed to increase access to education in recent years but challenges remain. More than 30% of young adults (25-34) lack upper secondary education (OECD, 2020^[2]) (Figure 1.2). This is substantially higher than on average across OECD countries (15%). Moreover, a relatively small share of young adults have a tertiary education degree: only 21% of adults aged 25-34 have a tertiary education qualification, compared to 45% across OECD countries on average. The out of school rates (Figure 1.3) remain high with 15% of youth in the official age range staying outside upper secondary education (OECD, 2020^[2]).

Figure 1.2. Educational attainment of 25-34 year-olds, 2019



Note: 1 Year of reference differs from 2019. 2. Data for upper secondary attainment include completion of a sufficient volume and standard of programmes that would be classified individually as completion of intermediate upper secondary programmes (12% of adults aged 25-64 are in this group). Countries are ranked in ascending order of the share of 25-34 year-olds who attained below upper secondary education. Source: OECD (2020^[2]), *Education at a Glance 2020: OECD Indicators*, <https://doi.org/10.1787/69096873-en>.

Young people with low levels of education are at a higher risk of being neither in education nor in employment (NEET). OECD (2020^[2]) estimates that young adults (aged 25-29) without upper secondary education are four times more likely to become NEET than those with tertiary education. In Brazil 30% of 20-24 year olds are neither in education nor in employment, which is above the OECD average and higher than in other Latin American countries such as Mexico, Argentina, Costa Rica, Chile and Colombia. Worryingly, over the last 10 years the share of young adults outside education and the labour market increased by 7 percentage points. This may be related to the economic recession that started in the mid-2010s and the sluggish recovery that followed. With the new economic downturn triggered by the pandemic, NEET rates have been increasing (da Silva and Vaz, 2020^[3]). Measures promoting economic recovery and reducing social inequalities may include improving access and completion of upper secondary education, facilitating the transition of young people from school to work, and increasing the skills of the existing workforce. Vocational education and training (VET), currently underdeveloped in Brazil, can be used to this end. (See Box 1.1 for the definition of vocational education and training.)

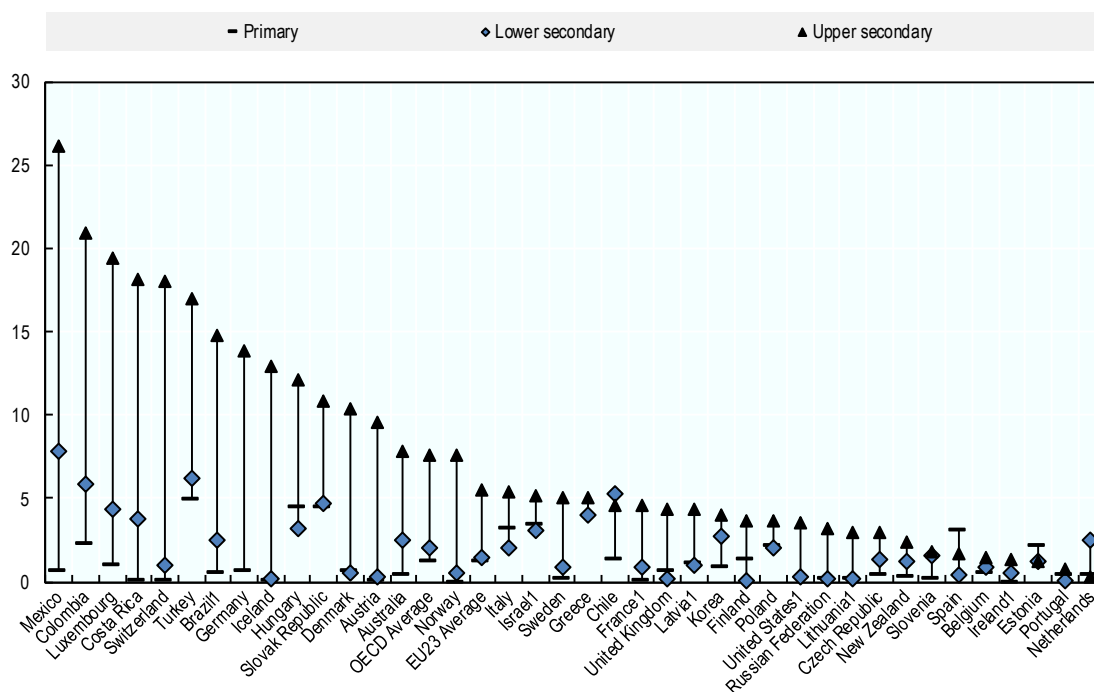
Box 1.1. How vocational education and training is defined

Vocational education is designed for learners to acquire the knowledge, skills and competencies specific to a particular occupation, trade, or class of occupations or trades. Vocational education may have work-based components. Successful completion of such programmes leads to labour market-relevant vocational qualifications acknowledged as occupationally oriented by the relevant national authorities and/or the labour market.

By contrast, general education programmes are designed to develop learners' general knowledge, skills and competencies, as well as literacy and numeracy skills, often to prepare participants for more advanced education programmes at the same or a higher ISCED level and to lay the foundation for lifelong learning. Such programmes are typically school- or college-based. General education includes education programmes that are designed to prepare participants for entry into vocational education but do not prepare for employment in a particular occupation, trade or class of occupations or trades, nor lead directly to a labour-market relevant qualification

Source: Kis, V. (2020^[4]), "Improving evidence on VET: Comparative data and indicators", *OECD Social, Employment and Migration Working Papers*, No. 250, , <https://dx.doi.org/10.1787/d43dbf09-en>; OECD (2017^[5]), *OECD Handbook for Internationally Comparative Education Statistics: Concepts, Standards, Definitions and Classifications*, <https://dx.doi.org/10.1787/9789264279889-en>.

Figure 1.3. Out of school rate by level of education, 2018



Note: The source for population data is the UOE data collection for demographic data (Eurostat/DEM) instead of the United Nations Population Division (UNPD). Out of school rate (one year before primary, lower secondary and upper secondary education) refers to a proportion of children and young people in the official age range for the given level of education who are not enrolled in primary, lower secondary and upper secondary education (UNESCO, 2021^[6]).

Source: OECD (2020^[2]), *Education at a Glance 2020: OECD Indicators*, <https://dx.doi.org/10.1787/69096873-en>.

Upper secondary VET in Brazil

Brazil's education system in a nutshell

Brazil divides its education system into basic and higher education levels. The basic level includes: early childhood education (ECEC); primary and lower secondary education (*ensino fundamental*); and upper secondary education (*ensino médio*). Education is compulsory from the age of four until the end of upper secondary education. Enrolment in primary education is near universal, but lower secondary enrolment rates are still low by international standards. Access to public education is free at all levels, including tertiary education provided by publicly funded universities. However, in Brazil many students are enrolled in private higher education institutions typically charging tuition fees, with over three-quarters of bachelor's students enrolled in private institutions (OECD, 2019^[7]).

Brazil is a highly decentralised country. It has a three-level federal system of government, including the federal government and federative entities (26 states, the Federal District and 5 569 municipalities). States and municipalities have direct responsibility for ECEC and primary education, states are the main providers of lower and upper secondary education, and the federal government is mainly responsible for higher education (OECD, 2021^[8]). VET schools can be run by the federal government, states, municipalities and private entities. The make-up of different providers depends on the type of VET provision (see below for an overview of the different types of provision). For example, 62% of students completing integrated initial VET programmes were educated in institutions run by the federal government and only 3% attended privately run institutions. In initial concomitant VET more than 60% of students attended private institutions (including Sistema S) and only 26% received education in federal schools (Brasil Ministério da Educação/Conselho Nacional de Educação, 2021^[9]).

The federal government sets national standards and overall objectives for the country; it directly manages some institutions including the federal universities and vocational federal schools; co-ordinates education policies across the different levels of government; and provides technical and financial assistance to states and municipalities. The Ministry of Education (*Ministério da Educação*, MEC) evaluates the education system through i) the National Institute of Educational Studies and Research Anísio Teixeira (*Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira*, INEP), whose focus is primarily on pre-tertiary education; and ii) the Foundation for the Co-ordination of Improvement of Higher Education Personnel (*Coordenação de Aperfeiçoamento de Pessoal de Nível Superior*, CAPES), which focuses on higher education. In collaboration with state and municipal governments, the Ministry of Education determines curricular guidelines to be taught at schools. The responsibility for upper secondary VET in Brazil is divided between the Federal Government and the state governments. (OECD, 2021^[8]).

In addition, there are several associated bodies with diverse responsibilities in the education system:

- The National Council of Education (*Conselho Nacional de Educação*, CNE) is a collegiate body to the Ministry of Education that is responsible for advising and monitoring the design and implementation of national education policy. It ensures the participation of the Brazilian society in education policy development and improvement.
- The National Education Development Fund (*Fundo Nacional de Desenvolvimento da Educação*, FNDE) is a semi-autonomous body responsible for resource allocation and providing technical support to states and municipalities.

At upper secondary level there are three main VET pathways in Brazil

Upper secondary VET programmes in Brazil are attended by young people (typical age of completion of lower-secondary education is 15) who continue from lower to upper secondary education. These initial upper secondary VET programmes give access to tertiary education. Initial VET in Brazil can be provided in two ways (Brasil Ministério da Educação/Conselho Nacional de Educação, 2021^[9]):

- *Integrated*. Students can follow the so-called ‘integrated programmes’ where vocational and academic content is part of one curriculum, and all the courses are delivered by the same institution. Students pass one final exam at the end of their upper secondary education.
- *Concomitant*. Vocational curriculum is separated from the academic content, with students registering separately for academic and vocational programmes. Students can receive all their classes in one institution, or they may need to attend a different institution to follow VET courses and sit two different final exams (Kauer, 2015_[10]).

Upper secondary VET is also available after the completion of upper secondary education (obtaining of an upper secondary diploma). It is called consecutive VET.

- In *consecutive* VET, students embark on upper secondary VET programmes ending with a technician certificate after obtaining an upper secondary diploma. Participants in these VET programmes are typically older than those in initial upper-secondary VET, and many have already acquired some work experience (Kauer, 2015_[10]).

In 2020, among all the VET upper secondary students: 50% were in *consecutive* VET provision, 37% in initial *integrated* VET, and 13% in *concomitant* VET (INEP, 2021_[11]). Upper secondary VET leads to the qualification of *Técnico Nível Médio*. The most popular VET programmes are in health, industry and management (OECD, 2014_[12]). VET programmes are provided by public institutions (such as federal, state and municipal schools) and private providers, with private institutions enrolling more than half of all upper secondary VET students. Private providers include private vocational schools and institutions of the Sistema S. The Brazilian Sistema S is a group of 10 non-profit private institutions specific to an economical sector and carrying out private activities of public interest. Among others, they provide professional and technical education, to meet the demand for qualified workers (Souza et al., 2015_[13]). Two of the Sistema S institutions: SENAI (National Service of Industrial Education) and SENAC (National Commercial Training Service) cater to 38% of the VET students enrolled in private institutions. They provide mainly consecutive VET programmes and some vocational courses in initial concomitant VET. Sistema S institutions may charge fees for some of their services and activities. However, a significant share of their revenue comes from collection of mandatory taxes over payrolls from firms in the sectors they are relative to (Souza et al., 2015_[13]). According to the agreement with the federal government, SENAI and SENAC must allocate two-thirds of their revenues from compulsory taxation to the provision of free professional and technical education programs (Souza et al., 2015_[13]).

Some initial upper-secondary VET programmes are highly selective and serve mostly as an entry pathway into tertiary education. For example, 38 of the 50 public schools with the highest results on upper secondary tests (ENEM – *Exame Nacional do Ensino Médio*) in Brazil in 2008 were vocational schools. Students may therefore opt for VET not because they want to prepare for a specific profession but because they strive for a good quality education that increase their chances of getting a place at university. According to Kauer (2015_[10]), it is mainly the fully integrated initial VET that attracts students from more affluent families. This is less the case in concomitant initial and consecutive VET, which are more likely to attract students from more modest backgrounds seeking labour market relevant qualifications that should help them obtain quality jobs.

Involvement of social partners in initial VET is weak, aside from various consecutive VET programmes run by employers’ organisations. Students in initial VET receive their vocational training in school workshops and the majority of the VET schools do not collaborate with employers. One of the reasons for this separation between schools and the world of work is that there are legal obstacles preventing schools from forging stronger partnerships with employers. For example, public schools are not allowed to offer apprenticeships. Given very limited input from social partners in initial VET, employers often perceive it as irrelevant (Itaú Educação e Trabalho, 2021_[14]). In comparison to some other countries with strong initial VET systems and to some consecutive VET programmes in Brazil, there is lack of a structure promoting collaboration between education providers and companies.

Post-secondary VET opportunities are limited in Brazil. Examples from other countries, such as Switzerland and Sweden, show that postsecondary VET pathways often allow upper secondary VET graduates to continue in education. Lack of postsecondary options may decrease the attractiveness of VET to students.

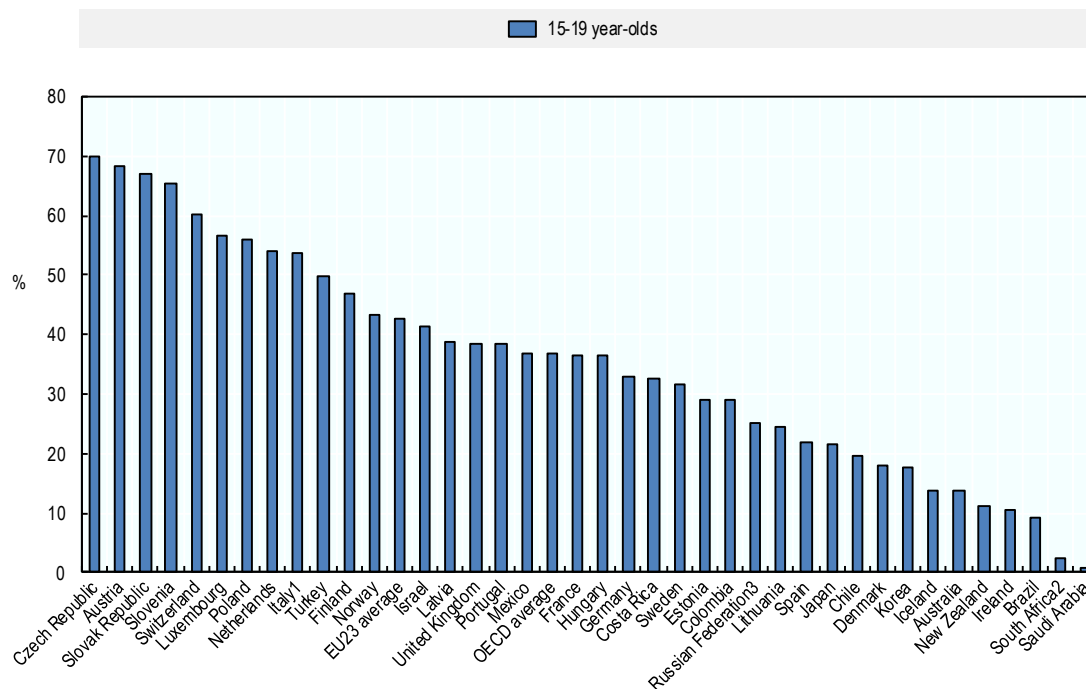
How Brazil's VET system compares to other countries

Enrolment in VET

In comparison to other OECD countries and partner economies, young people in Brazil who are in upper secondary education follow mainly academic paths. In 2018, only 10% of upper secondary students pursued VET paths, which was a smaller share than in most OECD countries (see Figure 1.4). On average across OECD countries, 37% of upper secondary students were in VET programmes. In Brazil, VET is more common among adult learners. In 2018, one in five students aged 25 and above were enrolled in upper secondary VET programmes (OECD, 2020^[2]).

Figure 1.4. Enrolment of upper secondary students in VET, 2018

Full- and part-time students enrolled in public and private institutions, age 15-19



Note: 1. Includes post-secondary non-tertiary programmes. 2. Year of reference 2017. 3. Excludes part of upper secondary vocational programmes. Countries and economies are ranked in descending order of the highest share of upper secondary enrolment in vocational education and training programmes.

Source: OECD (2020^[2]), *Education at a Glance 2020: OECD Indicators*, <https://dx.doi.org/10.1787/69096873-en>.

In a high-quality VET system, students share their time between school where they receive general education (history, mathematics, literature), and workplaces where they can acquire and apply their knowledge and skills in real work situations. Hence, vocational programmes typically lead to a recognised qualification, and involve a structured mix of:

- Work based learning (WBL): work placements with an employer that leads to the development of new skills (through participation in, and/or observation of work, under the supervision of an employer). In programmes with longer periods of WBL students typically contribute with some productive work.
- Off-the-job education and training at school, college or other educational and training provider involving no or limited productive work.

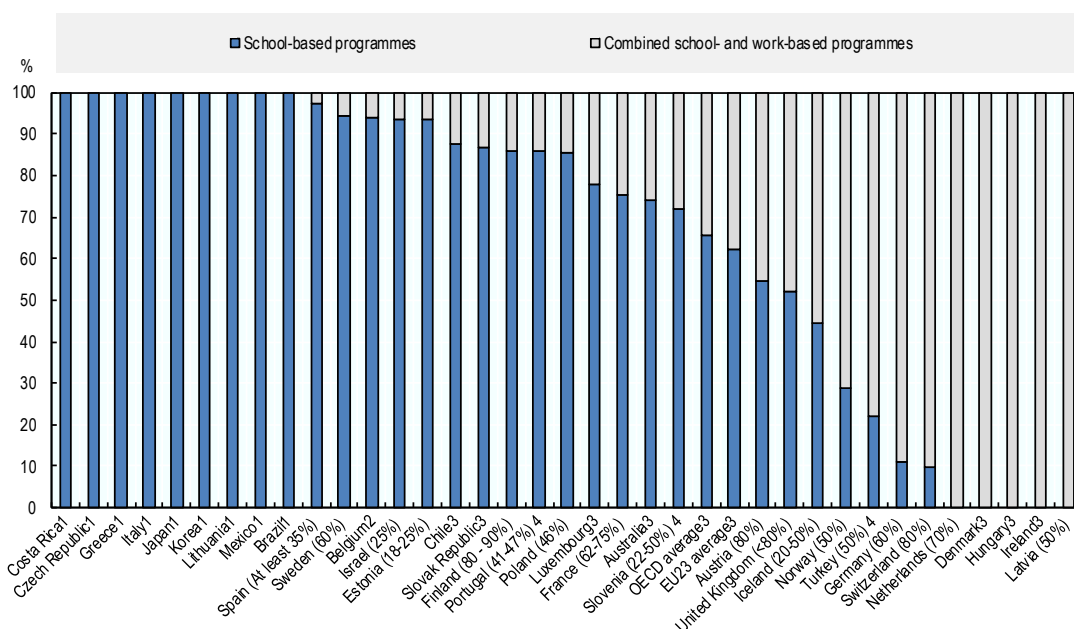
The distinction between academic and vocational learning can sometimes be challenging as the two can be provided at the same time. For example, students in electricity programmes may learn about laws of physics in an applied way while building electrical system in workshops; and students in construction need to know geometry to build a house that is not going to collapse.

In Brazil, work based learning is not part of initial upper secondary VET (see Figure 1.5). On average across OECD countries, one in three upper secondary VET students are in programmes with a substantial WBL component, and in a number of OECD countries all VET students have access to WBL. In Brazil restrictive health and safety regulations prevent companies from providing training to minors on company sites (OECD, 2020_[1]). For example, legal restrictions contributed to a closedown of an upper secondary vocational programme with training provided in training centres of a car manufacturing company (OECD, 2020_[1]). While regulations are important to protect the safety of minors, any reform of upper secondary VET should ensure that WBL can be part of the programme.

Brazil is not unique in having limited VET provision in initial upper secondary education and a parallel training system run by employers. In Peru, for example, industry sectors run their own schools providing technical skills in the relevant area. Most of the time they are independent of the Ministry of Education and are operated by the corresponding ministry. For example, schools of the *Servicio Nacional de Capacitación para la Industria de la Construcción* (SENCICO) are operated by the Ministry of Housing. They are funded with tuition fees and sometimes employer levies (McCarthy and Musset, 2016_[15]).

Figure 1.5. Distribution of upper secondary vocational students by type of vocational programme (2018)

Full- and part-time students enrolled in public and private institutions



Note: Figures in parentheses refer to the most typical duration of the work-based component as a percentage of the total programme duration for combined school- and work-based programmes. For example, in Germany, more than 98% of students in combined school- and work-based programmes are enrolled in a programme where the duration of the work component accounts for about 60% of the total programme duration. 1. Data on typical duration of the work-based component are not applicable because the category does not apply; 2. The most typical duration of the work-based component is at least 46% for the Flemish Community of Belgium and 60% for the French Community of Belgium; 3. Data on the most typical duration of the work-based component are missing; 4. The share of students enrolled in combined school- and work-based programmes as a percentage of all student enrolled in upper secondary vocational education is estimated based on the results of the INES ad-hoc survey on VET.

Source: OECD (2020_[2]), *Education at a Glance 2020: OECD Indicators*, <https://dx.doi.org/10.1787/b35a14e5-en>.

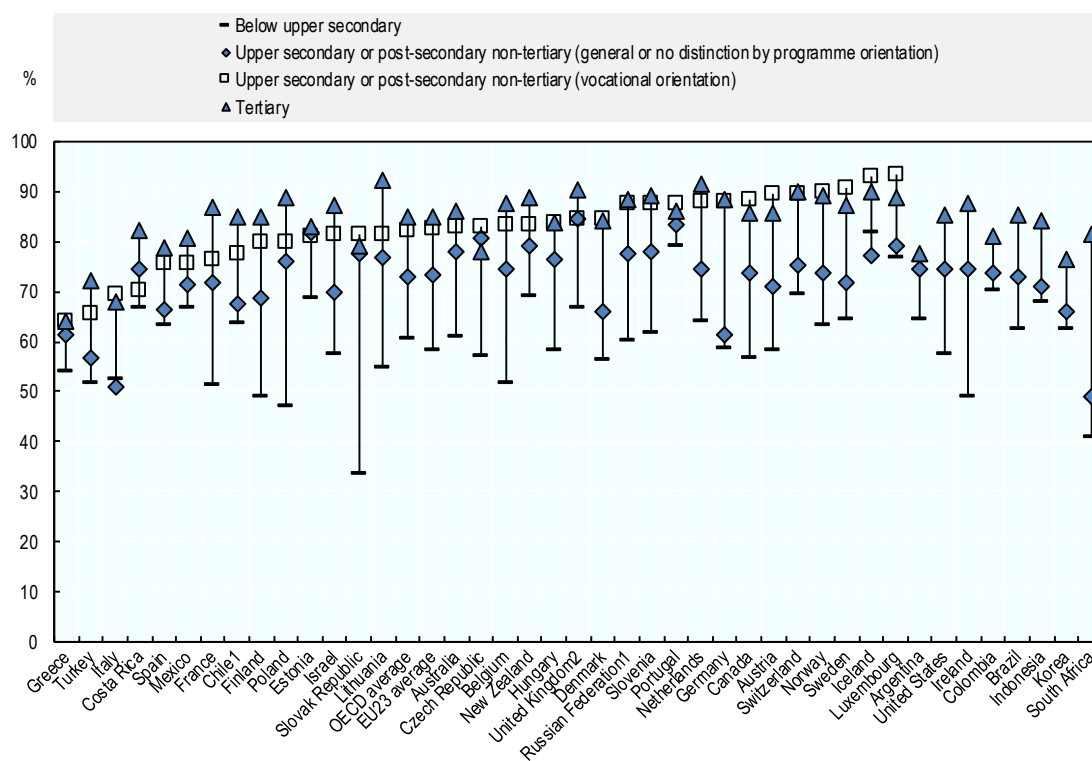
Labour market outcomes of VET students

In countries with high-quality VET systems, upper secondary VET programmes provide good employment prospects for their graduates. International evidence demonstrates that young people who completed upper secondary VET have better labour market opportunities upon completion than their counterparts from academic programmes who do not continue to tertiary education (see Figure 1.6). On average across OECD countries, 83% of 25-34 year-olds with an upper secondary VET qualification (as the highest qualifications) are in employment compared to 73% of those with general upper secondary education¹ (OECD, 2020_[2]).

As discussed above, in Brazil 90% of upper secondary students are in general programmes, but only a minority of them progress to higher education. Only around one in five of upper secondary completers pursue education at a higher level, with the other 80% or 15 million of young adults entering the labour market with some general upper secondary education but without specific occupational training. In OECD countries on average, 30% of 20-24 year-olds are enrolled in tertiary education (bachelor's degree and above) as compared to 21% in Brazil (OECD, 2020_[2]). Over the last thirty years the share of low-skill jobs decreased drastically in Brazil, whereas middle skilled and to some extent high skilled employment

expanded (see Figure 1.1). Currently, half of all jobs require middle level skills, suggesting that the demand for upper secondary graduates (which are associated with middle skilled employment), is high. However, a survey carried out among Brazilian employers revealed that in 2018 more than half of them complained about applicants lacking required skills or experience. A further 20% pointed to weak soft skills among candidates (OECD, 2020^[11]). Expanded and strengthened VET system can help ensure that upper secondary students develop the right skills for these middle-skill jobs.

Figure 1.6. Employment rates of 25-34 year-olds, by educational attainment and programme orientation (2019)



Note: 1. Year of reference differs from 2019. 2. Data for upper secondary attainment include completion of a sufficient volume and standard of programmes that would be classified individually as completion of intermediate upper secondary programmes (12% of adults aged 25-64 are in this group).

Source: OECD (2020^[21]), *Education at a Glance 2020: OECD Indicators*, <https://dx.doi.org/10.1787/b35a14e5-en>.

Reforming the Brazilian VET system

To address the challenges described above, Brazil adopted in 2017 a reform of its upper secondary education. The reform is now being implemented. However, the speed and breadth of the implementation varies across national sub-units (Salas, 2021^[16]). Box 1.2 summarise main elements of the reform.

Box 1.2. 2017 reform of upper-secondary education in Brazil

The reform of upper secondary education aims to improve quality, offer more choice to students and make upper secondary education more attractive and engaging. The reform reduces the number of mandatory subjects to be taught and increases class time. In the reformed system, student will follow a common core programme (including mandatory Portuguese and mathematics in all years) and chose one or more options in the following areas: languages; mathematics; natural sciences; human and social sciences; technical and professional training. Education networks, together with schools, have more flexibility over curricula and programme offer (OECD, 2021^[8]).

In the area of VET, the reform aims to considerably expand provision of initial VET. The objective is to triple the enrolment between 2014-2024. Vocational education is no longer a separate track, but has instead become an optional component of students' upper secondary studies. It also intends to provide more flexibility to students by diversifying the options students can choose from, and providing schools with more opportunities to adjust their programmes and curricula to local needs. The reform facilitates recruitment of vocational teachers by allowing schools to hire professionals with relevant work experience but without teacher training (OECD, 2021^[8]).

Source: OECD (2021^[8]), *Education in Brazil. An International Perspective*, <https://doi.org/10.1787/60a667f7-en>.

As high-quality VET leads to positive outcomes, the planned expansion of VET in Brazil is a welcome reform, provided that this expansion is coupled with investments in quality. There is no system that fits all. The design of VET programmes differs depending on their objectives and the population they serve. However, regardless of the exact structure of VET some characteristics define a good quality VET system. One key characteristic of good quality VET is that it is recognised and supported by employers.

The remainder of this report describes building blocks of good quality VET systems drawing on country examples. This report focuses on initial VET, which in Brazil refers to initial integrated and concomitant pathways. Consecutive VET is not one of the choices available to students on entry to the upper secondary phase of education, so it plays a very different role in the education and skills system. While this report does not concern itself with consecutive VET, providing a full picture of VET provision in Brazil is important as the coexistence of different provisions may lead to co-ordination and collaboration challenges. In addition, good practices found in consecutive VET, such as the involvement of social partners (Sistema S), could potentially be emulated in initial VET.

The remainder of this chapter summarises the key findings from the report. Chapter 2 discusses how academic and vocational content can be combined in VET programmes to serve diverse population, how Brazil could handle recruitment of VET teachers, and finally how schools can be supported to provide good quality VET given the planned expansion of school-based VET. Involvement of employers in provision of work-based learning is a topic of Chapter 3. Chapter 4 addresses different governance arrangements for VET and social partner's involvement in the governance of the VET system. Finally, Chapter 5 describes assessment and certification in VET, with a particular focus on employer engagement in these processes.

Summary of the main challenges and recommendations

What are the avenues for expansion of VET system in Brazil?

Key issues and challenges

VET can serve different populations. VET programmes may be designed to prepare students for entry into the labour market and/or to continue in education. There are also programmes that target those who dropped out from school or are at risk of dropping out (Kis, 2020^[4]). Designing a system that meets these different purposes can be challenging. Schools may not always have the right incentives to offer relevant programmes. Provision of VET may pose many challenges to schools in Brazil, as few have experience with VET provision. VET programmes are more expensive than academic ones, as workshop equipment can be costly. Unless schools are supported, there is a risk they would provide programmes in areas that are less expensive to provide but not necessarily in occupations in which labour market demand is high.

The attractiveness and quality of VET depends on its teachers. OECD (2021^[17]) shows that many countries face acute VET teacher shortages. Aging of the teacher population and the low attractiveness of the profession are some of the factors to blame.

Solutions and strategies to address the issues

Balancing academic and vocational content

VET programmes prepare young people for jobs but also for continuing in education. To this end, they combine vocational and academic content. Academic content (such as mathematics, language) that is required to continue at higher-level programmes can either be integrated into the VET programmes or be an optional add-on. Within VET provision, some programmes may be academically more demanding than others.

- *Integrated VET and academic content:* Completion of both vocational and academic qualifications may require extra effort and time from students, as in fact students work towards a double qualification.
- *Add-on programmes:* Alternatively, VET programmes may not automatically offer eligibility for higher education but VET students or graduates who would like to continue into higher-level programmes have the option of taking additional academic courses on top of a vocational qualification.
- *Diversified VET programmes with different academic requirements:* Differences in the target population can be reflected in the content and objectives of different programmes. To diversify provision, some VET programmes can be more academically demanding than others can.

Providing special forms of VET targeted at youth at risk

VET can be an attractive option for less academically oriented students. Some countries offer VET programmes (typically apprenticeship) of shorter duration to students at risk of dropping out. In strong school systems, those facing the greatest challenges receive extra coaching to help them succeed. So as these programmes are not seen as a low status option, they should seamlessly articulate with higher levels of education. In Austria, for example, integrative VET programmes (Integrative Berufsausbildung, IBA) target young people with special needs (two-thirds of participants), disabled youth and those without a school-leaving certificate.

Finding VET teachers to support expansion

Recruitment of VET teachers can be difficult as VET teachers have to be acquainted with the area of specialisation (e.g. construction, electronics, and hairdressing) and at the same time be able to effectively transfer their knowledge and skills to young people. Many countries, including Brazil, have introduced flexible arrangements for qualified employees so that they can teach in their area of expertise without too many entry barriers. These measures help address teacher shortages and ensure that those teaching VET subjects are abreast of the recent development in the relevant industry. To facilitate entry to the professions, many countries allow newcomers with industry background to complete a teaching qualification while on the job or to shorten the training programme. In some countries, it is also possible to combine a job in industry with some teaching responsibilities.

Supporting schools in offering relevant VET programmes

The organisation of the school network and the programmes provided by schools ideally take into account the cost of provision, students' preferences and labour market needs. Countries take various approaches to ensuring that the offer and organisation of VET satisfies the different needs in a cost-effective way:

- *Concentration of provision:* By concentrating provision and merging schools, the cost of providing VET programmes could be lowered and/or quality improved, as the fixed cost associated with running a VET programme, is, within reason, independent of the number of students. For example, if there are three schools in the area offering a similar VET programme, all three schools have to equip workshops and hire VET teachers to run the programme.
- *Sharing facilities:* Training centres or workshops can serve students from different schools in one local area.
- *Schools specialisation:* Specialisation of schools, focusing provision on just one field, such as health care, has many advantages, including that it can lower the cost of provision and facilitate participation of students in work placements with employers. One option is for students to start their upper secondary VET programme in their local school, with an emphasis on more general education and training, and then attend for a couple of weeks a more specialised VET school in their second or third year. This would reduce the potential problems associated with younger students moving far from home and spending long hours on commuting, or having to live away from home.

The implications for Brazil

The Brazilian reform aims to expand provision of school-based VET and provide public schools with larger responsibility over the mix of programmes on offer and their content. But the mismatch between VET provision and labour market demand for skills is a challenge in Brazil as the choice of VET courses is decided mainly by VET institutions with little consideration for the labour market side (Souza et al., 2015^[13]). Brazil needs to consider how to support schools and coordinate provision of different VET programmes locally. Moreover, the reform expanding VET in schools will certainly increase the demand for teachers of VET subjects. Flexible recruitment of skilled employees is one of the solutions to avoid VET teacher shortages and ensure that teachers have up to date industry-relevant skills. This option has already been introduced in Brazil, and should be further encouraged and supported. Many countries allow entry of skilled employees into VET profession. However, VET teachers without pedagogical training need to be strongly encouraged to complete teacher training while on the job.

Brazil may encourage providing various VET programmes or tracks that cater to the needs of different target populations. In Brazil, upper secondary vocational qualifications are awarded to those who complete their academic upper secondary studies. This arrangement may leave less academically oriented students with no qualification if they do not successfully complete their upper secondary education. Inclusion of

demanding academic content in all VET programmes can be detrimental to less academically oriented students and may contribute to higher dropout rates. States that have already introduced such programmes should evaluate their outcomes, with good practices scaled up across the country.

How to promote provision of work place training to students by employers?

Key issues and challenges

Training with employers or work based learning (WBL) is a key element of vocational education and training. It yields benefits to students and employers. It is also less costly than provision of training in school workshops. However, many countries struggle with securing enough training places with employers. Schools can play an important role in reaching out to employers. Partnerships between schools and local companies facilitate the initial offer of work placements, and the subsequent exchanges between schools and training employers sustain the work placements and ensure that the placements fit effectively into the vocational programme. However, building partnerships between schools and employers is hugely challenging, especially in countries where collaboration between the public and private sector is scarce.

The benefits from WBL depend on the quality of work placements. High quality work placements develop useful skills in student and are run by trainers who know how to work with young people. Employers may be reluctant to introduce some of the measures that aim to strengthening quality as they increase the cost of training provision.

Solutions and strategies to address the issues

Making work-based learning with employers mandatory

To ensure all VET students can benefit from WBL, including in programmes provided mainly in schools, some countries made WBL mandatory. A school can only offer a programme if there are enough training places. For example in Sweden, all students in VET programmes lasting 3 years should spend at least 15 weeks in company training.

Supporting schools in reaching out to employers

Individual schools may need support in developing links with employers and the capacity to foster WBL. Sometimes this support may come from organised bodies. For example, in the Netherlands, all companies offering work placements (both in apprenticeship and school-based programmes) have to be accredited by the Foundation for Cooperation between Vocational Education, Training and the Labour Market (SBB) – a body involving various stakeholders including employers and trade unions (ECBO, 2016^[18]).

Helping companies to train

Some employers may not feel able to train students, and some are better than others at conducting training. Training capacity is typically less developed in small companies that do not have dedicated training arrangements. Small companies may therefore particularly benefit from measures designed to help with training. Governments can enhance the training capacity of firms through a wide range of tools.

- **Training of trainers:** To ensure company employees who are responsible for training of students have the capacity to convey knowledge and develop skills in students, some countries require or encourage trainers to take up an appropriate training. Governments may also facilitate networking among employers to share knowledge and experience on how best to support students and develop their skills. In Norway, the Norwegian Directorate for Education offers free resources for apprentice instructors on their website, including short movies showing how instruction can be carried out in practice (Norwegian Directorate for Education and Training, 2011^[19]).

- Companies working together to provide training: To support employers that on their own would not be able to deliver WBL, many countries have arrangements that allow employers to share responsibility for it. In Germany for example, various models exist for employers to share the responsibility for training an apprentice, including small enterprises working together as part of a training consortium.
- Financial incentives: Countries provide subsidies and tax breaks to encourage employers to offer training to students. In some countries the cost of training is shared across employers who contribute to a training levy fund. In countries without a tradition of employers' engagement in VET, schools play a more active role in initiating and organising work placements and sometimes in funding. For example, in Estonia schools can transfer funding to enterprises to cover salary costs of workplace supervisors.

The implications for Brazil?

Expansion of VET in Brazil should be accompanied by an effort of making WBL a systematic part of VET programmes given the benefits associated with WBL. Provision of training in companies is more cost-effective and can contribute to making the VET offer more relevant to labour market needs. To develop WBL in initial VET, Brazil may draw on experience of employers who already provide work placements to adult learners. In Brazil, there are limited WBL opportunities in initial VET, but in programmes for adults, often run by social partners, WBL is more common. Brazil has well established sectoral training levy funds. It can be explored if and how this experience can be used to promote WBL in upper secondary VET.

Helping employers to meet various requirements and to 'teach' them how to train students may be necessary to expand WBL opportunities in Brazil. Supporting training of trainers and encouraging employers to work together are some of the solutions.

Who is responsible for VET and how to involve employers into VET policy?

Key issues and challenges

The governance of VET is often complex. VET caters to different student populations, such as young people in schools and adults returning to education, and spans across a range of sectors. Consequently, responsibility for VET can be spread across different bodies and levels of governance. Co-ordination of VET policies is important, but should not eliminate local and school autonomy in VET. However, decentralisation typically results in a lot of variation if the outcomes are very much dependent on individual institutions. Ideally, national prerogatives are combined with local freedom whereby schools can often adapt the content to the local labour markets. Combining these multiple interests can sometimes be difficult.

Involvement of social partners in VET policy yields many benefits but can be difficult to establish. Strong VET systems, drawing on social partner engagement, yield benefits to employers by increasing the pool of qualified labour, and benefit students by facilitating their transition to skilled employment. Building social partners' involvement is easier in countries where employer organisations (e.g. industry chambers in Germany) exist already. In Brazil, employer associations exist and are in some cases well organised (e.g. Sistema S), which should facilitate building their engagement in VET.

Solutions and strategies to address the issues

Strengthening collaboration

Countries attempt to reduce fragmentation and foster co-ordination in VET policy by:

- Vesting one institution with overarching responsibility over VET. In a federal context, a number of countries balance decentralisation with strong federal institutions in the domain of vocational education and training. For example, in Viet Nam the legislation simplified the previously scattered VET landscape and consolidated most responsibilities for the VET system under the Ministry of Labour, Invalids and Social Affairs.
- Fostering collaboration between different bodies and levels, and sometimes creating an independent body which role is to mediate and represent interests of various stakeholders. In Malaysia, for example, a national TVET Council (MTVET) was set up at the end of 2020 in an effort to bring more co-ordination into the scattered landscape, which has programmes governed by eleven ministries and delivered by private, public and state government VET institutions.

Different measures are not exclusive, i.e. a country may vest one level of governance (e.g. federal authority) with more responsibilities and at the same time create independent bodies facilitating collaboration.

Involving social partners

A strong VET system involves social partners at all levels where decisions about VET are taken. Social partners are often organised by sectors and decide or advise on corresponding VET programmes. For example, social partners representing the construction sector provide input in the design of VET programmes in construction. The influence of social partners can be simply advisory or consultative, or alternatively can involve full decision-making. In some countries, law guarantees the involvement of social partners. Social partners' engagement would typically be strong in apprenticeship systems, whereas in school based VET it would be less prominent.

The implications for Brazil

Some forms of co-ordination between different levels of governance and existing systems can be envisaged. The issue of co-ordination between various decision-makers may potentially represent a challenge in Brazil as VET schools are run by a range of bodies, including the federal government, states, municipalities, private providers from Sistema S and other private providers (Itaú Educação e Trabalho, 2021^[14]). Local autonomy is particularly important in large and diverse countries such as Brazil as it is highly unlikely that one set of rules and standards would suit all localities. Ideally, national/regional prerogatives are combined with local freedom whereby schools can often adapt the content to the local labour markets. Therefore, the objective should be to ensure co-ordination of various provisions, typically organised at the national or regional level, while allowing innovation and flexibility at the local level.

Brazil may start with creating a few VET programmes in collaboration with social partners (that can be scaled up if successful). This would involve, for example, setting up collaboration between schools and large companies from a specific sector that would advise on the content of VET subjects and offer work placements to students in relevant programmes. Employers (Sistema S) already run some VET programmes, and many of these programmes are associated with positive labour market outcomes. Involvement of Sistema S in the current reform and in discussions on what the VET system should look like could help in ensuring the quality of VET.

How can assessment and certification contribute to the development of a strong VET system in Brazil?

Key issues and challenges

Effective assessment is a necessary element of a strong VET system. VET programmes aim to provide graduates with the competences necessary to do specific jobs, and with the certification which assures employers that graduates have those competences. Summative assessment ensures that the required competences have been acquired by graduates. The confidence of employers in VET programmes depends, among other factors, on the quality of assessment systems. If the social partners are fully involved in the development of VET programmes and qualifications, and in the assessments, that will enhance the credibility of the associated certifications. For example in apprenticeship in England, employers take the lead in establishing each apprenticeship qualification, through ‘Trailblazer’ groups led by employers, which identify the competences required for a job. The same groups also establish an ‘assessment plan’ setting out in some detail how apprentices are to be assessed at the end of each programme.

There are many dilemmas in designing and implementing VET assessments. Should they be standardised, achieving reliability by ensuring that every candidate faces the same assessment tasks? Or should, alternatively, assessment rely on authentic work challenges and projects, which will vary from candidate to candidate? Should assessment list all the required competences and test them one by one, or, instead, should occupational competence be assessed in the round? Can we rely entirely on an assessment at the end of a training programme, or should that be buttressed with periodic partial assessments undertaken throughout the programme? Can local vocational teachers and providers be trusted to undertake assessment, or do we need independent assessors?

Solutions and strategies to address these issues

Balancing consistency and flexibility

There is a need for some balance between a standardised assessment delivering full reliability, and an assessment based on authentic working practice. Consistent standards in assessment are supported by standardised assessments, as in national examinations. But in the productive sector, ability to do the job is assessed most directly by looking at how well candidates perform authentic work tasks. This might mean, for example, not just undertaking a standard task like fixing a leaking pipe in the case of a plumber, but also negotiating with a client, diagnosing the plumbing fault, working and communicating with other artisans, costing and scheduling the repair task, and dealing with unexpected vocational, practical and human challenges in the course of the work. In upper secondary VET programmes in the Netherlands, for example, workplace projects are conducted within a workplace over a period of around six weeks, and school and workplace trainers normally undertake the assessment and grading.

Assessing overall competence

Assessments need to address both individual competences, and overall occupational competence. Occupational competence involves both mastery of a whole set of individual elements of knowledge and skills, and the overarching capacity to make use all of these competences to solve workplace challenges. In Luxembourg, for example, the summative assessment in apprenticeship includes a module-by-module assessment of the programme, as well as an assessment of a project associated with a simulated or real working situation, undertaken over a period of up to 24 hours.

Ensuring a degree of independence in assessment

Independence in assessment is designed to remove bias and ensure consistent assessment standards. Sometimes such independence is realised through nationally or regionally organised examinations, including practical assessments, which are independent of local teachers and trainers. However, the assessment of variable real-world tasks necessarily involves local actors. Sometimes an independent assessment can usefully balance a local assessment. For example in Korea, technical qualifications are typically awarded after an internal assessment undertaken by a training institute, and an external assessment undertaken by the awarding body, with the award depending on an adequate score in both assessments.

The implications for Brazil

Assessments in the Brazilian VET system should balance different assessment methods. To support reliability, assessments should include some standardised elements, such as written or practical assessment tasks which are the same or very similar for all candidates. However, there is also a need to assess the performance of candidates undertaking realistic work tasks, or pursuing practical projects in the workplace. These tasks or projects should be carefully chosen so as to reflect a wide range of competences required for the occupation, including soft and meta- skills such as creativity and teamwork, as well as more narrowly defined occupational skills, so as to provide a broader assessment of occupational competence taken in the round. In longer programmes, partial assessments undertaken periodically in the course of a programme can play a very constructive role in providing feedback to students and teachers on learning progress, offering partial credit, as well as potentially feeding into a final assessment.

Full involvement of the productive sector, including employers and trade unions, enhances the quality of assessment and certification, and improves the credibility of certification. The productive sector should be involved fully both in the establishment of new curricula in the expanded VET system in Brazil and in updating existing curricula, as well as in the planning of assessment systems, as the productive sector has the most direct and up to date knowledge and experience of required competences. The sector might also be usefully involved in undertaking assessments of individual students, as this will add credibility to the consequent certification of occupational competence.

Brazil should include an independent element in assessment. Those most closely involved in a training programme, including vocational teachers and employers offering work placements, have direct knowledge of students and their capacities and have a useful input into assessment. This should be balanced by independent actors in assessment, who may be less likely to have biases because of any direct interest in the outcome, and who are in a stronger position to ensure consistent standards.

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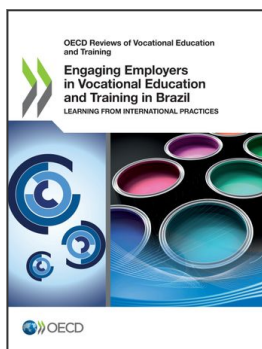
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Note

¹ The breakdown of employment rates by upper secondary programme orientation (vocational versus general academic) is not available for Brazil in the OECD data.



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