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SDG 4 - Policies for Flexible Learning Pathways in Higher Education

Taking Stock of Good Practices Internationally

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Contents

List of figures and boxes 4

List of abbreviations..... 5

Executive summary 6

Introduction7

1. Flexible learning pathways in higher education: An international agenda which challenges sector trends9

1.1 Flexible learning pathways: Concepts and definitions..... 9

1.2 Expansion and diversification have led to more fragmented systems11

1.3 Other barriers to flexible learning pathways..... 13

2. Policy frameworks and instruments that can facilitate flexible learning pathways.....18

2.1 Policy frameworks to support flexible learning pathways in higher education 18

2.2 Policy instruments to support flexible learning pathways in higher education.....20

3. Targeted policy measures to facilitate flexible entry and opportunities for transfer30

3.1 Alternative entry routes and transfer pathways.....30

3.2 More flexible study provision39

Concluding remarks 43

References45

Figures and boxes

Figures

Figure 1. Tertiary education gross enrolment ratio, by country income group	11
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Boxes

Box 1. Policy for an integrated higher education system in Jamaica	20
Box 2. Integrated national qualifications frameworks in Malaysia and South Africa	22
Box 3. The Scottish Credit and Qualifications Framework.....	24
Box 4. The Estonian framework of assessment for vocational education and training and higher education	24
Box 5. The Academic Credit Bank System in the Republic of Korea	26
Box 6. Foundation programmes at Monash South Africa University	34
Box 7. Validation of acquired experience in France	36
Box 8. Recognition of online and blended learning in the Netherlands	37
Box 9. Inter-institutional articulation agreements in the USA.....	38
Box 10. The Open University of China.....	41
Box 11. India's SWAYAM Platform for distance learning	41

Abbreviations

ACBS	Academic Credit Bank System (Republic of Korea)
AfriQAN	African Quality Assurance Network
AQAN	ASEAN Quality Assurance Network
ASEAN	Association of Southeast Asian Nations
CANQATE	Caribbean Area Network for Quality Assurance in Tertiary Education
CAP	Career Advancement Programme (Jamaica)
CAPE	Caribbean Advancement Proficiency Exam
CATS	credit accumulation and transfer system
CRB	Credit Rating Bodies (Scotland)
ECP	Extended Curriculum Programme
ECTS	European Credit Transfer and Accumulation System
ECVET	European Credit System for Vocational Education and Training
EKKA	Estonian Quality Agency for Higher and Vocational Education
Encceja	National Exam for the Certification of Competencies of Youth and Adults (Brazil)
ENIC	European Network of Information Centres
ENQA	European Association for Quality Assurance in Higher Education
INQAHE	International Network of Quality Assurance Agencies in Higher Education
ISCED	International Standard Classification of Education
MOOC	massive open online course
MQF	Malaysian Qualifications Framework
NARIC	National Academic Recognition Information Centres
NPM	New Project Management
NQF	National Qualifications Framework (South Africa)
NVAO	Accreditation Organisation of the Netherlands and Flanders
OECD	Organisation for Economic Co-operation and Development
OUC	Open University of China
RVA	recognition, validation, and accreditation
SCQF	Scottish Credit and Qualifications Framework
SDG	Sustainable Development Goal
SWAYAM	Study Webs of Active Learning for Young Aspiring Minds (India)
UCTS	University Credit Transfer System
UK	United Kingdom of Great Britain and Northern Ireland
USA	United States of America
VAE	Validation of Acquired Experience (France)
VET	vocational education and training

Executive summary

Higher education¹ has been expanding rapidly worldwide. Global enrolment in higher education more than doubled in less than two decades, reaching 221 million students in 2017. This proliferation has led to a highly diverse sector, reflected in not only a wider variety of higher education institutions, programmes of study, and delivery modes, but also in a greater diversity of learners entering the system. However, higher education has also become increasingly fragmented, which is reflected in the multi-layered governance, diversified financing, and growing autonomy of higher education institutions. Within this context, offering well-articulated and flexible learning pathways able to accommodate a variety of learning needs is a challenge in many higher education systems.

The need to adapt education systems to better support flexible learning pathways, with a view to strengthening equity and encouraging lifelong learning, is well recognized in the international Education 2030 Agenda and in Sustainable Development Goal 4. The Agenda encourages countries to develop well-integrated education systems that provide learning pathways for all students, in the form of entry and re-entry at all ages and all educational levels, stronger linkages between formal and non-formal structures, and recognition, validation, and accreditation of knowledge and skills acquired through non-formal and informal education. Through these measures, higher education systems can become more equitable and inclusive, more effective in fulfilling their missions and objectives, more efficient in their operations and use of resources, and better equipped to serve the needs of their communities and of society at large.

At the same time, the implementation of flexible learning pathways is a complicated process, influenced by a number of factors at the national, institutional, and even individual level. An adequate mix of policies and steering instruments is needed, in order to create an enabling environment for flexible learning pathways; and well-designed implementation mechanisms are required, to ensure that these pathways are reflected in the practices of higher education institutions. Some countries have succeeded in adopting policy frameworks, instruments, and targeted measures that support flexible learning pathways in their higher education systems.

This paper draws on country examples across different UNESCO regions to illustrate policy-relevant as well as practical approaches to developing flexible learning pathways in higher education. It shows that policies can facilitate flexible learning pathways include legislative and regulatory frameworks, articulation and transfer policies, and lifelong learning policies. It also presents a number of supportive policy instruments that can serve to bridge policy and practice, such as national qualifications frameworks, quality assurance and accreditation, credit accumulation and transfer systems, and information and guidance services. Finally, apart from discussing system-wide approaches, this paper also gives examples of more decentralized, institution-led practices that contribute to flexible learning pathways.

This paper concludes that well-designed policy frameworks and instruments and targeted measures can create an enabling environment for flexible learning pathways, but their effectiveness requires strong administrative capacity and coordination, as well as the involvement of all relevant stakeholders, including those who design, implement, and benefit from policies. It is also essential that policies, instruments, and practices are in alignment with one another and work towards a common objective. Therefore, a holistic approach, comprising an adequate and well-coordinated mix of policies, instruments, and targeted measures, is required, in order to translate flexible learning pathways from a national priority into an institutionalized practice that reaches its intended beneficiaries.

¹ In this study, the term higher education encompasses ISCED levels 4 to 8 and includes 'all types of studies, training or training for research at the post-secondary level, provided by universities or other educational establishments that are approved as institutions of higher education by the competent state authorities' (UNESCO, 1998).

Introduction

The Education 2030 Incheon Declaration and Framework for Action (also known as the Education 2030 Agenda) recognizes higher education as a key driver for the attainment of Sustainable Development Goal (SDG) 4. The Agenda emphasizes the role of higher education in providing access to and supporting lifelong learning opportunities for all individuals, a precondition for the development of inclusive societies, responsible citizenship, and a qualified workforce. To ensure that higher education is ready to serve SDG 4, the Education 2030 Agenda urges countries to build better-articulated and equitable higher education systems that support lifelong learning and offer flexible learning pathways to all students.

Articulation refers to the mobility of learners between institutions, programmes, and levels of studies. Articulated and flexible education systems generate many benefits, both for individuals and for society. First, they can better support equity, which is at the core of SDG 4, the Education 2030 Agenda, and national policies across the world. By reducing barriers to access and allowing for flexible transfer opportunities, higher education can be better equipped to serve non-traditional students, who would otherwise not be able to benefit from it.

Second, flexible learning pathways can also help higher education systems become more effective and efficient in fulfilling their missions and goals. Flexible higher education provision can better accommodate the diverse needs of both students and employers. It can also improve job prospects and create a sense of fulfilment among those engaged in learning (Carlsen *et al.*, 2016).

And third, a better-articulated yet flexible higher education system can also result in efficiency gains. For example, learners can have their prior learning recognized and used for course exemptions or when transferring between study programmes. This can help reduce the time and costs that it takes to complete a degree. It can also reduce the 'dead ends' in the study process, giving individuals the opportunity to advance to higher levels of learning.

At the same time, higher education systems across the world have been affected by significant transformations in the global context recently. One of these has been the exponential rise in the demand for higher education globally. In response to the social demand and rapidly changing labour markets, the number of higher education institutions has increased and the provision of institutions and programmes has become more diverse. Higher education institutions have begun to differ in terms of their status, origin, mission, and modes of delivery. Enhancing access to and enrolment in higher education have been salient policy objectives for governments across the world, in their quest to build sustainable knowledge economies and overcome societal challenges (Jones and Field, 2013).

The expansion of higher education has resulted not only in an increase in numbers of students but also in types of students. Today's students comprise both traditional and non-traditional learners, including working adults, part-time students, international students, people returning to higher education, and migrants. All these groups have different motivations and learning needs, which requires flexible, student-centred, and well-articulated higher education provision that allows students to pursue diverse learning pathways.

However, as a result of this expansion and diversification, higher education systems have become increasingly complex and fragmented. This complexity is reflected in the governance and financing of higher education, which involve a wide range of stakeholders, who play an important role in policy-

setting. But it is also mirrored in increasing levels of institutional autonomy and changing levels of state involvement, where greater decision-making power is devolved to institutions. In consequence, it has become increasingly difficult for national authorities to make sure that their higher education systems are well articulated and offer flexible learning pathways to students, in terms of entry, progression, and completion.

Therefore, building higher education systems that allow students to access learning opportunities via a variety of pathways and to advance through their studies is easier said than done. The complex nature of higher education systems and institutions and the fact that they operate in dynamic economic, social, and cultural contexts, under multiple levels and types of governance and steering mechanisms, make it difficult to introduce articulated and flexible study provision.

A mix of policy frameworks, policy instruments, and targeted policy measures to support alternative entry routes and opportunities for transfer can promote flexible learning pathways in higher education and help countries in their quest to attain SDG 4. Ensuring that students can access, progress through, and complete higher education implies a good level of coordination across different levels of education, as well as requiring the involvement of key stakeholders, including policy-makers, buffer organizations, leaders of (higher) education institutions, teaching staff, employers, and students. Ideally, a national regulatory or policy framework for flexible learning will guide this coordination. It can do so by setting standards and guidelines and providing funding that can help institutions to embed opportunities for flexible learning into their study programmes.

The purpose of this paper is to take stock of the policy frameworks, instruments, and targeted measures established internationally to support flexible learning pathways. While the paper cannot be exhaustive, it will draw on selected 'good practices' to provide guidance for policy-makers who intend to support flexible learning pathways in their higher education systems. In doing so, it will use a policy analysis framework that attempts to capture the dimensions both of policy development and of implementation.

This paper also hopes to lay the foundations for future research to be conducted by IIEP, which will identify, on the basis of in-depth country case studies, promising initiatives aimed at developing flexible learning pathways in higher education which can support lifelong learning and equitable outcomes for all. These promising initiatives and good practices could, in turn, help other countries learn from the experiences of those who have introduced measures to facilitate such pathways.

The paper is organized in three parts. The first part identifies selected trends in higher education that may pose challenges for the implementation of the current international agenda for education which calls for supporting flexible learning pathways for increased equity and lifelong learning. It also discusses other barriers that exist with regard to the implementation of flexible learning pathways. The second part identifies selected policy frameworks and policy instruments that can facilitate flexible learning pathways. And the third and last part presents selected policy frameworks, policy instruments, and targeted policy measures that can be seen as 'good practices' to guide policy-makers in other countries. The paper finishes by identifying some avenues for future research.

1. Flexible learning pathways in higher education: An international agenda which challenges sector trends

To ensure that the needs of all learners are met, the Education 2030 Agenda promotes flexible, student-centred higher education provision that allows students to pursue diverse learning pathways. SDG 4 urges countries to 'ensure inclusive and equitable quality education and promote lifelong learning opportunities for all' (UNESCO, 2015: 7). This vision therefore recognizes the importance of providing flexible learning opportunities for young people and adults. It also calls for equitable higher education systems, which allow meritorious students, especially those coming from disadvantaged backgrounds, including people with low socio-economic status, indigenous groups, ethnic minorities, migrants, refugees, and people with disabilities, to access and benefit from higher education. To achieve these objectives, the Agenda urges higher education systems to 'ensure quality assurance, comparability and recognition of tertiary education qualifications and facilitate credit transfers between recognized tertiary education institutions' (UNESCO, 2015: 41). It also calls for provision and recognition of formal, non-formal, and informal learning, and diversification of learning opportunities and modalities, to allow all young people and adults to develop knowledge, skills, and competencies for decent work and life. Higher education systems that support high-quality education, equity, and lifelong learning also play an important role in creating a sustainable future for all citizens, which is a common objective of all 17 SDGs (Blessinger, Sengupta, and Makhanya, 2018).

However, achieving the objectives of the Agenda is not an easy task. Recent global trends, primarily the expansion of higher education, have led to increased diversification of institutions and forms of delivery, and a diversity of learners entering the system, making higher education systems more complex and fragmented. As a result, there are numerous challenges to the provision of well-articulated and flexible learning pathways. Before the analysis delves into specific trends that hinder the provision of flexible learning, the paper will discuss the concepts and definitions that have been emerging, in order to build a shared understanding of the issue.

1.1 Flexible learning pathways: Concepts and definitions

The paper relies on the definition provided in the Education 2030 Agenda, where flexible learning pathways are seen as 'entry points and re-entry points at all ages and all educational levels, strengthened links between formal and non-formal structures, and recognition, validation and accreditation of the knowledge, skills and competencies acquired through non-formal and informal education' (UNESCO, 2015: 33). This implies not only that the pathways are flexible but also that there are multiple learning pathways, tailored to address a diversity of learners and their learning needs. The definition outlined in the Education 2030 Agenda illustrates the need to build coherent and well-articulated pathways in the broader education system, and to elevate the value of learning that takes place outside the boundaries of formal education.

There is a strong convergence between the definition offered in the Education 2030 Agenda and other concepts found in the literature that are close to the notion of flexible learning pathways. In particular, there is some consensus that flexible learning pathways are critical in ensuring that higher education systems are equitable and serve the needs of society. According to Unger and Zaussinger (2018: 10), flexible learning, which is at the core of the concept, 'provides students with the opportunity to take greater responsibility for their learning and to be engaged in learning activities and opportunities that meet their own individual needs'. This implies offering learners choices in how, what, when, and where they learn (Higher Education

Academy, 2015). Flexible learning is often associated also with student-centred learning, where teaching and learning processes are designed for and often with the student, and they are intended to lead to 'high quality, flexible and more individually tailored education paths' (Unger and Zaussinger, 2018: 10).

In the context of higher education specifically, the European Commission introduced the concept of flexible educational pathways, defining them as 'measures to implement flexible regimes for study programmes and to enable the previous educational achievements of students to be more widely recognized within the higher education system. This allows students to transfer more easily between institutions and study programmes as prior achievements can be utilised' (European Commission, 2015: 51). Recognition of prior achievement that allow learners to transition to more advanced stages of learning is, once again, reiterated in this definition.

Seamless pathways is another concept used in the literature which is in strong alignment with the Education 2030 Agenda, as it recognizes that improved articulation in education systems serves an important equity objective. It denotes 'systems and processes that accommodate all qualification articulations and credit transfers at a national level and represent the ideal outcomes of an agenda to improve access and equity to better manage physical, human and educational resources and to better coordinate government policy at state and national levels' (Walls and Pardy, 2010: 15).

There are other concepts associated with the idea of flexible learning pathways in (higher) education systems. For example, transferability refers to the 'capacity [of skills and competences] to be transferred to and used in a new occupational or educational environment' (MacKenzie and Polvere, 2009: 74). Transferability is frequently used interchangeably with permeability, the latter referring to the 'capacity of education and training systems to enable learners to access and move among different programmes, levels and systems and validate learning outcomes acquired in another system or in non-formal or informal settings' (CEDEFOP, 2014a: 193).

According to these definitions, transferability, or permeability, can be horizontal or vertical. Horizontal permeability refers to transferability between learning opportunities that may differ in content but are delivered at the same level of education (Spöttl, 2013). It also includes the notion of transfer from one occupation to another. Vertical permeability is linked to the idea that all learners, irrespective of whether they pursued vocational or general education in secondary school, have the opportunity to continue studying in an academic programme at the tertiary education level (Spöttl, 2013). This may imply that candidates with a vocational background need to complete a bridging programme or fulfil other requirements before entering an academic programme in higher education. It also means that there are no 'dead ends' to learning and that options to transfer between different types of provision are available. Therefore, permeability refers not only to entry routes to higher education but also to transfer routes within higher education that allow learners to build on their prior learning, irrespective of whether this learning took place at school, at work, or through leisure activities (CEDEFOP, 2012).

Another term related to flexible learning pathways is articulation, defined as a setup to 'allow graduates of one course of study to progress, or "articulate," to another' (Haas, 1999: 4). In broader terms, it refers to 'the horizontal and vertical linkages between institutions, programmes and levels in a system, and to the mobility of learners between these institutions, programmes and levels' (Mohamedbhai, 2013: 32). The term also emphasizes the role of higher education institutions in facilitating the recognition and transfer of credits from all strands of education (Singh, 1998). Articulation can be systemic, through a formal alignment of study programmes and pathways, or specific, in the form of inter-institutional agreements regarding, for instance, transferability between specific qualifications (South African Qualifications Authority, 2017). Articulation is important, considering the large number of institutions and degrees that exist in national higher education systems (Alvarez, 2017). Confronted with such a vast supply of higher education, students often face difficulties in deciding which path is most suitable for them. Therefore, having the flexibility to transfer between different study programmes and institutions, and receiving guidance in this process, can help students to move to higher levels of education and therefore attain better outcomes, both in the short term and in the long term.

All the concepts discussed are very close in meaning. They support the idea of creating stronger linkages between formal educational institutions and programmes and providers of non-formal and informal learning, through better collaboration, a greater emphasis on flexibility, and a recognition of different types of learning.

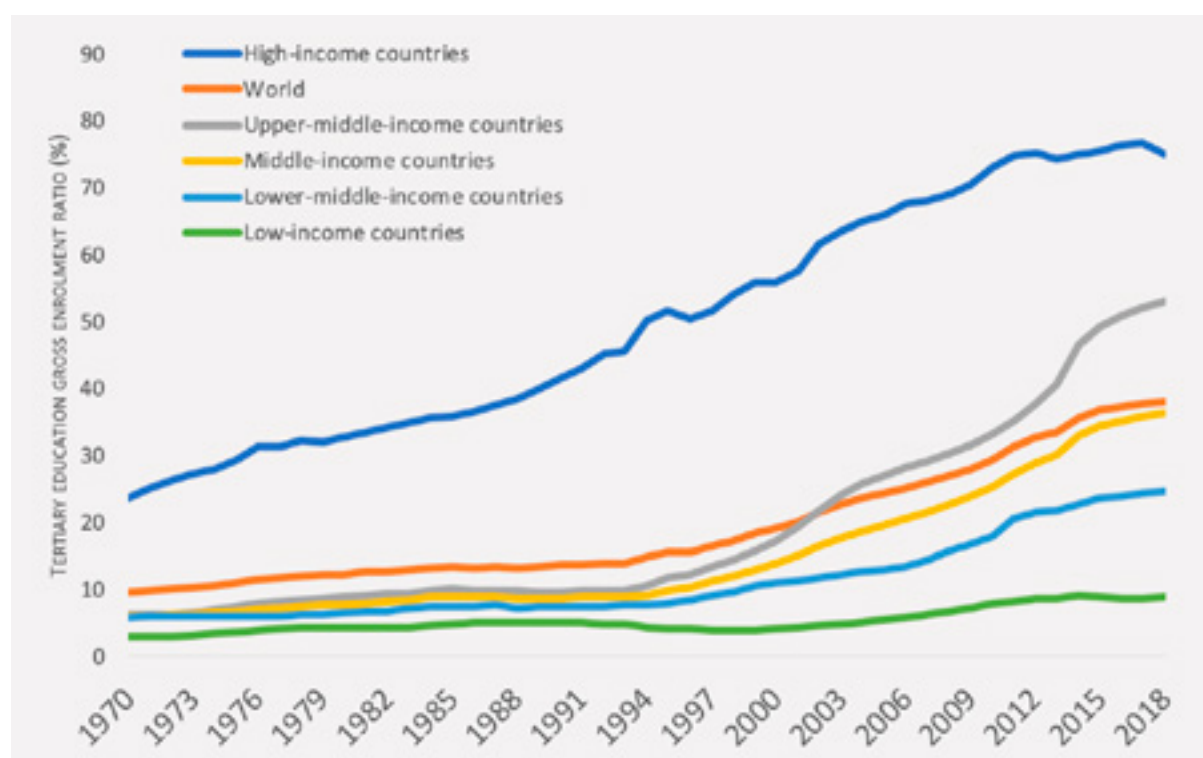
1.2 Expansion and diversification have led to more fragmented systems

Higher education systems have been shaped by a number of trends in recent decades. The following trends in particular have been posing challenges to the provision of flexible learning pathways: growth in demand for higher education, growth in numbers and types of providers, diversification of higher education institutions and programmes, and a more diverse student population.

Growth in demand for higher education

Demand for higher education has been rising steadily across the world. Global enrolment in higher education has more than doubled from around 100 million in 2000 to 221 million in 2017 (UNESCO, 2018a: 146). Between 2000 and 2015, the global higher education gross enrolment ratio as a percentage of the population aged 19 to 23 enrolled in higher education increased from around 19 per cent to 34 per cent (see *Figure 1*), and in 2017 this figure reached 38 per cent (UNESCO, 2018a: 304).

Figure 1. Tertiary education gross enrolment ratio, 1974–2018, by country income group (%)



Source: UNESCO-UIS, n.d.

Observed are upper- and lower-middle-income countries, which are exceeding the average of 4 per cent, with an annual growth rate of 7 and 5 per cent, respectively. Low income countries, on the other hand, match the global average, with a 4 per cent annual growth rate, while some high income countries are already experiencing a decline equal to 2 per cent per year. This is because a large number of high income countries have already achieved a comparatively high level of tertiary education enrolment. By 2040, the number of students enrolled in higher education globally is predicted to surpass 590 million (Calderon, 2018).

The rise in participation rates in higher education is partly due to higher progression and completion rates in secondary education, greater wealth overall, and a more equal distribution of income in some countries, as well as government policies that better support access to and participation in higher education (UNESCO and IIEP-UNESCO, 2017). In addition, there has been a rising demand for higher education from the middle classes, in particular in the middle income countries (Ferreyra, 2017; Marginson, 2017). This group wants 'their children to be upwardly mobile or to maintain their social position, and they have the discretionary income to finance those aspirations through tuition or taxation' (Marginson, 2017: 5). Finally, there has been an increase in non-traditional students entering higher education, as witnessed in some systems by growing numbers of adult students or students studying part time. Students over the age of 25, for instance, represent more than one-third of all enrolled undergraduate students in a number of countries across Europe, and this trend extends increasingly to other regions (UNESCO and IIEP-UNESCO, 2017).

Considering these trends, it is evident that over time, higher education has evolved from providing education for a few elite groups, to developing the knowledge and raising the qualifications of the broader population. A highly educated workforce is increasingly recognized as one of the key drivers of economic and social development, including for the implementation of the SDGs. Higher education also helps countries build their competitiveness in the global market and provides the knowledge base for research and innovation. As more countries reach universal participation,² and higher education becomes an indispensable asset, higher education institutions will be increasingly expected to contribute to the Sustainable Development Agenda through greater engagement with society, culture, and the environment.

Growth in numbers and types of providers

Evidence suggests that there are more than 18,500 higher education institutions offering at least a postgraduate or a four-year professional degree in 186 countries (International Association of Universities and UNESCO Information Centre on Higher Education, 2016).

Private-sector higher education has been developing rapidly, partly in response to the increase in demand but also as a way of diversifying funding for higher education. Estimations show that currently one-third of all higher education enrolments are in the private sector (UNESCO and IIEP-UNESCO, 2017). The private sector includes both government-dependent and independent higher education institutions, which can be non-profit or for-profit, and typically depend on third-party income. From a financial point of view, private institutions can be further categorized as 'state-supported', which applies to private universities that receive government funding; 'not-for-profit', which refers to institutions that are usually owned by a trust and depend on endowments and fees; 'religious-agency-supported', which applies to institutions run by established churches, and 'for-profit', which pertains to institutions operated by corporations for generating a profit (Varghese and Püttmann, 2011: 23–24).

Diversification of higher education institutions and programmes

Higher education expansion has resulted over time in a diversified higher education sector. Clark (1983) distinguishes between vertical and horizontal forms of diversification. The former refers to hierarchy and stratification of institutions, and the latter to differences between institutions in terms of mission and function. Diversification also refers to 'the process by which a system becomes more varied in its orientation and operations' (Varghese, 2014: 16).

To describe the proliferation of a diverse sector, Scott (1995) classifies higher education systems as dual, binary, unified, and stratified. Dual and binary systems comprise alternative types of higher education institutions, which are often differentiated by their study orientation (such as universities and polytechnics in some countries). Unified systems do not have a formal differentiation of institutions, and in stratified systems, institutions are assigned a role within the broader higher education context.

² According to Trow (2007), universal participation is reached at 50 per cent of gross enrolment ratio or above.

Worldwide, higher education sectors generally comprise both university and non-university institutions. The latter include technical institutes, polytechnics, and universities of applied sciences. The non-university sector of higher education started spreading in the 1960s and 1970s in response to changing demands for skilled labour (Kyvik, 2004). Institutions that are part of the non-university sector generally specialize in vocational, technical, or professional education and have a strong labour market orientation. They tend to focus more on applied research and experimental development and less on basic research, which is performed largely by universities.

Some higher education institutions cover all levels of qualifications, from short-cycle diplomas and certificates to doctoral degrees. Others provide education only at certain levels. Some institutions provide academic programmes, others offer vocational, technical, or professionally oriented education, and a third category delivers both types of provision. Institutions can also specialize in a small number of study fields or be more comprehensive and provide a wider range of programmes in different disciplines.

Higher education has also become increasingly internationalized, an example being the development of cross-border higher education. Cross-border activities refer to all initiatives that aim to enhance the international mobility of students, teachers, programmes, and institutions (Knight, 2004; Vincent-Lancrin, Fisher, and Pfothenauer, 2015). It expanded in scope and breadth over time, to include staff exchanges, branch campuses, foreign-owned universities, and franchised degree programmes or validations. Alongside the diversity of provision, new types of providers of cross-border higher education have emerged, including corporate universities, media and information technology companies, and international conglomerates. In some countries, foreign providers are credited with offering more flexible higher education, such as online or blended learning courses, which allow under-served groups to benefit from tertiary education (Frater, 2015). They may also provide a second chance to students who do not fulfil the requirements to enter a traditional university.

In addition to the institutions and programmes themselves, the way study programmes are delivered has also diversified, driven largely by the emergence of new technologies and digitalization. Considering that labour markets are changing rapidly, the need for upskilling and reskilling is growing in importance, and technological advancement is creating opportunities for skill development at a distance (Daniel, 2002). Therefore, traditional face-to-face learning is increasingly provided alongside alternative forms of delivery, including distance, blended, or e-learning.

A more diverse student population

In addition to diversification of the higher education provision, the expansion of higher education and its growing importance in society have led to 'an increasing diversity of students as far as their motives, talents and job prospects are concerned, as well as to more diverse needs of other users' (Teichler, 2004: 8). Apart from traditional students entering higher education after finishing upper secondary school, there are adult learners, returnees to higher education, people with caring responsibilities, migrants, and individuals with special needs who want to pursue higher education. But a more diverse student population also implies more diverse demands, and expectations of more flexibility (Unger and Zaussinger, 2018). This requires higher education to provide more opportunities for flexible learning, which will entail the development of alternative ways of planning, organizing, and delivering study opportunities. It will also require institutions to adapt their pedagogical approaches and assessment, as well as strengthen their guidance and counselling systems to be able to respond to different learning needs.

1.3 Other barriers to flexible learning pathways

In practice, a variety of systemic and institutional barriers can impede the development and implementation of flexible learning pathways in (higher) education systems. The existence of well-designed policies and steering instruments is essential to the creation of an environment that fosters flexible learning pathways. It is also necessary to identify barriers to policy implementation. The

following section will therefore present an analysis of obstacles that can stand in the way of flexible learning pathways, as they emerge from the literature.

A weak policy environment for flexible learning pathways

Higher education systems often lack an overarching framework that can support flexible learning pathways widely across the system (Moodie, 2010). Existing measures are usually 'based on singular institutional initiatives rather than on a coherent strategy covering all dimensions and goals associated with flexible learning' (Unger and Zaussinger, 2018: 8). Sometimes, institutions use informal transfer arrangements, applied on a case-by-case basis, using personal judgement and relationships rather than following standard guidelines established by a competent authority.

In some contexts, national higher education policies have been prioritizing the differentiation of higher education institutions, mainly through the development of a stronger non-university sector (more recently in particular in African countries), while focusing very little on improving articulation and pathways within such differentiated systems (Mohamedbhai, 2013).

Some countries may have a policy to support flexible learning pathways but limited experience of them in practice. This can happen, for example, in contexts where there is a lack of training or funding to carry out the implementation of the policy. In the United States of America (USA), for instance, the absence of institutional incentives for community colleges and four-year institutions was found to impede the investment of these institutions in the expansion of transfer pathways (Handel and Williams, 2012). In addition, implementing well-articulated learning pathways can be complex 'because it involves multiple institutional actors, multiple sub-sets of the educational system, and system-wide student information systems' (Ng'ethe, George, and George, 2008: 21). Therefore, a systematic approach comprising well-designed policies, funding, and training for the implementation of flexible learning pathways is required to capitalize fully on their potential (Unger and Zaussinger, 2018).

Administrative and structural fragmentation

Implementing flexible learning pathways requires the involvement of many stakeholders, and it is therefore a complex undertaking. Higher education officials often need to coordinate with ministries and institutions across different education levels (Ferreya, 2017: 251). But many countries have fragmented national governance structures, where a variety of ministries and buffer organizations are in charge of different parts of higher education (OECD, 2014). In some countries, higher education governance also involves different administrative levels (national and provincial, for instance). Processes for collaboration, consultation, and communication can be inefficient or missing, leading to segmentation and poor coordination. Fragmentation in the governance system and lack of coordination between different levels of education have been identified as factors that constrain articulation and flexible learning in higher education (OECD, 2014). Distributing authority among different actors, without a clear procedure for the coordination of activities, roles, and responsibilities can lead to paralysis and even conflict in the development of education reforms.

Fragmentation is also reflected in the way education systems are organized. Education systems traditionally have separate subsystems (general, vocational, and academic), typically covering primary, secondary and post-secondary education. Segmenting education and training systems can create institutional barriers, which limit students' opportunities to progress vertically to a higher-level programme, or horizontally by transferring between study fields (CEDEFOP, 2012). In some systems, 'tracking' occurs at an early age, forcing pupils to decide between a general or a vocational track early on. This allows little time for them to explore their interests, become more prepared, and make better-informed decisions regarding their studies and future goals. Allocating students to different tracks early in their education can make it particularly difficult for them to access more advanced levels of education later on (CEDEFOP, 2012). According to a 2012 report by the European Commission and the European Council, segmentation of education and training systems represents an obstacle to the development of flexible learning pathways (CEDEFOP, 2012). Although many countries have taken steps to build bridges

between their different subsystems, a lack of coordination, dialogue, and consensus among relevant stakeholders means that the implementation of flexible learning pathways remains a challenge.

Competition and institutional autonomy

Flexible learning pathways require collaboration between higher education institutions. However, the philosophy underlying New Public Management (NPM) aspired to make the public sector more efficient and outcome-oriented. In the context of higher education, NPM³ changed the traditional way of governing systems and institutions, by placing stronger emphasis on outputs and performance than on inputs and activities (Reale and Primeri, 2015). This has led to increased competition in higher education systems across the world, which has been further reinforced by the introduction of performance-based funding, research excellence initiatives, and ranking systems. Policies that instil competition in training and education systems have been recognized as being 'counterproductive in the development of cross-sectoral linkages that facilitate student mobility' (Walls and Pardy, 2010: 14).

Furthermore, higher education sectors increasingly operate in market-driven environments, and they often compete for the same students and the funding attached to them (Walls and Pardy, 2010). As a result, they often pursue differentiation strategies to better position themselves in the market, a trend that can go against collaboration. Therefore, the level of competition fuelled by both state steering and the growing importance of market-driven mechanisms is likely to reduce the willingness of higher education institutions to collaborate with one another, especially when they are dissimilar in missions, functions, and education provision. This may in turn affect the extent of permeability and flexibility in systems and institutions.

Higher education governance also refers to how authority is distributed between the state, the institution itself, and market forces, which varies widely across countries (Clark, 1983). In some economies with high levels of autonomy, governments play a limited role in policy-making. This is the case in particular in many countries in Latin America, where universities traditionally have a high level of autonomy and are therefore strongly involved in defining higher education policies (McCarthy and Musset, 2016; OECD, 2016; UNESCO, 2018b). Often, in the absence of system-wide policies, initiatives to support flexible learning pathways take place within and among institutions, giving institutions the power to choose who they want to collaborate with. Institutions may have full control over student selection, making multi- or cross-institutional efforts to implement access and progression pathways harder to implement (UNESCO, 2018b). Thus, in decentralized systems with high levels of institutional autonomy, decision-making regarding flexible learning pathways largely takes place within the higher education institutions themselves.

Differences between institutions and programmes

But there are also institutional factors that can limit the implementation of flexible learning pathways in higher education. These pertain to the differences that exist between institutions and programmes, which can be observed when looking at the admission requirements of institutions, the content and foci of curricula, pedagogical approaches, and assessment procedures (Bandias, Fuller and Pfitzner, 2011; Wheelahan, 2000).

Permeability is also influenced by institutional structures and education and training profiles (CEDEFOP, 2012). Certain elements of institutional policies and practices may limit the potential of flexible learning. Factors such as bureaucratic hurdles, inflexible course scheduling and study durations, and the failure of some institutions to adapt their provision to the needs of transfer students inadvertently hinder permeability and transferability (Handel and Williams, 2012). Lack of permeability between vocational/technical and academic programmes is a major obstacle. Vocational/technical and academic education generally have different objectives and knowledge characteristics,

³ While the NPM approach has been adopted by some developing countries and transitional economies, the use of NPM model is more prevalent in developed countries (Sarker, 2006).

which result in different learning outcomes. Vocational education usually focuses on tackling practical challenges related to a task, while academic education deals with the theoretical underlying features of the task (UNESCO, 2018b). In addition, vocational education and training are intended to address occupational and professional needs, while higher education serves a broader social and cultural purpose by advancing knowledge (Keating, 2008).

In some systems, traditional, well-established public universities are reluctant to recognize and transfer credits from vocational post-secondary institutions or from private providers. Universities often do not trust the rigour and quality of education provided by vocational/technical or private institutions and they do not want to accept students transferring from such institutions. Therefore, the gap between the specialized, skills-based competencies provided by vocational education and training and the more academic knowledge acquired in higher education creates barriers to permeability (Walls and Pardy, 2010). In Germany, for instance, comparability between post-secondary vocational programmes is facilitated by standards set by the regional authorities in charge of education; however, articulation from vocational to academic programmes remains problematic (OECD, 2014).

Using credit equivalences to identify learning outcomes can be a step forward, but such arrangements are still not widely reflected in practice. Defining a common currency of learning outcomes is challenging, partly because of the differences that exist between different types of provision and also because of the difficulty involved in measuring and assessing learning outcomes (UNESCO, 2018b).

Institutional culture and conservatism

Institutional culture, hierarchies of prestige, and lack of trust between institutions can also hinder the implementation of flexible learning pathways in higher education. This resistance to collaboration often develops 'from tradition, conservatism and the desire to preserve status, rather than from genuine educational concerns' (Singh, 1998: 15). As noted earlier, higher education institutions are increasingly operating in competitive environments, both nationally and internationally, and institutional actors may view individual profiling as a more promising strategy for guaranteeing a favourable market position than collaboration with the other institutions in the system. This has been driven largely by national and global rankings, though also by national policies, which influence institutional strategic planning in ways that can militate against collaboration.

The ability and motivation of education providers to develop a culture of flexible learning were identified as key enabling factors for successful articulation (Walls and Pardy, 2010). A smooth transition from vocational education and training (VET) to higher education 'will only be achieved through the adaptability of educators, administrators, and institutions and by VET providers describing and explaining the detail of the learning content to higher education staff' (Walls and Pardy, 2010: 8). Successful permeability between different higher education providers can be possible if institutions have a shared 'transfer-affirming culture' (Handel and Williams, 2012). Institutions that embrace such a culture regard student transfer as a joint responsibility, which is shared with other institutions. They also offer academic support to students to facilitate their progression and completion (Handel and Williams, 2012). A question that remains is how to make these relatively isolated institutional measures a common practice across the wider higher education system. But different types of institutions often have different academic cultures, which may hinder not only collaboration but also student transferability. For example, in Australia, students who move to universities from technical and further education colleges report stark differences between the cultural codes and study approaches in vocational education and higher education (UNESCO, 2018b). Similarly, the differences between the two- and four-year institutions in the USA, the former providing more open access and the latter being more selective, create two different organizational climates, which impacts on their articulation and collaboration with one another. Students who transfer from community colleges to four-year universities often experience 'transfer shock', reflected by a drop in their grades during the first study period at the receiving institution (Handel and Williams, 2012). In Argentina, universities and university institutes (also known as the SEU subsector) are recognized as having a very different institutional culture from the the higher education institutes

for technical/vocational education and teacher training (the SIES subsector). These differences pertain in particular to relationships with the state, traditions of teaching, autonomy, and extent of involvement in scientific research (Sharpe, 2015).

Poor information and guidance on study opportunities

Information, guidance, or counselling services that support learners in their transition to and progression through higher education are often absent or poorly developed (American Association of State Colleges and Universities, 2005; O'Meara, Hall, and Carmichael, 2007). In light of diversified higher education systems offering multiple study options, students may experience confusion and difficulty in deciding which study path best fits their personal and professional goals. Given that the process of applying to higher education is already complex and implies a number of decisions at lower levels of education, information and guidance are required early on, even before learners reach the stage of entering higher education. Moreover, students often do not understand how a programme in upper secondary education relates to a programme in higher education (OECD, 2014). This may result in a missed opportunity for them to advance to higher education, or even if they do, they may not necessarily have been prepared to succeed in their studies. The lack of clear pathways between upper secondary and higher education is recognized as a challenge in a number of countries.

A lack of, or inadequate, guidance makes it difficult for students to make informed decisions that would allow them to succeed in their chosen pathway. In the USA, for example, 'the current transfer process, coupled with the multitude of programs and majors offered by two- and four-year institutions, exacerbates what is already endemic to many colleges and universities: the lack of adequate guidance, especially for students who need it most' (Handel and Williams, 2012: 16). A lack of information and support can have adverse consequences for students. For example, they may enrol in fields of study that do not match their interests, aspirations, or professional goals, or they may decide to quit their studies without being informed about alternative pathways they could pursue. In Colombia, for instance, approximately half of a student cohort drops out, partly as a result of insufficient academic and career guidance and support (OECD, 2016). In general, adequate information and guidance services can help lower dropout rates, improve retention rates, and support students to make better-informed decisions.

2. Policy frameworks and instruments that can facilitate flexible learning pathways

National policy frameworks are essential for providing guidance to institutional actors and stakeholders in higher education systems. There are a number of policies and regulatory measures governments can use to improve permeability in their higher education systems and to ensure that students have access to flexible learning opportunities. For instance, the need to improve flexibility in (higher) education can be embedded into national legislation or stated as an objective in education policies. In addition, state officials can devise policy instruments that will build an enabling environment for flexible learning pathways in their higher education systems. Examples of such instruments are national qualifications frameworks, quality assurance and accreditation, credit accumulation and transfer systems (CATs), and information and guidance services. If designed adequately, they can be used to translate policy objectives for flexible learning pathways into institutional practices.

Nevertheless, there are also institutional practices which higher education institutions can adopt to make their study programmes more flexible and more easily accessible to different types of learners. For example, institutions can decide to provide multiple entry routes and progression pathways to learners. Such pathways can be facilitated through the establishment of bridges between institutions and study programmes, through the recognition, validation, and accreditation of formal, non-formal, and informal learning, or through inter-institutional transfer arrangements. Finally, higher education providers can also make the organization and delivery of study programmes more flexible and more centred around the needs of the learners.

2.1 Policy frameworks to support flexible learning pathways in higher education

Ensuring that students can enter higher education through different routes and can progress smoothly through their studies requires a good level of coordination between different education providers, including secondary and post-secondary education institutions. Ideally, a comprehensive national policy framework targeted at building better-articulated education systems will guide this coordination and set clear standards that can support institutions in devising and implementing flexible and permeable learning pathways. Such a framework can comprise, inter alia, legislation, regulation, funding, articulation and transfer policies, or policies pertaining to lifelong learning, recognition of prior learning, and credit accumulation and transfer.

Devising a comprehensive Higher Education Act that covers both the university and the non-university sector is important. In Estonia, for example, the government has developed an integrated Higher Education Act that embeds the university and non-university subsectors into one unified piece of legislation. Prior to this, the university subsector had been regulated through the Universities Act and the non-university subsector through the Institutions of Professional Higher Education Act. The new law, which was passed in February 2019, aims to improve coordination between academic and vocational/professional education and training (Government of Estonia, 2019).

Another example is the Malaysia Education Blueprint 2015–2025 on Higher Education, which serves as a strategic framework for the development of Malaysia's higher education sector over 10 years. The framework envisages a higher education system that 'is less focused on traditional, academic pathways and that places an equal value on much-needed technical and vocational training' (Ministry of Education of Malaysia, 2015: 11). It also lays the foundation for the development of a framework for the recognition of prior learning and the establishment of pathways for entry and re-entry into the higher education system.

The Flemish Community of Belgium applies a system-wide approach to the provision of flexible learning pathways, through its 2004 Flexible Learning Paths Act (OECD, 2019). Here, study programmes comprise a bundle of stand-alone modules, the completion of which results in a so-called credit certificate. Students in the Flemish system have the opportunity to pursue a degree contract, a credit contract, or an examination contract. The degree contract applies to students who intend to complete a programme of study and take a degree. The credit contract is for those who wish to enrol only in specific modules and obtain specific credit certificates. The exam contract grants learners the right, under terms and conditions specified by the board of the higher education institution, to take exams in order to obtain a degree or a credit certificate without being required to attend classes.

In South Africa, the need to provide learners with pathways into higher education and the world of work has been a national imperative, which is emphasized in the 2013 White Paper for Post-School Education and Training and the 2017 Articulation Policy for the Post-School Education and Training System of South Africa (South African Qualifications Authority, 2017). The latter sets out the legislative and regulatory framework for articulation for all education providers in the country. It aims to ensure that 'articulation occurs within and between the three NQF [National Qualifications Framework] sub-frameworks, that institutions work together to develop learning and work pathways, and that support is provided for learners as they follow their individual learning and work pathways' (South African Qualifications Authority, 2017: 1).

Another example of a policy framework for an integrated higher education system exists in Jamaica, where the government is working on creating a higher education system that enhances student access and progression throughout the system, makes higher education more affordable, and aligns education and training provision better with the needs of the labour market (see *Box 1*).

The need for flexible learning pathways can also be emphasized in national strategies for higher education, development plans, strategic programmes, or other governmental initiatives. In Finland, for example, the 2015 Strategic Programme of Prime Minister Juha Sipilä's Government established 26 projects to implement its policy goals, one of which aims to strengthen linkages and permeability between upper secondary education, higher education, and the labour market (Government of Finland, 2015). To achieve this, the government envisages making transfers between and within levels of education more flexible, reforming the entrance examination process to higher education, introducing a new study path in higher education (professional specialization studies), updating qualification requirements in the public sector, and improving collaboration between secondary education and higher education.

Many countries have devised lifelong learning policies, to emphasize that knowledge-based societies, in order to attain good economic and social outcomes, need opportunities for learning throughout the life span. Lifelong learning has both a 'lifelong' and a 'life-wide' dimension (Clemans, 2015). The lifelong dimension suggests that individuals should continue learning throughout their lives for professional or personal reasons, and that this learning can take place not only in organized and formal environments but also in non-formal settings. The life-wide dimension recognizes that opportunities for learning are also provided through informal settings, for instance through an individual's interaction with family, the workplace, and the community. Lifelong learning policies often serve as broad frameworks that state what different sectors (including higher education) and stakeholders can do to promote learning opportunities for individuals at different stages of their lives. They often advocate increased flexibility in education systems, and the provision of pathways suitable for different types of learners, including non-traditional groups. Thus, lifelong learning policies strongly align with the idea of introducing more flexibility and multiple pathways into education systems, in order to meet different learning needs. They can serve as frameworks that guide higher education institutions to adopt their own lifelong learning strategies and create more student-centred and flexible learning environments. The UNESCO Institute for Lifelong Learning provides evidence which suggests that at least 52 countries across the world have policies or strategies for lifelong learning (UNESCO-UIL, n.d.b).

Box 1. Policy for an integrated higher education system in Jamaica

In its attempt to increase the percentage of the population holding a bachelor's degree as their minimum qualification to 80 per cent in the next decades and to make higher education more responsive to the needs of the labour market, the Government of Jamaica has been working on a tertiary education policy aimed at creating an integrated higher education system. This integration is envisaged to take place through articulation agreements, credit accumulation and transfer systems, and the development of credentials that are recognized by both vocational and academic education providers. The objectives of the reform are to diversify access routes to and widen participation in higher education, optimize linkages between secondary education and higher education, promote quality, integrate technical skills and interdisciplinarity into study programmes, promote internationalization, encourage a more efficient use of resources, and contribute to socio-economic development. In 2010, the Career Advancement Programme (CAP) was introduced as an alternative to the Caribbean Advancement Proficiency Exam (CAPE) which aims to prepare students for tertiary education for an additional two years (Grades 12 and 13) after obtaining their Caribbean Secondary Examination Certification. CAP is oriented towards students who complete secondary level education (11 years of primary and secondary education) without any formal certification that would enable them to enter tertiary education or the labour market. After completing CAP, students can matriculate into Occupational Associate Degrees, which were designed recently and are more aligned to competency-based education and training. The Occupational Associate Degrees have been designed to offer numerous industry-specific trainings at the tertiary level. Both CAPE and CAP follow a 2 + 2 concept. In the case of CAP, this concept implies that the first two years are completed in high school (Grades 12 and 13) and can lead to an Associate Degree. As a result, students who obtain an Associate Degree can be entitled to a reduced study duration and the final two years can be completed at the Bachelor's level. This measure is expected to lead to improved transition rates from upper secondary to higher education and efficiency gains for students (by lowering the time and costs associated with a higher education degree) and the government (by getting students to progress and graduate faster). The government is also aiming to put VET on a par with academic education through better synergies between the National Qualifications Framework and quality assurance for VET, and academically oriented education.

Source: University Council of Jamaica, 2017; Williams, 2018.

Some countries may have national articulation or transfer frameworks mandated by the government, designed to provide formal and systematic standards for articulation and transfers between higher education institutions. Articulation frameworks represent 'arrangements that facilitate transitions between individual institutions and programmes. They may include 'common core curricula ..., guidance for students who envisage transferring their credits, incentives for institutions to establish articulation agreements, and data collection to monitor credit transfers' (OECD, 2014: 100). Such initiatives are useful as they usually set out procedures for curriculum coordination across different types of higher education providers and in some cases even list courses that are considered equivalent across institutions (Irvine, 2017).

2.2 Policy instruments to support flexible learning pathways in higher education

National authorities, in collaboration with relevant stakeholders, can devise policy instruments to create an enabling environment for flexible learning pathways across higher education institutions. The most common policy instruments associated with flexible learning pathways are national qualifications frameworks, quality assurance and accreditation, CATs, and information and guidance services.

National qualifications frameworks

National qualifications frameworks have been an important element of recent education reforms in developed, transitioning, and developing countries (Singh and Deij, 2016). National qualifications frameworks form a mechanism to classify and recognize study programmes on the basis of level and subject matter descriptors and they serve as central reference points for the recognition of non-formal

and informal learning (CEDEFOP, 2017). They allow the streamlining of learning outcomes and define level- and subject-related standards for issuing qualifications across different higher education institutions (UNESCO-UIL, 2015). The role of these frameworks is also to facilitate entry to and progression through higher education, so that students can move into and out of institutions, levels, and programmes, or switch between them on the basis of learning outcomes and competencies that are comparable across institutions and study programmes.

In UNESCO's Glossary of Basic Terms and Definitions in Quality Assurance and Accreditation, national qualifications frameworks are defined as 'a comprehensive policy framework, defining all nationally recognized qualifications in higher education in terms of workload, level, quality, learning outcomes and profiles. It should be designed to be comprehensible through the use of specific descriptors for each qualification covering both its breadth (competencies associated with learning outcomes) and its depth (level). It is structured horizontally in order to cover all qualifications awarded in a system, and vertically, by level. Its purpose is to facilitate: (i) curriculum development and design of study programmes; (ii) student and graduate mobility; and (iii) recognition of periods of study and credentials.' (UNESCO, 2007: 67–68).

Qualifications frameworks promote student mobility through the transfer of qualifications. They also focus on learning outcomes and learning pathways towards a qualification and describe linkages between qualifications in a given education system. Furthermore, they facilitate goal-setting for continuous learning. In some cases, qualifications frameworks serve as a code of practice for institutions, as they provide descriptors for each level of education.

National qualifications frameworks can be outcome-led or outcome-referenced. The former recognize qualifications irrespective of delivery mode or approach to learning, and they tend to focus less on input factors, such as duration of studies or institutional origin (Harvey, 2004: 18). The latter recognize that learning outcomes represent an important element in building a common language across sectors of education. They tend to focus more on input factors and take into account learning modes and duration of studies. In most of Europe, national qualifications frameworks are comprehensive, outcome-referenced, and focused on learning outcomes (Harvey, 2004: 18).

Qualifications frameworks can be devised both at the national and at the regional level. While they define standards at the national level, they are also instruments that facilitate recognition and student mobility at the regional level. Examples of regional qualifications frameworks are the European Qualifications Framework, the Pacific Qualifications Framework, the Sub-regional Qualifications Framework of the Southern African Development Community, and the Qualifications Reference Framework of the Association of Southeast Asian Nations (ASEAN). Regional qualifications frameworks often serve as an impetus for some countries to develop their own national qualifications frameworks. Integrated national qualifications frameworks that cover all types of provision at all educational levels can be strong tools for building more flexible and cohesive higher education systems. They also show the relationships between different types and levels of qualifications better (CEDEFOP, 2012). This is the case in countries such as Germany, Ireland, and Lithuania, which have national qualifications frameworks that comprise all types of qualifications at all levels (CEDEFOP, 2012). Frameworks in other countries, including Finland, the Netherlands, Sweden, and Norway, are designed to show linkages between initial education and continuing education and training. Integrated national qualifications frameworks extend beyond Europe as well (see *Box 2*). In general, national qualifications frameworks are viewed as important instruments because of their potential to place all types of learning, including formal, non-formal, and informal, on comparable levels (CEDEFOP, 2012).

However, many countries still do not have a comprehensive qualifications framework that covers all types of provision at all levels. Some tend to have separate qualifications frameworks and credit transfer systems for academic and vocational education, which restricts permeability in the system. Chile, for example, has different qualifications frameworks for different sectors. These include a qualifications framework for higher education, one for technical/professional education, another one for work-related qualifications and competencies, and a number of industry-specific frameworks. Recognizing the challenges that can arise with the existence of multiple qualifications frameworks, the government

plans to develop a comprehensive and universal national qualifications framework to promote lifelong learning, facilitate student mobility, broaden educational and training opportunities for adults, develop a common language regarding competencies, and improve employability (CEDEFOP, 2017).

Box 2. Integrated national qualifications frameworks in Malaysia and South Africa

Malaysia

The Malaysian Qualifications Framework (MQF) was adopted in 2007 and represents a unified system of national qualifications from all education and training institutions, including colleges, universities, vocational institutions, professional bodies, and other higher education institutions in the public and private sectors. In addition, it considers workplace training and other types of non-formal learning. Among the objectives of the MQF is to reduce the divide between academic qualifications and vocational education and training qualifications, by building stronger synergies between the two subsectors and strengthening their contribution to lifelong learning (Malaysian Qualifications Agency, 2017). The MQF was adopted through a process of stakeholder consultations and was benchmarked against international best practices. The MQF envisages widening access to education and increasing equity; promoting the recognition of prior learning; providing alternative educational pathways and mobility between programmes; minimizing differences (for example, in entry requirements and credits) between public and private higher education; and increasing the legitimacy and relevance of qualifications. The MQF is also closely linked to the quality assurance system, which supports the assessment of qualifications. Since 2011, the accreditation of programmes and qualifications within the higher education and training sector is subject to their adherence to the MQF.

Source: Malaysian Qualifications Agency, 2017.

South Africa

South Africa adopted its National Qualifications Framework (NQF) in 2008. It was designed as a holistic system for the classification, registration, and publication of articulated qualifications and partial qualifications (South African Qualifications Authority, 2014a). The NQF consists of three sub-frameworks, which are coordinated: one for general and further education and training, one for higher education, and one for trades and occupations. The declared objectives of the NQF in South Africa are to facilitate access, mobility, and progression within education, training, and career paths; to improve the quality of education and training; and to enhance equity by eradicating discrimination in education, training, and employment. The South African Qualifications Authority developed level descriptors for each of the 10 levels of the NQF, to support the implementation of qualifications and facilitate the development of evaluation criteria for comparability and articulation of qualifications.

Source: South African Qualifications Authority, 2012.

Quality assurance and accreditation

Quality assurance and accreditation is another instrument, which, if designed appropriately, can support flexible learning pathways in higher education. UNESCO defines quality assurance as 'an all-embracing term referring to an ongoing, continuous process of evaluating (assessing, monitoring, guaranteeing, maintaining and improving) the quality of a higher education system, institutions, or programmes' (UNESCO, 2007: 74).

The creation of quality assurance systems marks a significant global reform in higher education over the past decades. Both external quality assurance (implemented for instance by a national agency) and internal quality assurance (implemented by a higher education institution) have developed in higher education systems worldwide, and they can be seen as two sides of the same coin (Vroeijenstijn, 2007). The USA established the first formal quality assurance system at the beginning of the 20th century, to facilitate the transfer of students from one higher education institution to another. Many countries in Latin America and Asia created quality assurance systems alongside their privatization policies in the 1990s. In Europe, some countries created quality assurance systems during the 1980s, but quality assurance became a compulsory reform for signatory countries with the implementation of the Bologna Process (Crozier *et al.*, 2006). Like qualifications frameworks, quality assurance systems can be and have

been used to support regional integration processes. Examples of regional quality assurance networks are the European Association for Quality Assurance in Higher Education (ENQA), the African Quality Assurance Network (AfriQAN), the Caribbean Area Network for Quality Assurance in Tertiary Education (CANQATE), the ASEAN Quality Assurance Network (AQAN), and the International Network of Quality Assurance Agencies in Higher Education (INQAAHE).

Quality assurance systems tend to be diverse with regard to objectives, orientation, mechanisms used, scope, and management. Some fulfil an accreditation function, while others are used to perform assessments, reviews, or audits (Martin and Stella, 2007). Some may take a fitness-for-purpose approach, where quality is measured against the objectives of the institution under evaluation. Others follow a standards-based approach, where institutions are evaluated against predefined requirements. A standard, according to UNESCO, is a 'statement regarding an expected level of requirements and conditions against which quality is assessed or that must be attained by higher education institutions and their programmes in order for them to be accredited or certified' (UNESCO, 2007: 89). The standards-based approach has become more common over time, and accreditation is currently the predominant mechanism for quality assurance (Sanyal and Martin, 2007). In addition, standards used for quality assurance can be in the form of minimum standards or good practice standards (Martin, 2007). In both cases, they help higher education institutions and their programmes make strategic decisions on the basis of available resources and practices.

One variant of quality assurance focuses specifically on study programmes. Standards can be generic for all programmes, or they can be more subject-specific and express desirable learning achievements as objectives. This is the case, for instance, in the quality code of the United Kingdom of Great Britain and Northern Ireland (UK) Quality Body for Higher Education, which has developed subject benchmarks as a reference for content and levels. Quality assurance of study programmes typically starts with an assessment of intended learning outcomes at the programme and course level. It also assesses the alignment of pedagogical capacities, available resources, and the broader institutional environment.

A standards-based approach in quality assurance can be an important tool for supporting flexible learning pathways in a diverse higher education system. The Finnish Education Evaluation Centre, for example, evaluates the quality management systems of universities and universities of applied sciences, taking into account the availability of flexible study paths (Finnish Education Evaluation Centre, 2017). Here, the higher education system is designed to allow students to transfer between programmes and institutions and to put work- or practice-based credits towards the completion of a study programme.

Quality assurance can also support flexible learning pathways by elevating the value of non-formal and informal learning, which students can use to access these pathways and progress through them. The Scottish Credit and Qualifications Framework (SCQF), for example, gives higher education institutions, publicly funded tertiary education colleges, and other approved organizations the right to become Credit Rating Bodies (CRBs) (Harris and Wihak, 2018). Approved CRBs can award SCQF qualifications on the basis of formal, and increasingly, non-formal education (see *Box 3*).

Quality assurance can also be used to strengthen the articulation between general/academic education, and vocational education and training. Estonia, for example, has been experimenting with the development of a common procedure to assess study programmes in vocational education/ training and higher education (see *Box 4*).

Despite its potential to support flexible learning pathways, quality assurance can sometimes restrict permeability and flexibility in higher education. To strike a balance between accessibility, flexibility, and quality, quality assurance agencies may in some cases allow only a certain percentage of students to access higher education through recognition of prior learning or only a certain number of credits to be transferred from one type of provision to another. The Qualifications Agency of Malaysia, for example, which is the entity responsible for the implementation of the country's national qualifications framework, permits only 30 per cent of a qualification to be obtained through credit transfer (Allais, 2010). Similar procedures can be found in Latin American countries and in South Africa, where student transfers are closely monitored by quality assurance entities.

Box 3. The Scottish Credit and Qualifications Framework

The Scottish Credit and Qualifications Framework (SCQF) is acknowledged to be one of the most developed and integrated frameworks supporting lifelong learning. The Framework provides advanced procedures for the recognition of non-formal education, particularly through its practice of assigning the title of Credit Rating Body (CRB) to providers of formal and non-formal education. Within the SCQF, higher education institutions, publicly funded tertiary colleges, and other approved organizations (for instance professional bodies) can apply to become a CRB, which grants them the right to award SCQF qualifications. Institutions applying to become CRBs need to fulfil strict criteria. They need to demonstrate a successful track record in the design and delivery of education, and show that they already have a robust internal quality assurance system and that they have the capacity and commitment to operate as CRBs. In the event that an organization does not meet all the criteria to operate as a stand-alone CRB, it can apply to become a CRB as part of a collaborative partnership. Once an institution is granted the CRB title, it can also apply for permission to credit-rate the non-formal education of other providers, which is known as a third-party arrangement. This means that an education provider (of formal or non-formal education) can register its provision either directly through the SCQF or through a CRB, upon meeting pre-defined requirements. All recognized non-formal education (registered directly or through a third-party arrangement) is recorded in the SCQF database. The original providers retain ownership of their education in the database.

Source: Harris and Wihak, 2018.

Box 4. The Estonian framework of assessment for vocational education and training and higher education

The Estonian Quality Agency for Higher and Vocational Education (EKKA) is responsible for the external evaluation of vocational and higher education in Estonia. EKKA conducts institutional accreditation of higher education institutions, and quality assessments of higher education study programme groups (a subdivision of study programmes which comprises fields of study and curriculum groups), as well as accreditation of study programme groups in vocational education and training (VET). In 2016, EKKA undertook a first integrated assessment of VET and higher education study programmes at the Estonian Academy of Security Sciences. The Academy is an institution of professional higher education, which delivers education in the area of internal security. The Academy provides education at different levels, resulting in qualifications at International Standard Classification of Education (ISCED) levels 4–7. In previous assessments, EKKA used different requirements and criteria to evaluate study programme groups in higher education and VET. For higher education providers that deliver both types of provision (VET and general), the submission of separate assessments often results in duplication of information and work overload. Therefore, higher education institutions solicited the establishment of a common approach to the accreditation of higher education and VET. In response to this request, EKKA conducted a first pilot of an integrated assessment in higher and vocational education study programme groups. The assessment included 12 VET and higher education study programmes offered at the Estonian Academy of Security Sciences, comprising 6 VET programmes, 5 professional higher education programmes and 1 master's programme. The methodology for this integrated assessment was developed jointly by VET and higher education experts from EKKA. It resulted from a comparative analysis of the sets of standards and criteria set for VET and higher education study programmes. A joint expert panel was formed, consisting of employer representatives, VET and higher education experts, and student representatives. On the basis of the positive feedback collected from the stakeholders involved in this pilot, EKKA envisages conducting integrated assessments of higher education and VET in other institutions of professional higher education that offer VET. EKKA is also considering creating domain-specific joint committees for the assessment of VET and higher education programmes in similar fields of study.

Source: Kroonmäe and Bauman, 2017.

National qualifications frameworks and quality assurance can be mutually reinforcing in strengthening flexible learning pathways in higher education. For instance, registration of an academic programme at a certain level on the qualifications framework may be granted only if the programme undergoes a quality assurance process, as is the case in South Africa for new programmes. In this case, an academic programme assessment at the level of subject descriptors can help to ensure that teaching is carried out at an appropriate level. Furthermore, qualifications frameworks provide statements about generic competencies that graduates are expected to acquire at each level of education. Such statements provide a valuable frame of reference for both internal and external quality assurance processes. The Dublin descriptors, for instance, used in the European context, are a formal reference point for the assessment of levels of degrees. A number of national bodies across Europe have been using the Dublin descriptors in their own national qualifications frameworks.

Initiatives to link national qualifications frameworks and quality assurance systems in order to strengthen articulation in higher education are witnessed in other systems as well. Botswana, for example, is trying to foster stronger linkages between academic and vocational education through quality assurance, credit systems that define qualifications, and the recognition of prior learning and current competences. It uses its National Credit and Qualifications Framework to create systems for the recognition of prior learning and competences, in order to evaluate and recognize skills obtained in formal, non-formal and informal settings (UNESCO-UIL, n.d.a). The Malaysian Qualifications Authority is the entity responsible for the management and implementation of the national qualifications framework in Malaysia, and it carries out these tasks through programme accreditation (Gobaloo and Fahmi, 2013). National qualifications frameworks are used to facilitate recognition of all forms of learning in countries such as Botswana, Ghana, Mauritius, the Seychelles, and South Africa (CEDEFOP, 2017). In these countries, gaining a qualification that is placed on the national qualifications framework through recognition of prior learning is possible and encouraged by their respective qualifications authorities.

Credit accumulation and transfer systems

Credit accumulation and transfer systems (CATS) are another policy instrument that can support flexible learning pathways in higher education. Credit transferability facilitates student mobility through the recognition and transfer of learning achieved in different settings. A credit transfer system is defined by as 'a system which provides a way of measuring and comparing learning achievements (resulting from a course, training or a placement) and transferring them from one institution to another, using credits validated in training programmes' (UNESCO-UNEVOC and NCVER, 2009). Credit transfer increasingly involves both 'transfer between dissimilar institutions and curricula and recognition of extra-institutional learning, as well as transfer between institutions and curricula with similar characteristics' (Reilly, Mitchell, and Eaton, 2017: 1). CEDEFOP links the term to the recognition of prior learning and defines a credit system as 'an instrument designed to enable accumulation of learning outcomes gained in formal, non-formal, and/or informal settings, and facilitate their transfer from one setting to another for validation and recognition. A credit system can be designed by describing an education or training programme and attaching points or credits to its components or by describing a qualification using learning outcomes units and attaching credit points to every unit (UNESCO-UNEVOC and NCVER, 2009). Credit transfer has to do with 'the fairness of articulation experiences to support learner mobility' (Walls and Pardy, 2010: 8).

Credit transfer systems, like qualifications frameworks, have a strong regional and global dimension, since they are a commonly used instrument to facilitate recognition and student mobility across borders. European countries, for instance, are using the European Credit Transfer and Accumulation System (ECTS) to promote student mobility (Crosier and Parveva, 2013). With the help of ECTS, students can spend part of their studying time in another country and earn credits, which they can later on transfer back to their home country. The ECTS has served as a model for other regions developing credit transfer systems. Examples are the University Credit Transfer System (UCTS) for University Mobility in Asia and the Pacific, and the System for Academic Credits (Sistema de Creditos Academicos) in Latin America (Adamu, 2015).

Challenges can arise when the credit accumulation and transfer policy does not define on which levels of the national qualifications framework the transfer of credits is possible, and does not seek out required 'agreement on the unit of credit and the process of credit rating itself' (Tuck, 2007: 57). Other barriers to credit transfer are competition, current funding arrangements, and the role of professional associations (Walls and Pardy, 2010). Professional associations, for example, hold considerable control over the design, content, and structure of programmes, which may limit the extent of credit transfer in the university system (Walls and Pardy, 2010).

Establishing a credit transfer system can also be challenging if countries do not have a system for the recognition of prior learning or if they lack appropriate regulatory mechanisms (Adamu, 2015). For example, in some countries, such as Peru, the fragmentation of the vocational education sector makes it difficult for students to transfer from technical education programmes into further education, training, and higher education without losing credits (McCarthy and Musset, 2016). This is despite the fact that some technical institutes and sectorial schools (often employer-led VET establishments that aim to provide skills and training specific to the sector) offer programmes in many of the same subject areas as universities. The Republic of Korea is acknowledged as an example of good practice for its countrywide system of recognizing credits obtained from formal and non-formal learning (see *Box 5*).

Box 5. The Academic Credit Bank System in the Republic of Korea

The Republic of Korea has a unique countrywide measure to recognize non-formal education in higher education. This initiative is known as the Academic Credit Bank System (ACBS), and was established by the government at the end of the 1990s in an effort to provide a less costly alternative to a higher education degree and to create an appreciation for lifelong learning in society. The ACBS is a degree-granting institution that allows students to obtain a higher education degree by combining credits obtained in different settings. A key feature of the ACBS is 'to create a system that helps learners translate their learning experiences into credits so that they can accumulate credits and transfer to further learning' (Lee and Ko, 2014: 63). ACBS recognizes credits obtained through both formal and non-formal education; that is, credits can be transferred from other higher education institutions, or non-formal education and training providers that have been accredited by the ACBS (including private institutions). ACBS also recognizes credits transferred from the Bachelor's Degree Examination for Self-Education, a system that allows students to obtain a bachelor's degree without attending a higher education institution (Lee and Ko, 2014). Such degrees are generally awarded on the basis of an examination administered by the National Institute for Lifelong Education of the Ministry of Education. Finally, ACBS recognizes and accredits expert and apprentice activities that are of cultural value (Harris and Wihak, 2018). Non-formal education programmes are benchmarked against National Institute for Lifelong Education ACBS curriculum models, which are in turn based on national higher education curricula. In addition to curricular fit, ACBS takes into account staff qualifications, assessment methods, facilities, and coverage of major subject areas in non-formal education programmes. The development of ACBS has been considered a success in making higher education available to non-traditional learners, and steering the higher education system in the Republic of Korea towards more flexible progression pathways and a learning culture centred on lifelong learning. This success has been reflected in the numbers. In 2009, the ACBS awarded more than 34,000 bachelor's degrees, which accounted for a tenth of all undergraduate degrees awarded in the Republic of Korea during that year.

Source: Harris and Wihak, 2018.

Transferability can be limited if countries do not have a standard system to establish credit equivalences, particularly between different types of provision (such as vocational education/training and general education). Europe, for instance, has been confronted with this problem, where mobility between vocational education and training and higher education is constrained by a lack of compatibility between the credit system for higher education – the ECTS – and that for vocational education and training – the ECVET (European Credit system for Vocational Education and Training) – respectively (EURASHE, 2017). This is partly because the two credit systems stem from two distinct initiatives. The ECTS was developed

as part of the Bologna Process (1999) within the framework of the European Higher Education Area, while the ECVET was developed as a result of the Copenhagen Process (2002).

Recognizing this problem, European and national policy-makers are considering moving away from the hours of ECTS and the points of ECVET to a competence-based framework (Baykan, 2015). Such a framework would facilitate student transferability between VET and higher education by identifying levels of competences that are comparable across study programmes. In the USA for example, the state of Florida adopted a common course numbering system, which attributes the same number to courses offered by different higher education providers but which are similar in content. Therefore, similar courses offered in different institutions are considered comparable and provide the same credits. The aim of the reform was to facilitate pathways across levels and degrees in post-secondary education institutions (UNESCO, 2018b). In Japan, a credit transfer programme has been in place to encourage universities and junior colleges to exchange credits with professional training colleges. This initiative stemmed from a deregulation of the curriculum in the early 1990s, which introduced more flexibility in the system of credit recognition in higher education, and put more emphasis on non-formal and informal learning (Sawano, 2015).

Other countries have also introduced measures to facilitate credit accumulation and transfer across institutions and disciplines. In Norway, for example, credit recognition between institutions has been obligatory since 1981, and evidence suggests that between 10 and 20 per cent of students change institutions during their studies (OECD, 2014: 102). In Finland, the Universities Act explicitly notes that universities must admit transfer students, i.e. students 'whose right to study is transferred from one higher education institution to another or within a single higher education institution from one degree programme to another' (Ministry of Education and Culture of Finland, 2009).

Finnish universities are also part of the Flexible Study Rights Agreement (known as the JOO), which enables graduate and postgraduate students to take courses at other universities and include them into their degrees (Lahtinen, 2018). India introduced a choice-based credit system in 2015 to make it easier for students to select courses and earn credits across different disciplines. The reform also aims to make the system of higher education more flexible and to provide students with a well-rounded education, through a stronger emphasis on interdisciplinary learning (Kapur, 2017).

Colombia has also been working on developing a system for the accumulation and transfer of academic credits. The system aims to improve mobility across sectors, including providers of non-formal learning, vocational education and training, and general and academic-oriented higher education (Pacheco, 2017). And finally, South Africa has a National Policy for Credit Accumulation and Transfer, which sets forth nationally agreed principles for progression from one qualification to another (South African Qualifications Authority, 2014a).

Information, guidance, and counselling services

Information, guidance, and counselling is another important policy instrument for supporting flexible learning pathways in higher education. Considering the complex process of applying to higher education and the huge number of study programmes available, it is essential that information, guidance, and counselling services are available to students to support them in their transition to higher education and their progression through their studies. The provision of information and guidance is important and relevant to all students, and to disadvantaged groups in particular. For example, adults or individuals with caring responsibilities may need special support and guidance on alternative ways to access higher education. Or students who are already enrolled and want to switch to a different study programme may need information and advice on the possibilities for credit transfer and the recognition of prior learning.

Guidance and counselling services can thus play a particularly important role in raising awareness and aspiration among disadvantaged groups, who often regard higher education as an unattainable goal. Furthermore, such services can also serve as an important instrument for reducing dropout and improving

retention (European Commission/EACEA/Eurydice, 2014). Therefore, it is critical that information and guidance services are of high quality and have the capacity to support different types of learners.

According to a Eurydice study conducted in 2014, counselling and career guidance is available in more than 30 European economies. Such services are either provided by higher education institutions (as happens in the great majority of cases), outsourced to an external specialized body (e.g. in Croatia) or both (e.g. in Estonia, Lithuania, Poland, and Slovakia). Most countries in this study provide counselling and career guidance services for enrolled students and only a few make such services available for graduates (European Commission/EACEA/Eurydice, 2014). In the majority of countries analysed in this study, guidance services are available to all students. Targeted guidance is available in some countries, such as Greece and the UK. In Greece, so-called Liaison Offices provide counselling services on study pathways to students and graduates coming from vulnerable backgrounds. In the UK, students with disabilities are given particular attention, to make sure they have access to the same learning opportunities as other students (European Commission/EACEA/Eurydice, 2014).

In some countries, the establishment of guidance services is anchored in a national policy framework. For example, a number of higher education institutions in France have established information centres for prospective students, following the adoption of the 2013 Law on Higher Education, which encourages institutions to provide information on learning pathways at an early stage (European Commission, 2015). The goal of these centres is to provide advice and guidance on study options to students who are finishing secondary education, so they are informed about the learning pathways they could pursue in higher education.

Finland also has a strong legal basis for the provision of support and guidance services across all levels of education and training, including higher education. A National Lifelong Guidance Coordination and Cooperation Group was established to lead the development and implementation of guidance strategies and practices over the 2015–2020 period (Euroguidance Finland, 2018).

The need to adopt measures for guidance in higher education to support students' progression through studies and their transition to the labour market has also been recognized in Asian countries. Chinese universities, for example, provide career guidance services through career centres and departmental career tutors (Sun and Yuen, 2012). Some institutions use an integrated approach to guidance, covering different stages of the study cycle, supporting students in their learning pathways from access to completion (Sun and Yuen, 2012).

Although it can be particularly beneficial to have information, guidance, and counselling services available in institutions, countries can also develop a system-wide approach to information and guidance for education purposes. For example, centrally managed information systems available to the general public can be particularly helpful for candidates who are not aware of the range of sectors, providers, courses, and financing options in higher education (Wheelahen, 2000). The Netherlands and Norway, for instance, have national policies that aim to make information about study programmes in higher education, and pathways to access these programmes, more available. Both countries have online public information services which provide information about study options in higher education to prospective students (European Commission, 2015). Similarly, the Ministry of Education in Chile operates the Mifuturo web portal, which provides information to higher education candidates about academic and vocational institutions and programmes, financing options in higher education, and graduate employability, among other things (Ministry of Education of Chile, n.d.).

The Ministry of Education, Science and Technology of Argentina launched a similar initiative in 2018. A portal was created within the framework of the National System of Academic Recognition (Sistema Nacional de Reconocimiento Académico), which comprises voluntary agreements between higher education providers for the recognition of learning and training pathways. Through its strong emphasis on recognition, the SNRA system allows students to take advantage of the diversity of learning options to build their education and training pathways. The initiative also aims to break down the barriers that students face when changing institutions or careers, to place students at the centre of education and

training, and to encourage curricular innovation and articulation between institutions (Ministry of Education, Culture, Science and Technology of Argentina, 2018a, 2018b).

In 2015 the Ministry of Education and the Ministry of Labour of Peru launched the *Ponte en Carrera* online platform, designed to provide students with information on higher education institutions, study programmes, and career options. The platform also allows prospective students to take an informal Test of Professional Interests (*Prueba de Intereses Profesionales*), which allows candidates to reflect on their competences and interests, so they can make a more informed decision when choosing a study programme (Ministry of Education and Ministry of Labour of Peru and IPAE Acción Empresarial, n.d.).

3. Targeted policy measures to facilitate flexible entry and opportunities for transfer

In addition to policy instruments, targeted policy measures can be deployed to support alternative entry routes and transfer pathways into higher education. Alternative entry policies and approaches can be effective in facilitating student access to higher education. One such approach can be to bridge the gap between VET and higher education. Preparatory programmes can be provided to offer better support to candidates whose background is in VET or other candidates (for instance, non-traditional students) in their transition to higher education. Facilitation of alternative entry pathways can be furthered if systems and institutions have a formal procedure for the recognition, validation, and accreditation of formal, non-formal, and informal learning. Furthermore, inter-institutional agreements between individual institutions and programmes can enable better student transfer through the provision of guidelines and by streamlining credit transfer. Lastly, higher education institutions can support the provision of alternative learning pathways by diversifying the modes of delivery and the assessment procedures of study programmes.

3.1 Alternative entry routes and transfer pathways

Admissions policies and procedures have a strong influence on access to higher education. Regulations concerning admissions are very heterogeneous and they differ not only across systems but also within systems, institutions, and even programmes of study.

Admissions systems can operate on an 'open-access' policy, or they can be more selective, or they might use a mixture of both systems, depending on the higher education subsector. Open-access systems are those that grant automatic entitlement to a study place in higher education to candidates with a good level of achievement in secondary school exit examinations (European Commission/EACEA/Eurydice, 2014). In selective systems, institutions choose students either on the basis of their achievement in secondary school exit examinations, or by using their own admissions requirements; the latter can be in the form of entrance examinations, applications, interviews, etc. Some systems may apply open-access admission in some fields of study and be more selective in others. In some cases, there is a practice of centralized admission (e.g. in Sweden), while in others, institutions of higher education themselves make the decisions and apply their own admissions criteria and procedures (e.g. in Colombia).

In most systems, there is generally one dominant entry route to higher education. It is usually for students with a general upper secondary school qualification who enter the higher education system via an academic pathway. Examples of academic pathways to higher education are the general baccalaureate in France or the academic baccalaureate in Switzerland (Imdorf *et al.*, 2014). In some countries, national examinations for entering higher education are in place and they can play a central role in admission. This is the case in a number of countries in Asia and Latin America but also in other regions. However, these national tests can also pose barriers to access as their outcomes can often be the sole determinant of the likelihood of entering higher education. And if there are no other ways of accessing the system, this may leave candidates who have insufficient results and few means to prepare for these exams in a disadvantaged position.

In some countries, students can also enter higher education via a vocational pathway (e.g. with an upper secondary or post-secondary non-tertiary vocational education qualification). In Slovenia, for instance, more than 40 per cent of students who entered higher education in 2012/2013 did so via a vocational

pathway (European Commission/EACEA/Eurydice, 2014). In Finland, almost one-fifth of students entered higher education via the vocational route over the same period. More than one entry pathway also exists in countries such as Bulgaria, Estonia, France, Germany, Lithuania, the Netherlands, Portugal, and Spain, and these countries monitor the number of students who enter the system via different routes (European Commission/EACEA/Eurydice, 2014). In France, the vocational pathway to higher education refers to the *Baccalauréat professionnel ou technologique* (Imdorf *et al.*, 2014).

In certain cases, exemptions from upper secondary school exit examinations can be granted to students with exceptional academic achievements. This has been a practice in Guinea, where students with outstanding results in secondary technical and vocational education can move directly to technical higher education without taking the baccalaureate. Vocational pathways can be particularly important in facilitating access to higher education for non-traditional groups, who are often under-represented among those who enter the system through the academic route (Imdorf *et al.*, 2014). But it is not always the case that students with a vocational upper secondary education qualification can progress to higher education (UNESCO, 2018b).

Less common, but growing in importance, are entry pathways for non-traditional adult students (e.g. people who dropped out of upper secondary education, adult learners, working professionals, students with caring responsibilities, etc.). Alternative pathways are essential for candidates who may not meet the necessary criteria to enter the system. Access to higher education for these groups can be facilitated through measures such as modified entry requirements; recognition, validation, and accreditation of prior learning; alternative admissions tests; preparatory programmes that provide alternative entry qualifications; or preparatory higher education programmes (Essack, 2012; Unger and Zaussinger, 2018). Many of these measures have broadened their scope from purely quantitative assessments to more qualitative evaluations of a candidate's fit for a given higher education programme (Essack, 2012). Examples of alternative pathways to higher education for non-traditional students can be found in many countries.

Since 2017, Brazil has been using the so-called National Exam for the Certification of Competencies of Youth and Adults (Encceja), which is a qualifying test for individuals who did not complete their elementary or secondary studies at the right age. Candidates must be at least 18 years old to be eligible to sit these examinations. The Encceja comprises tests for obtaining the elementary school diploma (Ensino fundamental), as well as the secondary school diploma (Ensino médio). The latter provides access to higher education (Brasil Escola, 2018). In China, admission to higher education for adult learners takes place through the National Adult Higher Education Entrance Examination. Here, adult education programmes delivered by higher education institutions are recognized by national authorities to be at the same level as regular programmes enrolling traditional students (Nuffic, 2015a). Colombia uses special validation exams (Exámenes de validación de Bachillerato) to provide adults who did not attend upper secondary school with an alternative opportunity to obtain a high school diploma and thus have access to higher education. The test is administered in various subject fields, including mathematics, natural sciences, and social sciences (ICFES, 2015). In Malaysia, a number of universities have been granted the right to practise open admission for adult learners. These institutions are credited for providing more flexible admission opportunities to individuals who would otherwise be denied entry. These institutions evaluate candidates on the basis of their prior learning and experience through a number of instruments, including portfolios attesting knowledge and work experience, recommendations from employers, and oral and written examinations (Gobaloo and Fahmi, 2013). A number of institutions in South Africa have devised alternative admission paths, which select disadvantaged students on the basis of their academic potential rather than on their performance in national school examinations (UFISA, 2017). Here, some institutions use the so-called Extended Curriculum Programmes (ECPs) to facilitate entry for students who do not qualify for admission to a specific programme (Leibowitz and Bozalek, 2014). Although there are questions regarding the success of ECPs in supporting disadvantaged students all the way to the completion of their studies, they do seem to serve an important equity objective by providing an alternative entry route to those who might otherwise not consider pursuing higher education (Leibowitz and Bozalek, 2014). And finally, in Rwanda, the need to provide an alternative entry route to mature learners is stipulated in its 2008 Higher Education Policy. In its quest to widen participation and provide

fair access to higher education, the policy allows entry to higher education for mature learners without the minimum entrance qualifications, provided that five years have passed since they completed secondary education (Republic of Rwanda Ministry of Education, 2008).

Bridges between vocational education and training and higher education

An important step towards improving permeability and flexibility in higher education systems relates to allowing graduates from VET to access higher education. Relationships between VET and higher education, and between their institutional structures and profiles, have a strong effect on permeability (CEDEFOP, 2012). The call for enhanced permeability between VET and higher education has been a worldwide trend, which has led progressively to the development of different arrangements for facilitating student transfers between the two sectors. For example, one of the objectives of the European Vocational Education Policy for 2010–2020 is to ensure an easier transition between different streams in education and training systems, including better pathways from VET to higher education (Ulicna, Messerer, and Auzinger, 2016).

Many countries have expanded their vocational education and training offer by providing programmes that lead to higher levels of qualifications, a process sometimes referred to as the 'vocalization' of higher education (UNESCO-UNEVOC, 2013). Arrangements range from the development of advanced vocational education, as in Sweden and France, to the strengthening of professional bachelor's degrees, as in Germany. Some countries, such as Belgium and the Netherlands, have introduced short-cycle higher education degrees into their higher education sectors. These programmes are generally located on level 5 of the 2011 ISCED nomenclature, and they usually last for two years and lead to an associate degree. This qualification can be used to enter the labour market or continue studies at more advanced levels. In the Netherlands, short-cycle higher education programmes are generally integrated into the four-year bachelor's programmes provided by universities of applied sciences. Students receive an associate degree at the end of the short-cycle programme and have the option to continue for another two years (if they study full time) to obtain a bachelor's degree. Since 2017, associate degree programmes have no longer had to be part of a bachelor's programme.

Therefore, ISCED-5 qualifications play an important role in allowing the transition from VET to higher education while keeping a labour market focus. Such programmes often provide broader and deeper learning in a (vocational) field of study, which results in higher-level qualifications than those offered by upper secondary schools. For this reason, they can be considered an alternative to higher education (UNESCO, 2018b). Such qualifications will continue to grow in importance, considering the increasing need for advanced technical and professional skills on the labour market (CEDEFOP, 2014b). They can also contribute to equity and lifelong learning by providing a route to higher education for adults and other non-traditional learners. Flexible pathways between VET and higher education can be enhanced when institutions offer both academic and vocational or technical studies. In many countries, the development of dual-sector higher education institutions providing both vocational and academic education has become more prevalent. Several universities in Australia, for instance, provide both vocational education and training and higher education (Bandias, Fuller, and Pfitzner, 2011). In China, higher vocational institutes have been developed as independent branches of the university sector (UNESCO-UNEVOC, 2013). In some cases, the development of vocational education and training within the university sector has been a strategy to improve the reputation of this education and training, which is often perceived to be inferior to academically oriented education. Many countries in Africa have also been experiencing increasingly blurred boundaries between their university and non-university sectors. However, this trend goes in both directions. As in other regions, an 'academic drift' is taking place in polytechnic institutions, which have added university-type programmes to their provision and strive to offer academically advanced programmes, including doctoral degrees. Likewise, universities are going through a 'vocational drift', by increasingly offering job-relevant certificates and vocational diplomas (Mohamedbhai, 2013).

Dual provision is also common in upper secondary education. In Brazil, for example, some secondary schools offer integrated provision, which combines both general and vocational course content. In addition, students in general upper secondary education have the option to participate in parallel in a complementary technical programme in a different school (UNESCO, 2018b). Denmark introduced the so-called Eux programme in vocational schools, which combines work-based learning with general education courses, allowing students to complete a skilled worker's certificate along with the Higher Preparatory Examination that grants access to higher education (UNESCO, 2018b). In Switzerland, students in upper secondary vocational education have the option to pursue a general education qualification that gives them access to the university sector. They can follow this track in parallel to or upon completion of their upper secondary vocational education qualification (UNESCO, 2018b).

Dual enrolment is common in the USA, where secondary school students, alongside the school curriculum, have the option to take advanced-level courses in high school that can be transferred to a higher education institution. This has been a nation-wide initiative supported by federal Perkins funds (OECD, 2014). Evidence suggests that such arrangements can increase an individual's likelihood of enrolling in and completing some form of post-secondary education (UNESCO, 2018b: 50). Also, the KOSEN colleges of engineering and technical education in Japan deliver five-year programmes that combine upper secondary education and junior college education. Graduates of KOSEN colleges can transfer to the third year of an engineering or science programme at a university by completing transfer examinations (UNESCO, 2018b). Finally, interdisciplinary or multidisciplinary post-secondary qualifications can also broaden articulation opportunities and allow students to transfer more easily between different disciplines (South African Qualifications Authority, 2017).

Preparatory programmes for entry to higher education

Often, upper secondary VET programmes do not yield a university entrance qualification. Even if they do, these programmes are generally designed to prepare students for a specific occupation and do not place a high emphasis on the acquisition of the broader skills and knowledge that are often needed to perform well in an academic environment. This has been a challenge in many countries. For instance, in France, only 6 per cent of holders of a professional baccalaureate and 16 per cent of holders with a technological baccalaureate complete their undergraduate university-based education. In contrast, around half of students with a general upper secondary diploma complete it (UNESCO, 2018b: 46). In Egypt too, even though graduates from upper secondary VET can enter higher education if they demonstrate a certain level of achievement, their transition rates tend to be low, compared to students from general upper secondary education (Álvarez-Galván, 2015).

Institutions offering initial VET⁴ could adjust their provision to equip students with not only occupation-specific but also broader knowledge and skills that would facilitate their transition to further and higher education (OECD, 2014). However, in many countries, VET concentrates on a narrow range of technical skills, which limits an individual's ability to pursue further learning (CEDEFOP, 2012). Evidence shows that candidates without adequate academic preparation are more likely to struggle in higher education and to drop out before earning a degree (Salmi and Bassett, 2012).

Higher education systems and institutions can also establish measures to support candidates with a VET background or other candidates (for instance, non-traditional students) better in their transition to higher education. For example, higher education institutions can strengthen vocational or professional elements of their study programmes (CEDEFOP, 2012). Or they can collaborate with (vocational) secondary schools or other education providers to ensure that their students are sufficiently prepared to advance to higher education. These measures can be in the form of introductory or remedial programmes designed to provide initial preparation for higher education. They can also be used to facilitate entry for individuals who do not fulfil the entry requirements for higher education. Such programmes exist

⁴ Programmes offered at the upper secondary or tertiary education level to young people before entry into the job market (OECD, 2010).

in many European countries, but they extend to other regions as well. For example, in some countries, such as South Africa, foundation programmes play an important role in facilitating progression to higher education (see *Box 6*).

Box 6. Foundation programmes at Monash South Africa University

Monash South Africa University provides a pathway to undergraduate studies for students who do not meet the requirements for admission to a bachelor's programme (UNESCO, 2018b). Its one-year foundation programme prepares students to advance to undergraduate studies. Students choose their foundation programme depending on the bachelor's programme they want to enter. The programme aims to develop not only students' academic skills but also their social and civic skills, by engaging them in community service learning and extracurricular activities. Student support is another strong component of the programme. It has a mentoring programme, which helps students cope with the challenges they face in their studies, and provides intervention measures for those who struggle academically. Both academic staff and student support officers are involved in the mentoring process. Students who themselves took part in the foundation programme serve as mentors for current students. The programme has been recognized as a success in facilitating student transition to undergraduate studies. Evidence suggests that 80 per cent or more of the students enrolled in foundation programmes end up transferring to a bachelor's degree. Foundation programmes charge tuition fees, but the university awards merit-based scholarships. It also provides 'enrolment awards', which students can use to get a waived or discounted tuition fee if they continue their studies at the undergraduate level.

Source: Monash South Africa University, 2018.

Measures to prepare candidates for higher education can be national or regional, or (higher) education providers can provide them locally. In Estonia, for example, students leaving upper secondary vocational schools can access higher education if they earn at least 60 credit points in general subjects, or they can spend an additional year in programmes designed to prepare them for higher education (UNESCO, 2018b). Indonesia has been using a different 'bridging mechanism' to facilitate entry to higher education for students leaving vocational schools. Public polytechnics, for example, have started to assess these students on the basis of their achievements at school, rather than by using conventional entrance examinations, which are largely tailored to general secondary school graduates (OECD and Asian Development Bank, 2015). In the Netherlands, there are a number of initiatives in both upper secondary vocational education institutions and universities of applied sciences to ensure that secondary school leavers with a vocational education and training background are prepared for higher education. These initiatives are in the form of extra lessons, joint projects, and other forms of inter-institutional cooperation (UNESCO, 2018b).

Preparatory programmes can also be used to facilitate progression to higher levels of education for students who are already in higher education. In the Netherlands, for example, graduates of universities of applied sciences are often required to complete an additional short programme before they can pursue studies at a university at master's level. Such programmes usually take between six months and a year to complete. In China, graduates of three-year higher vocational institutions can progress to a bachelor's programme at a four-year university, provided they pass standardized written examinations administered by provincial agencies. These individuals can receive a bachelor's degree after two instead of four years of study (World Bank, 2015).

Recognition, validation, and accreditation of formal, non-formal, and informal learning

Alternative entry routes can be facilitated if systems and institutions have a formal procedure for the recognition, validation, and accreditation (RVA) of formal, non-formal, and informal learning. UNESCO Institute for Lifelong Learning defines the term as 'a practice that makes visible and values the full range

of competences (knowledge, skills and attitudes) that individuals have obtained in various contexts, and through various means in different phases of their lives' (UNESCO-UIL, 2012: 8). This definition takes a broad perspective and advocates the recognition of learning that takes place not only in institutional settings, but which can be acquired more broadly and informally. The UNESCO Institute for Lifelong Learning distinguishes between formal, non-formal, and informal learning as follows: formal learning is education that is institutionalized, intentional, and planned through public organizations and recognized private bodies, which – in their totality – constitute the formal education system of a country. Non-formal learning is defined as education that is institutionalized, intentional, and planned by an education provider. Informal learning refers to forms of learning that are intentional or deliberate, but are not institutionalized (UNESCO-UIL, 2012: 8).

RVA is also commonly referred to in the literature as recognition of prior learning. Recognition of prior learning is 'assessment of knowledge, skills and competence that an individual possesses by a competent authority or education institution extending beyond the formal context to include learning acquired in a non-formal or informal setting; that did not lead to a qualification; acquired through professional experience; and acquired through unfinished studies at a recognised institution' (Witthaus *et al.*, 2016: 12).

Recognition of prior learning fulfils a number of functions, including recognition of an individual's learning outcomes on the basis of defined standards; comparing individual learning outcomes against the skills needed in the labour market; and coordinating a systematic framework for learning outcomes, standard-setting, curricula, and assessment (UNESCO-UIL, 2015). Assessment methods to recognize an individual's formal, non-formal, and informal learning include portfolios, interviews, professional discussions, practical demonstrations, and essays (Harris and Wihak, 2018). In higher education institutions, recognition of prior learning can be supported by a competency-based curriculum, which awards credits on the basis of the attainment of knowledge and skills rather than study duration.

Recognition of non-formal and informal learning can be used to grant alternative entry to higher education. For instance, entry through recognition of prior learning is possible in all higher education institutions and programmes in Denmark, Finland, Norway, Portugal, and Scotland (European Commission/EACEA/Eurydice, 2014). In Finland, recognition of non-formal and informal learning is well established and is supported by higher education legislation. Most, if not all, higher education institutions have developed procedures to recognize prior learning on the basis of national principles. In other European countries, such as France, Germany, Italy, and the UK, procedures for the recognition of prior learning are applied only in some higher education institutions and programmes.

Recognition of prior learning can also be used as students progress through their studies, for example, for course exemptions, which could help reduce the time and costs associated with a higher education qualification. In Spain, the National Distance Education University provides access to higher education for adults over the age of 40 by validating and accrediting their professional experience. This opportunity is only available to those who do not have the academic qualifications to enter higher education. They must also study in a field that is relevant to their professional knowledge and experience (UNED, n.d.). In some cases, such as in Mauritius and France, recognition of prior learning can be used even to obtain a partial or full higher education qualification (see *Box 7*) (UNESCO, 2018b).

In some countries, national qualifications serve as a reference against which recognition of prior learning is evaluated. In Norway, for instance, adults can have their prior learning evaluated against national curricula at equivalent levels. Those who are at least 23 years old and do not have an upper secondary qualification can enter higher education through this route. Denmark is another country with a long tradition of recognizing prior learning. The Danish national qualifications framework allows for the registration of non-formal qualifications and certificates from the public and private sectors (Harris and Wihak, 2018). ECTS is used in some countries to connect non-formal education to formal frameworks. Such practices exist, for instance, in Croatia, Cyprus, the Czech Republic, Estonia, Finland, Greece, Ireland, Italy, Latvia, Lithuania, the Netherlands, Norway, Poland, and Slovakia (Harris and Wihak, 2018).

Box 7. Validation of acquired experience in France

In 2002 France adopted the Social Modernization Act, which lays the foundation for the so-called Validation of Acquired Experience (VAE). The law states that every individual has the right to have his or her prior experience assessed. This may refer to professional or personal experience, including knowledge and skills developed through volunteering, self-employment, or community service (UNESCO-UIL, 2013). VAE provides access to most certifications available in France, including certification in initial vocational training, higher education, and continuing education. VAE procedures are now widely implemented across education and training providers. The Ministry of Education carries out the implementation of VAE at the level of professional secondary education. At the level of post-secondary education and continuing education, education and training providers themselves are responsible for designing and implementing procedures for VAE.

The VAE process is carried out in five stages (Singh, 2015). The first consists of consultation, information, and guidance, where candidates obtain information about certification possibilities. Candidates can then move on to the second phase if their applications comply with administrative and legal requirements. In the third phase, candidates prepare a portfolio of evidence, usually through a written application that describes the experience and knowledge that relate to the desired degree. They are also encouraged to attach additional sources of evidence, including professional achievements, work certificates, or certificates of participation in various activities. As an alternative, candidates may also choose to be assessed through a simulation that involves performing professional tasks in front of a board of examiners. However, this practice tends to be used less frequently. In the fourth stage, a designated VAE board evaluates candidates' applications and identifies their suitability for the desired degree. In the final stage, the VAE board communicates the decision to the candidates. If they need to complete additional requirements to obtain the desired certification, the board supports them in creating a work plan and monitors their progress until the certification process is complete. The qualification obtained through VAE is the same as if it was obtained through regular academic study.

Source: UNESCO, 2018b.

Policies related to the recognition of prior learning have become relatively widespread, particularly in countries such as Australia, Canada, New Zealand, South Africa, the UK, the USA, and countries in Northern Europe (Harris and Wihak, 2018). Associations and advocacy bodies have been established across many countries, as have training and professional development programmes for practitioners working with recognition of prior learning (Harris and Wihak, 2018). In Europe, for example, recognition of prior learning can be pursued in two ways. There are networks of academic recognition centres, such as the European Network of Information Centres (ENIC), and the national academic recognition centres (NARIC), both of which support learners and institutions on aspects related to access and progression in higher education (CEDEFOP, 2012).

Recognition of prior learning has also grown in importance in developing countries, where informal labour markets are very prominent. This is particularly notable in sub-Saharan and North Africa, where the informal sector accounts for 90 and 50 per cent of employment respectively (Savadogo and Walther, 2013). The National Industrial Training Authority in Kenya, for example, allows individuals who have completed an apprenticeship in the informal sector to have their skills recognized and certified (UNESCO, 2018b). Similarly, India, through its Skills Development Policy, is seeking to establish a system of competency standards and recognition and certification for those working in unorganized sectors (Singh, 2013). Burkina Faso has introduced formal mechanisms to certify and recognize learning obtained through experience in a number of trades in the informal sector (Savadogo and Walther, 2013).

Even though recognition of prior learning has become an important element of (higher) education policy agendas across the world, its use in practice remains less developed in many countries. One reason for this is that it is a costly and labour-intensive process, since it is done on a case-by-case basis and cannot be easily standardized. Even though in general, countries have designated authorities responsible for

recognition of prior learning, this function is often shared with higher education institutions, who may lack the necessary capacity to implement the relevant processes and procedures.

The use of recognition of prior learning in distance and online education has also been less common and is often strictly regulated by authorities. This is the case in countries such as Bhutan and Bahrain, where knowledge acquired through online and distance education cannot be validated by higher education institutions (UNESCO-UIL, 2015). Open educational resources and massive open online courses (MOOCs) are often regarded with scepticism by quality assurance and accreditation bodies, as many such courses have been developed without academic oversight (Harris and Wihak, 2018). Barriers to recognition of learning acquired through MOOCs are also due to a lack of integration of open learning within existing procedures for recognition of prior learning and a lack of guidance for MOOC learners on recognition options (Witthaus *et al.*, 2016). But there have been positive developments in this area as well, as in the case of the Netherlands (see *Box 8*).

Box 8. Recognition of online and blended learning in the Netherlands

The Accreditation Organisation of the Netherlands and Flanders (NVAO) has published a memorandum on online and blended learning. This memorandum includes the formal recognition of MOOCs by higher education institutions to assure 'the value of qualifications awarded by their accredited programmes'. NVAO recognizes that MOOCs can contribute to Dutch higher education programmes, and it recommends that a MOOC certificate fulfils the following requirements (Accreditation Organisation of the Netherlands and Flanders, 2014: 9):

- (a) formally and clearly states on whose authority it was issued, provides information on the content, level and study load, states that the holder has achieved the desired learning objectives, provides information on the testing methods employed and lists the credits obtained, according to a standard international system or in some other acceptable format; (b) is demonstrably based on authentication; (c) states that the examinations have been administered under supervision and specifies the nature of this supervision.

Source: Witthaus *et al.*, 2016.

Inter-institutional transfer agreements

As noted earlier, policies and instruments used to support flexibility and permeability in higher education vary across different contexts and depend on the nature of state steering present in the system. In highly autonomous and decentralized systems in particular, initiatives to support flexible learning pathways can be more commonly encountered at the level of the institution than at that of the system.

In certain contexts, two or more (higher) education providers can develop agreements to facilitate student transfer. The role of these inter-institutional agreements is to facilitate pathways between their institutions and programmes. They enable student transfer through the provision of guidelines and by streamlining credit transfer. Depending on the context, these agreements can appear in the form of articulation agreements, collaborative agreements, progression agreements, transfer agreements, memoranda of understanding, or memoranda of agreement.

Transfer agreements can be formal or informal. Formal agreements pertain to cases where a written document, such as a memorandum of understanding or a memorandum of agreement, provides a formal structure for the articulation relationship between different education providers or between their programmes or qualifications. Informal agreements, on the other hand, are usually based on verbal discussions between education providers. They may be present in cases where the number of transfer candidates is too small to justify the formalization of an agreement or where an institution is still in the process of developing transfer arrangements with other institutions (South African Qualifications Authority, 2017).

Transfer agreements can be established between providers of upper secondary education and higher education to facilitate entry to higher education. They can play a particularly important role in getting disadvantaged students into higher education. The collaboration between a university and a school community 'helps to influence the aspirations of students, expectations of teachers, and possibilities for creating a broader community of learners' (Salmi and Bassett, 2012: 42). In the province of Ontario, Canada, for example, there are two programmes offered in high schools to facilitate student transfer to community colleges (Irvine, 2017). These programmes are particularly targeted at disengaged students who are at high risk of failing or not graduating. The first is a dual credits programme, where students earn both high school and college credits for the same course. High school teachers and college faculty staff design the curricula of such programmes jointly. More than half of the courses are delivered by college instructors on college campuses; some are delivered in high schools. The second initiative is the Specialist High Skills Major programme. In this programme, students select a mix of Grade 11 and Grade 12 courses in business, mining, sports, arts, or culture, and upon successful completion, they obtain an annotation of specialized studies on their transcripts (Irvine, 2017). Likewise, this programme aims to facilitate student entry to a community college. Articulation agreements extend to other regions as well. The city of Bogotá, in Colombia, for instance, has also established agreements 'to ensure that all tertiary institutions that participate in partnerships with secondary schools have their credits recognised by all other institutions, not just the one delivering the training' (OECD, 2016: 219).

Transfer agreements can also be used to facilitate transferability once students are already in higher education. In the USA, inter-institutional articulation agreements have been commonly used for this purpose (see Box 9).

Box 9. Inter-institutional articulation agreements in the USA

Articulation agreements between higher education institutions are widespread in the USA and they are common mechanisms to facilitate student progression from two-year community colleges offering associate and occupational degrees to four-year institutions awarding bachelor's degrees. These agreements are useful as they 'provide an improved access, more academic alternative and a seamless pathway to achieve degree completion' (Hall, 2014: 21) and one of their main objectives is to prevent or reduce course duplication (Jaeger, Dunstan, and Dixon, 2015). In the US context, articulation agreements were initially encountered in the form of state-wide agreements. More recently, agreements that grant transfer in fields relating to the applied sciences are more commonly inter-institutional than state-wide (Hall, 2014). Therefore, transfer agreements can be more formal, devised at the state level, and mandated by legislation or they can exist in a more decentralized and informal form between institutions or programmes (Irvine, 2017). In the USA, transfer agreements between community colleges and four-year institutions are particularly important in facilitating the access to higher-level qualifications for disadvantaged groups, who cannot usually meet the costs of a four-year bachelor degree or do not fulfil the requirements to enter a four-year institution. At the same time, evidence suggests that although the vast majority of students entering higher education through the community college route indicate that they want to earn a bachelor's degree, the percentage of students who actually transfer and complete a bachelor's degree is substantially smaller. At the same time, transfer rates tend to vary widely across states, with some states, such as Florida, Illinois, New Jersey, and Virginia, performing significantly better than the national average.

Source: Jenkins and Fink, 2016.

Similar arrangements to those in the USA exist in other countries. Institutions in Tajikistan, for instance, use collaborative agreements whereby students who complete two years in some technical colleges can transfer to the third year of study at a partner university. In some cases, technical colleges and their partner universities use the same campuses and deliver joint courses (UNESCO-UNEVOC, 2013). In Austria, graduates of vocational colleges have the right to transfer to the second or third year of a related bachelor's programme, and such transitions depend largely on inter-institutional agreements (OECD, 2014). In some cases, vocational colleges have even established agreements with academic post-secondary institutions

outside of Austria, enabling their students to attain a professional bachelor's degree in as little as one year (OECD, 2014). In South Africa, memoranda of agreement exist between a number of colleges and universities to facilitate student transfers (South African Qualifications Authority, 2017).

3.2 More flexible study provision

Higher education institutions can strengthen the provision of alternative learning pathways by organizing and delivering study programmes in a more flexible way and diversifying assessment procedures so that they suit different learning needs and personal circumstances. In addition to conventional ways of organizing study programmes (i.e. on a full-time basis), institutions can provide part-time, evening, weekend, or external courses, which is particularly important for students who combine studies with work or those who have caring responsibilities. For instance, across European countries, 11 per cent of 20–24 year-olds who are enrolled in higher education perceive themselves not as students but as workers who study part time (Beblavý and Fabo, 2015). This proportion increases to 70 per cent for those who are above the age of 30. The availability of part-time provision varies widely across countries. The proportion of part-time students in short-cycle programmes exceeds 60 per cent in countries such as Australia, Belgium, the Netherlands, and the UK. The share of part-time students amounts to more than 50 per cent in Sweden at the bachelor's level, and in Finland and New Zealand at the master's level (OECD, 2017).

Modularizing study programmes can greatly support flexibility in higher education. Modules are defined units of learning, teaching, and assessment and are usually delivered within a specified period of time (e.g. one semester). Modules are usually associated with a pre-determined workload, with which credits are associated. Modularization therefore refers to breaking down study programmes into modules that can be taken independently. Modular provision allows learners to take one or more modules of interest without being required to register for a full programme of study. Under modular provision, learners can progress at their own pace and if they wish, they can still earn a degree after completing the required amount of study (European Commission/EACEA/Eurydice, 2015). Stackable credits are similar to modular provision. A system that is based on these delivers academic and professional courses that can be used individually for employment purposes or can 'stack into' a higher education degree. In some contexts, this refers to partial certification, a process that enables learners to certify their skills gradually.

Modularization of study programmes has become a common practice in many countries. Sweden, for example, has an education system that is based on a modular structure, allowing learners to design their own study programmes and follow courses at their own pace. In South Africa, some higher education institutions give students the option of exiting higher education at different stages by completing part-qualifications.⁵ Those who do this can come back at a later stage to complete the requirements for a full qualification (South African Qualifications Authority, 2017). This flexible arrangement is supported by the national qualifications framework of South Africa, which allows for the registration of unit standards, modules, and short courses (Samuels, 2013). Similarly, a credit accumulation and modular scheme lie at the core of Rwanda's qualifications framework for higher education (CEDEFOP, 2017). Here, learners entering a higher education programme can receive a diploma at the end of each year of studies (Nuffic, 2015b). For instance, a Certificate of Higher Education is awarded upon completion of 120 credits, which is the equivalent of one year of studies. Similarly, a Diploma in Higher Education is awarded upon completion of 240 credits, which amounts to two years of study.

Education can also be delivered through flexible study modes, such as open or distance learning. Distance learning refers to 'a mode of study where a learner may complete all or part of an educational programme in a geographical location apart from the institution hosting the programme' (Muyinda, 2012: 34). Open and distance learning institutions offer 'alternative mode[s] of delivery to widen access to education, to satisfy continuing educational needs of adults, to expand trained workforce, and/or to train teachers to improve quality of schooling' (Jung, 2005: 6). They can be '(1) single-mode institutions,

⁵ Part-qualification is 'an assessed unit of learning that is registered as part of a qualification. For example a part-qualification can be a module, unit standard' (South African Qualifications Authority, n.d.).

which focus exclusively on distance education; (2) dual-mode institutions, which offer both distance and face-to-face education simultaneously; and (3) a consortia or a group of institutions that collaborate to provide distance education' (Varghese and Püttmann, 2011: 25). To tailor provision to both traditional and non-traditional students, higher education institutions increasingly operate under the dual-mode model, offering both distance and face-to-face education (Muyinda, 2012).

The provision of higher education through distance learning refers to programmes delivered entirely online or through blended learning. Online learning is 'distance education mediated primarily by synchronous and/or asynchronous Internet technologies, such as email, discussion boards, chat rooms, and course management systems' (Benson *et al.*, 2012: 274). Blended learning, also known as hybrid learning, describes 'learning environments that use elements of distance learning along with elements of traditional face-to-face learning' (Benson *et al.*, 2012: 274).

The integration of distance education into higher education varies widely across systems and institutions. In some countries, distance learning institutions account for a considerable share of student enrolment. This is the case, for example, with the Open University of China, the Indira Gandhi National Open University in India, the Sukhothai Thammathirat Open University in Thailand, the Anadolu University in Turkey, and the Open University in the UK.

Notable progress has been made in both developed and developing countries in advancing provision of online education (Gaebel *et al.*, 2014; Walters, 2015). For example, a study that looks at the provision of distance education in higher education institutions across European countries estimates that around 3 million students take part in some form of distance education in Europe, most commonly delivered at the bachelor's and master's levels (Carlsen *et al.*, 2016). Around 75 per cent of the distance education programmes included in the same analysis are programmes that lead to a degree. Among European countries, Germany, Spain, and the UK were identified as providing the largest number of distance education programmes in absolute terms (Carlsen *et al.*, 2016). In these countries, more than half of higher education students participate in some form of e-learning (Gaebel *et al.*, 2014). Likewise, a majority of higher education institutions in the Nordic countries deliver their study programmes through distance or blended learning (Carlsen *et al.*, 2016). Norway, for instance, has a long tradition of higher education delivered at distance, owing to its size and dispersed population. In Finland, the Open University of Helsinki provides an alternative path to higher education for students from all backgrounds. Here, students can gain the right to study at a regular university on the basis of studies completed at the Open University (Unger and Zaussinger, 2018).

The development of distance education in developing regions is also gaining force, as access to internet-based technologies is becoming more widespread. It is also viewed as a way to expand access to higher education and promote lifelong learning. In South Africa, for example, the number of students graduating with a higher education degree obtained at distance increased between 2005 and 2012 (South African Qualifications Authority, 2016). In Guinea, candidates with work experience can enrol in distance education at the higher education level, and it provides degrees that are equivalent to those obtained through regular face-to-face provision. The Centre for External Studies at the University of Namibia and the Centre for Open and Lifelong Learning at the Polytechnic of Namibia deliver higher education programmes through distance learning (Murangi, 2013). Mauritius operates an Open University, which provides foundation, bachelor's, master's, and doctorate programmes delivered at distance (Betchoo, 2015).

Open and distance learning has also become more prominent in a number of countries in Asia. The Open University of China, for instance, is the second-largest open university in the world, after India's Indira Gandhi National Open University, and it provides both degree and non-degree education (see *Box 10*). In India, more than 50 universities have designated departments that deliver distance education to part-time and working professionals (Nuffic, 2015c).

Finally, some institutions have developed MOOCs to make higher education accessible to a wider variety of learners. MOOCs generally offer free or low-cost open-access education and are available to anyone in the world who has internet access. Examples of open learning platforms that provide MOOCs include edX,

Coursera, and Udacity. Evidence suggests that in 2015, there were around 4,200 MOOCs, 75 per cent of which were available in English and to a large degree delivered by MOOC providers in the USA (UNESCO, 2018b). After the USA, India enrolls the second-largest number of students in MOOCs, which are hosted by the Study Webs of Active Learning for Young Aspiring Minds (SWAYAM) platform (see Box 11).

Box 10. The Open University of China

The Open University of China (OUC) was established in 2012 as a product of the former China Central Radio and TV University, and local radio and TV universities. The institution enrolls more than 3.5 million students, making it the second-largest open university in the world, after India's Indira Gandhi National Open University. Among its enrolled students, about two-thirds are junior college students and one-third are undergraduate students. Rural students, military personnel, and disabled students account for nearly 9 per cent of total enrolment. The institution plays an important role in the development of society through promoting lifelong learning, placing equal value on the provision of degree-awarding and non-degree continuing education.

The OUC established four alliances to support its ambition to develop a learning society through the provision of high-quality educational resources. They comprise one alliance with other universities in China, one with industry, one with business, and a last one with cities. The OUC aims to capitalize on the strengths and resources of these societal actors in its quest to develop vocational training programmes, and community and citizen education, and to support the establishment of learning industries, learning businesses, and learning cities. Education is delivered primarily online, supplemented with distance learning support and face-to-face tutorials. The university established a credit bank system to support credit accreditation, credit transfer, and credit recognition. This has resulted in the development of more than 60 Learning Outcomes Accreditation Sub-Centres. All students create a so-called lifelong learning portfolio, where they can accumulate credits, both from degree-awarding and continuing education, which they can use to receive certification. In 2017, OUC won the Institutional Prize of Excellence, awarded by the International Council for Open and Distance Education (International Council for Open and Distance Education, 2017).

Source: Open University of China, n.d.

Box 11. India's SWAYAM Platform for distance learning

MOOCs have become an important alternative to the bricks-and-mortar system of higher education in India. The country increasingly relies on digital modes of delivery as a means to expand higher education opportunities. For this reason, the government initiated the development of the so-called Study Webs of Active-Learning for Young Aspiring Minds (SWAYAM) platform, which aims to provide one-stop access to MOOCs and other e-learning content developed by various education providers. This has been part of a broader vision to strengthen access to educational resources for all, including the most disadvantaged groups. The platform hosts courses going from Grade 9 at the school level all the way to postgraduate education. Access to MOOCs is provided free of charge, except in cases where learners want to receive a certificate of completion, in which case a small fee applies. An important aspect of MOOCs hosted on the SWAYAM platform is their potential to receive recognition by higher education institutions. In 2016, the University Grants Commission issued the Credit Framework for Online Learning Courses, which encourages universities to identify courses provided on SWAYAM that can be transferred in the form of credits onto the academic record of students. Under current provisions, a student entering a higher education study programme in a university can transfer up to 20 per cent of their credits from relevant online courses completed on SWAYAM. A follow-up initiative of the government has been the SWAYAM Prabha programme, which is used to disseminate the audio-visual content developed as part of the SWAYAM-hosted MOOCs through 32 educational TV channels.

Source: Government of India Ministry of Human Resource Development and All India Council for Technical Education, 2018.

Some countries have devised policies to enhance the provision of distance education and e-learning in institutions of higher education. South Africa, for example, has a Policy for the Provision of Distance Education in South African Universities, which aims to provide greater access in terms of numbers and diversity, to turn access into success, and to provide affordable education for students (Department of Higher Education and Training of South Africa, 2014). Some European countries, such as Bulgaria, France, and Slovenia, have designated national policies and strategies to enhance e-learning activities in higher education (Gaebel *et al.*, 2014).

Improving flexibility in the organization and delivery of higher education programmes is necessary but not sufficient to ensure that all learners can actually benefit from flexible study arrangements. Often, exemptions from tuition fees or access to student financing are available only to students who study full time, or to those who meet a certain age requirement. In addition, widening participation in higher education through distance learning is constrained by rigid entry requirements and a lack of, or poor, information on flexible study arrangements. Therefore, it is important to tackle the wider barriers that candidates face, not only upon entry, but also during their studies, to ensure a positive learning experience conducive to good outcomes for all.

Concluding remarks

Higher education systems across the world have experienced notable growth and diversification in recent decades. The increase in the number and types of higher education providers and study programmes, and the widening of the range of learners entering the system, have enhanced perceptions of the importance of higher education as a key driver of social, cultural, and economic development.

As the significance of higher education in building knowledge-based societies that also contribute to social cohesion has grown over time, so has its complexity. This is reflected in the way higher education systems are governed and financed and in the growing number of stakeholders who play a role in decision-making processes. In consequence, it has become more difficult for policy-makers to ensure that increasingly complex higher education systems provide multiple entry routes and progression pathways adapted to different learning needs.

In such complex systems, which often tend to be fragmented, students find it increasingly challenging to enter and move across higher education provision in a flexible manner. Today's learners find it more difficult to understand the increased complexity of the higher education offer. Confronted with a large number of study options to choose from, they require information on the pathways available to them that would give them the best chances of succeeding in higher education and reaching their personal and professional goals.

But to respond to the learning goals of a heterogeneous student group, higher education itself needs to enhance opportunities for flexible learning, including by offering multiple entry routes and progression paths. By doing so, higher education can also better serve the interests of the most disadvantaged groups, who often view university education as an unattainable goal. In line with SDG 4 and the international Education 2030 Agenda, countries face the political imperative to develop well-articulated higher education systems that support equity and lifelong learning and facilitate flexible learning pathways for all.

At the same time, a number of systemic, institutional, and individual factors make it challenging for higher education to fulfil these objectives. This study has shown that in many contexts flexible learning pathways are not yet a national priority for higher education. Even if they appear to be an objective of higher education policies, they are not necessarily accompanied by supportive instruments and targeted measures to facilitate their implementation. In addition, the implementation of flexible learning pathways is constrained by administrative and structural fragmentation in higher education governance; high levels of institutional autonomy and competition between institutions; differences between higher education institutions and programmes; institutional culture, conservatism, and the desire to preserve status; and a lack of information and guidance to support learners in their transition to and progression through higher education.

This study has also identified examples of policy frameworks and instruments, and targeted measures to support alternative entry routes and opportunities for transfer that have already been in operation in some countries across the world. These examples could help policy-makers and institutional stakeholders in other contexts to support flexible learning pathways in their own higher education systems and institutions more effectively. In terms of policy frameworks, flexible learning pathways can be reinforced through legislation, regulation, articulation and transfer policies, and lifelong learning policies. With respect to policy instruments, national qualifications frameworks, quality assurance and accreditation, CATs, and information and guidance services can create an enabling environment for flexible learning

pathways. Finally, targeted policy measures conducive to flexible learning pathways include alternative entry routes to higher education, opportunities for transfer between institutions and study programmes, and flexible study provision, in addition to alternative delivery modes (i.e. part-time arrangements and flexibility in the content and coverage of study programmes).

Even though research suggests that initiatives to enhance flexible learning in higher education already exist in many countries, a more holistic and systematic approach is needed to ensure that providing flexible learning pathways is not only a policy priority but also a well-functioning institutional practice across the entire education system. Through concrete case examples, this study has shown that an enabling environment for flexible learning pathways requires strong administrative capacity, coordination, and the involvement of all relevant stakeholders, including government organizations, (higher) education providers, employers, labour unions, and students. It is also important that policy frameworks, policy instruments, and targeted policy measures are coherent and do not have contradictory goals. Rather, they should reinforce one another in the attainment of common goals.

A number of examples have been provided in this study to illustrate the role of policies that can support flexible learning pathways in higher education systems and institutions. However, further research is required to understand the relevance and usefulness of these policies, instruments, and practices in different higher education systems operating in different contexts. For example, the existing body of literature approaches the topic largely in the context of developed countries, but less is known about flexible learning pathways in developing economies.

In addition, while some of the evidence suggests that these policy frameworks, policy instruments, and policy measures can support equity and lifelong learning, a more comprehensive and in-depth analysis is required to validate this assumption, and to better understand the exact elements and linkages that can lead to progress in this area.

Further research is also needed to understand how policies for flexible learning pathways work together as a whole, and in relation to the context in which they are developed, and to identify whether they operate in synergy, in complementarity, or in tension with one another.

Moreover, little is known about how policies and instruments translate into institutional practices and interact with institutional priorities and conditions, and with organizational cultures. In other words, further research is required to understand the effectiveness and impact of flexible learning pathways for students. And finally, there is only limited evidence on how policies for flexible learning actually do impact equity concerns in different higher education sectors. More research is also needed to demonstrate whether a more permeable higher education system allows students to move up the educational ladder to more advanced levels of higher education.

Both the effectiveness of these policies and their effects on equity will be explored in the IIEP research project 'SDG 4: Planning for flexible learning pathways in higher education'. Factors related to the implementation and effectiveness of flexible learning pathways, and their effects on equity, will be addressed in an international survey and a series of in-depth country case studies as part of this research.

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