Towards Sustainable Development Goals target 4.3: 
By 2030, to ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university
UNESCO - a global leader in education

Education is UNESCO’s top priority because it is a basic human right and the foundation for peace and sustainable development. UNESCO is the United Nations’ specialized agency for education, providing global and regional leadership to drive progress, strengthening the resilience and capacity of national systems to serve all learners. UNESCO also leads efforts to respond to contemporary global challenges through transformative learning, with special focus on gender equality and Africa across all actions.

The Global Education 2030 Agenda

UNESCO, as the United Nations’ specialized agency for education, is entrusted to lead and coordinate the Education 2030 Agenda, which is part of a global movement to eradicate poverty through 17 Sustainable Development goals by 2030. Education, essential to achieve all of these goals, has its own dedicated Goal 4, which aims to “ensure inclusive and equitable quality education and promote lifelong learning opportunities for all”. The Education 2030 Framework for Action provides guidance for the implementation of this ambitious goal and commitments.

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Target 4.3 of the Sustainable Development Goals aims, by 2030, to ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university.

Progress on this target indicates that:

**Access to higher education:** Over 235 million students were enrolled in higher education in the world in 2020, more than doubling the 100 million students enrolled in 2000 (UIS database). The gross enrolment ratio reached 40% globally in 2020, yet only 9% in Sub-Saharan Africa (UIS database).

**Enrolment distribution in public and private higher education institutions (HEIs):** About a third of enrolment worldwide is estimated to be in private HEIs and two thirds in public HEIs. The share of enrolment in private HEIs ranges from about 15% in Oceania to 54% in Latin America and the Caribbean (UNESCO, 2021b).

**Number and size of HEIs:** Based on a dataset of 55 countries, the number of HEIs grew 52% between 2006 and 2018. In this period, in India over 22,000 additional HEIs were reported. The size of HEIs varies according to their type. In 2018, comprehensive universities were just over 5-times larger than short-cycle HEIs in terms of the average number of students enrolled (Williams, J. and Usher, A., 2022).

**Equal access for all:** Stronger non-discrimination policies are necessary to guarantee equality of opportunities for low-income people, persons with disabilities, refugees and displaced persons, and members of ethnic minorities. Enabling access to quality higher education for these and other discriminated groups is central for social justice and social cohesion (UNESCO, 2022a).

**Gender equality:** The gross enrolment rate of women in higher education increased from 19% in 2000 to 43% in 2020, whereas for men it rose more slowly from 19% to 37% (UIS database). The gender parity index indicates that
globally there were 113 women enrolled in higher education for every 100 men in 2020 (UIS database). Women remain underrepresented in some STEM areas. Only 30% of researchers worldwide are women (UNESCO Institute for Statistics, 2020).

**Participation in higher education by wealth:** Gaps in enrolment rates in higher education between the richest and the poorest can reach 60 percentage points or more, especially in some middle-income countries (UNESCO, 2022b).

**Persons with disabilities:** The proportion of adults aged 25 and above who have completed higher education is half as high among those with disabilities as among those without disabilities (41 countries with data) (UN DESA, 2019).

**Refugees:** Only around 5% of refugees attend higher education (UNHCR, 2021), an eighth of the 40% global gross enrolment rate (UIS database). The UNESCO Qualifications Passport for Refugees and Vulnerable Migrants (UQP) aims to facilitate their access to higher education through the recognition of prior learning and qualifications.

**Flexible learning pathways (FLP):** FLP can support wider participation in higher education, better responsiveness to diverse student needs, reduced dropout rates, labour market (re-)entry and career progression (UNESCO IIEP, 2022). Across 75 countries reporting relevant data, 55 have established a national policy for FLP, while 45 have relevant regulations and legislation (UNESCO IIEP, 2022).

**Quality assurance:** Almost every country has one or more national - and multiple regional, professional and subject-specific - quality assurance bodies. This amounts to around 345 quality assurance bodies globally (INQAAHE Study on Global Trends in Higher Education Quality Assurance, 2018-2020).

**National qualifications frameworks (NQF):** At least 116 countries have a NQF addressing higher education, with the great majority of certified or referenced NQFs in Europe (INQAAHE Global Study 2018-2020). Integrated NQFs covering several or all education levels are key to developing flexible learning pathways, as they show the linkages between different types of qualifications (UNESCO IIEP, 2022, p. 18).

**International student mobility:** The number of internationally mobile students tripled from 2000 to 2019, from two to six million. Internationally mobile students’ share of total world enrolments rose from 2.09% in 2000 to 2.58% in 2019 (UIS database). North America and Western Europe hosted 49% of internationally mobile students in 2019, while 13% of internationally mobile students came from these regions (UIS database). The pandemic restricted physical mobility, but virtual mobility increased. The UNESCO Global Convention on the Recognition of Qualifications concerning Higher Education, adopted in 2019, facilitates international mobility by offering a legal framework to ensure individuals’ rights to have their qualifications assessed in a fair, transparent and non-discriminatory manner.

**Financing higher education:** Public investment in higher education in a set of 55 countries increased by 64% after inflation between 2006 and 2018. This represented an increase of 7% in spending per student (Williams, J. and Usher, A., 2022). In 2018, on average in 48 countries, around 12% of higher education students received governmental direct student financial aid in the form of a loan and around 20% in the form of a grant (Williams, J. and Usher, A., 2022).
Impacts of the COVID-19 pandemic on higher education: The pandemic has disrupted and challenged the functioning of higher education in its three central missions worldwide. The short- and long-term impacts of the COVID-19 pandemic on higher education are complex, extensive and arguably pervasive - affecting all aspects of higher education functioning, including teaching and learning, research, community engagement, equity, internationalisation and mobility, institutional governance and management, and finances (European Commission & PPMI Group, 2021). As reported by UNESCO National Commissions, countries’ needs to overcome the challenges for higher education caused by the COVID-19 pandemic have centred on strengthening online and distance learning, including through teacher training, expanding pedagogical materials, and improving digital infrastructure and the availability of digital devices (UNESCO, 2021a).

Preparedness to face the pandemic and its impacts on higher education systems has been unequal, depending on technological resources, institutional capacity, financial backstop and regulatory environments. In 2019, only 29% of the population of Sub-Saharan Africa and 57% of the world's population was using the internet (International Telecommunication Union in The World Bank data, 2022). Pre-pandemic online enrolment and regulation of online provision offer an approximate sense of countries’ readiness to shift online. During the 2018/19 academic year, the percentage of higher education students who enrolled exclusively in distance learning varied significantly between countries; for example, it reached 25% in Germany and only 1% in Belgium (Flemish Community) (OECD, 2021). Before the pandemic, less than 35% of quality assurance bodies were involved in evaluating distance education (Karakhanyan & Stensaker, 2020).

In terms of learning disruption, the closing of higher education campuses resulted in 78 days closed for in-person instruction on average across 24 jurisdictions in 2020 (OECD, 2021). It is estimated that 18% of upper secondary national level examinations, which usually certify the completion of this level and permit access to higher education, were cancelled globally (UNESCO, UNICEF, The World Bank and OECD, 2021). The shift to online teaching-learning modalities has been uneven between regions. A global survey conducted by the International Association of Universities between March and April 2020 found that the replacement of classroom teaching by online modalities varied from 29% in Africa to 85% in Europe (Marinoni et al., 2020).

The pandemic’s impact on higher education staff included a reduction in academic employment in 14 out of 57 countries with data, while 15 countries reported reductions in administrative employment (UNESCO, 2021a). Remuneration was also affected in 40% of these countries for academic staff and 38% for administrative staff (UNESCO, 2021a).

University research capacities have been essential for understanding the pandemic and responding socially and medically. The pandemic altered research and community engagement activities: across 57 countries with data, 41 reported the suspension or delay of research activities and 33 of community engagement activities. Yet 15 countries – mostly upper-middle and high-income countries – reported an increase in research activities and 18 in community engagement activities, notably in COVID-19 related fields (UNESCO, 2021).
UNESCO thanks the valuable contributions from all individuals and organizations that have made possible the preparation of this summary of the Higher Education Global Data Report (in progress), by providing information and feedback. UNESCO thanks Jonathan Williams, Higher Education Strategy Associates (HESA) and independent consultant; Susanna Karakhanyan, International Network for Quality Assurance Agencies in Higher Education (INQAAHE); Maria Martinho, United Nations Department of Economic and Social Affairs (UN DESA); Manal Stulgaitis and Anders Andreasen, United Nations High Commissioner for Refugees (UNHCR); and César Guadalupe, Universidad del Pacífico. Colleagues from UNESCO that contributed include Talal El Hourani and Rohan Pathirage, UNESCO Institute for Statistics (UIS); Manos Antoninis and Camila Lima De Moraes, Global Education Monitoring Report (GEM); Michaela Martin, International Institute for Educational Planning (IIIEP); Emma Sabzalieva, Victoria Galán and Clarisa Yerovi, International Institute for Higher Education in Latin America and the Caribbean (IESALC); Florence Migeon and Tamara Marti, UNESCO Division Education 2030; and Archana Chaudhary and Nandini Chatterjee Singh, Mahatma Gandhi Institute of Education for Peace and Sustainable Development (MGIEP). Members of the UNESCO Section for Higher Education contributing to this report include Paz Portales, Peter Wells, José Luis Guzmán, Vanja Gutovic, Andreas Snildal and Dounia Abderrahman. Francisca Campos made the graphic design of the document, which was prepared by Andrea Detmer.
Introduction
Higher education has a central role in accomplishing the 2030 Agenda for Sustainable Development, in its three integrated and indivisible dimensions of economic, social and environmental development. The higher education sector has the responsibility of co-creating knowledge and innovations that allow progress in the 17 Sustainable Development Goals (SDGs). It has the mission of educating citizens as social agents who can become leaders for sustainable development. Furthermore, the sector and the organizations comprising it have the duty to implement concrete actions to achieve the SDGs and their 169 targets.

SDG target 4.3 specifically aims, by 2030, to ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university. This entails leaving no one behind, assuring equality of opportunities to all, serving especially population groups affected by structural inequalities and —often intersectional—forms of discrimination under ‘prohibited grounds’ (UN, 1966). The right to higher education is recognized under international human rights law. The Universal Declaration of Human Rights (UDHR) adopted in 1948, states that ‘higher education shall be equally accessible to all on the basis of merit’. Merit needs to be considered in context, recognizing the ‘potential to succeed’ of students in any context. Thus, to assure a fair distribution of opportunities leading towards social justice, specific measures preventing discrimination and exclusion are necessary.

Elements of higher education quality includes facilitating learning throughout life, and permitting and promoting diverse learning paths and educational aspirations. Higher education quality also relates to meaningful research and learning that supports climate action, decent work, gender equality, responsible citizenship, peace, justice, prosperity and wellbeing. Quality also entails facilitating socioemotional learning and wellbeing in students and staff. Achieving these goals requires addressing evolving societal challenges in partnerships within knowledge and learning systems, encouraging collaboration across disciplinary fields, between different types of educational institutions, between higher education and the public and private sectors and civil society, all at the local, national and international levels.

The aim of this report is to present the most up-to-date global data available in relation to Higher Education systems. It intends to provide a picture of the global system-level situation around SDG target 4.3, centring on the equality of conditions that permit quality higher learning, at personal, community and societal levels. The right to higher education and our mandate to ensure equal access to quality education for all guide our search for metrics that show us progress, setbacks and gaps.

The report addresses five dimensions essential for realizing SDG target 4.3 and that have some internationally comparable quantitative data: participation in higher education, equity and inclusion, quality of higher education, financing of higher education and the impacts of COVID-19 on higher education. The existence and development of higher education has multiple other dimensions, which exceed the scope of this first summary report, including the rich landscape of research resources, collaborations, results and impact, as well as the important and diverse area of community engagement. Public and institutional higher education policies and related aspects of governance and management are central for steering and operating higher education systems, but global quantitative data is limited on these matters.

Data availability is a significant limitation in the construction of this report. Official quantitative data available globally focus on essential, yet limited, dimensions of higher education. This report relies on multiple sources that apply different methodologies, timeframes, geographical orientations and data validation procedures. This permits reporting on topics that would otherwise be omitted.
Dimension 1

Participation in higher education

The past decade has seen a significant growth in enrolment, yet millions around the world are still denied their right to education, and learning opportunities continue to be unequally distributed.
Enrolment in higher education

Over 235 million higher education students were enrolled globally in 2020, more than double the 100 million students enrolled in 2000

Enrolment has increased in all SDG regional groupings, but at different rates, changing the distribution of students between regions. The number of students in Europe and Northern America increased by 24% between 2000 and 2020, going from accounting for 40% of the world’s enrolment in 2000 to 21% in 2020. In the same two decades, the number of students in Central and Southern Asia increased 268%, the highest rate among regional groupings, going from representing 13% of world students in 2000 to 21% in 2020.

Enrolment in higher education, by region, both sexes, 2000-2020

In 2020, the largest share (about a third) of higher education students worldwide were enrolled in Eastern and South-Eastern Asia (nearly 77 million students) (UIS database)

Source: UNESCO Institute for Statistics database
The worldwide gross enrolment rate in higher education increased from 19% to 40% between 2000 and 2020.

The gross enrolment rate shows the general level of participation in a given level of education. The gross enrolment rate for tertiary education indicates the total enrolment in tertiary education regardless of age expressed as a percentage of the population in the 5-year age group immediately following upper secondary education (UIS Glossary). The indicator has limitations but offers an estimation of education system capacity.

In the 2000-2020 period, the biggest regional increase in the gross enrolment rate was in Eastern and South-Eastern Asia (up 36 percentage points), and the smallest in Sub-Saharan Africa (up 5 percentage points). In 2020, the gross enrolment rate reached 27% in Central and Southern Asia; between 48% and 54% in Northern Africa and Western Asia, Eastern and South-Eastern Asia, and Latin America and the Caribbean; 75% in Oceania; and 79% in Europe and Northern America (UIS database).

Gross enrolment rates in higher education, by region, both sexes, 2000-2020

In Sub-Saharan Africa, the gross enrolment ratio reached only 9% in 2020, while in Europe and Northern America it amounted to 79% (UIS database)

Source: UNESCO Institute for Statistics database
Public and private provision both play a role in global higher education enrolments. The diversity of existing HEIs and their financial arrangements challenge the distinction between state and non-state provision (UNESCO, 2021b). The UNESCO Institute of Statistics considers private institutions as those not operated by a public authority, but controlled and managed by a private body. Under this definition, about 33% of students were enrolled in private institutions globally in 2017. Between 2010 and 2017, this proportion remained stable at the global level. The biggest relative growth was in Oceania, where the private share of enrolments rose from 8% in 2010 to 15% in 2017. Divergent national trends are masked in regional aggregates (UNESCO, 2021b).

About a third of enrolment worldwide is estimated to be in private higher education institutions and two thirds in public institutions. Enrolment in private institutions in 2017 ranged from about 15% in Oceania to 54% in Latin America and the Caribbean (UNESCO, 2021b).

Percentage of enrolment in tertiary education in private institutions, by region, 2010-2017

Based on a dataset of 55 countries gathered from 2018 to 2022 by Higher Education Strategy Associates (HESA) - which covers around 91% of global enrolments-, there were 88,071 higher education institutions in operation in 2018. This was up by 52% from 2006, meaning that the tracked countries added nearly 30,000 HEIs in just twelve years. Half of the global total of higher education institutions were in Central and Southern Asia in 2018 (51%), including the great majority (79%) of the institutions added from 2006 to 2018. This was almost entirely due to India, which alone added 22,249 institutions in this period, accounting for 74% of the world’s growth in institution counts. In terms of percentage growth, Sub-Saharan Africa increased its count of HEIs by 153% over the period in question, while Central and Southern Asia did so by 113%. Europe and North America barely added any HEIs, as their total count increased by just 4% in these twelve years.

In India, over 22,000 additional higher education institutions were reported in the period 2006-2018, reaching over 40,000. (Williams, J. and Usher, A., 2022)

Number of higher education institutions by region, 55 countries, 2006-2018

Provision: size and type of higher education institutions

Different types of higher education institutions (HEIs) educate students around the world.

Data from 2018 for 55 countries indicate that the largest share of global HEIs (47%) were university colleges, followed by short-cycle higher education institutions (19%), specialised universities (15%) and comprehensive universities (11%) (Williams, J. and Usher, A., 2022).

The size of HEIs also varies. In 2018, comprehensive universities were just over 5-times larger than short-cycle HEIs in terms of the average number of students enrolled (Williams, J. and Usher, A., 2022).

Average enrolments per institution by type of higher education institution, 2006 and 2018

Evolution in the number of higher education institutions in a set of 55 countries, by type, 2006-2018

Comprehensive universities educated as many as 51% of students enrolled in higher education institutions in 2018, in a set of 55 countries (Williams, J. and Usher, A., 2022)
Dimension 2

Equity and inclusion in higher education

“The Declaration of Human Rights states that higher education shall be equally accessible to all on the basis of merit. According to the right to education, tertiary education should be accessible, without discrimination, by every appropriate means, on the basis of individual capacity and progressively free (UN, 1966). As talent is equally distributed across the population, in all groups, regardless of their characteristics, it is possible to find students with the potential to succeed in higher education in all contexts”.

(Making Higher Education more inclusive, SDG-Education 2030 Steering Committee, 2020, p. 3)
Access to higher education according to households’ income level depicts vast inequalities within countries.

The Global Education Monitoring Report team in the Scoping Progress in Education (SCOPE) initiative reports:

“*The poorest have hardly any post-secondary education opportunities in low and middle income countries*” (UNESCO, 2022b).

Gaps in enrolment rates in higher education between the richest and the poorest can reach 60 percentage points or more in some countries, including Bolivia (1% for the poorest, 66% for the richest), Panama (6%, 74%) and Mongolia (10%, 70%). Even in some European countries, gaps between the poorest and the richest exceed 35 percentage points; for example, in Luxembourg (25%, 73%), Portugal (43%, 90%) and Spain (46%, 88%).

Inequalities by income level entail gaps not only in enrolment rates but in the types of higher education institution students attend.
Gender equality

SDG5: Achieve gender equality and empower all women and girls

Access to higher education increased at a faster pace among women than among men, between 2000 and 2020.

The gross enrolment rate in higher education increased from 19% in 2000 to 43% in 2020 among women, but only from 19% to 37% among men (UIS database).

The gender parity index indicates that at the global level, 113 women were enrolled in higher education for every 100 men in 2020 (UIS database).

However, gender equality is not only about enrolment; it concerns the quality of learning experiences, the completion of qualifications, participation in the labour market, contribution in research and leadership roles, and engagement in all disciplines.

Gender parity index in tertiary education, by region, 2000-2020

Only 30.5% of researchers worldwide were women in 2018 (UNESCO Institute for Statistics database)

Source: UNESCO Institute for Statistics database
The UNESCO International Institute for Higher Education in Latin America and the Caribbean (IESALC) and Times Higher Education study on gender equality in higher education analysed responses of 776 higher education institutions worldwide on their contributions to SDG5 (UNESCO IESALC & Times Higher Education, 2022).

More than half of graduates in 2019 were female, but this drops to 41% in STEM subjects and rises to 66% for medicine. Academic and research gender indicators reveal that only 36% of senior academics and 29% of authors are women. In terms of university-wide policies and services, 89% of responding HEIs have non-discrimination policies against women, but accessible childcare facilities are available only in 59% of institutions for students and in 69% for staff.

Regional disparities are significant and institutions in Oceania tend to be ahead in student, academic and institution-wide gender equality (UNESCO IESALC & Times Higher Education, 2022).

**Student-related gender indicators**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Average %</th>
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<tbody>
<tr>
<td>Women receiving degrees</td>
<td>54</td>
</tr>
<tr>
<td>Track application, acceptance and completion rates for female students</td>
<td>83</td>
</tr>
<tr>
<td>Have a policy to address application, acceptance, entry and participation rates for female students</td>
<td>69</td>
</tr>
<tr>
<td>Have women’s access schemes, such as mentoring or scholarships</td>
<td>81</td>
</tr>
<tr>
<td>Encourage applications by women in subjects where they are underrepresented</td>
<td>78</td>
</tr>
<tr>
<td>Have women’s mentoring schemes in which at least 10 per cent of female students participate</td>
<td>69</td>
</tr>
<tr>
<td>Track women’s graduation rate compared with men’s and scheme to close gap</td>
<td>64</td>
</tr>
</tbody>
</table>

**Academic and research-related gender indicators**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Average %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of senior female academics</td>
<td>36.00%</td>
</tr>
<tr>
<td>Percentage of female authors</td>
<td>29.00%</td>
</tr>
</tbody>
</table>

The proportion of adults aged 25 and above who have completed higher education is half as high among those with disabilities as among those without disabilities (41 countries with data) (UN DESA, 2019).

Disability is defined as ‘a limitation in a functional domain that arises from the interaction between a person’s intrinsic capacity, and environmental and personal factors’ (International Classification of Functioning, Disability and Health, WHO 2001).

Functioning refers to the levels of body function and structures, activities and participation, and the multiple combination of functioning limitations (each with a spectrum) implies that the experiences of disability are diverse (UN DESA, 2019).

Over one billion people in the world have some form of disability (World Health Organization & World Bank, 2011, p. xi).

**Percentage of persons 25 years and older who completed tertiary education, by disability status, in 41 countries, around 2012**

Source: Disability and development report 2018 (UN DESA, 2019)

Note: (WG) identifies countries with data produced using the Washington Group Short Set of Questions; (MDS) identifies countries with data produced using the Model Disability Survey. Data from Cameroon were collected in selected regions of the country and are not nationally representative.
According to data from the United Nations High Commissioner for Refugees (UNHCR), in 2020 refugees’ enrolment rate in higher education globally was around 5%, which was significantly lower than for primary education (68%) and secondary education (34%). Over 140,000 refugees were enrolled in higher education in 98 countries, 69% in universities (UNHCR 2020).

Figures of refugees in higher education are estimations. Data collection for refugee enrolment is a challenge because data is highly decentralized and rarely collected by a central entity at the national or regional level. Refugee students are often registered as international students and data is rarely disaggregated to reflect migration status or gender. This is partly due to data and privacy regulations of higher education information management systems (UNHCR, 2020; Martin & Stulgaitis, 2022).

The global enrolment ratio of refugees in higher education is estimated at around 5% (UNHCR, 2021), while the global gross enrolment rate is 40% (UIS, 2022).

The UNESCO Qualifications Passport for Refugees and Vulnerable Migrants (UQP) aims to facilitate their access to higher education through the recognition of prior learning and qualifications.

The UQP is designed for refugees and vulnerable migrants lacking documentation of their qualifications. The evaluation methodology combines an assessment of available documentation, the experience gained through previous evaluations and the use of a structured interview. The UQP provides credible information that can be relevant for applications for employment, internships, qualification courses and admission to studies. The pilot conducted in Zambia and Iraq between 2019 and 2021 resulted in 45 issued UQP and the validation of a recognition tool with a global scope.

15by30: in 2019, UNHCR and partners set the goal to increase enrolment in higher education of young refugee women and men to 15% by 2030

Refugees and displaced persons

The global enrolment ratio of refugees in higher education is estimated at around 5% (UNHCR, 2021), while the global gross enrolment rate is 40% (UIS, 2022).
Dimension 3

Quality of higher education

“Quality in higher education is a multi-dimensional, multi-level, and dynamic concept that relates to the contextual settings of an educational model, to the institutional mission and objectives, as well as to specific standards within a given system, institution, programme, or discipline”

(UNESCO, 2007, p. 70)
Flexible learning pathways
Policy frameworks

The Education 2030 Incheon Declaration and Framework for Action Towards inclusive and equitable quality education and lifelong learning for all states that promoting lifelong learning requires:

‘the provision of multiple and flexible learning pathways and 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 nonformal and informal education’ (UNESCO, 2016, p. 33).

Learning, as a lifelong experience, requires quality education provision alongside flexible learning pathways. Each person’s learning trajectory is unique and involves innumerable formal and informal learning experiences.

In terms of formal learning in higher education, increased participation, the diversification of learners (age, working condition, persons with disabilities, refugees), the diversification of provision (types of higher education institutions and types of programmes, including micro credentials and MOOCs), the availability of educational technologies and the dynamic labour market requiring rapidly changing skillsets, all permit and promote the development of flexible learning pathways. Public policies and regulations, and institutional structures can foster integrated and flexible systems for dynamic learning progression, for example by recognising prior learning and by facilitating horizontal and vertical mobility (UNESCO IIIEP, 2022).

Regulatory, legislative and policy frameworks for flexible learning pathways can support:

- Widened participation in higher education
- Better responsiveness to diverse student needs
- Improved general level of education/qualifications in society
- Labour market (re-)entry and career progression
- Strengthened equity in progression of studies
- Reduced dropout rates/increased completion of studies

(UNESCO IIIEP, 2022)
Flexible learning pathways
Policy implementation

The UNESCO International Institute for Educational Planning (UNESCO-IIEP) project SDG4: Planning for Flexible Learning Pathways in Higher Education analysed mechanisms to support flexible learning pathways (FLP) in higher education systems across the world. Findings considered responses from 75 countries from all regions (UNESCO IIEP, 2022).

Policies on national qualifications frameworks and information and guidance for students have the highest degree of implementation regarding policies supporting FLP (UNESCO IIEP, 2022)

Data on regulatory, legislative and policy frameworks show that 55 out of 75 countries tracked have established a national policy for FLP, while 45 have relevant regulations and legislation (UNESCO IIEP, 2022)

Degree of implementation of policies that support flexible learning pathways, as reported by 75 countries in 2019

Source: Achieving SDG4: flexible learning pathways in higher education. Research Findings from the IIEP International Survey (UNESCO IIEP, 2022)
Flexible learning pathways to access higher education

At least eleven types of pathways to enter higher education exist.

These depend on the type of institution and study programme. The most common mechanism to determine access to higher education is a secondary education leaving certificate. Short-cycle programmes (ISCED level 5) generally have more entry pathways than bachelor’s or equivalent programmes (ISCED level 6). The diversity of entry pathways in short-cycle programmes promotes the access of a wider range of learners (UNESCO IIEP, 2022).

Entry pathways to higher education, as reported by 75 countries in 2019

Source: Achieving SDG4: flexible learning pathways in higher education. Research Findings from the IIEP International Survey (UNESCO IIEP, 2022)
Flexible learning pathways within higher education

Transfer pathways within higher education permit both, horizontal mobility (at the same level of education) and vertical mobility (to higher levels of education). These can occur between and within institutions and fields of study.

Opportunities to transfer within the same field of study are more common within the same institution than across institutions, and between institutions of the same type than of different types. Transfers across different fields of study are less common than within the same field (UNESCO IIEP, 2022).

**Opportunities for transfer within the same field of study, as reported by 75 countries in 2019**

- Intra-or inter-institutional agreement: 27 countries (30%), 21 countries (24%)
- A regional or sub-regional credit transfer system: 16 countries (19%), 12 countries (14%)
- A national credit transfer system: 28 countries (33%), 22 countries (26%)
- A national regulation: 43 countries (51%), 30 countries (36%)

**Opportunities for transfer across different fields of study, as reported by 75 countries in 2019**

- Between different types of HEIs: 20 countries (23%), 18 countries (21%)
- Between HEIs of the same type: 27 countries (31%), 23 countries (28%)
- Within the same HEI: 37 countries (43%), 27 countries (32%)

Source: Achieving SDG4: flexible learning pathways in higher education. Research Findings from the IIEP International Survey (UNESCO IIEP, 2022)
Pathways beyond higher education & lifelong learning opportunities

Adults with a higher education qualification are more likely to have further training and a higher number of training activities than adults with lower educational levels (UNESCO, 2021b).

66% of adults with a higher education qualification have ten or more training activities, doubling the 33% of adults with up to secondary education (UNESCO, 2021b).

‘Education qualification is the most influential determinant of training’ (UNESCO, 2021b, p. 265)

Training occurrences in lifetime, by education level, selected high-income countries, 2010–19

Quality assurance

Quality assurance (QA) refers to ‘an ongoing process by which the quality of a higher-education system, institution, or programme is assessed by the competent authority/authorities to assure stakeholders that acceptable educational standards are continuously being maintained and enhanced’ (Global Convention on the Recognition of Qualifications concerning Higher Education, p. 3).

Around 345 quality assurance bodies operate worldwide (INQAAHE Study on Global Trends in Higher Education Quality Assurance, 2018-2020)

This entails internal quality assurance (intra- institutional practices) and external quality assurance (inter- or supra- institutional schemes) (UNESCO, 2007). The development of external quality assurance mechanisms created the need to demonstrate their validity, credibility and added value. Quality assurance bodies have developed processes to validate their own work, including by third party assessments (Karakhanyan & Stensaker, 2020).

Quality assurance systems and organizations have widely developed in the last decades and today, almost each country has one or more national and multiple regional, professional and subject-specific QA bodies.

Out of the approximate 345 QA bodies operating worldwide, around 142 have been evaluated externally or have been recognized by regional or international quality assurance networks. Around 258 QA bodies are members of a regional or international networks (Karakhanyan & Stensaker, 2020), re-calculations as per SDG regions in 2022.

Quality assurance bodies, global landscape

<table>
<thead>
<tr>
<th>Sub-Saharan Africa</th>
<th>Northern Africa and Western Asia</th>
<th>Central and Southern Asia</th>
<th>Eastern and South-Eastern Asia</th>
<th>Latin America and the Caribbean</th>
<th>Oceania</th>
<th>Europe and Northern America</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of countries</td>
<td>46</td>
<td>25</td>
<td>14</td>
<td>18</td>
<td>49</td>
<td>28</td>
</tr>
<tr>
<td>Number of QA bodies</td>
<td>21</td>
<td>21</td>
<td>32</td>
<td>52</td>
<td>75</td>
<td>11</td>
</tr>
<tr>
<td>Membership with QA networks</td>
<td>11</td>
<td>18</td>
<td>20</td>
<td>45</td>
<td>20</td>
<td>11</td>
</tr>
<tr>
<td>Number of externally evaluated/ recognized bodies</td>
<td>0</td>
<td>5</td>
<td>2</td>
<td>4</td>
<td>7</td>
<td>2</td>
</tr>
</tbody>
</table>

A Qualifications Framework (QF) represents ‘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 with 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, pp. 67–68).

At least 116 countries have a NQF addressing higher education. The great majority of certified or referenced NQF are in Europe (INQAAHE Global Study 2018-2020, recalculated as per SDG regions in 2022).

Integrated NQF covering several or all education levels are central for developing flexible learning pathways, as they show the linkages between different types of qualifications (UNESCO IIEP, 2022, p. 18).

### National Qualifications Frameworks (NQF), status

<table>
<thead>
<tr>
<th></th>
<th>Sub-Saharan Africa</th>
<th>Northern Africa and Western Asia</th>
<th>Central and Southern Asia</th>
<th>Eastern and South-Eastern Asia</th>
<th>Latin America and the Caribbean</th>
<th>Oceania</th>
<th>Europe and Northern America</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of countries</td>
<td>20</td>
<td>18</td>
<td>7</td>
<td>7</td>
<td>9</td>
<td>9</td>
<td>48</td>
</tr>
<tr>
<td>with NQFs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NQFs self-certified</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>37</td>
</tr>
<tr>
<td>NQFs referenced</td>
<td>0</td>
<td>4</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>29</td>
</tr>
<tr>
<td>against other NQFs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NQFs referenced</td>
<td>0</td>
<td>7</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>29</td>
</tr>
<tr>
<td>against other QFs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NQFs under revision</td>
<td>3</td>
<td>12</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>22</td>
</tr>
</tbody>
</table>

Recognition of qualifications

The recognition of qualifications facilitates international mobility and enables flexible learning pathways, with horizontal and vertical articulation, within and between countries.

Changes in the higher education landscape have necessitated a revision of each of the “first generation” of UNESCO regional recognition conventions – first adopted in the 1970s – but also a renewed impetus for the development of a Global Convention on the Recognition of Qualifications concerning Higher Education.

The Global Convention was adopted in 2019, becoming the first United Nations treaty on higher education with a global scope. It establishes universal principles for fair, transparent and non-discriminatory recognition of higher education qualifications and qualifications giving access to higher education and offering avenues for further study and employment. It also has specific provisions on promoting the recognition of refugees’ qualifications, even in cases where documentary evidence is lacking. As of May 2022, it has 14 States Parties and requires 6 more to enter into force.

The Global Convention is implemented in complementarity with the five regional recognition conventions. While the latter promote recognition, mobility and inter-university cooperation between regions, the Global Convention facilitates this among regions. A major added value are the networks of academic information centres under the conventions, which already exist in Europe (ENIC-NARIC) and Asia-Pacific (APPNIC), and facilitate the exchange of information and qualifications between countries at the regional level, thereby promoting mutual understanding and transparency.
The number of internationally mobile students increased in all regions, in terms of both inbound and outbound mobility from 2000 to 2019, albeit unevenly between regions (UIS database).

Figures on internationally mobile students by region of origin and host region indicate that countries in North America and Western Europe hosted 49% of students in 2019, while only 13% of the global internationally mobile students came from these regions. Countries in Central and Eastern Europe also hosted a larger proportion of students (13%) than they sent abroad (7%). In all other UIS regions, the proportion of students hosted was less than the proportion of students originating (UIS database).

The number of internationally mobile students tripled from 2000 to 2019, from two to six million. Internationally mobile students’ share of total world enrolments rose from 2.09% in 2000 to 2.58% in 2019 (UIS database).
As the enrolment in higher education has doubled in the past 20 years and the number and diversity of providers continues to grow, adequate financing has become all the more important for ensuring equality and affordability in higher education.
Public investment in higher education

In 2018, considering the 55-country dataset gathered by HESA, Europe and Northern America accounted for 49% of global total public higher education spending, down from 60% in 2006. The shift in proportion was almost entirely towards Eastern and South-Eastern Asia, which accounted for 25% of global spending in 2018, up from 17% in 2006 (Williams, J. and Usher, A., 2022).

Comparing patterns of total public spending in relation to enrolments depicts a different picture. From 2006 to 2018, the public spending per student at the world level increased by 7%, reaching USD 4,758 (real PPP). The advantages of Europe and Northern America amplified, as their spending per student increased by 36%, i.e., amounting to USD 10,541 (real PPP) in 2018. The only other region that experienced growth in spending per student was Eastern and South-Eastern Asia (up 56%), reaching spending per student of USD 3,509 (real PPP) in 2018. In every other SDG regional grouping, spending per student declined (Williams, J. and Usher, A., 2022).

Total public spending on higher education by region, 2006-2018 (in billions of 2018 USD, PPP)

![Graph showing total public spending on higher education by region, 2006-2018.]

Total public spending on higher education per higher education student by region, 2006 and 2018 (in thousands of 2018 USD, PPP)

![Graph showing total public spending on higher education per higher education student by region, 2006 and 2018.]

Source: UNESCO Institute for Statistics database
Global data on public versus private financing of higher education is tenuous partly given the weak tracking of finances of private higher education institutions (HEIs) in many jurisdictions.

Based on a 41-country dataset, estimations indicate that between 2006 and 2018, the increase in public financing of public HEIs was USD 25 billion (in real PPP) greater than the increase in private financing, although private financing increased slightly more in percentage terms (51% versus 47%).

From a regional perspective, the share of private financing of public HEIs only increased in Europe and North America, and Oceania, and fell in other regions. (Williams, J. and Usher, A., 2022).

Approximate public and private funding to tracked public higher education institutions in 41 countries, 2006 to 2018 (in billions of 2018 USD, PPP)

Private institutions, especially in middle and high-income countries depend on household funding more than state institutions (UNESCO, 2021b).

“Most non-state institutions, especially those that are smaller and non-elite, rely on fees for their funding” (UNESCO, 2021b, p. 174)

Share of higher education institutions’ revenue that comes from households, by sector, selected countries, 2017


Note: Percentages in parentheses represent the share of students enrolled in private institutions. Private institutions include both completely independent and government-dependent private institutions.
Based on a 55-country dataset, around 90.3% of higher education students globally paid compulsory fees in 2018, which was basically unchanged from 2006. Of course, there are countries with very low fees, many of which are reported in the Figure as Token fee-charging. These data are based on breakdowns within countries as determined by their provider types and tuition exemption or differential regimes.

Categories of student fee regimes in 55 countries, 2018

For mixed models, the country best fits with the model indicated by the general colour of the country on the map, but it also has some characteristics of the secondary model signalled by the coloured dot.
Thirty-three percent of students in Northern Africa and Western Asia do not pay compulsory fees. Latin America and the Caribbean is next at 19%. The position of Latin America may be somewhat surprising given the region has the highest share of students in private higher education, almost all of whom pay compulsory fees (with some exceptions in Chile), however more than 40% of Latin American students in public higher education do not pay compulsory fees, which is the highest rate of any region in the world (Williams, J. and Usher, A., 2022).
A recently developed database allows the analysis of government direct student financial aid (SFA) disbursements in 48 countries. These disbursements take the form of loans or grants. Direct SFA disbursements grew in these countries by 75% between 2006 and 2018, though essentially all of this growth occurred prior to 2012. The patterns for loans and grants were somewhat similar.

In terms of recipient numbers, there was greater divergence between loans and grants. In 2006, there were slightly more loan recipients globally than grant recipients. However, there was a separation in recipient numbers particularly after 2011, such that by 2018 there were 65% more grant recipients than loan recipients globally. This implied that on average, loans were significantly larger than grants. The average higher education student loan in 2018 was worth USD 7,803 (PPP), whereas the average grant was just USD 2,608 (PPP). The value of loans also stayed basically constant from 2006 to 2018 relative to inflation, whereas the average grant value fell between 2011 and 2018 by 30%. (Williams, J. and Usher A., 2022).

Total disbursements of direct government higher education grants and loans, in 48 countries, 2006 to 2018 (in billions of 2018 USD, PPP)

Comparing recipient numbers with total higher education enrolments provides an indication of SFA coverage. Coverage of loans peaked in 2011 at 14.8% of higher education students in countries reporting data, but subsequently fell back to 11.8% – still slightly higher than in 2006. Grant coverage however continued to increase from 2011 to 2016, and in 2018 was at 19.5% (Williams, J. and Usher A., 2022).

Percentage of higher education students receiving direct government grants and loans, in 48 countries, 2006 to 2018

In 2018, on average in 48 countries, around 12% of higher education students received governmental direct student financial aid in the form of a loan and around 20% in the form of a grant (Williams, J. and Usher A., 2022).

Dimension 5

Impacts of the COVID-19 pandemic on higher education

The COVID-19 pandemic has disrupted and challenged the functioning of higher education worldwide in its three central missions. It has also evidenced that higher education is a central societal actor, notably in networked challenge-oriented research and innovation. Different higher education actors, including students, staff, leaders and policy makers, have needed to adapt rapidly and creatively to pandemic conditions.

Preparedness and resources to respond, however, have been unequally distributed, within and between countries. Readiness to respond has depended on connectivity, devices, and teacher training for the fast digital transition; on financial resources to support students, staff and institutions; and on risk management and governance capacities.

Key challenges have included student and staff mental, emotional, and physical health; student learning losses; qualification completion and transitions between educational levels and to work; the continuity of research activities and the intensification of research in areas to tackle the pandemic; deepened disadvantages experienced by persons in vulnerable conditions, such as persons with disabilities; financial stress for individuals and institutions; the impact of working-from-home arrangements on female academics especially; and uncertain and changing policies affecting international mobile students and staff.

The ubiquitous impact of the pandemic is unequally distributed. Vulnerable groups and low-income countries have been the most negatively affected. To prevent increased long-term inequalities, comprehensive impact assessments and sustained support to vulnerable groups are essential.
To overcome the difficulties posed by the pandemic, as reported by UNESCO National Commissions, countries notably have required resources for online and distance learning. This includes teacher training, pedagogical materials and improvements in digital infrastructure and the availability of digital devices. In terms of research, enhanced international collaboration and communication has been required to organize research remotely. National Commissions also report greater international policy dialogue to face the impact of the pandemic (UNESCO, 2021a).

### Countries’ needs to overcome the challenges caused by the pandemic (number of countries reporting needs out of 57 countries)

<table>
<thead>
<tr>
<th>Need</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>More international policy dialogue</td>
<td>32</td>
</tr>
<tr>
<td>More international cooperation in research to be organized remotely</td>
<td>35</td>
</tr>
<tr>
<td>Guidelines/tools/teaching learning materials to develop online/distance learning</td>
<td>47</td>
</tr>
<tr>
<td>Teacher training in online/distance learning</td>
<td>52</td>
</tr>
<tr>
<td>Improvement in the infrastructure and availability of devices for online/distance learning</td>
<td>47</td>
</tr>
<tr>
<td>Other</td>
<td>11</td>
</tr>
</tbody>
</table>

Source: COVID-19: reopening and reimagining universities, survey on higher education through the UNESCO National Commissions (UNESCO, 2021)
Preparedness: An unequal baseline to respond

The preparedness of higher education systems, institutions and communities to face adversities brought on by the COVID-19 pandemic involved their technological resources, institutional adaptation capacity, financial resources and regulatory environments. Diverse conditions around the world enabled varying responsiveness, notably to rapidly transition to online functioning.

The digital divide between and within countries is a central concern that has threatened effective participation in higher education, especially for the most vulnerable.

Challenges affecting students’ ability to move online include financial difficulties, a lack of devices and internet connectivity, study conditions, emotional distress, and the risk of dropping out, which overall are estimated to affect more students in low-income countries than in higher-income countries (Salmi, 2020).

In terms of quality assurance, research indicates that less than 35% of the quality assurance bodies were involved in evaluating distance education pre-pandemic (Karakhanyan & Stensaker, 2020).

Technology bottlenecks for online learning in higher education include:

- Unequal connectivity of students and faculty
- The capacity of faculty to deliver online courses and of students to become online learners
- The higher education regulatory environment, including quality assurance systems regarding online delivery
- The ability to learn in emergency contexts, handling the changing provision of services (World Bank, 2020)

Pre-pandemic distance learning provision data offers estimations about the preparation for this modality, which can be affected by regulatory frameworks (OECD, 2021).

Over the 2018/19 academic year, the percentage of students who enrolled exclusively in distance learning in higher education varied significantly between countries. For example, it reached 25% in Germany and only 1% in Belgium (Flemish Community) (OECD, 2021).

In 2019, only 29% of the population in Sub-Saharan Africa and 57% of the world’s population was using the internet (International Telecommunication Union in The World Bank data, 2022).
An assessment of the degree of readiness of higher education institutions to move to online teaching and learning considering ten factors indicates inequalities between countries and institutions.

Operational continuity plans and risk management strategies were largely unavailable, even in high-income countries.

Limited broadband access was a key impediment for the online transition (Salmi, 2020).

### Readiness of higher education institutions to move online

<table>
<thead>
<tr>
<th>Fact of readiness</th>
<th>High-income countries</th>
<th>Middle-income countries</th>
<th>Low-income countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Continuity Plan</td>
<td>![Squares]</td>
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<tr>
<td>Emergency Management Office</td>
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<td>![Squares]</td>
</tr>
<tr>
<td>Power Supply</td>
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<td>![Squares]</td>
</tr>
<tr>
<td>Broadband Internet</td>
<td>![Squares]</td>
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<td>![Squares]</td>
</tr>
<tr>
<td>Learning Management System</td>
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<td>![Squares]</td>
</tr>
<tr>
<td>Videoconferencing</td>
<td>![Squares]</td>
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<td>![Squares]</td>
</tr>
<tr>
<td>Digital Content Resources</td>
<td>![Squares]</td>
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<td>![Squares]</td>
</tr>
<tr>
<td>Teaching and Learning Unit</td>
<td>![Squares]</td>
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<td>![Squares]</td>
</tr>
<tr>
<td>Trained Instructors</td>
<td>![Squares]</td>
<td>![Squares]</td>
<td>![Squares]</td>
</tr>
<tr>
<td>Cybersecurity</td>
<td>![Squares]</td>
<td>![Squares]</td>
<td>![Squares]</td>
</tr>
</tbody>
</table>

- ![Squares] Fully available
- ![Squares] Generally available
- ![Squares] Not always available
- ![Squares] rarely available

Disruption:
Impact on learning

As of April 8, 2020, higher education institutions in 175 countries and communities had closed, disrupting the studies of 99% of the worldwide higher education student population (World Bank, 2020).

Physical campuses of higher education institutions were fully closed for in-person instruction for an average of 78 days in 2020 (this excludes school holidays, public holidays and weekends), across 24 jurisdictions with comparable data. This was more than the averages for general upper-secondary schools (66 days across 32 jurisdictions) and for vocational upper-secondary schools (63 days across 30 jurisdictions). The extent of closures varied significantly between countries (OECD, 2021).

National examinations usually certify the completion of upper secondary schooling and permit access to higher education. It is estimated that 18% of upper secondary level examinations were cancelled globally during the pandemic (UNESCO, UNICEF, The World Bank and OECD, 2021).

The pandemic affected internationally mobile students especially, given the closures of borders and campuses. In Europe, 85% of universities offered alternative virtual mobility modalities (European Commission & PPMI Group, 2021).

A survey considering eight virtual student mobility programmes that ran in 2020-2021 concluded that 36% of students were ‘very satisfied’ with the experience. The most valuable elements were the flexibility to plan workloads, the convenience of staying at home and reduced cost compared to travelling abroad. The main challenges related to internet connections (UNESCO IESALC, 2022).
**Disruption:**

**All affected, but unequally**

The shift to online teaching and learning modalities has been uneven between regions. The Global Survey on the Impact of COVID 19 on higher education, conducted by the International Association of Universities (IAU), collected responses between March and April 2020. Only 7% of HEIs worldwide had teaching cancellations, but 24% of HEIs in Africa did. The replacement of classroom teaching with online modalities varied from 29% in Africa to 85% in Europe. (Marinoni et al., 2020).

**Impact on teaching and learning by region**

<table>
<thead>
<tr>
<th>Region</th>
<th>Not affected</th>
<th>Classroom teaching replaced by distance teaching and learning</th>
<th>Teaching suspended but the institutions is developing solutions</th>
<th>Teaching cancelled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>3%</td>
<td>29%</td>
<td>43%</td>
<td>24%</td>
</tr>
<tr>
<td>Americas</td>
<td>3%</td>
<td>72%</td>
<td>22%</td>
<td>3%</td>
</tr>
<tr>
<td>Asia &amp; Pacific</td>
<td>1%</td>
<td>60%</td>
<td>36%</td>
<td>3%</td>
</tr>
<tr>
<td>Europe</td>
<td>Almost zero</td>
<td>85%</td>
<td>12%</td>
<td>3%</td>
</tr>
</tbody>
</table>

Source: The impact of COVID-19 on higher education around the world, IAU Global Survey Report (Marinoni et al., 2020), p. 24. The survey was available online and open from 25 March until 17 April 2020.

‘The digital learning modalities used during the pandemic crisis exposed the disparities in access to digital resources, connectivity and digital skills that exist between different socio-economic groups, possibly creating significant learning gaps. Disadvantaged learners, such as those from low-income families, minority groups, those with disabilities, or migrants sometimes experienced the digital environment as an additional barrier to learning’ (OECD, 2021, p. 18)
A Survey through the UNESCO National Commissions analysed the impact of the pandemic on higher education access, equity and quality of teaching and learning, and institutional operations, as well as other national challenges and emerging issues and strategic responses. The survey took place between December 2020 and February 2021. Analysis was based on valid responses submitted by 57 Member States, around half of which were high-income countries (UNESCO, 2021a).

**Financial impacts**
Higher education institutions experienced a mix of income reductions, increases and stability during the pandemic. Reductions in income occurred partly due to lowering of fees and enrolment decline. Institutions earned additional income from international aid, from other domestic sources (such as foundations and new research funds) and from special government aid. The financial impacts vary when analysed by country income-level. For example, a greater proportion of countries in Africa (six out of eight countries reporting data) than in any other region reported that enrolment declines caused reductions in income for HEIs (UNESCO, 2021a, p. 16).

**Financial impacts on higher education institutions (number of countries reporting impact)**

<table>
<thead>
<tr>
<th>Impact Description</th>
<th>Number of Countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Additional income from international aid</td>
<td>4</td>
</tr>
<tr>
<td>Additional income from other domestic sources, such as foundations and new research</td>
<td>4</td>
</tr>
<tr>
<td>Additional income from special government aid</td>
<td>16</td>
</tr>
<tr>
<td>Reduction in income due to lowering of fees</td>
<td>9</td>
</tr>
<tr>
<td>Reduction in income due to enrolment decline</td>
<td>19</td>
</tr>
<tr>
<td>Stable funding</td>
<td>28</td>
</tr>
<tr>
<td>Other</td>
<td>17</td>
</tr>
</tbody>
</table>

Source: COVID-19: reopening and reimagining universities, survey on higher education through the UNESCO National Commissions (UNESCO, 2021)

**Impact on staff:**
Fourteen out of 57 countries reported reductions in academic employment, while 15 countries reported reductions in administrative employment (UNESCO, 2021a).

Remuneration was also affected in 40% of the countries for academic staff and 38% for administrative staff. These impacts included salary reductions, and delayed payments to staff at some private institutions experiencing delays in the receipt of student fees (UNESCO, 2021a).
Disruption: Impact on research and community engagement

University research capacities have played an essential role for understanding the pandemic and its implications, as well as for developing medical and policy solutions, highlighting the essential public mission of higher education.

The COVID-19 pandemic has caused the cancellation and alteration of research and community engagement activities. Among 57 countries with data, 41 reported the suspension or delay of research activities and 33 the same for community engagement activities due to the COVID-19 pandemic. Yet 15 countries – mostly upper-middle and high-income countries – reported an increase in research activities, and 18 an increase in community engagement activities, notably in COVID-19 related fields (UNESCO, 2021a).

Impact on research activities (number of countries reporting impact out of 57)

Impact on community engagement activities (number of countries reporting impact out of 57)
Conclusions
Significant progress towards SDG target 4.3 has been achieved in the past couple of decades. The global landscape of higher education has improved in essential dimensions of access, institutional and system-level quality assurance, learning progression pathways and some aspects of equity. Diversification of provision has enabled some of these advances. The COVID-19 pandemic, however, has further exposed and deepened inequalities, undermining the most vulnerable. The digital gap has become a pivotal challenge to address in order to limit -and ideally overcome- growing gaps in learning opportunities between the richest and the poorest. Responsible collective governance of critical technologies, collaboration in pedagogical innovation, and comprehensive assessments of the effects of the pandemic on higher education activities are all urgent to respond appropriately to the long-term impacts of the pandemic on higher education and to avoid aggravated inequality. This may enable our progress towards the dynamic and inclusive higher education sector that we envision.

To realize the full potential of higher education in its multiple undertakings and specifically to achieve SDG target 4.3, we need to understand in depth the current global higher education situation in its multiple dimensions. We need to comprehend existing trends and their potential impact on achieving the target, and critically, to assess the effects of dramatically disrupting events such as the COVID-19 pandemic. With quality information we can orient, monitor and adapt policies effectively.

Today, global official comparable data is insufficient. Official data provided by States to UNESCO varies in terms of completeness, which reflects the need to strengthen higher education information management systems. Also, as higher education and its policies evolve, we need to incorporate new indicators to global datasets regarding previously uncovered areas. Some indicators also require revision as the practice of higher education evolves (e.g., in terms of programmes by disciplines, as cross-disciplinary studies grow; in terms of students' standard age of studying, as lifelong learning becomes a reality; and in terms of types of qualifications, as learning is achieved through more diverse means of educational provision). There is a need for further collaboration between public, private and civil society organisations generating data and analysing diverse aspects of higher education. Furthermore, we need to explore data with focus on special cases of concern that may be invisible in general figures. Despite imperfect and incomplete information, this milestone of the 3rd UNESCO World Higher Education Conference, invites us to reflect upon higher education data and to take initial steps gathering relevant data from varied sources to assess the global situation regarding target 4.3.

Higher education is entangled with other societal sectors in complex and multidirectional ways. Beyond SDG 4.3, it has a key role to play in achieving other SDG4 targets. SDG4 aims to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. In addition to target 4.3, higher education has a role in realizing: relevant skills of youth and adults (target 4.4); eliminating gender disparities in education and ensuring equal access to all levels of education and vocational training for the vulnerable (target 4.5); achieving literacy and numeracy (target 4.6); acquisition of knowledge and skills needed to promote sustainable development (target 4.7); expanding globally the number of scholarships available to developing countries (target 4.b); and substantially increasing the supply of qualified teachers (target 4.c).

Higher education can contribute also to the other SDGs, playing a major role in realizing the following goals: to end poverty (SDG1); to ensure healthy lives and promote well-being (SDG3); to achieve gender equality (SDG5); to promote sustainable economic growth, full and productive employment and decent work (SDG8); to reduce inequalities within and among countries (SDG10); to ensure sustainable consumption and production (SDG12); to combat climate change and its impacts (SDG13); and to promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels (SDG16).

As the only UN agency with a mandate addressing higher education, UNESCO upholds the need to orchestrate global higher education data efforts. We invite member States, other international organisations, researchers and relevant companies to be part of this collective effort.
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Organized by UNESCO in collaboration with the Government of Spain, the 3rd World Higher Education Conference (WHEC2022) aims at breaking away from the traditional models of higher education and opening doors to new, innovative, creative, and visionary conceptions that not only serve current agendas for sustainable development, but also pave the way for future learning communities that overcome barriers, speak to all and are inclusive of all lifelong learners.

The WHEC2022 promotes a global conversation nurtured by diverse narratives on higher education through various activities: generation and dissemination of knowledge; formulation of updated policy recommendations; identification and sharing of innovative practices; networking and strengthening of partnerships; broad participation of stakeholders at local and international levels (within and outside higher education systems: professors, researchers, youth, managers, authorities, policy makers, experts, entrepreneurs, social leaders, etc.); and development of renewed paths framed by the 2030 Agenda for Sustainable Development and looking at the Futures of Education.

Section of Higher Education

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