

JUNE 2023

Compendium

Education Policies and Programmes in G20 Countries

One Earth, One Family,
One Future through Education



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ONE EARTH • ONE FAMILY • ONE FUTURE

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Introduction

The Group of Twenty (G20) is a leading forum of major economies that seeks to develop global policies to address the world's most pressing challenges. The G20 members are Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Mexico, the Republic of Korea, the Russian Federation, Saudi Arabia, South Africa, Türkiye, the United Kingdom, the United States and the European Union. Spain is also invited as a permanent guest.

Each year, the Presidency invites guest countries to take full part in the G20 exercise. Under the Indian G20 Presidency in 2023, the invited countries are Bangladesh, Egypt, Mauritius, the Netherlands, Nigeria, Oman, Singapore, Spain and the United Arab Emirates. This year, the United Nations Educational, Scientific and Cultural Organization (UNESCO), the United Nations Children's Fund (UNICEF), and the Organisation for Economic Co-operation and Development (OECD) were also invited to participate as knowledge partners in the peer-learning process.

Collectively, the G20 members account for two-thirds of the world's population, 80 per cent of its economic output, and 75 per cent of its trade. The multiplicity of crises the world is currently experiencing, and the longer-term push towards sustainable green economies, underscore the urgency for G20 countries to embark on a journey of systemic transformation and develop evidence-based solutions to national, regional and global challenges. Seizing opportunities that arise in times of increased complexity and disruption will require the public and private sectors, foundations, non-state actors and civil society to better align their actions around greener, more inclusive and more sustainable models of growth. For these reasons, the Indian Presidency has chosen the theme: 'Vasudhaiva Kutumbakam' ('One Earth, One Family, One Future').

Building on the legacy of previous G20 summits, and with the above focus on collective action and solidarity in mind, the G20 Education Working Group (G20 EdWG) under the Indian Presidency has identified four priority areas aimed at bridging the gaps in quality education and lifelong learning that prevent all learners from realizing their full developmental potential. The priority areas for deliberation are: i) foundational literacy and numeracy; ii) tech-enabled learning; iii) capacity for the future of work; and iv) research and innovation through collaboration and partnership.

Foundational literacy and numeracy, along with tech-enabled learning, are considered the first of the four building blocks that will allow achieving the goal of 'Vasudhaiva Kutumbakam', and create inclusive quality education and lifelong learning opportunities for all. They lay the foundations for promoting lifelong learning for the future of work, as well as achieving a sustainable green transition through collaboration and partnerships between national and international higher education systems, and countries' research, development and innovation capacities (RDI).

This compendium presents the programmes submitted in response to a survey that all G20 members and participating countries were invited to complete between January and June 2023. The responses focus on the four G20 EdWG priority areas. The results presented here illustrate promising practices by the responding countries that could guide other countries as they seek to transform their education systems. The programmes featured in the compendium also allow a better understanding of emerging teaching and learning approaches and trends, including the deepening integration of digital technology in teaching and learning experiences, and the building of bridges and coordination between education and the world of work. Partnerships in RDI are also emerging between academia and the private sector to design breakthroughs and solutions to some of the world's most pressing challenges, including climate change, digitalization and energy, and economic and social crises.

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Argentina

I. Libros para Aprender (Books for Learning)

Objectives and outcomes	The objectives of the Books for Learning Programme are to implement a 1-to-1 book distribution policy that will support students in developing essential reading and comprehension skills and enhance teaching and learning effectiveness in key subjects such as mathematics and language. The initiative is expected to improve literacy at the foundational level and optimize teaching time by enabling teachers to plan lessons more efficiently with the aid of individual student books.
Programme executor and funding	Ministry of Education Total amount of money dedicated: USD 44.500.000 for 2022 and USD 233.000.000 for 2023.
Programme description	Libros para Aprender is a government initiative that aims at strengthening education delivery and improving academic outcomes by providing students with the necessary tools and resources for their educational development.
Modalities/ resources	The programme offers various programming modalities to accommodate different learning environments and student needs. These include: i) direct distribution to schools; ii) online access; iii) specialized editions of textbooks for students with specific educational needs, such as students with disabilities or those studying in alternative education settings, and iv) supplementary materials such as workbooks, reference books, and teaching guides to support the teaching and learning process.
Target beneficiary group/s	Target beneficiaries: Approximately 8.600.000 students at primary level. Target education level for students: Specific target groups:
Scale and scope	Number of beneficiaries: In 2022, a total of 8,247,321 books were distributed, equivalent to an investment of approximately USD 8,900,000,000. By 2023, more than 33,100,000 books are expected to be distributed, reaching more than 8,600,000 students and 49,800 educational institutions. Geographical scope: Nationwide
Monitoring and evaluation	The Ministry of Education is implementing an internal monitoring project that is in its first phase. National Universities will be convened to implement an external monitoring and evaluation process. Improvements in learning will also be measured through the APRENDER 2023 and ERCE 2025 tests (UNESCO).
Lessons learned	N/A

II. Hacia la Universalización de la Jornada Completa o Extendida (Towards Universal All-day Schooling)

Objectives and outcomes	The main objectives of the “Hacia la Universalización de la jornada completa o extendida” are: i) Working towards achieving full or extended school days in all state-run primary schools and ensuring a minimum of 25 hours per week of school time; ii) Strengthening key academic skills such as written production, reading comprehension, and mathematical and scientific literacy through the extension of school hours. The programme recognizes that additional time dedicated to these subjects can contribute to improving students’ proficiency in these areas.
Programme executor and funding	Ministry of Education Total amount of money dedicated: USD 350 million for 2022 and USD 279.57 million for 2023.
Programme description	The “Hacia la Universalización de la jornada completa o extendida” programme is a government initiative that strives to ensure that all students have access to a comprehensive and enriching learning environment that promotes their overall development and prepares them for future success. It does this by promoting and implementing full, or extended, school days in primary and secondary schools across the country, including additional academic and extracurricular activities. By extending the school day, students have more time for subjects such as mathematics, language, science and social studies, as well as engaging in activities like sports, arts, technology, and cultural programmes.
Modalities/ resources	The programme emphasizes the importance of holistic development, providing students with a well-rounded education that goes beyond traditional classroom instruction. To this end, it is necessary that schools which previously had four hours of classes per day (70% of schools) increase the number of hours to at least five per day. The government collaborates with schools to provide the necessary resources, infrastructure, and training for teachers and staff to effectively implement the extended school day model. The active involvement of parents, community organizations, and local stakeholders in supporting and enriching the educational experience is encouraged.
Target beneficiary group/s	Target beneficiaries: Approximately 1 million learners at pre-school, primary and secondary levels.
Scale and scope	Number of beneficiaries: In 2022, agreements were signed with 21 provinces and the City of Buenos Aires. More than 7,400 schools were reached with 1 hour more class time, more than 740 schools with full day and more than 1 million children with more class hours. By 2023, 2380 schools will be added with a minimum of one more hour per day. This implies going from 77% of part-day schools in 2022 to 30% in the current year. Thus, 70% of state-run primary schools in the country will have a minimum of 25 hours of class per week. Geographical scope: Nationwide
Monitoring and evaluation	The Ministry of Education is implementing an internal monitoring project in its first phase. National Universities will be convened to implement an external monitoring and evaluation process.
Lessons learned	N/A

III. Conectar Igualdad (National Plan for Digital Inclusion in Education)

Objectives and outcomes	The main objectives of the Conectar Igualdad are to: i) overcome the digital divide and promoting inclusivity and equity in technology-enabled learning; ii) utilize open technology ecosystems and open learning resources to provide high-quality content and learning experiences and enhance the quality of education and learning outcomes; iii) maximize the use of non-digital resources to address the existing digital divide; iv) establishing standards for eLearning content, technology, and pedagogy to enhance the interoperability of digital learning materials.
Programme executor and funding	Ministry of Education. Educar S.E Total amount of money dedicated: USD 413.000.000
Programme description	The Plan contributes to the reorganization of the curriculum and the intensification of teaching based on four converging strategies: i) distribution of equipment and connectivity; ii) the Conectar LAB innovation and experimentation centers; iii) the development of hybrid teaching contents and proposals through the Conectar Igualdad Platform and the educ.ar portal, and; iv) the distribution of educational netbooks to students in all state-run secondary and special public schools in 1 to 1 mode, the provision of internet connectivity, training in the use of devices and the development of teaching proposals focused on mathematics and language.
Modalities/ resources	The Conectar Igualdad Platform, which accompanies the aforementioned national programme, increases availability to digital tools, applications, information and services, creating a dynamic educational environment composed of virtual classrooms, digital materials, pedagogical proposals and courses, to use computers at school and at home.
Target beneficiary group/s	Target beneficiaries: Students, teachers
Scale and scope	Number of beneficiaries: Students: 1,768,517; Teachers: 31,486 Geographical scope: The National Digital Inclusion Plan is federal in scope.
Monitoring and evaluation	The PNIDE 2023 monitoring and evaluation strategy aims to track the distribution and use of technologies in collaboration with all 24 jurisdictions. It involves data collection through questionnaires and interviews, focusing on both management and didactic-pedagogical dimensions. The collected data informs the assessment of the impact of digital inclusion on students' trajectories. The strategy also monitors the progress of deliveries and connectivity status of schools to improve services and extend coverage. Reports are constructed at both the national and jurisdictional levels, with results shared in national meetings to enrich future planning and address the needs of educational communities.
Lessons learned	In order to address geographic dispersion, coverage was expanded by partnering with a logistics operator. The main political objective and significant challenge ahead is to design and implement universal plans for device and connectivity access. This includes developing content, pedagogical proposals, environments/platforms, software, and providing comprehensive training.

IV. Comprehensive Units of Professional Technical Education

Objectives and outcomes	The objectives are: i) Strengthening capacities for lifelong learning in the context of the future of work; ii) Developing measures to close skill gaps and facilitate skill development through skilling, reskilling, and upskilling initiatives; iii) Creating a workforce that is prepared for the future; iii) Building robust digital learning ecosystems and promoting digital skills and literacy among children and youth; iv) Establishing linkages between the industry and academia to enhance collaboration and align education with industry needs.
Programme executor and funding	National Institute of Technological Education- Ministry of Education in concurrence with the Federal Commission of Professional Technical Education. Total amount of money dedicated: USD 60 million.
Programme description	Professional Technical Education aims to provide comprehensive training relevant to secondary and higher education levels, as well as the development of professional skills through initial Vocational Training and Continuous Training. It promotes lifelong learning and fosters educational trajectories. A key institutional objective is to establish innovative educational institutions equipped with advanced technology, facilitating the integration of Technical Professional Education at secondary and higher levels, as well as Initial and Continuing Vocational Training, across all regions of the country.
Modalities/ resources	The National Fund for Educational Professional Technician ensures funding for innovative institutions, known as Integral Units of the ETP, across the country to democratize techno-productive knowledge. The initiative aims to establish cutting-edge educational institutions that integrate Technical Professional Education at secondary and higher levels, as well as Initial and Continuing Vocational Training nationwide. The fund supports the construction of new buildings and the replacement of existing ones in the ETP modality, strategically located based on local needs. The programme addresses educational, economic, social, scientific, technological, and productive disparities among regions, promoting cohesion. It aims to create an interconnected system that links technical secondary education, Vocational Training, and higher technical education.
Target beneficiary group/s	Target beneficiaries: Students, teachers, school leaders, parents/caregivers, administrative staff, girls/women Special interest groups: low socio-economic status, population groups in rural areas, population groups in urban areas, minority groups (e.g., linguistic, others), migrant population groups, refugees/displaced population groups, children with disabilities.
Scale and scope	Number of beneficiaries: Students: 1.7 million; teachers: 80.000; school leaders: 8,000 Geographical scope: Nationwide
Monitoring and evaluation	The Federal Commission for Professional Technical Education monitors and tracks the progress of the issues on a monthly basis. Monthly monitoring allows for timely assessment and evaluation of the initiatives and actions undertaken. In addition, the commission prepares annual management reports to provide a comprehensive overview of the achievements and challenges faced in the field of professional technical education. This monitoring and reporting mechanism ensures accountability and facilitates informed decision-making for further improvements and advancements in the sector.
Lessons learned	N/A

V. Promoting Research and Innovation through the National Directorate for the Promotion of Science Policy (DNPPC)

Objectives and outcomes	As part of the National Plan for Science, Technology and Innovation 2030, and among other areas, the DNPPC encourages international cooperation and collaboration in research and innovation. It aims to establish partnerships, networks, and joint projects with foreign institutions, researchers, and organizations. This facilitates the exchange of knowledge, expertise, and best practices, contributing to the advancement of scientific research in Argentina.
Programme executor and funding	National Directorate for the Promotion of Science Policy of the Ministry of Science, Technology and Innovation. Total amount of money dedicated: N/A
Programme description	The DNPPC implements strategies to facilitate the adoption of foreign technology, guided by four pillars of innovation and aligned with national scientific policy and Argentine foreign policy. These strategies encompass scientific and technological development, technology transfer, R+D+I, strategic industrial sectors, HR training, federalization, gender inclusivity, and liaison with scientists abroad through the RAICES Programme.
Modalities/ resources	The DNPPC employs various collaboration mechanisms to foster cooperation and knowledge exchange. These include HR training programmes such as scholarships and courses, research projects in science, technology, and innovation (STI), establishment of binational centres, participation in networks, engagement in multilateral projects and partnerships, and promotion of innovation and R+D projects. Through the Export Knowledge Programme, several initiatives have been implemented. This includes international innovation awards in collaboration with Israel, France, and Germany. Additionally, calls for project proposals with market potential and potential partners abroad have been made through Non-Refundable Contributions (NRA), partnering with Israel, Spain, and Germany. The DNPPC also collaborates with the Argentine Foreign Ministry to promote the participation of academia and industry in international missions and fairs.
Target beneficiary group/s	Target beneficiaries: Staff of academia; Industry; R&D Labs; Start-ups; Government and non-government organizations.
Scale and scope	Number of beneficiaries: Geographical scope: Nationwide
Monitoring and evaluation	N/A
Lessons learned	N/A



Australia



I. NAPLAN Reform

Objectives and outcomes	Assessing the types of skills essential for every child to progress through school and life, including reading, writing, spelling, grammar and punctuation, and numeracy.
Programme executor and funding	Australian Department of Education. Australian Curriculum, Assessment and Reporting Authority (ACARA) funding to deliver - USD 9.28M per annum for 2022-23. Education Services Australia Funding to deliver - USD 9.82M for 2022-23
Programme description	Introduced in 2008, Australia's National Assessment Programme – Literacy and Numeracy (NAPLAN) annually assesses all students in Grades 3, 5, 7 and 9. New proficiency standards and streamlined reporting were introduced to NAPLAN in March 2023, providing four clear levels of achievement that link better with the Australian Curriculum. The new reporting also improved transparency and precision in assessing students' literacy and numeracy abilities, and provides parents, carers and teachers with earlier, simpler and clearer information about their children's achievement.
Modalities/ resources	Recent reforms include moving the test period to Term 1 in 2023 (from Term 2 previously) and creating a simplified reporting system. Full transition to online testing occurred in 2022. Online testing gives richer and more precise data on each student's progress, and a more realistic benchmark for student achievement in core skills through the inclusion of adaptive testing methodologies. The simplified reporting system will show how children are tracking against four simple proficiency standards, 'Exceeding', 'Strong', 'Developing' and 'Needs additional support'. This simplified reporting system is complemented by test events earlier in the year (March instead of May), enabling parents/carers and teachers to provide additional support to a child earlier in case it is needed.
Target beneficiary group/s	Target beneficiaries: Students, teachers, parents/caregivers Target education level for students: Primary school (Grades 3–5); lower secondary (Grades 7–9) Specific target groups: Any child in need of additional learning support
Scale and scope	Number of beneficiaries: Approx. 1.2 million students Geographical scope: National, state
Monitoring and evaluation	ACARA produces the annual NAPLAN Report, which details student achievement at each year level and according to categories such as gender, indigenous status, language background other than English, parental occupation and education, and remoteness. Additionally, ACARA produces the National Report on Schooling in Australia, which describes progress against the goals and commitments in the Education Declaration.
Lessons learned	The results from 2023 onwards are not comparable to older tests, given that from 2023 onward, NAPLAN will take place earlier in the year, using a new scale and a simplified reporting system based on four proficiency standards. In addition, the previous band-based reporting system did not provide parents with an easy reference to understand their child's progress against the Australian Curriculum, and more importantly, whether more support was needed. The introduction of proficiency standards will set a higher standard of expected achievement at a challenging but reasonable level, making it easier to identify and act upon student results that point to the need for additional support.

II. Regional University Centre (RUC)

Objectives and outcomes	The main objectives are to provide opportunities for students in rural, regional and remote areas to pursue higher education within their communities, and to bridge the gap in support for such education. Additionally, the programme aims to improve students learning experience, promote collaboration with local organizations and industry, and complement rather than substitute for other university investments in regional areas, including satellite campuses and study centres.
Programme executor and funding	The Australian Federal Government is responsible for the overall funding and coordination of the project. Since 2018, it has provided USD 68.3 million (which includes funding for the centres, the establishment of the RUC Network and a scoping study, evaluation and a partnerships research project).
Programme description	RUCs are community-owned facilities in regional and remote locations in Australia that provide study spaces, video conferencing, computing facilities and high-quality internet access, as well as academic skills and well-being support for students engaged in distance (online) learning at any Australian university or vocational education and training (VET) provider. There are currently 34 centres located across all states and territories.
Modalities/ resources	With 34 centres across Australia, the RUC programme aims to improve tertiary education access and attainment through physical infrastructure, pastoral support and assistance with academic skills. RUCs foster a sense of community for online students, reducing feelings of isolation. Funding and partnerships with universities enhance the services offered to students, and help build higher education aspirations in rural and remote communities nationwide.
Target beneficiary group/s	<p>Target beneficiaries: Students</p> <p>Target education level for students: Tertiary</p> <p>Specific target groups: Low socio-economic status, population groups in rural areas, minority groups (e.g. linguistic), Aboriginal and Torres Strait Islander population groups</p>
Scale and scope	<p>Number of beneficiaries: In 2022, the centres supported over 3,300 students studying more than 1,000 different courses at over 200 tertiary education providers; 74% of students were studying towards a university-level degree and 26% of students studied VET and other courses; 11% of students identified as Aboriginal or Torres Strait Islander; 61% of students were over 25 years old; 77% of students identified as female, 20.7% identified as male and 2.3% identified as non-binary, intersex or unknown.</p> <p>Geographical scope: National</p>
Monitoring and evaluation	The programme will undergo evaluation in two phases. The first phase (2021) indicated that the programme addressed access gaps, and suggested potential improvements. The second phase will take place in 2023/24, building on the implemented improvements and the opening of new centres. Regular monitoring features milestone reporting, including on progress, financial and student data.
Lessons learned	Community involvement and local leadership are crucial for the centres' success. The programme now utilizes a competitive grant process, allowing local communities to apply for funding and ensuring community involvement. Local staff and governing boards play a vital role in the successful implementation of each centre.

III. MicroCred Seeker

Objectives and outcomes	MicroCred Seeker provides students with comparable and accurate information on micro-credentials offered across Australia, helping them make informed decisions about those that meet their education and/or employment needs. The website includes functionality allowing them to search for micro-credentials according to a range of options, including industry, price and credit value towards other qualifications.
Programme executor and funding	The Australian Federal Government is responsible for the project's overall funding and coordination. The total financial allocation for the project is approximately USD 3,046,527, with approximately USD 1,511,983 dedicated to platform development.
Programme description	MicroCred Seeker is a digital marketplace that aims to address key gaps in the Australian education sector, promote lifelong learning and help employers find employees with the right qualifications. The MicroCred Seeker platform went live in December 2022.
Modalities/ resources	MicroCred Seeker is a nationally consistent platform for students to compare short courses against higher education provider offerings and credit point value. It will assist students, workers and employers in Australia to find learning options that facilitate upskilling, reskilling and lifelong learning.
Target beneficiary group/s	<p>Target beneficiaries: Students, adults wanting to upskill</p> <p>Target education level for students: From school leaver to late-career adults, depending on the micro credential on offer</p> <p>Specific target groups: All students and lifelong learners</p>
Scale and scope	<p>Number of beneficiaries: As the platform has only recently been launched, the numbers of students using the platform is not yet known. An evaluation will be conducted in due course.</p> <p>Geographical scope: National</p>
Monitoring and evaluation	Data throughout the platform are monitored by the government and the delivery partner. As the platform has only recently launched, evaluation will be conducted later.
Lessons learned	N/A

IV. Trailblazer Universities Programme

Objectives and outcomes	To work with industry partners to create ecosystems of innovation to support the translation and commercialization of university research and build world-leading research commercialization capability in priority areas.
Programme executor and funding	Australian Government Department of Education. Total funding is USD 247 million over four years.
Programme description	The Australian Government has established six Trailblazer Universities which will work with industry partners to create an ecosystem of innovation to support the translation and commercialization of university research, and build world-leading research commercialization capability in priority areas. Trailblazer Universities will achieve these ambitious objectives by implementing targeted reforms that reduce barriers to collaboration with industry. This includes introducing innovative intellectual property agreements, incentives and rewards for researchers to engage with industry, as well as creating new pathways that promote strong industry engagement.
Modalities/ resources	The selected universities will implement targeted reforms that reduce barriers to collaboration with industry, including introducing innovative intellectual property agreements, incentives and rewards for researchers to engage with industry, and creating new pathways that promote strong industry engagement. The six universities and their areas of focus are: i) the University of Adelaide (defence); ii) the University of Queensland (food and beverage accelerator); iii) Deakin University (recycling and clean energy commercialization); iv) University of New South Wales (recycling and clean energy); iv) Curtin University (resources technology for critical minerals); v) University of Southern Queensland (innovation launch, automation, novel materials, communications, hypersonics).
Target beneficiary group/s	<p>Target beneficiaries: Students, members of academia, higher education institutions, industry partners</p> <p>Target education level for students: High school, tertiary, post-graduate, post-doctoral, emerging and established researcher</p> <p>Specific target groups: Priority areas of defence, food and beverage, recycling and clean energy, resource technology and critical minerals, and space</p>
Scale and scope	<p>Number of beneficiaries: Higher education institutions: 6 universities will lead Trailblazer University projects, in partnership with other universities, bringing the total number of higher education institutions to 12; industry partners: an estimated over 160 businesses. <i>(Estimated figures, as the programme commenced recently.)</i></p> <p>Geographical scope: National, institutional</p>
Monitoring and evaluation	Trailblazer Universities will report progress and outcomes to the Australian Government on a regular basis. The Australian Government will undertake an evaluation focusing on the performance of the Trailblazer Universities Programme against its objectives and projected outcomes.
Lessons learned	Although the Trailblazer Universities Programme is a long-term investment in Australia's research commercialization capability, it has already generated some short-term benefits such as an increased ability to attract global talent, particularly to regional areas. Furthermore, the swift assessment process for selecting the final Trailblazer Universities has shown that universities and industry can respond quickly to government priorities and produce high-quality applications.



Brazil



I. Improvement Courses in Education Technology

Objectives and outcomes	The main objective of this course is to enhance the technological skills and knowledge of basic education teachers. Specific objectives include introducing innovative teaching and learning methods using accessible technologies; enhancing teachers' theoretical knowledge in this area, and preparing them for future experiences; and enabling teachers to incorporate the activities and exercises proposed in the course modules into their classroom practices.
Programme executor and funding	Diretoria de Formação Docente e Valorização dos Profissionais da Educação (DIFOR). Information is available on the Avamec platform (https://avamec.mec.gov.br/#/instituicao/seb/curso/14183/visualizar).
Programme description	This is a continuous education course to complement and improve teachers' technological training.
Modalities/ resources	The course is divided into five self-instruction modules that allow participants to study at their own pace. The course content is based on daily and continuous study practice. Participants can study the modules in any order they choose, without any restrictions. The course is evaluative; to complete it, students must complete all slides and activities, and participate for a minimum of 45 days. To pass each module, students must achieve a minimum grade of 6.0 and are allowed to retake activities until they reach the required score. The course's specific objectives are to enhance teachers' technological training, promote new ways of teaching and learning using technology, and increase theoretical knowledge in this field to enhance future experiences in the classroom.
Target beneficiary group/s	<p>Target beneficiaries: Teachers</p> <p>Target education level for students: Continuing education course for teachers</p> <p>Specific target groups: Basic education teachers</p>
Scale and scope	<p>Number of beneficiaries: 2.2 million teachers; 103,000 registered professionals</p> <p>Geographical scope: National</p>
Monitoring and evaluation	The course is monitored by DIFOR. The results are shared through a report of actions produced by the Secretary of Basic Education of the Ministry of Education.
Lessons learned	There is a need to expand the offer of training on technologies and their use.

II. Network Connect Programme

Objectives and outcomes	The programme aims to increase efficiency and reduce public spending through digital solutions by boosting institutions' technological capacity and digital transformation, ensuring uniform ICT capacities. It also seeks to strengthen the innovation ecosystem and promote the development and dissemination of innovation and technology, expanding the offer of new services and products to the community. It further aims to expand the use of digital solutions in professional and technological education, training professionals in ICT and strengthening collaborative actions among the participating institutions.
Programme executor and funding	Secretariat of Professional and Technological Education Total amount of money dedicated: USD 6.6 million
Programme description	The programme's goal is to modernize technological capacity and drive the digital transformation of the Federal Institutes of Education, Science and Technology (FI); the Federal Centres of Technological Education (Cefets); and Pedro II College, all of which make up the Federal Network of Professional, Scientific and Technological Education.
Modalities/ resources	The programme is organized into four axes to modernize and transform vocational and technological education through digital solutions. The first axis involves designing and validating new solutions to meet the needs of the education network. The second axis focuses on delivering and maintaining existing solutions to improve the institutions' performance. The third axis aims to train the personnel of the beneficiary institutions in ICT through courses offered by the Brazilian network for education and research's (RNP) School of Networks. The fourth and final axis deals with programme management, including programme planning, monitoring and evaluation, to ensure transparent management and generate value for society. Examples of solutions already modelled include the Digital Diploma, FOR platform, Learn More platform, Moodle and Cloud Backup.
Target beneficiary group/s	Target beneficiaries: Students, teachers, school leaders, administrative staff Target education level for students: Professional qualification, technical high school, undergraduate and post-graduate.
Scale and scope	Geographical scope: National
Monitoring and evaluation	The fourth axis of the programme is programme management support, which involves managing the programme through planning, monitoring and evaluating projects, as well as managing the programme portfolio through performance indicators and physical and financial follow-up. This promotes an integrated and transparent management approach, with the aim of generating value for society.

III. Learning-centred Education (eduCA+)

Objectives and outcomes	The goal is to have vocational and technological education (VET) institutions throughout Brazil incorporate the culture of Education for World 4.0.
Programme executor and funding	Secretariat of Professional and Technological Education (Setec) Total amount of money dedicated: USD 1 million
Programme description	The eduCA+ project is a strategic initiative that aims to transform professional and technological education, promoting socio-environmental responsibility and economic development while prioritizing student participation.
Modalities/ resources	This programme formalizes the Ministry of Education (MEC)'s coordinated effort with educational managers, teachers and other partners to build an education model and practices that consider global trends, the Brazilian reality, and the accumulated knowledge and experiences of professionals in the field. The initiative also features investment in prototyping environments (makerspaces) for public VET institutions in Brazil; an international benchmarking programme for national VET managers to learn about Education for World 4.0 initiatives; the preparation of Setec/MEC's strategy for VET for World 4.0; and a professional qualification programme in innovation management for VET in World 4.0, with the development of up to 100 initiatives by VET professionals linked to the Federal Network of VET or the Network of the States. The initiative also includes in-service training in digital education for 1,500 teachers and the publication of a bank of good practices for VET in World 4.0.
Target beneficiary group/s	Target beneficiaries: Students, teachers, administrative staff Target education level for students: Undergraduate, graduate Specific target groups: Initiative focused on in-service training for VET professionals (teachers, technicians and managers)
Scale and scope	Number of beneficiaries: 1,700 teachers/technicians in VET (200 selected for the Innovation Management Qualification Programme in 2022; 1,500 selected for the Digital Education Specialization in 2022); 23 school leaders (participants in the International Benchmarking Programme in Education and Innovation for World 4.0 in 2022) Geographical scope: National
Monitoring and evaluation	The Technical Working Committee (CTT), established by the Setec/MEC Directive No. 581 of 7 December 2021, monitors the development of eduCA+ actions. This CTT was established to monitor and evaluate the set of structuring actions to develop Education in World 4.0 and the Lato Sensu Post-Graduation in Digital Education.
Lessons learned	Continuous training of VET professionals at all levels is crucial to help them learn and utilize the enabling technologies of World 4.0 and apply these solutions to school organization, curriculum planning, educational practices and technological upgrading of learning environments. To reduce the gap between industry and education, it is essential to bring VET schools and institutes closer to the productive sector in all technological areas. By understanding the local/regional culture and the possibilities of the productive sector, VET schools and institutes can participate in the technological development and diffusion required for World 4.0.

IV. Educational Digital Resources (EDRs) for Technical Courses

Objectives and outcomes	The goal is to develop 640 hours of EDRs for indexing in the MEC's Digital Platform, and to prepare documentation on the EDRs and the requirements for their construction.
Programme executor and funding	Setec/MEC Total amount of money dedicated: USD 1 million
Programme description	This initiative involves the organization and development of 640 hours of EDRs for indexing in the MEC's Digital Platform.
Objectives and outcomes	The goal is to develop 640 hours of EDRs for indexing in the MEC's Digital Platform, and to prepare documentation on the EDRs and the requirements for their construction.
Modalities/ resources	The programme interventions encompass the development of practical curricula and pathways for technical and vocational training, as well as the production of user-centric learning experiences through technology-mediated training proposals. There are also efforts to enhance and innovate basic and vocational education by building on established knowledge and practical experiences. The training processes are tailored and contextualized to meet the needs of the target audience, based on the curated learning networks. Additionally, distance learning platforms are used to provide technical courses with EDRs, enabling students to study and complete activities from anywhere, as long as they have internet access.
Target beneficiary group/s	Target beneficiaries: Students, teachers, school leaders, administrative staff Target education level for students: Professional qualification, medium-level technician Specific target groups: Population groups in urban areas
Scale of the Programme	Number of beneficiaries: May exceed 2 million students, thousands of teachers (for the technical courses) and thousands of educational managers, including school principals and pedagogical coordinators Geographical scope: National
Monitoring and evaluation	This is not a programme – it is an action that is followed up and monitored according to the delivery of products. A monthly checkpoint is held between the Setec/MEC team and the team responsible for producing the REDs.
Lessons learned	There is a need to define pedagogical criteria for drafting the EDRs. The team involved in developing them also needs to have some educational experience in the classroom. Finally, it is necessary to standardize the programming language of educational platforms to accept all EDR formats.

V. Postgraduate Course (Lato Sensu) in Teaching for VET – DocentVET

Objectives and outcomes	DocentVET's primary objective is to train graduates, undergraduates and/or technologists who currently work or intend to work in professional and technological education, specifically in mid-level technical courses. The course also encourages the production and dissemination of knowledge related to VET as a field of study, and promotes distance education as an educational strategy, particularly in professional and technological education.
Programme executor and funding	Total amount of money dedicated: Institute of Espírito Santo (IFES) Budget, Edict 46/2020 and Edict 7/2022, with financial resources from Setec/MEC of approximately USD 2,884,615. CAPES Budget, Edict 5/2018 and Edict 9/2022, with financial resources from the Open University of Brazil (UAB)/CAPES
Programme description	DocentVET is implemented through two channels: i) IFES offers the course at the national level for the entire network of technical education, including the 27 state education departments and all institutions belonging to the Federal Network of Professional Education, with funding provided by Setec. ii) Additionally, 25 participating educational institutions from both the Federal Network of Professional, Scientific and Technological Education (RFVET) and the Open University of Brazil (UAB) offer the course, under the Coordination for the Improvement of Higher Education Personnel (CAPES).
Modalities/ resources	In partnership with Setec/MEC, IDES has offered a total of 10,500 places in the course: 4,320 places in the first round (Edict 46/2020), with 2,874 certified education professionals; and 6,200 places in the second round (Edict 07/2022), with around 3,292 graduates. Another offer is planned for August 2023, with around 2,000 additional places nationwide. The CAPES/UAB partnership with Setec/MEC and the 25 institutions has offered a total of 10,122 places: 4,002 in the first offer (Announcement 5/2018), with 2,480 graduates (62% of students); the second offer (Announcement 9/2022) is underway, with another 6,120 places available.
Target beneficiary group/s	Target beneficiaries: Students, graduates, undergraduates and/or technologists who work or intend to work in professional and technological education Target education level for students: Post-graduation (lato sensu) at specialization level Specific target groups: Girls/women, graduates, Bachelor's degree students and/or technologists who work or intend to work in professional and technological education
Scale and scope	Number of beneficiaries: N/A Geographical scope: National
Monitoring and evaluation	DocentVET is monitored nationally through two different channels. IFES offers the course at the national level, with state coordination and technical support from Setec/MEC; the CAPES/UAB offer is monitored and evaluated by Setec/MEC's technical coordination, using instruments developed for this purpose. At the local level, the 25 participating institutions must monitor, evaluate and oversee each of their offers. At the national level, a partnership between Setec/MEC and Universidade Federal de Santa Catarina (UFSC) enables a simultaneous national evaluation of the two course offerings through the Evaluation Monitoring System (SAAS/UFSC).
Lessons learned	N/A

VI. Professionals of the Future Project

Objectives and outcomes	The project aims to improve the employment prospects of graduates of professional training and qualification programmes in sustainable sectors of the Brazilian economy.
Programme executor and funding	Federative Republic of Brazil and Federal Republic of Germany
Programme description	The project's primary objective is to enhance the employment opportunities of VET graduates, particularly in sustainable sectors of the Brazilian economy. These include professional and technological education, bio-economy, renewable energy, and other sustainable productive activities related to circular economy and digitalization as cross-cutting themes. The project will facilitate the formation and promotion of partnerships between companies and educational institutions, to foster and expand the training of individuals targeting the supported sectors.
Modalities/ resources	The project has outlined several key steps to achieve its objectives. These include conducting a specific mapping of professions in sectors relevant to the green economy; defining and constructing relevant course contents for professional and higher education; identifying priority regions and institutions according to demand; providing support for implementation by qualified entities; analysing international and national experiences in private-public sector interaction in education; developing national guidelines to foster closer ties between sectors; and promoting partnerships in professional education between private companies and educational institutions.
Target beneficiary group/s	<p>Target beneficiaries: Students, teachers, administrative staff</p> <p>Target education level for students: Professional qualification, medium-level technical professional education, graduate and postgraduate</p> <p>Specific target groups: Girls/women, low socio-economic status, population groups in rural areas, children with disabilities, private-sector representatives (associations, companies or industries)</p>
Scale and scope	<p>The programme aims to benefit 14,000 graduates from professional education courses, including 2,800 young people, 2,800 women and 2,800 individuals from vulnerable groups. Of these graduates, 9,800 (including 1,960 youth, 1,960 women and 1,960 from vulnerable groups) are expected to find employment after completing the course, with 7,000 of them landing relevant jobs in the area. The programme involves ten private-sector representatives from each of the three sustainability sectors (energy, bio-economy and circular economy) and has established four cooperation agreements with private-sector partners.</p> <p>Geographical scope: National</p>
Monitoring and evaluation	Project governance is the responsibility of the Joint Steering Committee, comprising representatives from MEC, the Ministry of Labour, the Brazilian Cooperation Agency and Germany's Development Cooperation. The committee meets twice a year to share information on the implementation and coordination of the various activities underway. Other ministries and institutions, such as the National Council of the Federal Network of Vocational, Scientific and Technological Education Institutions (CONIF) and the National Service of Industrial Learning (SENAI), are occasionally invited to the committee meetings.
Lessons learned	N/A

VII. Maker Network: the ‘Learning by Doing’ of the Federal Network

Objectives and outcomes	The objectives are threefold: i) motivate elementary school students in the local community to become interested in entering professional and technological education by offering workshops and events based on maker education; ii) mitigate dropout rates by using active teaching methodologies and extracurricular activities; iii) encourage student participation in Knowledge Olympics, seminars and academic conferences to ensure their success.
Programme executor and funding	Setec Total amount of money dedicated: USD 5,384,575 (around BRL 28 million): USD 2,980,769 (around BRL 15.5 million) for Phase I and USD 2,403,806 (around BRL 12.5 million) for Phase II
Programme description	The Maker Network project, initiated by Setec, supports the establishment of Maker Laboratories in Federal Institutes, Pedro II College and Federal Centres of Technological Education (CEFETs), which are part of CONIF.
Modalities/ resources	The project focuses exclusively on the acquisition of equipment and aims to promote the principles of maker education among professors and administrative technicians in education. It encourages the development of a ‘learning by doing’ culture, promotes project-based learning and demonstrates how these labs can support the teaching-learning process in all fields of knowledge.
Target beneficiary group/s	Target beneficiaries: Students, teachers, members of academia, higher education institutions, industry partners, local community Target education level for students: Professional qualification, middle-level technical, higher level, post-graduation (all levels)
Scale and scope	The Maker Network project has engaged 2,500 students and 725 professors and administrative staff members, also reaching a much larger audience through the Federal VET Network (RFVET) and its 40 participating higher education institutions. In total, the project has benefited over 806,587 RFVET students and 77,794 RFVET professors and administrative staff members. Its impact is extended to industry partners, which have been engaged through events such as the Software Workshop held at IFSuldeMinas – Campus Poços de Caldas, and local communities through its LabMóvel initiative, which has served ten municipalities across Brazil.
Monitoring and evaluation	An analysis of the proposals in Phase I and Phase II was performed by an ad hoc commission composed of pro-rectors from the VET Federal Network in the areas of teaching, research and extension, and members suggested by Setec/MEC to analyse partnerships and governance. A new management is to be announced to transform this project into a full programme.
Lessons learned	Developing a public policy with decentralized resources for a country as large as Brazil is a challenging task, especially during the COVID-19 pandemic. The logistics of delivery and execution, as well as designing the public notice and determining the requirements and counterparts from participating institutions, pose significant management challenges. However, this challenge was successfully overcome through collaborative action with the Federal Network, leading to a win-win relationship for both parties.

VIII. Fostering Innovation and Entrepreneurship

Objectives and outcomes	This initiative aims to promote research, development, innovation and technological extension actions within the professional and technological education institutions that comprise the Federal Network.
Programme executor and funding	Setec Total amount of money dedicated: USD 12 million (annual budget of approx. USD 3.2 million)
Programme description	Setec's strategic agenda focuses on innovation and entrepreneurship. It encourages the construction of institutional environments and capacities for innovation, and connection with society and the productive sector.
Modalities/ resources	<p>This strategy encompasses a range of initiatives aimed at bridging the gap between the classroom and the real world, bringing positive and meaningful significance to the teaching-learning process through VET networks. These initiatives are organized around four axes:</p> <p>Axis 1 – Skills for digital transformation centres on developing learning approaches that meet the needs of Industry 4.0, with a focus on digital technologies that have emerged in this context.</p> <p>Axis 2 – Emergence of innovative, technology-based businesses centres on developing educational practices that generate innovative technology-based businesses.</p> <p>Axis 3 – Technological qualification of the productive sector promotes the consolidation of capacities to offer technological services; research, development and innovation (RDI); and the transfer of technological knowledge to the productive sector.</p> <p>Axis 4 – Strategic integration with the productive sector aims to foster strategic partnerships in education and science, technology and innovation between VET institutions and the productive sector.</p>
Target beneficiary group/s	<p>Target beneficiaries: Students, teachers</p> <p>Target education level for students: Elementary school (final years), high school technical, undergraduate and graduate students</p>
Scale and scope	<p>Number of beneficiaries: 45,000 students; 800 projects</p> <p>Geographical scope: National</p>
Monitoring and evaluation	Three tools are used to monitor the programme: monthly checkpoint meetings with coordinators and managers of supported projects, mid-term evaluations and ex-post evaluations (for closed funding cycles) based on theory of change.
Lessons learned	N/A



Canada



I. Early Learning and Child Care (ELCC)

Objectives and outcomes	The objective of the Canadian government is to reduce the fees for regulated child care to an average of CAD 10 per day by March 2026. In addition, the government has entered into Canada-wide ELCC Agreements with provinces and territories, resulting in commitments to create over 250,000 new childcare spaces by March 2026.
Programme executor and funding	Employment and Social Development Canada Total amount of money dedicated: Over CAD 27 billion (just over USD 20 billion) over five years, starting in 2021/22, as part of the federal Budget 2021 to build a Canada-wide ELCC system with provincial, territorial and Indigenous partners. Up to CAD 30 billion (USD 22.3 billion) over five years will be provided in support of ELCC. CAD 625 million (USD 461.312 million) over four years, beginning in 2023/24, for an ELCC Infrastructure Fund.
Programme description	A Canada-wide ELCC system aims to ensure that all families have access to high-quality, affordable, flexible and inclusive ELCC no matter where they live.
Modalities/ resources	The Canada-wide ELCC system involves the transfer of federal funding to provincial and territorial governments to enhance and expand the ELCC system in their respective jurisdictions. These funds are disbursed through five-year bilateral agreements with all provinces and territories. As a result of this initiative, coupled with previous investments made since 2015, a minimum of CAD 9.2 billion will be permanently allocated annually for ELCC and Indigenous ELCC by 2026.
Target beneficiary group/s	Target beneficiaries: Students, teachers, parents/caregivers, Indigenous peoples, youth and children Target education level for students: Early childhood and pre-primary level Specific target groups: Girls/women, low socio-economic status, population groups in rural areas, population groups in urban areas, minority groups (e.g. linguistic), children with disabilities
Scale and scope	Number of beneficiaries: Approximately 2.28 million children aged 0–5 years and 221,000 individuals employed as early childhood educators and assistants. Creation of 250,000 new high-quality childcare spaces for children under the age of six by March 2026. Geographical scope: National, provincial, Indigenous government and communities
Monitoring and evaluation	The Canada-wide ELCC Agreements for 2021–2026 and the ELCC bilateral agreements include specific commitments for data sharing and reporting between the federal government and provinces/territories. The government also introduced federal legislation on 8 December 2022 requiring the Education Minister to report annually on federal investments and progress. To this end, progress reports are regularly published on the Government of Canada website in official languages.
Lessons learned	The Canada-wide ELCC system is currently dispersed and lacks standardized, comparable data, making it difficult to track progress and identify areas for improvement. Recruiting and retaining a qualified workforce is a common issue and professionalizing the sector is necessary to improve the quality of care. The same challenges exist in the Indigenous ELCC context. In response, First Nations, Inuit and Métis Nation partners are using incremental funding to recruit, train and retain Indigenous early care and education providers and to expand access to care through existing and new sites, or enhanced hours of care.

II. CanCode

Objectives and outcomes	CanCode strives to provide Canadian youth from kindergarten through secondary education with the skills necessary to participate in the digital economy, preparing them for further studies in digital skills and science, technology, engineering and mathematics (STEM) courses. The programme aims to prioritize diversity and reach under-represented groups, such as girls, Indigenous youth, youth with disabilities and those in rural, remote and Northern communities.
Programme executor and funding	Innovation, Science and Economic Development Canada Total amount of money dedicated: In 2017, the Government of Canada invested CAD 50 million over two years as part of the Innovation and Skills Plan. The investment continued in 2019 for CAD 60 million over three years, and in 2021 for CAD 80 million over three years.
Programme description	CanCode was established as part of the 2017 Innovation and Skills Plan, which is a multi-year strategy to create well-paying jobs for the middle class. The programme aims to equip Canadian youth with coding and digital skills and provides grades K-12 learners with access to training that also encourages their interest and preparedness for STEM courses. Additionally, it supports teachers with training and professional development opportunities to help them introduce digital skills such as data analytics and digital content development, as well as coding, in the classroom.
Modalities/ resources	CanCode is now in its third iteration and continues to build on the success and momentum of CanCode 1.0 and 2.0. By doing so, CanCode seeks to accommodate different learning styles, stimulate various interests and appeal to a diverse group of young people in a variety of ways. The programme has a particular focus on reaching under-represented groups, such as girls, Indigenous youth, youth with disabilities and those living in rural, remote and Northern communities.
Target beneficiary group/s	Target beneficiaries: Students, teachers Target education level for students: Students (K-12) and teachers across Canada Specific target groups: Girls/ women, population groups in rural areas, minority groups (e.g. linguistic), children with disabilities
Scale and scope	Number of beneficiaries: Since launching, CanCode has provided over 4.5 million students and over 220,000 teachers with coding and digital skill training. Under the latest iteration, it shall deliver additional training to 3 million students and 120,000 teachers. Geographical scope: National
Monitoring and evaluation	Recipients of CanCode funding are required to submit quarterly progress reports that detail the number of students and teachers reached, as well as the training opportunities provided. Furthermore, in accordance with the Treasury Board Policy on Results, the Financial Administration Act, and the Treasury Board's Policy on Transfer Payments and Policy on Results, the CanCode programme is currently undergoing evaluation by Innovation, Science and Economic Development Canada (ISED)'s internal evaluation and audit branch.

III. Canada Student Financial Assistance Programme (CSFA Programme)

Objectives and outcomes	The CSFA Programme provides eligible students with financial assistance in the form of grants and loans to help cover the cost of tuition, books, mandatory fees, living costs and transportation associated with post-secondary education.
Programme executor and funding	Total amount of money dedicated: In 2021/22, over CAD 6.2 billion were allocated in federal student grants and loans: CAD 3.3 billion disbursed as Canada Student Grants (CSGs) and CAD 2.9 billion disbursed as Canada Student Loans (CSLs).
Programme description	The CSFA Programme provides targeted grants and needs-based loans to eligible students enrolled in post-secondary education programmes. It also offers a Repayment Assistance Plan (RAP) to borrowers experiencing financial difficulties in repaying their CSL. It is important to note that the CSFA Programme does not cover all post-secondary study expenses and is designed to supplement funds available to students from other sources, such as their own income and assets, parental or spousal contributions, other student awards, and provincial and territorial student assistance programmes.
Modalities/ resources	The programme specifically supports groups such as full-time and part-time students, students from low- and middle-income families, students with dependents and students with permanent disabilities.
Target beneficiary group/s	<p>Target beneficiaries: Students</p> <p>Target education level for students: Post-secondary and non-tertiary, short-cycle tertiary education, Bachelor's degree and above</p> <p>Specific target groups: Girls/women, low socio-economic status, population groups in rural areas, population groups in urban areas, minority groups, migrant population groups, refugees/displaced population groups, children with disabilities</p>
Scale and scope	Number of beneficiaries: In the 2021/22 academic year: 670,000 students received CSGs and/or CSLs (544,000 received CSGs, 558,000 received CSLs); 403,000 female students received CSGs and/or CSLs; 471,000 full-time students received CSGs (for low- and middle-income students); 91,100 students with dependents received CSGs; 60,200 students with permanent disabilities received CSGs; 285,000 students benefited from RAPs, and 26,400 students benefited from Resettlement Assistance Programmes. Geographical scope: National
Monitoring and evaluation	The Department of Employment and Social Development Canada provides standardized reporting to parliament through the annual Departmental Results Reports and produces the CFSA Annual Report and the CSFA Statistical Review. The programme also undergoes evaluation at least every five years, with the results made available to the public.

IV. Youth Employment and Skills Strategy Programme (YESSP)

Objectives and outcomes	Expected outcomes from the YESSP for youth depend on the life stage of the youth served and include job readiness, career advancement and employment acquisition.
Programme executor and funding	Employment and Social Development Canada (ESDC) Total amount of money dedicated: In 2020, the Government of Canada announced a CAD 575.3 million investment over two years (2021-2022 and 2022-2023) to support approximately 45,300 additional job placements through YESSP. In 2021: CAD 109.3 million was invested for 2022-2023 YESSP departments (excluding Employment and Social Development Canada) to support an additional 7,000 youth. YESSP often receives additional incremental funding amounts. The 2022 Fall Economic Statement also announced CAD 301.4 million over two years, starting in 2023/24 for YESSP.
Programme description	The Youth Employment and Skills Strategy (YESS) provides funding to third-party delivery organizations and employers to provide a range of employment activities aimed at helping young people between the ages of 15 and 30 gain the skills, abilities and experience they need to access quality jobs.
Modalities/ resources	YESS is delivered by 12 departments, agencies and Crown corporations across the Government of Canada.
Target beneficiary group/s	Target beneficiaries: Youth ages 15–30, with a focus on those facing barriers Target education level for students: Youth ages 15–30, with a focus on those facing barriers to employment Specific target groups: Girls/women, low socio-economic status, population groups in rural areas, population groups in urban areas, minority groups (e.g. linguistic), migrant population groups, refugees/displaced population groups, children with disabilities, Indigenous Peoples and visible minorities
Scale and scope	Number of beneficiaries: In 2021/22, 45,000 opportunities for youth, of which ESDC's YESSP supported approximately 18,000 (approximately 18% Indigenous, 25% youth with disabilities and 45% visible minority youth). Geographical scope: National
Monitoring and evaluation	YESS has established several performance indicators to assess its impact, including participant counts and demographic breakdowns. Intermediate indicators are also used to understand the quality of YESSP-funded supports, such as skill development and employment outcomes. Long-term outcome indicators look at the average employment earnings after five years of youth participants in YESSP-funded support programmes compared to non-participating youth. The programme undergoes a summative evaluation every five years.
Lessons learned	As a horizontal programme involving 12 federal departments, agencies and Crown Corporations, the programme has encountered challenges related to data standardization owing to the fact that each partner department or agency administers its own programme. To address some of these challenges, a new Performance Measurement Framework is currently being implemented.

V. Canada Education Savings Programme (CESP)

Objectives and outcomes	CESP helps make post-secondary education more affordable for all Canadians by encouraging early planning and saving.
Programme executor and funding	ESDC Total amount of money dedicated: Since 1998, CAD 15.7 billion in cumulative Canada Education Savings Grants (CESG) payments and since 2004, CAD 1.7 billion in cumulative Canada Learning Bonds (CLB) payments. In 2021, CAD 1.1 billion was paid in CESGs and CAD 139 million in CLBs into Registered Education Savings Plans (RESPs).
Programme description	The Government of Canada encourages parents to save for their children's post-secondary education using RESPs. To help families build savings, the government offers two education savings incentives linked to RESPs – the CESG and the CLB. RESPs allow education savings to grow tax-free and can be used to cover the costs of a child's full- or part-time studies after high school in apprenticeship programmes, CEGEPs (general or vocational colleges in Quebec), trade schools, colleges and universities.
Modalities/ resources	The Basic CESG provides a 20% payment on the first CAD 2,500 of RESP contributions each year until the year the child turns 17, regardless of income. The government pays a maximum lifetime amount of CAD 7,200 in CESG to each beneficiary. The CLB provides an initial payment of CAD 500 to the beneficiary's RESP and CAD 100 for each subsequent year of eligibility, up to 15 years old (with a maximum of CAD 2,000). Children from families with low income (born on or after 1 January 2004) are eligible for the CLB and can request the CLB themselves when they turn 18.
Target beneficiary group/s	Target beneficiaries: Students, parents/caregivers Target education level for students: post-secondary and non-tertiary, short-cycle tertiary education, Bachelor's degree and above Specific target groups: Girls/women, low socio-economic status, population groups in rural areas, population groups in urban areas, migrant population groups, refugees/displaced population groups, children with disabilities, Indigenous populations
Scale of the programme	Number of beneficiaries: As of 2021, 4.0 million children have received the CESG and 1.7 million have received the CLB. CAD 4.9 billion has been withdrawn from RESPs to support the post-secondary education of 481,225 students. Geographical scope: National
Monitoring and evaluation	ESDC conducts and publishes periodical programme evaluations of the CESP, as per the Treasury Board Secretariat's Policy on Results. ESDC also produces an Annual Statistical Review for the CESP. The results from the evaluation are shared on the government website.
Lessons learned	Programme access challenges prevent many children from benefiting from the programme. The 2022 formative evaluation of the CLB showed that low-income families face barriers in accessing the CLB, including a complex application process, low awareness and immediate financial vulnerabilities. These barriers are more pronounced for some groups, including Indigenous peoples, those living with a very low income, single parents, children in care, and those living in rural or isolated communities.

VI. Upskilling for Industry Initiative (UII)

Objectives and outcomes	UII aims to create stronger and more meaningful opportunities for workers to engage in demand-driven training opportunities, with a focus on upskilling workers into the following high-growth sectors: digital technology, cyber security, agriculture technology, advanced manufacturing, clean technology and bio-manufacturing.
Programme executor and funding	Innovation, Science and Economic Development Canada Total amount of money dedicated: Approximately CAD 183 million
Programme description	The UII aims to enhance employer-led approaches to upskilling and redeploying workers to meet the needs of six high-growth industries. The programme will achieve this by offering non-repayable contributions to a lead recipient who, together with its network and delivery partners, will engage employers in the upskilling ecosystem. The purpose is to identify skill needs and develop new curricula and upskilling programmes for mid-career workers to fulfil industry demands. Ultimately, the UII aims to create a more responsive skill ecosystem to adapt to changing labour demand across Canada and upskill 15,000 mid-career workers.
Modalities/resources	Short-cycle upskilling (about 4 to 16 weeks long) consists of a mix of specialized technical training as well as general business and interpersonal skills, such as communications, teamwork and project management. The mix between technical, general business and interpersonal skills may vary based on employers' needs and the pre-existing qualifications of the pool of workers.
Target beneficiary groups	Target beneficiaries: Mid-career workers Target education level for students: Mid-career workers Specific target groups: Mid-career workers, people looking to gain new skills to progress in their career
Scale and scope	Number of beneficiaries: N/A – new programme Geographical scope: National
Monitoring and evaluation	N/A – new programme, indicators have not yet been finalized.

VII. Canada Research Chairs Programme (CRCP)

Objectives and outcomes	Chair holders aim to achieve research excellence in engineering and the natural sciences, health sciences, humanities and social sciences. They improve Canadians' depth of knowledge and quality of life, strengthen Canada's international competitiveness, and help train the next generation of highly skilled people through student supervision, teaching and coordinating other researchers' work.
Programme executor and funding	Social Sciences and Humanities Research Council; Natural Sciences and Engineering Research Council of Canada; and the Canadian Institutes of Health Research report to Innovation, Science and Economic Development Canada Total amount of money dedicated: Approximately CAD 229 million
Programme description	The Canada Research Chairs Programme invests approximately USD 311 million per year to attract and retain a diverse cadre of world-class researchers to reinforce academic research and training excellence in Canadian post-secondary institutions. In 2000, the Government of Canada created a permanent programme to establish 2,285 research professorships – the Canada Research Chairs – in eligible degree-granting institutions across the country.
Modalities/ resources	Research Chairs are accepted into this programme on the basis that they will be leaders and contributors to research and research training at the host Canadian institution. The duration of the programme allows more in-depth research and collaboration which can promote cross-institutional collaboration with the chair holder's home institution. 'Tier 1 Chairs' are tenable for seven years and renewable once and are for outstanding researchers acknowledged by their peers as world leaders in their fields. 'Tier 2 Chairs' are tenable for five years and renewable once and are for exceptional emerging researchers who are acknowledged by their peers as having the potential to lead in their field. In all, the programme provides opportunities for the Research Chairs to collaborate more broadly with their peers to advance their field of study while also providing learning opportunities for a diverse student body.
Scale and scope	Number of beneficiaries: Higher education institutions: 44.3% women and gender minorities, 24.9% racialized individuals, 6.1% persons with disabilities and 3.8% Indigenous peoples. Total current number of filled chairs: 1,992. Geographical scope: National
Monitoring and evaluation	The Tri-agency Institutional Programmes Secretariat (TIPS) is responsible for day-to-day administration, reporting to the Management Committee, which itself reports to the Steering Committee and subsequently to the Minister of Innovation, Science and Industry. The Management Committee provides comments and advice concerning the management of the peer-review process and communications strategies, as well as the programme's structure, policy development and budget management. The Steering Committee plays an important role in the peer-review process but is also mandated to oversee the management of the programme and provide strategic advice on its general direction.

VIII. Canada Excellence Research Chairs

Objectives and outcomes	The Canada Excellence Research Chairs (CERC) programme intends to strengthen Canada's ability to attract the world's top researchers in order to be at the leading edge of breakthroughs in science, technology and innovation (STI) priority areas that are expected to generate social and economic benefits for Canadians; help Canada build a critical mass of expertise in STI priority areas identified by the Government of Canada; create a competitive environment to help Canadian institutions, in their pursuit of excellence in their research, attract a cadre of world-leading researchers; and contribute to branding Canada as a location of choice for world-leading research, science and technology development, alongside other federal programmes with similar objectives.
Programme executor and funding	The CERC programme is funded by the three federal research funding agencies: the Canadian Institutes of Health Research, the Natural Sciences and Engineering Research Council, and the Social Sciences and Humanities Research Council. Total amount of money dedicated: Approximately USD 180.4 million over eight years.
Programme description	The CERC programme offers universities award values of up to USD 4 million or USD 8 million over eight years to support world-renowned researchers and their teams in establishing ambitious research programmes at Canadian universities.
Modalities/ resources	N/A
Target beneficiary group/s	Target beneficiaries: Higher education institutions
Scale and scope	Geographical scope: National
Monitoring and evaluation	At the midterm of the eight-year funding period, the progress of each funded initiative will be assessed against the milestones identified in the institution's application, including performance measurement and equity, diversity and inclusion action plans. Recipient institutions must submit a midterm report. The midterm review involves an in-depth assessment by a panel of experts assembled by TIPS, whose results will in turn suggest a course of action to the programme's steering committee. The midterm review may result in continued funding or phasing out of funding to the initiative. The steering committee may terminate the award and provide no further funding if the results of the midterm review are not satisfactory. CERC awardees will be required to meet additional annual reporting and public accountability and transparency requirements. Failure to meet reporting requirements will result in the suspension of payments until the requirements are met.



China



I. Compulsory Education Curriculum Plan and Curriculum Standards

Objectives and outcomes	N/A
Programme executor and funding	Ministry of Education of the People's Republic of China Total amount of money dedicated: USD 335 million (CNY 2.3 trillion)
Programme description	The Compulsory Education Curriculum Plan and Curriculum Standards are designed to deepen curriculum reform and ensure that students can obtain certain skills, s, such as literacy and numeracy, at certain levels.
Modalities/ resources	All provinces, cities and autonomous regions are required to plan and promote the implementation of compulsory education curriculum programmes and standards (2022 version). They are expected to plan and organize various forms of training and exchange in a systematic manner to strengthen the concept of curriculum reform and determine the overall requirements of the reform. The programme is designed to achieve full coverage of principals, teachers, and teaching and research staff, as well as education administrators.
Target beneficiary group/s	Target beneficiaries: Students Target education level for students: Primary and secondary schools Specific target groups: Girls/women, low socio-economic status, population groups in rural areas, population groups in urban areas, minority groups (e.g. linguistic), migrant population groups, children with disabilities
Scale and scope	Number of beneficiaries: Around 158 million students Geographical scope: National
Monitoring and evaluation	Student progress is monitored and evaluated based on two aspects: comprehensive quality and academic achievement. Teacher progress is monitored and evaluated according to three aspects, namely comprehensive quality, performance of duties and teaching performance, with several secondary and tertiary goals under each aspect. School development is monitored and evaluated according to four aspects: daily management of school teaching, classroom teaching, school-based teaching and research, and quality management. Monitoring and evaluation of teaching quality is an important part of the programme. Key goals in this respect are first, to strengthen the monitoring and evaluation of students' academic level through an improved school-based formative testing, and second, to focus on analysis and feedback of monitoring and evaluation results through an established bottom-up system for analysing and reporting on teaching quality.
Lessons learned	N/A

II. National Smart Education Platform

Objectives and outcomes	The platform aims to drive digital education and provide quality digital resources to all students and teachers, following the '3C' principle of 'connection, content and cooperation/communication', focusing on the five core functions of learning, teaching, school governance, empowering society and educational innovation.
Programme executor and funding	Ministry of Education
Programme description	The National Smart Education Platform aims to address urgent needs for quality education resources and services for both teachers and students. It implements a national education digitalization strategy through 'three Platforms and one Hall'. These platforms provide massive, high-quality digital resources for primary and secondary schools, vocational education and higher education. Additionally, the Service Hall offers convenient services for teachers and students, such as employment, examination and study abroad.
Modalities/ resources	To further develop education, the government is prioritizing the construction of new educational infrastructure; promoting digital transformation and intelligent upgrading; and integrating innovation through information networks, platform systems, digital resources, smart campuses and enhanced digital security. Internet access has reached 100% in all schools, with over 210,000 schools having access to wireless networks. Multimedia classrooms are available in 99.5% of schools (over 4 million), and over 28 million schools have network access. The platform has undergone training and pilot applications encouraging the use of online education and teaching resources, and promoting the integration of technology in teaching. This has led to a new norm of online-on-site hybrid teaching.
Target beneficiary group/s	<p>Target beneficiaries: Students, teachers, school leaders, parents/caregivers, administrative staff</p> <p>Target education level for students: Basic education, vocational education and higher education</p> <p>Specific target groups: Girls/women, low socio-economic status, population groups in rural areas, population groups in urban areas, minority groups (e.g. linguistic), migrant population groups, refugees/displaced population groups, children with disabilities</p>
Scale and scope	Number of beneficiaries: 291 million students and 18.5 million teachers. By July 2022, the National Smart Education Platform had registered over 3.03 billion views and the total number of visitors had reached 430 million. Geographical scope: National
Monitoring and evaluation	N/A

III. New Infrastructure for Education

Objectives and outcomes	The goal of this initiative is to establish a new education infrastructure optimized for efficiency, safety and reliability by 2025.
Programme executor and funding	Ministry of Education
Programme description	The programme targets high-quality education infrastructure development, focusing on information networks, platform systems, digital resources, smart campuses, innovative applications and credible security. The construction of new infrastructure for education is a pulling force for the transformation of education in the information era and a strategic initiative to accelerate the modernization of education.
Modalities/ resources	The project aims to address the urgent need for high-quality education by gradually constructing new education infrastructure. It is innovation-focused, utilizing new-generation technologies such as 5G, artificial intelligence (AI), big data, cloud computing and blockchain to promote digital transformation in education. It emphasizes coordination among ministries and local governments to stimulate market vitality and cultivate a positive environment for education development. Additionally, it adopts an integrated approach by coordinating traditional and new infrastructure, promoting online-offline integration and avoiding duplicate constructions.
Target beneficiary group/s	<p>Target beneficiaries: Students, teachers, school leaders, parents/caregivers, administrative staff</p> <p>Target education level for students: Basic education, vocational education and higher education</p> <p>Specific target groups: Girls/women, low socio-economic status, population groups in rural areas, population groups in urban areas, minority groups (e.g. linguistic), migrant population groups, refugees/displaced population groups, children with disabilities</p>
Scale and scope	<p>Number of beneficiaries: 291 million students and 18.5 million teachers</p> <p>Geographical scope: National</p>
Monitoring and evaluation	There are plans to strengthen project management, procurement, process and performance management; establish a sound management system and standards for the whole project life cycle; and guarantee the quality of the project. Local education supervision departments are advised to incorporate the key tasks of the new education infrastructure in their supervision and assessment of lower-level governments' as they fulfil their educational responsibilities, as well as schools. There are further plans to establish dynamic monitoring and third-party evaluation mechanisms to promote normalized, real-time and data-based quality monitoring and impact evaluation.
Lessons learned	N/A

IV. Academy of Future Technologies

Objectives and outcomes	The programme aims for frontier, revolutionary and disruptive technological change and development in the next 10–15 years. It explores a substantial crossover of professions and disciplines, cultivating leading talents with foresight who are capable of driving future development in science and technology innovation.
Programme executor and funding	Ministry of Education
Programme description	To cultivate innovative leaders of future science and technology, the construction of Academy of Future Technologies was launched in May 2020, and the first batch of 12 academies was announced in May 2021. The first batch condensed the features of future technologies. It covered more than ten key fields such as life and health, aerospace, intelligent manufacturing, future energy, quantum technology, AI, big data, deep space, deep sea, deep blue and deep earth.
Modalities/ resources	To create a future-ready workforce, the programme maintains a student-centred approach and adheres to open innovation. The academies stimulate students' curiosity. They encourage students to take the initiative to discover problems, think deeply about them, propose bold ideas, and give full play to their creativity and imagination. The academies enhance students' thinking and cultivates their ability to integrate mathematics and science, laying a deep theoretical foundation for innovative research in future technologies. The academies integrate training in innovative thinking into the curriculum and practices, encourage students to undertake original practical activities, cultivate their capacity for creative and critical thinking, and create a talent cultivation ecology without limitations and boundaries for innovation and thinking.
Target beneficiary group/s	<p>Target beneficiaries: Students</p> <p>Target education level for students: Higher education</p> <p>Specific target groups: Girls/women, low socio-economic status, population groups in rural areas, population groups in urban areas, minority groups (e.g. linguistic), migrant population groups</p>
Scale and scope	<p>Number of beneficiaries: 500,000 students.</p> <p>Geographical scope: National</p>
Monitoring and evaluation	N/A
Lessons learned	N/A

V. Vocational Education Special Training Programme for Field Engineers

Objectives and outcomes	N/A
Programme executor and funding	Ministry of Education
Programme description	The programme is designed to meet the high-end digital, intelligent and green development requirements of key areas such as advanced manufacturing, emerging industries and modern service industries; deepen the integration of industry and education through school-enterprise cooperation; and fully implement the Chinese apprenticeship system. Schools and enterprises jointly undertake employee apprenticeship and training. The programme improves the new synergistic development mechanism of the education chain, industry chain, talent chain and innovation chain, and creates a talent pipeline of urgently needed professionals with technical skills.
Modalities/resources	The programme differs from conventional talent cultivation in three ways. First, it explores the rules and laws for cultivating engineering and technical talents through vocational education, designs the standards for cultivating onsite engineers and improves the system for cultivating engineers. Second, industrial departments select enterprises to create apprenticeship positions, and vocational schools connect with enterprises to provide joint training programmes and build a school-enterprise community for a shared future. Third, schools and enterprises jointly build onsite engineering colleges focusing on high-level apprenticeship and training.
Target beneficiary group/s	<p>Target beneficiaries: Students</p> <p>Target education level for students: Vocational education</p> <p>Specific target groups: Girls/women, low socio-economic status, population groups in rural areas, population groups in urban areas, minority groups (e.g. linguistic), migrant population groups</p>
Scale and scope	<p>Number of beneficiaries: 237 million students</p> <p>Geographical scope: National</p>
Monitoring and evaluation	Relevant provincial departments shall strengthen tracking and guidance during the project's implementation, in accordance with provisions of the Vocational Education Law of the People's Republic of China and other laws. They shall promptly identify problems, correct and rectify them, and suggest improvements. The expert committee carries out phased evaluation through the project management system.
Lessons learned	N/A

VI. International Conference on the Cooperation and Integration of Industry, Education, Research and Application (2022)

Objectives and outcomes	N/A
Programme executor and funding	Ministry of Education
Programme description	The International Conference on the Cooperation and Integration of Industry, Education, Research, and Application provided a collaborative platform for higher education and research institutions, as well as professors, researchers and scholars from different countries, to conduct cooperative research and joint student training, and promote university–industry cooperation.
Modalities/ resources	The conference promoted establishing mechanisms for international cooperation and integration of industry, education, research and application; integrated global resources of top talents; high-level cooperation of industry, education, research and application; and the recruitment of high-level international joint supervisors.
Target beneficiary group/s	Target beneficiaries: Students, teachers, members of academia, higher education institutions, industry partners Target education level for students: Higher education Specific target groups: N/A
Scale of the programme	Number of beneficiaries: 20,000 scholars and researchers Geographical scope: National
Monitoring and evaluation	N/A
Lessons learned	N/A



European Union



I. Pathways to School Success

Objectives and outcomes	The initiative is based on the dual recognition that: (a) the mission of school education is to help children and young people develop the knowledge, skills and attitudes necessary to become responsible, resilient and engaged individuals, and to have a fulfilling life; and (b) these goals require education systems to be equitable and inclusive.
Programme executor and funding	European Commission, in the framework of the European Education Area (EEA) governance structure
Programme description	Pathways to School Success is a Recommendation of the Council of the European Union, based on consultations and workshops among EU Member States. Follow-up activities will pursue the objective of decoupling educational attainment from socio-economic background to reduce underachievement, particularly by groups at risk.
Modalities/ resources	The recommendation sets a framework for further action, including through peer learning, cooperation and exchanges of information and experiences between Member States, stakeholders and partner countries, particularly through a dedicated EU Working Group on Schools (Pathways to School Success subgroup). EU funding, including from Erasmus+, will be used to support the recommendation and its aims for inclusive education.
Target beneficiary group/s	<p>Target beneficiaries: Students, teachers, school leaders, administrative staff</p> <p>Target education level for students: Primary and secondary education</p> <p>Specific target groups: Low socio-economic status, population groups in rural areas, population groups in urban areas, minority groups (e.g. linguistic), migrant population groups, refugees/displaced population groups, children with disabilities</p>
Scale and scope	<p>Number of beneficiaries: N/A</p> <p>Geographical scope: A European framework combining local action with cross-border cooperation</p>
Monitoring and evaluation	Follow-up of the implementation takes place within the Working Group on Schools of the EEA strategic framework.
Lessons learned	N/A

II. Council Recommendation on Blended Learning Approaches for High-quality and Inclusive Primary and Secondary Education

Objectives and outcomes	The recommendation aims to make school education more inclusive, improve competence development, and support teachers and school leaders.
Programme executor and funding	European Commission, in the framework of the EEA governance structure
Programme description	The Commission facilitates peer learning, resources and professional development opportunities to support Member States with implementation. The Working Group on Schools (Pathways subgroup) of the EEA strategic framework chose blended learning for inclusion as one of the first topics for exchange in 2022.
Modalities/ resources	Based on the recommendation's broad definition of blended learning, the group focused on policy conditions and opportunities for supporting schools and teachers as they implement blended learning in teaching and learning practices in an inclusive manner. A plenary discussion and seminar brought together ministry and stakeholder representatives to consider the pedagogical value of blended learning for inclusion, and the related crucial and evolving role of teachers. Enabling factors (policies, initial teacher education and continuing professional development) were also discussed to support teachers' readiness, willingness and competencies to take full advantage of blended learning as a pedagogical approach for inclusion.
Target beneficiary group/s	<p>Target beneficiaries: Students, teachers, school leaders, administrative staff</p> <p>Target education level for students: Primary and secondary education</p> <p>Specific target groups: Low socio-economic status, population groups in rural areas, population groups in urban areas, minority groups (e.g. linguistic), migrant population groups, refugees/displaced population groups, children with disabilities</p>
Scale and scope	<p>Number of beneficiaries: N/A</p> <p>Geographical scope: A European framework combining local action with cross-border cooperation.</p>
Monitoring and evaluation	Follow-up is implemented within the EEA strategic framework's Working Group on Schools.
Lessons learned	N/A

III. Erasmus+ Teacher Academics

Objectives and outcomes	N/A
Programme executor and funding	European Commission, with individual projects coordinated by applicant organizations.
Programme description	Under Erasmus+ projects, Teacher Academies are networks of initial and continuous teacher-education providers that aim to improve teacher-education policies, enhance the European dimension and internationalization of teacher education, and offer teaching modules and learning opportunities on topics such as digitalization, sustainability, equity and inclusion.
Modalities/ resources	As a cross-sectoral initiative, Teacher Academies may encourage training schools to experiment and share innovative new ways of teaching (including for distance- and blended approaches to teaching and learning).
Target beneficiary group/s	<p>Target beneficiaries: Students, teachers, school leaders</p> <p>Target education level for students: Teacher Academies work with a range of possible partners, but their ultimate aim is to support teaching in schools from primary to initial VET levels.</p> <p>Specific target groups: N/A</p>
Scale and scope	<p>Number of beneficiaries: N/A</p> <p>Geographical scope: An EU-wide initiative, based on cross-border partnerships</p>
Monitoring and evaluation	Follow-up is implemented within the EEA strategic framework's Working Group on Schools.
Lessons learned	N/A

IV. Digital Education Action Plan

Objectives and outcomes	The action plan aims to ensure that all citizens is equipped with the digital competencies and skills to work, learn and realize their full potential in the digital era.
Programme executor and funding	European Commission in the framework of the EEA governance structure, with roles for Member State authorities and stakeholders Total amount of money dedicated: USD 16 million per year (EUR 15 million)
Programme description	To support the digital transition, the Commission proposed a new comprehensive approach to digital learning and education at the European level under the Digital Education Action Plan 2021–2027, adopted in September 2020.
Modalities/ resources	The Digital Education Action Plan aims to make digital education a priority in Europe, with two strategic priorities: <ul style="list-style-type: none"> - 1. Develop a European digital education ecosystem, including infrastructure, connectivity and equipment; effective digital capacity planning and development; digitally competent teachers and education staff; and high-quality content, user-friendly tools, and secure platforms that respect privacy and ethical standards. - 2. Enhance digital competencies and skills for digital transformation, including developing basic digital skills from an early age and advanced digital skills to produce more digital specialists; and ensure equal representation of girls and young women in digital studies and careers.
Target beneficiary group/s	Target beneficiaries: Students, teachers, school leaders, administrative staff Target education level for students: All levels of education (learners and providers) in a lifelong learning context Specific target groups: Girls/women, low socio-economic status
Scale and scope	Number of beneficiaries: N/A Geographical scope: An EU-wide initiative, based on cross-border partnerships
Monitoring and evaluation	The Digital Education Action Plan is monitored and evaluated as part of the EEA and advised by a Working Group on Digital Education, Learning, Teaching and Assessment. The European Commission publishes a report that informs both practitioners and decision-makers on the progress achieved and challenges addressed in implementing the EEA.
Lessons learned	N/A

V. Centres of Vocational Excellence (CoVEs)

Objectives and outcomes	N/A
Programme executor and funding	European Commission, with individual projects coordinated by applicant organizations. Total amount of money dedicated: EUR 48 million per year (2022)
Programme description	The recommendation defines key principles for ensuring agile VET that adapts swiftly to labour-market needs and provides quality learning opportunities for young people and adults alike. Among the initiatives funded by the 2021–2027 Erasmus+ programme are the 100 networks of CoVEs. Networks operate both at the national level and with CoVEs in other countries through international collaborative networks.
Modalities/resources	CoVEs involve existing VET centres, rather than creating new ones. These centres operate in a local context, creating skill ecosystems for innovation, regional development and social inclusion while working with CoVEs in other countries through international collaborative networks. They establish a bottom-up approach to vocational excellence involving a wide range of local stakeholders, enabling VET institutions to rapidly adapt skill provision to evolving economic and social needs.
Target beneficiary group/s	Target beneficiaries: Students, teachers, administrative staff, adult learners Target education level for students: Initial training of young people as well as the continuing upskilling and reskilling of adults Specific target groups: N/A
Scale of the programme	Number of beneficiaries: N/A Geographical scope: National, local, international through EU networks
Monitoring and evaluation	N/A
Lessons learned	N/A

VI. European Strategy for Universities

Objectives and outcomes	The strategy aims to enhance the European dimension in higher education and research by supporting universities as beacons for the European way of life. It also seeks to empower universities as drivers of change in the green and digital transitions, as well as reinforcing their role in promoting Europe's global influence. One of its primary goals is to facilitate peer learning and sharing of best practices among Member States, particularly in promoting whole-institution approaches to sustainability, climate and environmental literacy.
Programme executor and funding	European Commission, in the framework of the EEA governance structure
Programme description	Higher education is at the crossroads of education, research and innovation, serving society and the economy. It is singled out to play a major role in developing the EEA. With this strategy, the European Commission proposes ways in which it can contribute to rethinking the role of Europe's universities in this fast-changing era through trans-border cooperation. The range of specific flagship initiatives under it includes the European Universities Initiative to create more European inter-university campuses; a legal status for alliances of higher education institutions; a joint European degree; and a European Student Card.
Modalities/resources	The strategy focuses on universities' role in addressing twenty-first century challenges and closing the skill gap. It prioritizes supporting research and innovation action plans for the green energy transformation and greening of industrial ecosystems. Micro-credentials will play a key role in closing the skill gap, with the planned development of short courses on green-transition skills leading to micro-credentials, in cooperation with socio-economic actors.
Target beneficiary group/s	<p>Target beneficiaries: Students, teachers, administrative staff, local communities and their relationship with universities</p> <p>Target education level for students: Higher education (tertiary) and its links with the research world: research universities, technology institutes, art schools, higher VET institutions</p>
Scale of the programme	Geographical scope: National, local, international through EU networks
Monitoring and evaluation	The European Commission, in the framework of the EEA governance structure, plans to set up a European Higher Education Sector Observatory as part of this process, to provide evidence on progress made. This observatory will combine the best of the current EU data tools and capacities in a single place, enhancing their use and relevance for policy-makers, universities, students and researchers.
Lessons learned	N/A

VII. Encouraging STEM for Women and STEM-relevant skills as part of the Framework for Competencies

Objectives and outcomes	Since the launch of the programme in September 2020, over 13,500 girls in secondary schools have been trained across 10 countries, with the goal to reach an additional 10,000 girls in 10 countries by the end of 2022.
Programme executor and funding	European Commission, in the framework of the EEA governance structure
Programme description	<p>The programme includes training activities on digital and entrepreneurial skills for sustainability for girls and women in digital and EU STEM-related areas, in cooperation with the European Institute of Technology's Knowledge and Innovation Communities, 'Girls Go Circular', and the Entrepreneurship, Science, Technology, Engineering, Arts and Mathematics (ESTEAM) project on 'Enhancing the digital and entrepreneurial competencies of girls and women'.</p> <p>Increasing the number of STEM graduates and fostering entrepreneurial and transversal skills are two of the objectives of the European Skills Agenda. This is reflected in the European Union's Competence Framework for competences. This framework sets eight agreed areas of competence and defines how they help shape education policy and practice, and measure progress. This framework defines competencies as a mix of knowledge, skills and attitude.</p>
Modalities/ resources	The EU STEM Coalition promotes the development of new higher education programmes for engineering and ICT based on a STEM approach, including exploring ways and means to make STEM fields more attractive to women.
Target beneficiary group/s	<p>Target beneficiaries: Students, teachers, members of academia, higher education institutions, industry partners</p> <p>Target education level for students: N/A</p> <p>Specific target groups: N/A</p>
Scale of the programme	<p>Number of beneficiaries:</p> <p>Geographical scope: National, institutional European, aligning practice and policies in Member States</p> <p>Total amount of money dedicated: N/A</p>
Monitoring and evaluation	The programme is evaluated within the framework of the EEA and its governance structure.
Lessons learned	N/A

VIII. European Institute of Technology (EIT)

Objectives and outcomes	The EIT strives to enhance Europe's competitiveness, promote sustainable economic growth, and create job opportunities by fostering collaboration among top business, education and research organizations. It aims to cultivate environments where innovative ideas can flourish and drive innovation and entrepreneurship throughout Europe. The EIT's approach involves harnessing the power of the 'knowledge triangle' – business, education and research – by pooling and connecting leading organizations to form dynamic cross-border partnerships known as EIT Innovation Communities, thereby boosting Europe's innovation capacity.
Programme executor and funding	N/A
Programme description	The EIT is an independent EU body established to promote innovation by nurturing entrepreneurial talent and supporting new ideas.
Modalities/ resources	The Innovation Communities operate in various fields, such as climate, digitization, renewable energies, health, sustainable materials, food, manufacturing, urban mobility, culture and creativity. One of the EIT's mandates is to strengthen the innovation capacity of higher education, which is particularly relevant for G20 education. This involves supporting higher education institutions as they teach innovation and entrepreneurship, building their capacities and developing concrete actions to increase their impact. The EIT aims to equip universities with the necessary tools to promote innovation throughout their campuses and beyond.
Target beneficiary group/s	<p>Target beneficiaries: Members of academia, higher education institutions, industry partners</p> <p>Target education level for students: This is not an education-centred initiative, but it assigns a role to both tertiary education and further research from the doctoral level onwards.</p>
Scale of the programme	Geographical scope: National, provincial, institutional European, international
Lessons learned	N/A



France



I. Pre-primary and primary class size reduction in Priority Education Areas

Objectives and outcomes	This programme aims to increase educational attainment, combat inequality, and further the acquisition of better literacy and numeracy.
Programme executor and funding	French Ministry of Education
Programme description	In France, educational priority policies apply to a network of primary and secondary schools where social and economic inequalities affect students' performance. Such policies aim to reduce the impact of inequalities through positive educational actions in schools that have the greatest number of disadvantaged children.
Modalities/resources	Two types of priority education networks (<i>Réseaux d'éducation prioritaire</i> [REP]) have been identified: i) the REP+, which covers areas with the greatest concentrations of social difficulties, and where schools have a strong impact on academic success; and ii) the REP, which are more socially mixed but still have more social difficulties than mainstream secondary schools.
Target beneficiary group/s	<p>Target beneficiaries: Students</p> <p>Target education level for students: Last year of preschool school (age 5) and first two years of elementary school (ages 6 and 7)</p> <p>Specific target groups: low socio-economic status, population groups in rural areas, population groups in urban areas, minority groups (e.g. linguistic), migrant population groups, refugees/displaced population groups</p>
Scale and scope	<p>Number of beneficiaries: 361,000 students (in priority areas)</p> <p>Geographical scope: National</p>
Monitoring and evaluation	The programme is evaluated by the Directorate for Evaluation, Prospect and Performance (the statistics department of the Ministry of Education) and monitored by the Directorate General for Schools through systematic annual evaluations of literacy and numeracy, and targeted research in collaboration with research institutions.
Lessons learned	With regard to pupils' skill levels in French and mathematics, by the end of Year 3 and after two years of education in a class with fewer students, pupils had achieved better results than their peers educated in mainstream classes whose size had not been reduced. Concerning the first year of elementary school (age 6), teachers feel more confident about their class management and ability to make all pupils succeed, as well as their pupils' abilities. Their classroom practices are geared towards supporting students and providing cognitive stimulation. They favour pedagogical differentiation in both French and mathematics. The positive impact is particularly visible in Year 2 (age 7) and persists into Year 3 (age 8), and is also more significant among children experiencing difficulties in maths.

II. PiX Digital Platform

Objectives and outcomes	In increasingly digital societies, Pix aims to help all individuals become familiar with their digital environment and develop digital skills throughout their lives to be able to learn, work and participate in social life. Pix allows autonomous development of skills, which can be combined and organized around more formal teaching (by a teacher). Pix certification is an asset to demonstrate digital literacy and proficiency, accelerating entry or return to employment – especially for job seekers and newly graduated students. For teachers, Pix is a convenient tool for handling digital issues related to their subject matter. At the level of the education system and beyond, and given the millions of users of the platform, Pix provides valuable data on the level of digital proficiency of students and other beneficiaries.
Programme executor and funding	The Pix platform is managed by the GIP Pix (a French public interest group created in 2017). The implementation of Pix in the school system is coordinated and supervised by the French Ministry of Education.
Programme description	The Pix platform is a French online public service for the assessment, development and certification of digital skills, intended both for pupils and students in initial training, working people (employees, trainees in continuing vocational training, job seekers) and more generally, all citizens.
Modalities/ resources	Since the 2020/21 school year, PIX certification has been compulsory in France for pupils in their last year of lower secondary school (14 years old) and upper secondary school (17 years old). It replaces the previous digital skill certifications in secondary education (b2i) and higher education (c2i). The Pix public interest group, which is in charge of the management and implementation of the Pix platform and certification, was established by a decree of the French government.
Target beneficiary group/s	<p>Target beneficiaries: Students, teachers, school leaders, parents/caregivers, administrative staff, other</p> <p>Target education level for students: Use of Pix platform for digital skill assessment and development is intended for students in Grade 7 (age 12). National certification at the end of lower secondary school (Grade 9 students, age 14) and upper secondary school (Grade 12 students, age 17).</p>
Scale of the programme	<p>Number of beneficiaries: Over 4.5 million pupils and 9,200 teachers have been trained on Pix since September 2021.</p> <p>Geographical scope: National</p>
Monitoring and evaluation	N/A
Lessons learned	Regarding implementation in French secondary education, key factors of success have been the progressive implementation of Pix, with an initial phase of experimentation that allowed adapting the platform design and implementation before its compulsory extension to all secondary schools, and constituting a national community of Pix ambassadors who are able to support school heads and teachers in their use of Pix with students.

III. One Young Person, One Solution

Objectives and outcomes	The 'One Young Person, One Solution' initiative sets out to foster young people's autonomy and self-development, and to create a feeling of civic engagement/participation in society.
Programme executor and funding	Ministry of Labour Total amount of money dedicated: USD 9.68 billion
Programme description	The 'One Young Person, One Solution' plan aims to reduce youth unemployment by providing tailored solutions such as specific contracts, access to various forms of learning and mentorship. It is part of a scheme gathering various charities under the umbrella structure (the ' <i>collectif mentorat</i> ').
Modalities/ resources	The plan is built around three action levers: facilitating the entry of young people into the world of work; orienting and training young people towards the professions of the future; and offering customized integration programmes to people not in education, employment or training (NEETs).
Target beneficiary group/s	Target beneficiaries: Students and individuals aged 15 to 30 years old Specific target groups: Low socio-economic status, population groups in rural areas, population groups in urban areas, minority groups (e.g. linguistic), migrant population groups, refugees/displaced population groups
Scale of the programme	Number of beneficiaries: Working youth/ unemployed youth: 1.8 million people entered the schemes between mid-2020 and mid-2021, up 41% in one year. Geographical scope: National
Monitoring and evaluation	An evaluation of the 'One Young Person, One Mentor' programme, led by the National Institute for Youth and Popular Education (INJEP) was launched in January 2023 with the following goals: define the diversity of mentorship activities and monitored young people; understand the role of the organizations offering mentorship programmes; and measure the impact of mentorship on young people.
Lessons learned	The programme's tailored approach is considered a significant success factor. Increasing the possibilities for each participant to find an appropriate solution to their situation allows them to achieve their goals in a flexible manner. For young people with disabilities, school dropouts or poorly qualified youngsters, the tailored services of the 'One Young Person, One Solution' scheme provide appropriate solutions to all kinds of challenges. The programme's success can also be attributed to the vast mobilization of businesses which have agreed to employ and train young people. The cooperation between the CFAs (apprenticeship training centres), Apec (the French association for the employment of executives), ' <i>missions locales</i> ' (community aid organizations for young people) and job centres has been vital to the success of the programme.



Germany



I. Joint Initiative of the Federal Government and the Länder on Transfer of Language Education, Reading and Writing Promotion (BiSS-Transfer)

Objectives and outcomes	BiSS-Transfer has objectives set over two phases: i) Phase 1: Promote language and reading skills and their diagnosis; ii) Phase 2: Build on the experiences and results from the first programme phase, and pass these on to other schools.
Programme executor and funding	A university consortium, consisting of the Mercator Institute at the University of Cologne, the Leibniz Institute for Research and Information in Education, Technical University Dortmund and the Institute for Quality Development at Humboldt-University Berlin, coordinates and designs the programme. BiSS-Transfer has a total budget of EUR 13 million (approx. USD 14 million) from the Federal Ministry of Education and Research (BMBF). The costs of staffing and coordinating around 2,700 schools and national institutes, totalling at least EUR 15 million (approx. USD 16 million), are covered by the Länder.
Programme description	'Transfer of language education, reading and writing promotion (BiSS-Transfer)' is a follow-up to 'Education through Language and Writing' (<i>Bildung durch Sprache und Schrift</i> – BiSS, 2013–2020). It is a joint initiative launched by the Federal Government and the Länder, in which primary and lower secondary schools and a few day care centres work together to promote language and reading skills. The initiative is divided into 2 phases over 12 years, and is now in Phase II (the transfer phase).
Modalities/ resources	To ensure effective language learning and diagnosis, evidence-based tools and language programmes have been identified and evaluated through a database of 101 instruments, and their impact is being monitored within groups of schools nationwide. Furthermore, blended learning modules have been developed for teacher training and development. In Phase II (2020–2025), initial schools of BiSS are serving as transfer agents to share their experience with clusters of other schools. The conditions necessary for a successful transfer of new teaching methods, instruments and programmes are being elaborated to ensure widespread adoption and success.
Target beneficiary group/s	Target beneficiaries: Students, teachers Target education level for students: Primary and secondary education Specific target groups: Girls/women, low socio-economic status, population groups in rural areas, population groups in urban areas, minority groups (e.g. linguistic), migrant population groups, refugees/displaced population groups, children with disabilities
Scale of the programme	Number of beneficiaries: In Phase I (2013–2019), about 400 schools and 180 childcare centres; in Phase II (2020–2025), about 2,700 schools Geographical scope: National
Monitoring and evaluation	Evaluation projects and a network of universities accompanying the process monitor the programme. Evaluation of Phase I (2013–2019) formed the basis for Phase II.
Lessons learned	N/A

II. DigitalPakt Schule

Objectives and outcomes	The aim is to increase the performance of the digital education infrastructure and create one infrastructure that is fit for the future.
Programme executor and funding	<p>Governments at the Länder level, Federal Government of Germany, joint steering group of the Federal Government and the Länder at the level of State Secretaries and State Councillors</p> <p>Total amount of money dedicated: EUR 6.5 billion from the Federal Government for the DigitalPakt Schule and the three additional programmes stemming from the Covid-19 pandemic, i.e. a 90% funding rate. The Länder contribute at least 10% and fund additional measures. Total funding for the DigitalPakt Schule amounts to over EUR 7 billion over six years.</p>
Programme description	The Federal Government and the Länder launched the DigitalPakt Schule 2019–2024 to improve noticeably the digital infrastructure at schools across Germany.
Modalities/ resources	The programme budget aims to improve the digital education infrastructure. The Federal Government supports the Länder and municipalities in investing in IT equipment and systems, to ensure schools are digitally equipped for the future. It allocates some financial support to cross-Länder projects, while the Länder continue to fund additional measures and ongoing programmes in the education sector.
Target beneficiary group/s	<p>Target beneficiaries: Students and teachers</p> <p>Target education level for students: All grades and levels of school education</p>
Scale and scope	<p>Number of beneficiaries: About 11 million students and 827,000 teachers, and around half of the schools in Germany (20,000)</p> <p>Geographical scope: National</p>
Monitoring and evaluation	The DigitalPakt Schule programme is subject to independent scientific evaluation by a third party, both during and after implementation, with a joint steering group defining the objectives. The evaluator submits interim and final reports, whose results are published. The evaluation assesses the extent to which the programme has driven changes in the digital infrastructure and the use of digital media in schools, but it does not seek to compare learning outcomes between the Länder.
Lessons learned	The Covid-19 pandemic has created an increased need and demand to implement the measures stipulated in the DigitalPakt Schule. However, applying for and allocating funding to school authorities under the programme differs from Land to Land and can involve significant administrative work. Additionally, many service providers (such as IT administration companies) and businesses (such as Wi-Fi equipment providers) have been overwhelmed with requests, leading to backlogs.

III. Innovations Wettbewerb – INVITE

Objectives and outcomes	The innovation competition INVITE aims for the development of innovative solutions which, with the help of AI, enable all people to find the right continuing professional training on demand.
Programme executor and funding	The BMBF is in charge of INVITE. The ministry is supported by the Federal Institute for Vocational Education and Training (BIBB) in implementing the competition. Total amount of money dedicated: EUR 88 million
Programme description	INVITE funding is directed at enabling and achieving platform connection and interoperability, a stronger user orientation of platforms and the use of AI technologies to achieve an individualized design of learning processes. Additionally, a meta project identifies standards for the design of an innovative digital ecosystem for continuing education and training.
Modalities/ resources	The competition results in funding for 35 projects, totalling around EUR 80 million. Projects in the development fields are funded for 36 months, while the meta project is funded for 46 months.
Target beneficiary group/s	Target beneficiaries: Teachers, all people seeking continuing education and training Target education level for students: Depends on the goals of each of the 35 projects, with a focus on continuing VET Specific target groups: Low socio-economic status, low-qualified people
Scale and scope	Number of beneficiaries: INVITE developments benefit both the stakeholders in continuing VET and its users, including companies (especially small and medium-sized enterprises) and all people seeking continuing VET. Geographical scope: National and provincial; linking up with Europass is also intended.
Monitoring and evaluation	The programme is technically and administratively overseen by BIBB. The programme's results are especially shared through the accompanying research project, 'INVITE meta'.
Lessons learned	A key challenge was to identify innovative projects whose developments are based on a trustworthy handling of data and algorithmic systems; which can operate permanently and independently after project funding has ended; and which are designed to be connectable and scalable.

IV. ProfilePassport (ProfilPASS)

Objectives and outcomes	N/A
Programme executor and funding	The ProfilPASS service centre at the German Institute for Adult Education is responsible for continuously developing the ProfilPASS, ensuring its high quality and maintaining a network of stakeholders.
Programme description	Within the framework of the 'Continuing Education Passport with Certification of Informal Learning' programme, the ProfilPASS was developed as a system for the systematic assessment of competencies. Such competencies may have been acquired formally, non-formally or informally in all areas of life. By giving people the opportunity to assess their skills, the ProfilPASS supports them in planning their career development and future learning. The ProfilPASS also provides further guidance by experts.
Modalities/ resources	N/A
Target beneficiary group/s	<p>Target beneficiaries: Students</p> <p>Target education level for students: Over time, different iterations of the ProfilPASS have been introduced, so that it now targets children and young people, as well as employees and retirees.</p> <p>Specific target groups: N/A</p>
Scale of the programme	<p>Number of beneficiaries: N/A</p> <p>Geographical scope: National</p>
Monitoring and evaluation	N/A

V. Enhancing European Cooperation in Educational Research

Objectives and outcomes	N/A
Programme executor and funding	BMBF Total amount of money dedicated: USD 2.12 million annually
Programme description and Funding	The 'Enhancing European Cooperation in Educational Research' initiative helps researchers and academics in the European region engage in close dialogue and learn from one another, while at the same time advancing research in Europe.
Modalities/ resources	N/A
Target beneficiary group/s	Target beneficiaries: Members of academia Target education level for students: N/A
Scale of the programme	Number of beneficiaries: Seven projects/consortia Geographical scope: National, targeting international cooperation
Monitoring and evaluation	The effectiveness of the measure is reflected in the greater participation of German researchers and German universities in European research funding and educational research programmes, the higher number of international and cross-border cooperation projects, and a better visibility of German research in the European Research Area. Among other places, the results are made available on the website of the Framework Programme for Empirical Educational Research.
Lessons learned	N/A



India



I. National Education Policy 2020

Objectives and outcomes	The NEP 2020 aims to transform the Indian education system to meet the aspirations of the 21st century by providing quality education to all learners, promote lifelong learning, foster innovation and creativity, build global citizens, and develop a culture of excellence and social responsibility.
Programme executor and funding	Ministry of Education with other partners. Central and State budgetary expenditure; aims to increase the public funding to 6% of Country's GDP. Total amount of money dedicated: The policy envisages increased investment as percentage of GDP.
Programme description	The policy envisions an accessible, equitable, inclusive, high quality and diverse education ecosystem based on flexibility, holistic and multidisciplinary learning, integration of curricular and vocational education. Major highlights include: Universalization of ECCE for all children up to the age of 8 years; Introduction of 5+3+3+4 school curriculum with flexible pedagogy and assessment; Anational mission to ensure FLN for all students by grade 3; Expansion of access and equity in higher education through multiple entry and exit; Academic Bank of Credit and online education; Establishment of a National Research Foundation to fund and promote research and innovation; Revision of regulatory framework for higher education to ensure autonomy, transparency, and accountability; Promotion of multilingualism and Indian languages; Integration of vocational and skill education with mainstream education; Strengthening of teacher education and professional development; Leveraging technology for improving teaching-learning and governance.
Modalities/ resources	Envisages increase in public investment in education to at least 6% of GDP; mobilizing additional resources through philanthropy, corporate social responsibility (CSR), endowments, donations, etc; optimal utilization of existing resources.
Target beneficiary group/s	Target beneficiaries: All stages of education from pre-primary to higher education, including school, teacher, vocational, adult, technical and professional education. Specific target groups: girls, socio-economically disadvantaged groups, differently abled persons, gifted and talented students, etc.
Scale and scope	Number of beneficiaries: More than than 500 million children and youngsters are covered in the policy. Geographical scope: National
Monitoring and evaluation	SARTHAQ - an implementation plan for the NEP 2020, outlines the activities, roles and responsibilities of different agencies and timelines. It also suggests periodic review and revision of the policy based on feedback and evidence.
Lessons learned	The policy is drafted with a bottom to top approach, involving country wide discussions in hundreds of thousands of villages, towns, education institutions and with experts. It draws from best practices and experiences from various national and international initiatives in education. The policy acknowledges the need for continuous learning and improvement based on evidence-based research and innovation.

II. NIPUN Bharat Mission

Objectives and outcomes	To achieve universal acquisition of foundational learning and literacy (FLN) skills by 2026/27.
Programme executor and funding	At the national level: Department of School Education & Literacy, Ministry of Education, Government of India, along with the National Council of Educational Research and Training (NCERT). At the state level: Department of School Education, State Council of Educational Research and Training. Total amount of money dedicated: The programme is under the aegis of a centrally sponsored scheme, Samagra Shiksha: Indian Rupees (INR) 236,140.62 for primary school and INR 59,556.04 for early childhood care and education (ECCE) = INR 295, 696.66 Lakhs were allocated during the programme annual budget 2022/23.
Programme description	The programme aims to achieve proficiency in FLN for all children aged 3–9 by the end of Grade 3. Children in Grades 4 and 5 who lack these skills will receive individual guidance and support, and supplementary graded learning materials, to help them acquire them.
Modalities/ resources	The programme uses a five-tier approach for partnership between national, state and district entities, blocks/clusters, schools/communities, teachers and parents to develop long-term roadmaps and action plans. States develop five-year plans based on the local context and use a national tracker based on 22 key performance indicators (KPIs) for monitoring. Capacity-building programmes are offered for education department officials, teacher educators, academic resource persons and teachers. NCERT is developing new textbooks and course modules for foundational learning and ECCE.
Target beneficiary group/s	Target beneficiaries: Students, teachers, school leaders, parents/caregivers, administrative staff, everyone contributing to the lives of young children Target education level for students: Foundational stage (Preschool 1, Preschool 2, Preschool 3, Grade 1, Grade 2 and Grade 3) Specific target groups: Girls/women, low socio-economic status, population groups in rural areas, population groups in urban areas, minority groups (e.g. linguistic)
Scale and scope	Number of beneficiaries: 83.7 million school children (3–8 years); 42.5 million Anganwadi children (3–6 years); 2.1 million teachers; school leaders from all schools; administrators from all states; and all parents of children aged 3–8 years. Geographical scope: National, provincial, district, local (block and cluster), school level, all at the five tier levels.
Monitoring and evaluation	Central and state-level mechanisms include administrative structures and tech-based solutions. The programme tracks progress through 22 Key Performance Indicators, monthly Google tracking, quarterly planning templates, annual reporting formats, national conferences and large-scale learning assessments, including a national achievement survey for students in Grade 3 and foundational learning study. Funds have been provided for state-level learning achievement surveys. Provisions exist for a third-party evaluation to ensure objective and systematic feedback.
Lessons learned	To achieve the desired learning outcomes, it is crucial to ensure that teachers are effectively trained in age-appropriate pedagogy. Additionally, tracking children individually is crucial to provide personalized guidance and support. However, the Foundational Learning Study (FLS) has revealed that learning outcomes differ across languages. For instance, the oral reading speed varies significantly and cannot be standardized uniformly for all languages.

III. PM e-VIDYA (Prime Minister's E-Learning Initiative)

Objectives and outcomes	PM e-VIDYA and its constituent programmes aim to improve the quality of education, promote equity and inclusivity, and bridge the digital divide among learners from different socio-economic backgrounds. These programmes aim to enhance learners' understanding of a subject and improve their learning outcomes. Accessibility of e-content enables skill generation and lifelong learning.
Programme executor and funding	Central Institute of Educational Technology and NCERT at the national level, under the supervision of the Department of School Education and Literacy (DoSEL) and the Ministry of Education (MoE) Total amount of money dedicated: USD 10 million (FY 2021/22)
Programme description	This is a comprehensive initiative launched under the Atmanirbhar Bharat Programme, which aims to unify all digital/online/on-air education efforts to provide coherent and multimodal access to education. This initiative includes creating, curating and disseminating e-content, along with suitable interventions in the learning-teaching process, in line with the Central Institute of Educational Technology (CIET). It is aligned with the National Education Policy, paragraphs 24.2 and 24.4e and consists of the following programmes: Digital Infrastructure for Knowledge Sharing (DIKSHA), One Class One Channel & Radio Broadcast and Podcast, National Initiative for School Heads' and Teachers' Holistic Advancement (NISHTHA), Massive Online Open Courses (MOOCs) on Study Webs of Active Learning for Young Aspiring Minds (SWAYAM) platform, ePathshala and e-content in Indian Sign Language (ISL) for Children with Special Needs (CWSN). DIKSHA is built on open-source technology and has a rich repository of digital content to aid the teaching-learning process. One Class One Channel provides one dedicated channel per grade for classes 1 to 12, NISHTHA is a capacity building programme for Integrated Teacher Training for all the teachers and school principals at the elementary stage (Classes 1-8). SWAYAM platform facilitates hosting of interactive, free of cost courses of Class 9 to post-graduation for easy access by anyone, anywhere. ePathshala showcases and disseminates educational e-resources, including textbooks, AV, periodicals, print and non-print materials for students, teachers, parents, researchers and educators. E-content ISL is being developed to attain equity and inclusion for CWSN.
Modalities/resources	The e-content developed for PM e-VIDYA includes around 10,000 videos and audios based on NCERT's curriculum. They are accessible through internet-based platforms, as well as TV and radio, providing multimodal access for students and teachers. The e-content also includes resources in ISL, making it more inclusive for learners with special needs.
Target beneficiary group/s	Target beneficiaries: Students, teachers, school leaders, parents/caregivers Target education level for students: School and teacher education Specific target groups: Girls/women, low socio-economic status, population groups in rural areas, population groups in urban areas, minority groups (e.g. linguistic), migrant population groups, refugees/displaced population groups, children with disabilities
Scale and scope	Number of beneficiaries: 264 million children and 9.7 million teachers Geographical scope: National
Monitoring and evaluation	A feedback mechanism with the help of Interactive Voice Response Systems and email has been created, where calls and emails from learners across the country are received and answered on a regular basis. A monitoring mechanism also exists for the TV channels telecasting educational e-content, with daily monitoring of the telecast.
Lessons learned	The department's digital initiatives have increased accessibility and inclusivity through various modes, e.g. internet-based, television and radio, reaching remote learners and bridging the digital divide to some extent. The use of sign language videos and audiobooks has enhanced inclusivity for learners with different needs.

IV. National Mission on Education through Information Communication Technology (NMEICT)

Objectives and outcomes	NMEICT was created to leverage the potential of ICT by providing high-quality personalized and interactive knowledge modules over the internet/intranet for all learners in higher education, in an anytime and anywhere mode. Its objectives are met by various projects/interventions of the scheme.
Programme executor and funding	Individual components are executed by India's leading higher education institutions. Total amount of money dedicated: USD 298 million from 2021 to 2026
Programme description	Some of the main programmes covered by the NMEICT include: SWAYAM which ensures access to quality teaching learning resources through MOOCs; SWAYAM Prabha which telecasts high-quality educational programmes through 22 DTH channels for higher education and 12 DTH channels for school education and literacy on a 24/7 basis; the National Digital Library collects, provides online access from the school level to the postgraduate level; e-Yantra incorporates robotics into engineering education and provides exciting hands-on application to mathematics, computer science and engineering principles.
Modalities/ resources	NMEICT programme was launched in January 2009 and now provides the scaffolding for the higher education sector to adapt to developments in ICT. Its remit includes, amongst other avenues: virtual labs providing a complete learning management system to students, using sophisticated equipment, web resources, video lectures, animated demonstrations and self-evaluation. FOSSEE (Free Open-Source Software for Education) promoting open-source software. Samarth (University Enterprise Resource Planning) which is a university information management system project for universities and higher education institutions. The National Educational Alliance for Technology (NEAT) is a public-private partnership (PPP) model to bring together popular educational technological products on a single platform for the convenience of learners; it has special provisions for economically and socially disadvantaged students. The Indian Research Information Network System (IRINS) is an indigenously developed research information management system for higher education and research and development (R&D) organization. e-Shodh Sindhu provides access to qualitative electronic resources including full-text, bibliographic and factual databases to academic institutions at a lower rate of subscription.
Target beneficiary group/s	Target beneficiaries: Students, teachers Target education level for students: ISCED 4 (post-secondary and non-tertiary), ISCED 5 (short-cycle tertiary education), ISCED 6–8 (Bachelor's degree and above) Specific target groups: Girls/women, low socio-economic status, population groups in rural areas, minority groups (e.g. linguistic)
Scale and scope	Number of beneficiaries: Approximately 40 million students and 1.6 million teachers. Geographical scope: National
Monitoring & evaluation	Decentralized: each component does its own monitoring and evaluation.
Lessons learned	Regulatory backing to edtech initiatives is important for them to scale and find balance between, social and economic objectives. For example, regulatory support for the SWAYAM MOOCs programme has helped ensure acceptance, as well as a focus on quality and rigour. National Education Alliance for Technology initiatives have helped to engage and fuel the start-up ecosystem by discovering new models such as engagement with start-ups under PPPs, with a specific focus on the SDGs.

V. National Apprenticeship Training Scheme 2.0 Portal

Objectives and outcomes	The portal aims to equip technically qualified youth with the practical knowledge and skills required in their field of work.
Programme executor and funding	AICTE, NETF, Ministry of Education
Programme description	The National Apprenticeship Training Scheme (NATS) is a flagship one-year programme for skilling Indian youth and is designed to equip technically qualified youth with hands-on, industry-related, practical knowledge and skills by bringing together industry, educational institutions and students.
Modalities/ resources	Apprentices receive on-the-job training and are supervised by trained managers, using well-developed training modules. They receive a stipend during the training period, with 50% reimbursed by the Government of India. Upon completion, they receive a Certificate of Proficiency which can be registered as valid employment experience. Apprentices are placed at organizations with excellent training facilities.
Target beneficiary group/s	<p>Target beneficiaries: Student, parents/caregivers, employers/corporations/ Micro-, small and medium-sized enterprises (MSMEs)/government ministries</p> <p>Target education level for students: Diploma and vocational degree, college students, dropouts, lifelong learners, higher education institutions in India</p> <p>Specific target groups: Girls/women, low socio-economic status, population groups in rural areas, minority groups (e.g. linguistic), migrant population groups, refugees/ displaced population groups, children with disabilities, all vocational/diploma course students</p>
Scale and scope	<p>Number of beneficiaries: 40million students and 50,000 higher education institutions</p> <p>Geographical scope: National</p>
Monitoring and evaluation	AICTE National Educational Alliance for Technology (NEAT Cell) is the implementing body for the NATS Portal and is accountable to the Ministry of Education. The monitoring and evaluation data are studied and evaluated to ascertain gaps in location, discipline, area of internship, gender, etc. to allow taking steps to achieve better outreach, awareness and adoption of the portal.
Lessons learned	Some of the lessons learned during the implementation phase of Anuvadini are as follows: i) user-centric UI/UX design: designing the platform with a focus on user experience and user interface is essential to make it more accessible and user-friendly; ii) cost-effectiveness for greater value: implementation efforts must be designed to generate greater value at a lower cost, to ensure that the platform remains affordable and accessible to users; iii) stakeholder consultation and engagement: engaging and consulting with stakeholders such as multinational corporations (MNCs), industries, higher education institutions and members of academia can help identify their needs and requirements, ensuring that the platform is aligned with their goals and objectives.

VI. Pradhan Mantri Kaushal Vikas Yojana (PMKVY)

Objectives and outcomes	The goal is to provide skill training to youth and enhance their employability; encourage skill development for the unorganized sector; increase productivity and improve the quality of the workforce; and provide financial support to individuals to allow them to undergo skill training.
Programme executor and funding	Ministry of Skill Development and Entrepreneurship (MSDE), Government of India Total amount of money dedicated: USD 1,2 billion to date
Programme description	The scheme was launched in 2015 to provide fresh skilling opportunities through short-term training and recognize the prior learning of Indian youth. Its main focus is to impart industry-relevant skills to youth and make them job-ready for various sectors such as manufacturing, healthcare, construction and IT.
Modalities/ resources	Skill development centres have been established across the country, offering training in sectors such as construction, healthcare and hospitality. Thirty-seven autonomous industry-led bodies (Sector Skill Councils) provide training in sectors like automotive, banking and retail. Additionally, the eSkills platform offers short courses to facilitate lifelong learning in the skilling ecosystem. The Recognition of Prior Learning (RPL) programme recognizes individuals' skills acquired through informal or non-formal learning, and certifies them after assessment.
Target beneficiary group/s	Target beneficiaries: Students, individuals in the 15–45 age group Target education level for students: individuals ages 15–45 Specific target groups: Girls/women, low socio-economic status, population groups in rural areas, population groups in urban areas, minority groups (e.g. linguistic), migrant population groups, children with disabilities, persons with disability, tribal populations, etc.
Scale and scope	Number of beneficiaries: Individuals 15–45 years old (including students, dropouts, unemployed youth/adults): 13,724,196 (male: 7,770,503, female: 5,953,188, transgender: 505) Geographical scope: National, provincial, district and Local
Monitoring and evaluation	PMKVY uses a complete digital ecosystem to ensure compliance and quality control of the training centres and capture the trainee life cycle. This includes the Skill India Portal which includes features such as the Aadhaar Enabled Biometric Attendance System, tracking of the training process in real-time through Skill India Digital (SID), a CCTV-based monitoring and command centre, virtual verification of operational training centres, and physical visits and inspections by state engagement officers and representatives from the National Skill Development Corporation (NSDC) and MSDE.
Lessons learned	Outreach, the need for flexibility and standardized assessments are highly important to ensure the quality and success of the programme. One of the challenges encountered was the lack of recognition from employers. Another lesson learned is the importance of grievance redressal mechanisms to address complaints or issues related to the programme.

VII. Government-Funded Research

Objectives and outcomes	Various programmes are being implemented for improving the quality of research in the higher educational institutions in the country. PMRF scheme seeks to attract the best talent into research for realising the vision of development through innovation. STARS scheme aims to promote inter-disciplinary and translational research for addressing needs & issues of the country in key sectors like health, agriculture, energy, environment, security etc. IMPRINT scheme guides research into socially relevant areas with the involvement of Industry. SPARC scheme aims to strengthen research collaboration of Indian Research groups with top research groups in the leading Universities. KIRAN aims to promote participation of women in science and engineering domains.
Programme executor and funding	Ministry of Education (PMRF, IMPRINT, SPARC), IISc (STARS), Department of Science & Technology (IMPRINT, KIRAN); Total amount dedicated: USD 200 million for seven years (PMRF); USD 3.05 million for 2022/23 (STARS); USD 1.2 million for 2022/23 (IMPRINT); USD 8.9 million for 2022/23 (SPARC); USD 11.5 million for 2020/21 (KIRAN). These are exclusively Central Government's Ministry of Education funding and doesn't include funding from other agencies or departments.
Programme description	The Prime Minister's Research Fellows (PMRF) aims to incentivize up to 3,000 Ph.D. students from recognized universities to engage in relevant research. The Scheme for Transformational and Advanced Research in Sciences (STARS) provides extramural funding to faculty of higher education institutions for research in key sectors such as health, agriculture, energy, environment and security. Impacting Research Innovation and Technology (IMPRINT) is a pan-Indian Institute of Technology and Indian Institute of Science joint initiative, guides research into socially relevant areas with the involvement of industry. The Scheme for Promotion of Academic and Research Collaboration (SPARC) facilitates academic and research collaborations between top-ranked Indian institutions and globally ranked foreign institutions through joint research projects involving student and faculty mobility. Under the Knowledge Involvement in Research Advancement through Nurturing (KIRAN), female researchers in science and engineering are offered research grants for a period of three years and an upper-age relaxation of five years to promote doctoral and postdoctoral research.
Modalities/ resources	Under SPARC, the top 100 Indian institutions (NIRF Ranking) are eligible to apply with a partner foreign institution featured among the top 500 QS World University Rankings.
Target beneficiary group/s	Target beneficiaries: Ph.D. scholars (PMRF); researchers (all others) Target education level for students: Pursuing a Ph.D. (PMRF); Ph.D. and above (all others) Specific target groups: Women (KIRAN)
Scale and scope	Number of beneficiaries: 3,000 (PMRF); 110 (KIRAN). Geographical scope: National (all)
Monitoring and evaluation	Ministry of Education (PMRF); IISc (STARS); National Accreditation Board for Education and Training – Quality Council of India (IMPRINT); IIT Kharagpur; multilevel monitoring by central government, state governments, principal scientific advisers, NITI Aayog and statutory bodies (KIRAN).
Lessons learned	IMPRINT is adding value to India's innovation quotient, PMRF is encouraging talented minds to pursue research, STARS is promoting translational research, SPARC is strengthening international research collaborations, and KIRAN is promoting women in science and engineering.

VIII. Innovation Programmes

Objectives and outcomes	Various programmes are being implemented to strengthen the country's innovation ecosystem. Atal Innovation Mission (AIM) strives to create a facilitating environment for transforming ideas into innovative solutions and envisions producing 1 million young innovators. MoE's Innovation Cell (MIC) aims to systematically foster a culture of innovation in all higher education institutions.
Programme executor and funding	NITI Aayog (AIM); Ministry of Education (MIC); Total amount dedicated: INR 2,000+ crores (AIM); 1% of institution's total budget
Programme description	AIM takes a holistic approach to ensure the creation of a problem-solving innovative mindset in schools and an ecosystem of entrepreneurship in universities, research institutions, and the private and MSME sector. MoE's 'Innovation Cell' encourages students' creative energy to work on new ideas and innovation, and create start-ups and entrepreneurial ventures.
Modalities/ resources	AIM consists of the following initiatives: Atal Tinkering Laboratories (ATLs) foster curiosity, creativity and imagination in young minds, and inculcate skills such as design mindset, computational thinking, adaptive learning and physical computing. Atal Incubation Centres (AICs) foster and support world-class innovation and dynamic entrepreneurs who want to build scalable and sustainable enterprises. Mentor India is a nation-building programme to engage mentors for Atal Tinkering Labs. Atal New India Challenge supports innovators designing products based on advanced technologies in socially relevant areas through a grant-based mechanism. Atal Community Innovation Centres encourage a spirit of entrepreneurship in the underserved/unserved regions by providing an enabling infrastructure. Aatmanirbhar Bharat ARISE-ANIC programme promote research and innovation, and increases the competitiveness of Indian start-ups and MSMEs. To date, over 10,000 ATLs have engaged 7.5 million students, and 69 AICs have helped create 32,000+ jobs. MIC consists of multiple initiatives: Institution's Innovation Councils (IIC) in educational institutions work in close coordination with MIC and consist of academicians, industry leaders, IP experts, bankers/investors and innovators. IICs have been established in more than 7,500 institutions, and more than 80,000 initiatives have been carried out across India over the last 3 years. Smart India Hackathon is an initiative that enables students to solve the pressing problems of our daily lives, and inculcates a culture of problem-solving and product innovation. YUKTI – National Innovation Repository (NIR) aims to build a repository of ideas, innovations and start-ups developed in academic institutions, and offers continuous support in terms of one-to-one mentorship, grant assistance, referral and linkage with incubation units, connecting with angel/venture capital investors, etc. National Innovation and Start-up Policy guides higher education institutions in promoting student-driven innovations and start-ups. School Innovation Ambassador program trains schoolteachers to nurture students on Ideation, IPR, product development, designing, problem solving and critical thinking.
Target beneficiary group/s	Target beneficiaries: Youth. Target education level for students: School and higher education (AIM); higher education (MIC)
Scale and scope	Number of beneficiaries: 250 million (AIM), 4.14 million students and ~900 universities (MIC). Geographical scope: State and national
Monitoring and evaluation	Systematic monitoring using real-time management information systems and dynamic dashboards, third-party reviews (AIM); AICTE and Ministry of Education (MIC)
Lessons learned	Youth of our country, especially in higher education institutions, need to play a crucial role at every step to shape the innovation ecosystem. The ecosystem will encourage, inspire and nurture young students by exposing them to new ideas and processes, resulting in innovative activities in their formative years.



Indonesia



I. National Assessment – Literacy and Numeracy Test

Objectives and outcomes	The National Assessment was designed to assess the performance of the education system at the school, local government and national levels.
Programme executor and funding	Ministry of Education, Culture, Research and Technology
Programme description	Indonesia transformed its subject-based national examination into a National Assessment focusing on literacy and numeracy tests, as well as student character surveys. The National Assessment is held at primary and secondary schools to assess the performance of the education system at the school, local government and national levels. The results of the National Assessment become the indicators in the Education Report Card (Platform) used as the basis for data-based planning.
Modalities/ resources	Developed and modified from existing international assessments (Programme for International Student Assessment [PISA], Trends in International Mathematics and Science Study [TIMSS]), the National Assessment focuses on literacy and numeracy competencies, as well as character-building. The test is now conducted through a Minimum Competency Assessment and Character Survey, measuring the ability to reason using language (literacy) and reason using mathematics (numbering), and intending to strengthen character education.
Target beneficiary group/s	Target beneficiaries: Students; teachers; school leaders; education offices Target education level for students: Primary school (Grade 5), junior high school (Grade 8), senior high (Grade 11)
Scale and scope	Number of beneficiaries: Over 259,000 schools, over 3.1 million teachers and over 6.5 million teachers Geographical scope: National
Monitoring and evaluation	The results of the latest evaluation were shared with local education offices and the Ministry of Religious Affairs. Among others, the results became a major input for the government in preparing a risk-mitigation plan and strategies for the next National Assessment. Assessment of student literacy and numeracy is an indicator that determines educational achievement in a given region, providing a foundation for both the region's and the schools' educational planning. In that light, all schools should orient their programmes and learning activities toward increasing students' literacy and numeracy skills.
Lessons learned	Using the results of the National Assessment that are available in the Education Report Card, schools can now evaluate their respective conditions and make improvements. Students and teachers can now focus on demonstrating their learning results rather than attempting to pass high-stakes testing.

II. Formulation, Socialization and Implementation of the Directorate General of Teacher and Teacher Personnel Regulation Number 0340/2022 Regarding the Elementary School Teacher's Competence Framework of Literacy and Numeracy

Objectives and outcomes	The regulation's objective is to help teachers understand domains and skills, and improve their literacy and numeracy competencies through self-assessment, modules and learning media/decodable books. Online courses conducted by partner universities abroad has increased teachers' capacity to implement literacy and numeracy learning in the classroom.
Programme executor and funding	Ministry of Education, Culture, Research and Technology
Programme description	Having formulated the regulation and the conceptual framework, the programme consists of literacy and numeracy learning resources for teachers, such as instruments for self-assessment, modules and learning media/decodable books created by teachers. It includes a teacher's literacy and numeracy competence enhancement programme through partnerships with foreign universities involving teachers in elementary schools and early childhood education units. The regulation guides teachers' learning journey through a progression of literacy and numeracy competencies. The Ministry of Education, Culture, Research and Technology, collaborating with the Ministry of Finance, supports selected teachers to participate in online courses conducted by Columbia University in the City of New York and Monash University in Australia.
Modalities/ resources	The formulation of the regulation began with some scholars developing the conceptual framework for a learning progression of literacy and numeracy competence in the classroom context. The framework provided the basis for the formulation of the regulation. For the regulation to guide teachers' learning journey, it is formulated as learning resources consisting of modules, instruments for self- assessment and learning media/decodable books created by teachers.
Target beneficiary group/s	Target beneficiaries: Teachers Target education level for students: Last year of ECE/one year prior to elementary school
Scale and scope	Number of beneficiaries: Particularly for the online courses, 75 teachers had participated in the programme. Geographical scope: National
Monitoring and evaluation	All documents and outputs in the programme have been reviewed by experts and educational practitioners to ensure quality delivery.
Lessons learned	Instilling basic literacy and numeracy (BLN) skills from an early age can jumpstart children's potential. Regular endeavours to correct teachers' understanding of numeracy and literacy are needed.

III. Technology-enabled Learning

Objectives and outcomes	The intention is to facilitate distance learning and blended learning, guarantee that students and teachers have the skills required to effectively use technology-enabled learning tools, expand internet connection across the country so that students in remote locations can also benefit from technology-enabled learning, and provide access to online courses and learning tools.
Programme executor and funding	Ministry of Education, Culture, Research and Technology; community learning; and local education authorities
Programme description	The programme has several lines of action: developing e-learning platforms such as Moodle and Google Classroom; creating digital literacy programmes that teach basic computer skills, digital tools and online learning platforms; expanding internet access by building internet infrastructure and distributing cheap devices to students; developing alliances with technology businesses to provide access to online courses and learning tools; and creating a curriculum that incorporates technology-enabled learning in vocational higher education.
Modalities/resources	The programme involves formulating standard procedures and criteria guidelines to underpin the development of a conceptual framework for technology-based learning, establishing a connected digital platform as a source of learning, and optimizing the role of local government and the community in learning delivery.
Target beneficiary group/s	Target beneficiaries: Students, teachers, school leaders, administrative staff of formal and non-formal education Target education level for students: All levels
Scale and scope	Number of beneficiaries: N/A Geographical scope: National
Monitoring and evaluation	The programme substantially increases the use of information technology in learning and the number of users of the online learning platform across different levels of education.
Lessons learned	The use of appropriate learning technology has increased the quality of learning outcomes.

IV. Summary of Programmes to Improve Competencies at Vocational Schools

Objectives and outcomes	The programmes are designed to enhance the competence and industry insight/experience of vocational university lecturers, improve the learning process, and create outstanding and quality human resources.
Programme executor and funding	Ministry of Education, Culture, Research and Technology
Programme description	Competence certification programmes, professional certification, certified industry internships and strengthening the governance of globally reputable vocational universities are programmes designed to enhance the competence and industry insight/experience of vocational university lecturers.
Modalities/resources	To make tech-enabled learning more inclusive and equitable, the Indonesian government has developed digital content aligned with industry needs, provided access to digital devices and internet connectivity, trained teachers in digital tools and technologies, collaborated with private-sector partners, and created awareness and outreach programmes. These interventions have helped bridge the digital divide and ensure that all students have access to technology and digital content, regardless of their socio-economic background.
Target beneficiary group/s	<p>Target beneficiaries: Faculty members/lecturers</p> <p>Target education level for students: Lecturers who are based in vocational study programmes at state and private universities that offer vocational education under the supervision of the Ministry of Education, Culture, Research and Technology</p> <p>Specific target groups: Lecturers in vocational higher education in Indonesia</p>
Scale and scope	<p>Number of beneficiaries: N/A</p> <p>Geographical scope: National</p>
Monitoring and evaluation	The programme is monitored and evaluated using offline and online data.
Lessons learned	The various programmes have shown the necessity of competence certification to guarantee learning quality.

V. Recognition of Prior Learning (RPL)

Objectives and outcomes	RPL creates a path for people with competencies that are needed in the future to become lecturers.
Programme executor and funding	Ministry of Education, Culture, Research and Technology
Programme description	RPL provides recognition of an individual's past learning achievements obtained from formal, non-formal or informal education, and/or work experience. This recognition can be a basis for individuals to continue their studies in related formal education or equate their experiences with a corresponding qualification.
Modalities/ resources	RPL incorporates practitioners/experts as prospective lecturers, maintaining the quality of TVET. It promotes lifelong learning by providing opportunities for everyone to continue learning, either through training, internships or work experience, all of which can be recognized as credits when proceeding to formal education or serve as the basis for upgrading certain qualifications. To close the skill gaps, Indonesia encourages practitioners and experts from industry to become lecturers, sharing their experiences and expertise.
Target beneficiary group/s	<p>Target beneficiaries: Students, teachers, school leaders, parents/caregivers, administrative staff of formal and non-formal education</p> <p>Target education level for students: High school diploma, Diplomas II, III and IV</p> <p>Specific target groups: Vocational students, lecturers and institutions</p>
Scale of the programme	<p>Number of beneficiaries: 1,840 students and 380 lecturers.</p> <p>Geographical scope: National</p>
Monitoring and evaluation	Monitoring is performed by asking relevant educational institutions participating in the programme to write a report. Evaluation is done by assessing the findings of the report. National monitoring and evaluation are still in progress.
Lessons learned	Many experts and practitioners are eager for the opportunity to participate in preparing future generations or give back to the community.

VI. Project-based Learning (PBL)

Objectives and outcomes	PBL is geared towards building capacities and promoting lifelong learning in the context of the future of work. This learning model will help students acquire 21 st -century Skills as a means to face the current and future world of work.
Programme description	PBL is a student-centred experiential approach to education that supports 'deep learning' through active exploration of real-world problems and challenges. PBL in vocational higher education is done through courses or other study programmes.
Modalities/ resources	PBL in vocational higher education shifts the classic form of single-discipline learning towards multi-discipline learning by involving students in groups working on a real project that requires different abilities to be completed. Familiarizing students with the working environment while they are still on campus enables them to imagine the context of their future profession. Students must perform self-assessment to develop their knowledge and skills. Real projects provided by the vocational higher education institutions require students to continuously improve their skills, including – and importantly – digital skills.
Target beneficiary group/s	<p>Target beneficiaries: Students, teachers, school leaders, parents/caregivers, administrative staff</p> <p>Target education level for students: Diplomas II, III and IV</p> <p>Specific target groups: Vocational students, lecturers, institutions</p>
Scale and scope	<p>Number of beneficiaries: 55% of the country's total vocational study programmes have implemented PBL.</p> <p>Geographical scope: National</p> <p>Total amount of money dedicated: N/A</p>
Monitoring and evaluation	PBL is evaluated through the dissemination of implementation-assessment instruments and visits to vocational higher education institutions that administer PBL programmes.
Lessons learned	Based on the reviews from industrial partners who accepted students for internships at their companies, students' communication skills must be improved.

VII. Strengthening the partnership ecosystem

Objectives and outcomes	The partnership ecosystem is expected to lead to an increase in the absorption rate of regional vocational human resources, and oriented towards solving regional economic problems in a sustainable manner.
Programme executor and funding	Ministry of Education, Culture, Research and Technology
Programme description	The partnership seeks to create linkages between vocational education institutions and the business and industry sectors.
Modalities/ resources	The partnership aims to produce graduates who suit the needs of the industrial world and reduce competence gaps in the education and training process. Such partnerships can be developed in the context of industrial work practices, curriculum development, job fairs, and other modalities. Multi-stakeholder involvement is essential. The Penta-helix model is used to highlight the importance of the five elements in developing local and regional potential through: 1) government; 2) academics; 3) agencies or business actors; 4) society or communities; and 5) media.
Target beneficiary group/s	<p>Target beneficiaries: Students and teachers</p> <p>Target education level for students: Vocational schools and vocational higher education institutions</p> <p>Specific target groups: Vocational students, lecturers and institutions</p>
Scale and scope	<p>Number of beneficiaries: N/A</p> <p>Geographical scope: National</p>
Monitoring and evaluation	The success of the programme can be assessed from its indicators, both on the volume of cooperation established and its effectiveness. Link-and-match is carried out with the support of the penta-helix tool and can be measured through the Partnership Index.
Lessons learned	The gap between the education sector and the business and industry sectors spans four dimensions: competence, quality, communication and cooperation. The gap triggers a low number of work absorption, so that link-and-match has not yet happened. Among the gaps are a school curriculum that is not in line with industry needs and the decreasing availability of productive teachers, slowing down teacher regeneration. In addition, coordination between business and industry, local government and vocational education units is still limited, with the result that 1) business and industry are unable to capture the necessary information to determine their involvement; 2) vocational education units formulate learning schemes in silos; and 3) local governments prepare their regional development agendas without any leads.

VIII. Funding International Research Collaboration

Objectives and outcomes	The objectives are to strengthen research and innovation by enhancing connections that will lead to richer collaborations in the future; creating the appropriate inter- and transdisciplinary research partnerships between countries and facilitating joint research; broadening research perspectives and research fields to deliver higher-impact research output; and significantly increasing Indonesian researchers' research publication in reputable scientific journals.
Programme executor and funding	Ministry of Education, Culture, Research and Technology
Programme description	Research international collaboration is one of the strategies to elaborate research resources from international to Indonesia. Its main focus are green economy, blue economy, tourism, digital technology, technology and medical devices.
Modalities/ resources	Access to entry permits will be facilitated for researchers whose research involves collaboration with Indonesia, whether in partnership with foreign or local industries. Training/internship programmes, such as professors of practice, joint degree programmes, academic banks of credits, research clusters and industry partnerships, will be provided in collaboration with industries.
Target beneficiary group/s	<p>Target beneficiaries: Students, members of academia, higher education institutions, industry partners</p> <p>Target education level for students: Researchers (minimum master's degree)</p> <p>Specific target groups: N/A</p>
Scale and scope	<p>Number of beneficiaries: N/A</p> <p>Geographical scope: National, institutional</p>
Monitoring and evaluation	The programme is monitored and evaluated annually, and Indonesia conducts an annual seminar as a platform for reporting. The results of the research programme are monitored and evaluated by various parties, including the funders of research collaboration; the Secretariat of Higher Education and Research of the Ministry of Education, Culture, Research and Technology; and a financial audit agency.
Lessons learned	Collaboration among experts with different backgrounds and disciplines can generate solutions to complex problems.



Italy



I. Reform of measures for student guidance on educational pathways and employment opportunities

Objectives and outcomes	The education reform sets out to strengthen linkages between education cycles, targeting the reduction of early school leaving and improving tertiary education access.
Programme executor and funding	Ministry of Education and Merit
Programme description	Collaboration with institutions in subsequent education levels enhances the effectiveness of the guidance pathways. From 2023/24, 30-hour guidance modules, including extracurricular activities, will be introduced in lower and upper secondary schools. The last 3 years of upper secondary schools will allocate 30 curricular hours to guidance. These modules will be developed collaboratively with institutions like universities, arts/music institutions, businesses and guidance services. Each module, lasting 30 hours or more, will include personalized activities recorded in an ePortfolio , integrating the student's educational journey, promoting reflection, identifying strengths, and showcasing digital competencies and experiences.
Modalities/resources	As part of the education reform, lower and upper secondary schools will appoint teachers as tutors to guide students, helping them to develop personal ePortfolios, and counselling them on education and career choices. A digital platform will be created, offering students and families data-driven information for decision-making during educational transitions. Personalized activities are recorded in a digital portfolio supporting students' reflection, helping them to identify their strengths and showcase their digital competencies and experiences. Schools will assign a staff member to engage with families using the data on the platform. Teacher training will incorporate guidance modules, and specific training initiatives will support tutors. 'Training campuses' will be piloted, promoting collaboration among institutions to provide comprehensive secondary pathway information and personalized support.
Target beneficiary Group/s	Target beneficiaries: Lower secondary school/upper secondary school, Grades 7–13
Scale and scope	Number of beneficiaries: N/A Geographical Scope: National
Monitoring and evaluation	The reform is subject to an annual monitoring of its implementation, through the analysis of data collected by the information system of the Ministry of Education and Merit on the basis of specific indicators.
Lessons learned	N/A

II. Extraordinary intervention for reducing territorial educational gaps and preventing early school leaving

Objectives and outcomes	The initiative has multiple, inter-connected objectives, including, to bridge educational gaps and improve access to opportunities for students across the country, support struggling schools and reduce territorial disparities in educational outcomes.
Programme executor and funding	Ministry of Education and Merit Total amount of money dedicated: National Recovery and Resilience funds totalling EUR 1.5 billion have been allocated for lower and upper secondary schools, including EUR 500 million dedicated to initiatives aiming to strengthen the skills of students aged 12–18. Additionally, the National Operational Plan 2021–2027, supported by European Structural Funds, provides EUR 750 million specifically to enhance the basic competencies of students in lower secondary schools, with a focus on FLN. Additional funding of EUR 240 million from the 2021 stability law is also designated for these efforts.
Programme description	The initiative specifically targets schools that have recently faced performance challenges. These schools will receive targeted support from school managers and external tutors in Italian, mathematics and English for a minimum of two years.
Modalities/ resources	When allocating funds to regions, several data indicators are considered, such as the early school leaving rate, the number of school students, the rate of students from migrant families, the rate of the population without an upper secondary degree, and the rate of families with five or more members. Schools can then activate different actions, depending on their particular needs: <ul style="list-style-type: none"> - Mentoring, coaching and guidance pathways for each struggling student (one-to-one courses) with motivational/learning weaknesses in FLN and basic skills. - Enhancing basic skills and motivating pathways for small groups of students with attention deficit - Guidance pathways for families to facilitate active participation in tackling early leaving from education and training - Extra-curricular training labs for groups, also building specific networks on different topics (school subjects, cross-disciplinary approach, cinema, theatre, sports, music)
Target beneficiary Group/s	Lower secondary school/upper secondary school, Grades 7–13; also promoting social inclusion and integrated digital education for individuals with disabilities or from disadvantaged areas
Scale and scope	The initiative aims to teach adequate basic skills to at least 1,000,000 students nationwide annually and reduce the early school leaving rate to 10.2% by 2026. The first target, set for 31 December 2024, is to reach 820,000 learners (470,000 students 12–18 years old and 350,000 aged 18–24).
Monitoring and evaluation	The first objective of monitoring will be to determine the achievement of the National Recovery and Resilience Plan benchmarks and milestones (see above). Evidence of the implemented actions will be collected every three months and will be available for each school on the platform. A national assessment will follow, as well as an impact evaluation of the programme.
Lessons learned	N/A

III. National Plan for Digital Schools: Innovative Learning Environments and Smart Learning

Objectives and outcomes	The objectives of the National Plan were twofold. First, it aimed to support schools in the digitalization of their learning processes and methodologies, including through actions focused on creating innovative learning environments by equipping them with advanced technological resources to integrate technology in teaching. Second, it aimed to enhance methodologies, curricula and competencies related to STEM, coding and new digital curricula.
Programme executor and funding	Ministry of Education and Merit Total amount of money dedicated: a total of EUR 44.66 million annually is allotted for Innovative Learning Environments
Programme description	The National Plan for Digital Schools was introduced to support schools in digitalizing their learning processes and methodologies. It encompasses a range of actions focused on: innovation of learning environments; and enhancement of methodologies, curricula and competencies, including STEM approaches, coding and training for teachers in new digital curricula and student competencies. The interventions have covered the entire country, including schools located in peripheral areas, with the objective of promoting equitable access to digital resources. The concept of 'innovative learning environments' and smart learning is founded on principles and practices that prioritize active student engagement, well-structured cooperative learning, and teachers who can effectively motivate students and cater to individual differences. The plan also emphasizes the importance of educational feedback and of interdisciplinary connections.
Modalities/ resources	The initiative is based on a comprehensive survey of school needs and the vision of the Handbook on Digital Citizenship Education (January 2019) of the Council of Europe, which has made access to digital technologies a precondition for citizenship and an instrument of equal opportunities in schools. The plan's digital inclusion actions are therefore divided into many sub-actions concerning, on the one hand, the acquisition of digital equipment and tools, including connectivity for the purposes of bringing one's own device; and educational activities aimed at developing the digital competencies of the most vulnerable students, in line with the European Digital Competence Framework ('DigComp').
Target beneficiary group/s	Pre-primary to secondary education, ISCED 0–3
Scale and Scope	Nationwide
Monitoring and evaluation	The project has been monitored and evaluated through an online platform onto which the schools can load all the data and outcomes from the project. Moreover, an auditor has conducted the administrative control, and the central administration has performed the methodological and didactical control.
Lessons learned	<ol style="list-style-type: none"> 1. Schools exhibit a willingness to adapt and embrace innovation. 2. Effective change and innovation require proactive initiatives from the central government. 3. The central government plays a crucial role in providing support and assistance to schools during the process of change and innovation.

IV. Reforms of initial Technical and Vocational Education

Objectives and outcomes	The main objective of the two main reforms are to overhaul the Italian technical and vocational education system. They will align vocational and technical education with the actual needs of the productive sector and the labour market, with a particular emphasis on incorporating innovations introduced by the National Plan Industry 4.0, prioritizing environmental sustainability and achieving competitiveness targets outlined in the National Recovery and Resilience Plan. Additionally, the reforms aim to establish a continuous technical education system that begins at the secondary education level and extends into the tertiary system of higher technical institutes (ITS Academies).
Programme executor and funding	Ministry of Education and Merit
Programme description	The reform of technical institutes focuses on fostering innovation and productive technical and VET ecosystems through upcoming regulations featuring multiple objectives: redefining technical pathways, updating students' profiles, ensuring continuity between secondary and tertiary education, and promoting collaboration through 'Educational Pacts 4.0'. The reforms offer technical pathways through Provincial Centres for Adult Education, and issue competence certifications aligned with the European Qualifications Framework.
Modalities/resources	Decree Law No. 144 of 23 September 2022 establishes the creation of the National Observatory for Technical and Vocational Education within the Ministry of Education and Merit. Comprised of 15 education experts with annual assignments, the observatory will provide advisory and proposal functions to continuously enhance technical and vocational education. Its members include representatives from employers' and trade union organizations, as well as regions, local authorities, the National Institute for the Evaluation of the Education and Training System (INVALSI), and the National Institute for Documentation, Innovation and Educational Research (INDIRE).
Target beneficiary group/s	Upper secondary technical and vocational education
Scale and scope	National
Monitoring and evaluation	The implementation of interventions funded through the Recovery and Resilience Facility is monitored and evaluated by the Commission through the Central Service for the National Recovery and Resilience Plan at the Ministry of Economy and Finance. The Ministry of Education conducts monitoring tasks to measure achievement of the target.
Lessons learned	N/A

V. Italian National System for the Evaluation of Schools (Decree of the President of the Republic No. 80, 28 March 2013)

Objectives and outcomes	The objectives of the programme are to enable a deeper national assessment on student achievement, produce data for school evaluation and self-evaluation, and promote social accountability.
Programme executor and funding	INVALSI
Programme description	The Italian National System for the Evaluation of Schools was introduced by law, after many years of experimental studies, to improve the quality of the vocational training offer and student achievement. It takes into account collaboration between different research institutes (INVALSI, INDIRE), in dialogue with the National Operative Programme and the National Recovery and Resilience Plan. Both programmes are based on data produced by the National System of School Evaluation and national testing on student achievement.
Modalities/ resources	The evaluation process comprises four phases: school self-evaluation, school external evaluation, improvement actions and social accountability. It is facilitated by INVALSI, which coordinates the process, and INDIRE, which is the inspection body. It is based on a large-scale approach with evaluation tools developed for schools, including indicators of school quality. To facilitate the process, a digital platform has been developed to enable all schools to access and examine their data in relation to territorial references and benchmarks for self-evaluation reporting. Schools participate in data collection by completing a school questionnaire administered every three years.
Target beneficiary group/s	All Italian schools (primary, middle and high schools), centres for adult education (Italian National System of Evaluation of Schools — Decree of the President of the Republic No. 80, 28 March 2013).
Scale and scope	National
Monitoring and evaluation	Specific research studies by INVALSI
Lessons learned	N/A



Japan



I. Global and Innovation Gateway for All (GIGA) School Programme

Objectives and outcomes	The quality of education will be improved through integrated, personalized and self-regulated learning and collaborative learning, based on the preparation and utilization of a school-wide ICT environment equipped with high-speed networks in each school and the provision of one device per student.
Programme executor and funding	Ministry of Education, Culture, Sports, Science and Technology (MEXT) Total amount of money dedicated: Around USD 3.824 billion (approx. JPY 515.2 billion)
Programme description	The GIGA School Programme aims to improve the quality of education and the utilization of the ICT environment.
Modalities/ resources	The GIGA School Programme entails establishing ICT environments in schools, thanks to the provision of one computer for each student and the installation of high-speed internet networks. It supports school ICT use through the GIGA School Operation Support Centres and the dissemination of examples and best practices of computer utilization in schools, available on MEXT's website. From 2020 onwards, MEXT began developing its MEXT Computer-Based Testing System (MEXCBT) as an open platform allowing all interested students of elementary, junior high and high schools throughout Japan to study and take assessments.
Target beneficiary Group/s	Target beneficiaries: Students, teachers, school leaders, administrative staff Target education level for students: Primary and secondary education (first year of elementary school through third year of high school)
Scale and scope	Number of beneficiaries: 12 million students Geographical scope: National
Monitoring and evaluation	Monitoring and evaluation is conducted through national accounting audits and administrative assessments.
Lessons learned	The installation of hardware, such as computers, is completed, but some disparities among schools and regions regarding the utilization of ICT equipment have arisen. Various types of support are necessary to alleviate such disparities. Teachers as well as students require computers. Finally, the installation of ICT networks is important to ensure learning that fully utilizes cloud technology.

II. Japan Virtual Campus (JV_Campus)

Objectives and outcomes	The objective of JV Campus is to promote the international competitiveness of Japanese universities by creating an academic environment that uses online education, secures excellent international students and creates a new study-abroad environment for Japanese students.
Programme executor and funding	University of Tsukuba Total amount of money dedicated: JPY 381 million
Programme description	The description is available on the online international education platform 'Japan Virtual Campus (JV-Campus)'.
Modalities/ resources	By building an online platform that fosters internationally competitive education, which will be opened up both domestically and internationally, Japan will provide education that showcases Japan's strengths and attractiveness overseas, while promoting the sharing of excellent educational resources among universities.
Target beneficiary Group/s	Target beneficiaries: Students, teachers Target education level for students: ISCED 6–8 (Bachelor's level and above)
Scale and scope	Number of beneficiaries: N/A Geographical scope: National
Monitoring and evaluation	N/A
Lessons learned	N/A

III. Large-scale Financial Support for Improving Environment for Distance Learning at Universities

Objectives and outcomes	This initiative intends to secure learning opportunities by accelerating the construction of the environment for distance learning at universities, ensure system and server maintenance related to the implementation of remote lessons, maintain equipment for distance learning (e.g. cameras, audio equipment, mobile routers to lend to students), and support the expenses necessary to establish a technical and educational support system for conducting distance lessons.
Programme executor and funding	Total amount of money dedicated: JPY 10 billion
Programme description	N/A
Modalities/ resources	N/A
Target beneficiary Group/s	Target beneficiaries: Students, teachers Target education level for students: ISCED 6–8 (Bachelor's level and above)
Scale and scope	Geographical scope: National
Monitoring and evaluation	Good practices of distance learning at universities are presented at symposia.
Lessons learned	N/A

IV. Hybrid and Distance Education in Higher Education Institutions

Objectives and outcomes	MEXT aims to highlight specific educational methods in higher education in the post-COVID era and disseminate the outcomes.
Programme executor and funding	MEXT Total amount of money dedicated: JPY 6 billion
Programme description	This plan targets universities/colleges to encourage them to become smart campuses through digital transformation in the current/post COVID-19 crisis environment. MEXT is moving ahead with support for universities and colleges that are proactively preparing an environment which contributes to the realization of learner-oriented education and improvement of learning quality through the adoption of digital technology.
Modalities/ resources	N/A
Target beneficiary group/s	Target beneficiaries: Students, teachers, other Target education level for students: ISCED 6–8 (Bachelor’s level and above) Specific target groups: N/A
Scale and scope	Number of beneficiaries: N/A Geographical scope: National
Monitoring and evaluation	The goal is to conduct a situational survey on the development of educational methods in higher education in the post-COVID era that combine digital (online) education and physical (face-to-face and hands-on) classes, and evaluate their dissemination.
Lessons learned	N/A

V. Brush-up Programme for Professionals

Objectives and outcomes	Higher education institutions certify practical and specialized programmes that meet the needs of working adults and industry.
Programme executor and funding	MEXT Total amount of money dedicated: This is not budgeted, since the programme is based on a certification system.
Programme description	The Brush-up programme certifies practical and specialized programmes conducted by higher education institutions which meet the needs of working adults and industry.
Modalities/ resources	Upon certification, programmes are required to develop an environment in which students can acquire practical knowledge and skills through fieldwork and internships, in cooperation with companies, and must also offer classes taught by faculty members who are practitioners.
Target beneficiary group/s	Target beneficiaries: Students, higher education institutions Specific target groups: Higher education institutions
Scale and scope	Number of beneficiaries: 394 programmes certified as of April 2023 Geographical scope: National
Monitoring and evaluation	The review committee, comprised of university faculty, business professionals and other experts, examines the programme content. Follow-up surveys of universities and other institutions that implement certified programmes are also conducted periodically.
Lessons learned	Although the certification brings the advantage of guaranteeing the quality of education and making it easier for adult students to receive financial discounts on course fees, the system is not fully recognized by universities and working adults, and its use should continue to be promoted.

VI. Supporting Learning for Working Adults Portal

Objectives and outcomes	The goal of this portal is to support learning for working adults who are eager to enhance their skills and knowledge, but are uncertain about which programmes to pursue or where to begin their learning journey.
Programme executor and funding	MEXT Total amount of money dedicated: JPY 30 million
Programme description	The portal disseminates information on educational programme offerings for working adults, role models for lifelong learning, financial assistance and more.
Modalities/ resources	The portal features a search function enabling users to refine their search based on field of study, cost and available qualifications. Additionally, the site regularly publishes articles summarizing the experiences and outcomes of individuals who have participated in recurrent programmes offered by universities, along with information regarding financial assistance for course enrolment.
Target beneficiary group/s	Number of beneficiaries: About 3,000 page views per day Geographical scope: National
Scale and scope	Number of beneficiaries: The total number of people participating in the recurrent education programmes has not been calculated Geographical scope: National
Monitoring and evaluation	During steering committee meetings attended by experts in the subject matters pursued by working individuals, the operational status of the portal is assessed and discussions are held to address any identified issues, leading to improvements.
Lessons learned	While working adults and companies have started recognizing the significance of lifelong learning, there is a need to actively promote and disseminate information on the contents of recurrent education programmes offered by higher education institutions, as well as the skills and competencies that can be acquired through these programmes.

VII. Producing Professional Human Resources in Growth Fields – Recurrent Education Promotion Project

Objectives and outcomes	The project aims to increase the number of attractive programmes offered by higher education institutions allowing working adults to brush up on their skills and knowledge.
Programme executor and funding	MEXT Total amount of money dedicated: JPY 1.7 billion
Programme description	The project supports higher education institutions in developing and providing educational programmes based on industry needs.
Modalities/ resources	When developing recurrent education programmes, higher education institutions are expected to respond to industry skill requirements and needs; this can be achieved through collaborations with companies and local governments.
Target beneficiary group/s	Target beneficiaries: Students, higher education institutions Specific target groups: Working adults
Scale and scope	Number of beneficiaries: The total number of people participating in the recurrent education programmes has not been calculated. Geographical scope: National
Monitoring and evaluation	When developing the courses, higher education institutions will receive advice on programme design and publicity to secure participants from third-party organizations, and take the surveys on implementation progress.
Lessons learned	The programme level and the skills to be acquired should be clearly specified. It is also vital for higher education institutions to secure a stable numbers of participants and committed instructors. Many universities require support from the national government to achieve these aims and obtain the necessary financial resources.



Mauritius



I. Early Support Programme (ESP)

Objectives and outcomes	To ensure readiness for the next stage of learning, the Early Support Programme (ESP) addresses foundational learning by identifying learning gaps as early as possible and ensuring remedial measures are taken as soon as difficulties are identified. This is intended to prevent the accumulation of learning deficits that become challenging to compensate for in later years.
Programme executor and funding	Primary Directorate of the Ministry of Education Total amount of money dedicated: About USD 3 million
Programme description	N/A
Modalities/ resources	Support teachers have been recruited to assist the class teacher in teaching pupils facing learning difficulties in all schools. For pupils coming from pre-primary settings, a Learner Development Profile is completed by the pre-primary teacher and accompanies the child to primary school. A Primary School Readiness assessment is also completed at the beginning of Grade 1. These instruments serve to gauge the child's learning and developmental needs. The support teachers work with learners who have been identified for the ESP programme. The support teachers work out the means to attend to these children, in consultation with the regular class teachers. The programme is run through a pull-out system where pupils leave their regular classrooms access personalised teaching with an adapted pedagogy provided by the support teacher. The child then goes back to their original classroom after having acquired the desired learning level. Individual learning plans are designed for every pupil in the ESP. The headmaster or the deputy headmaster oversees the overall implementation and holds meetings with the Support Teachers and class teachers to monitor progress.
Target beneficiary group/s	Target beneficiaries: Primary school pupils Target education level for students: Started in 2016 as from Grade 1 and now covering all six years of primary schooling Specific target groups: Primary school pupils with learning difficulties
Scale and scope	Number of beneficiaries: All students in the primary education sector Geographical scope: National
Monitoring and evaluation	The programme is monitored by school inspectors during school visits and by the Directorate of Primary Education. Results are shared through inspection reports, during meetings and through the creation of Communities of Practice.
Lessons learned	The earlier the identification of learning gaps, the greater the chances of getting pupils at risk back on the learning track. The ESP has enabled collaborative teaching, improving the interaction between the class teacher and the support teacher.

II. Early Digital Learning Programme (EDLP); Student Support Portal (SSP); University Management System (UMS); National Open Education Resource (OER) Repository

Objectives and outcomes	Overall, these initiatives increase the familiarity of the Mauritian learners and educational professionals in the use of modern tools and technologies. Initiatives such as EDLP, SSP, UMS or the National OER Repository drive the following outcomes: i) support teacher instruction, ii) promote interactive, engaging, personalised learning, and iii) foster independent learning.
Programme executor and funding	The Ministry of Education, Tertiary Education, Science and Technology; the SSP has been implemented with the support of the NCERT of the Government of India. Total amount of money dedicated: About USD 20 million in total for the EDLP primary project; about USD 5 million for the UMS and OER Repository; about USD 220,000 annually and USD 670,000 for setting up
Programme description	EDLP provides all primary school children with tablets that are preloaded with textbooks and self-learning tools as part of the EDLP's overarching goal to support and improve instruction and learning through the use of digital interactive lessons. All textbooks for Grades 1 to 9 in all subjects are available online on the Mauritius Institute of Education (MIE) portal for all students and the general public. SSP , an online platform, provides access to a repository of pedagogical videos in all the subjects offered at Grades 7, 8 and 9 (lower secondary level) online on any device. The materials of the SSP are to be integrated into the forthcoming OER repository set up in collaboration with the Commonwealth of Learning (COL). UMS is a harmonising platform for higher education that includes a common admission platform, the management of the free tertiary education scheme, access to online research journals, and a common learning and teaching management platform. The forthcoming National OER Repository will also be an add-on to the UMS and all textbooks will include instructions for teaching. Staff in all public and private HEIs will be trained in creating and quality assuring OER materials.
Modalities/ resources	Local television channels broadcast educational videos. Lessons are enlivened in all classes with the use of projectors. The tablets are uploaded with syllabi content and, as from upper primary, the tablets are enhanced with a classroom management system to individualise teacher support during teaching sessions. OER materials are created and shared as part of the National OER Policy, under the Creative Commons Licensing. High-speed internet connection further enriches the learning of all students by engaging them better in pedagogical activities.
Target beneficiary group/s	Target beneficiaries: Students, teachers, school leaders, administrative staff. Target education level for students: Higher education, primary education
Scale and scope	Number of beneficiaries: Students: approximately 25,000 tertiary, 45,000 secondary, and 100,000 primary; teachers: approximately 1,000 for tertiary, 4,000 for secondary and 4,000 for primary, school leaders: approximately 100. Geographical scope: National
Monitoring and evaluation	The EDLP programme is nationally monitored through the E-Education Directorate and the National Inspectorate for the Primary Sector at the Ministry. An interim evaluation regarding implementation was commissioned, in collaboration with the World Bank, and submitted in 2019. A full evaluation of the EDLP programme will be considered upon completion of all classes in the primary cycle in 2023/24.
Lessons learned	A major lesson learned has been for the education system to understand the importance of strengthening primary pupils' ability to confidently engage in digital learning from an early stage of schooling, ensuring they are confident digital learners when they progress to secondary school. The EDLP helped develop teachers' capacity to create digital resources and conduct e-assessments, all of which are helped by the provision of high-speed internet connectivity to the classroom.

III. The Futures of Higher Education (FHE) Programme

Objectives and outcomes	Enhancing the higher education sector's ability to ensure the country has adequately trained human resources for the requirements of the job market of the future.
Programme executor and funding	The Ministry of Education, Tertiary Education, Science and Technology Total amount of money dedicated: About USD 3 million
Programme description	The FHE programme aims at embracing new trends, technologies and industry requirements to ensure that the students of today are ready for the future of work. The FHE programme is expected to produce a Roadmap 2040 with implementable milestone projects to transform the HE sector.
Modalities/ resources	FHE endeavours to obtain a wide range of inputs from stakeholders on the pillars of the HE of tomorrow. Five such pillars have been identified: i) technology-driven HE, ii) agile regulator framework and quality assurance, iii) pathways and micro-credentials as part of HE, iv) the role of research in HE as an enabler to support socioeconomic advancement, and v) internationalisation and cross-border HE. FHE aims to strengthen lifelong learning by providing opportunities for formal recognition of competencies and experiences to encourage and expand acquisition of further skills and competencies. Skills required in Mauritius have considerably evolved over the recent years, with more industry demand for micro-credentials over long-term programmes. The FHE includes credit transfer, micro-credential recognition, and value system alignment between institutions.
Target beneficiary group/s	Target beneficiaries: Students, industry, society at large Target education level for students: All levels starting from those with experience but no formal qualifications, to those joining HE, or even those engaged in lifelong learning through MOOCs and micro-credentials Specific target groups: Low socio-economic status, children with disabilities
Scale and scope	Number of beneficiaries: More than 30,000 learners Geographical scope: National
Monitoring and evaluation	The FHE will be monitored by the Tertiary Education Directorate at the Ministry in collaboration with international agencies, including UNESCO, SADC and World Bank.
Lessons learned	FHE engages all stakeholders, and more specifically the future students of HE. The new capabilities of AI means that future of work will require a paradigm shift in HE, in terms of education, methodologies and contents.

IV. The Technology Stream (TechS)

Objectives and outcomes	The TechS provides an avenue for students at the mid-secondary level to start gaining experience in applied knowledge, using a competency-based curriculum, from secondary schooling onwards. This contributes to building their ability and readiness for emerging needs of the growing services and skills sectors in Mauritius. Pathways have been created that would lead to access to mid- and higher technical institutions and even university education.
Programme executor and funding	Ministry of Education, Tertiary Education, Science and Technology Total amount of money dedicated: About USD 1.72 million (Rs 86 million)
Programme description	The TechS is a two-year programme at mid secondary level (Grades 10 and 11) which enables students to gain skills-oriented and competency-based qualifications, using an applied knowledge approach as an alternative to the traditional streams leading to O-Level/School Certificate. Students can subsequently continue their studies towards vocational or technical fields with the objective of enhancing their suitability for the world of work. TechS aims to diversify educational offerings with a new, credible, coherent and high-quality learning pathway in line with the economic and developmental needs of the country.
Modalities/ resources	TechS will provide skills-building opportunities to students entering upper secondary education to opt for studies in the technical and technological sectors. This will be done through the provision of relevant pathways and will initially be launched in ten secondary schools, both public and private. The innovative programme will include intensive capacity building of teachers, the development of a new curriculum, and the revision of assessment.
Target beneficiary group/s	Target beneficiaries: Students and society at large Target education level for students: Technological: mid-secondary level (School Certificate, O-Level) – ISCED 2 Specific target groups: Students with a preference for hands-on learning
Scale and scope	Number of beneficiaries: 2,000 students in secondary; 50 teachers within each diploma Level 6 (ISCED 4) target/participant group Geographical scope: National
Monitoring and evaluation	TechS will be monitored and implemented by the Technical Education Unit at the Ministry, along with specialised institutions for monitoring of programme and curriculum implementation. The MIE will share evidence and data from the programme.
Lessons learned	Along the lines of other projects implemented (EDLP, SSP, OER etc), internal evaluation process will be undertaken to guarantee the introduction of corrective measures when needed. Competency-based education has become increasingly important for the future of employability.



Mexico



I. Open and Distance University of Mexico (UnADM)

Objectives and outcomes	The programme sets out to: i) enhance the inclusivity, quality and collaboration of technology-enabled learning at higher education levels in Mexico; ii) meet the demand for higher education in Mexican society by offering a flexible, fully online and free study plan.
Programme executor and funding	Subsecretaría de Educación Superior Total amount of money dedicated: USD 23,784,680
Programme description	This model provides a flexible and fully online study plan to meet the increasing demand for higher education in Mexico. Students are at the centre of the model and are responsible for managing their own learning process, with support from teaching resources and technological tools. The goal is to offer quality degrees to all online applicants and eliminate student dropout, as last year the Open and Distance University of Mexico (UnADM) received over 70,000 applications but could only accept 26,000.
Modalities/resources	All curricula from the 23 most requested degrees and engineering careers in Mexico were digitalized and adapted to a student-centred model. A completely free and digital state university was then created to overcome the digital divide and make tech-enabled learning more inclusive and equitable.
Target beneficiary group/s	Target beneficiaries: Students, teachers Target education level for students: Higher education undergraduate and graduate programmes Specific target groups: Anyone in need of higher education with internet access
Scale and scope	Number of beneficiaries: 101,901 students (to date), 6,000 teachers Geographical scope: National
Monitoring and evaluation	Widely different variables are measured and monitored to evaluate UnADM. The most important variables are enrolment, number of graduates, educational offer, job paths and community engagement. UnADM presents the results every year.
Lessons learned	The major lesson learned until now is that education is evolving, and technology can no longer be avoided in the teaching-learning processes. The provision by the state of a high-quality and diverse higher education programme that is completely free and online is not only a valuable contribution to the population's right to education, but is also a way to meet an educational demand aggravated by the pandemic and the acceleration of digital technologies and interactions.



Oman



I. Eidaad Programme (Bridging the Gap between Industry & Academia through Applied Learning)

Objectives and outcomes	Eidaad Programme started in 2019 as an initiative to implement a long-term training plan to bridge the gap between industry and academia. It aims to align academic output with industry needs, improve the graduate employability index, and enhance graduates' abilities to bridge the industry/academia gap and attain global recognition.
Programme executor and funding	Ministry of Higher Education, Research and Innovation (MoHERI)
Programme description	Eidaad Programme is an internship programme that targets Bachelor's degree students in their pre-final year of study. The programme works on developing students' basic skills for a full academic year to help them obtain the right capabilities and skills needed by industry.
Modalities/ resources	The programme aims to bridge the gap between academia and industry by providing a year-long internship that develops key technical, future, Fourth Industrial Revolution, creativity and work-ethic skills. It also builds high-level transferable skills and enables students to demonstrate professional competencies in the workplace, aligning academic output with industry needs. It achieves this through a comprehensive development programme combining industry and elective courses, with core competencies supervised by both members of academia and industry.
Target beneficiary group/s	<p>Target beneficiaries: Students</p> <p>Target education level for students: Bachelor's degree students in their pre-final year of study</p> <p>Specific target groups: All Omani male/female Bachelor's degree students in their pre-final year</p>
Scale and scope	<p>Number of beneficiaries: 10,000 students, 1,200 teachers and 322 administrators; and parents, working youth/adults, and unemployed youth/adults at the national level</p> <p>Geographical scope: National</p>
Monitoring and evaluation	The programme is run nationally by the Eidaad team, which executes, monitors and analyses results at the national level. The team also monitors students' performance and evaluations by industry participants and academics, and provides support at all levels. The students are usually evaluated through the e-Portal, making it possible to observe academic activity and intervene when required.
Lessons learned	Several key strategies must be implemented to ensure the success of the Eidaad Programme. These include creating a unified screening system among participating industries, raising students' knowledge and awareness of the programme, addressing common reasons for students' rejection of training offers, preventing last-minute withdrawals, maximizing regional internship opportunities, avoiding delays caused by companies, creating synergies between all involved parties, and regularly following up with students and companies to ensure adherence to the Fundamental Development Framework Plan.

II. The National System for Capacity-building and Talent Management

Objectives and outcomes	<p>The project outlines several key goals targeting the establishment of a unified national system for the development of competencies and skills in Oman. These include bridging the gap between education and the labour market, enhancing human capital, establishing a comprehensive information infrastructure, creating clear standards and mechanisms for professional and leadership paths, and enhancing the country's global competitiveness index. Additionally, the project stresses the importance of establishing governance for various competence-building programmes and preparing for future industrial revolutions.</p>
Programme executor and funding	<p>Ministry of Labour Total amount of money dedicated: USD 18,183,207</p>
Programme description	<p>The project aims to build a unified system for building national capabilities in the Sultanate of Oman that will not be subject to distortion or loss for many years to come. The system will provide an integrated record of national capabilities data, and ways to benefit from them for future business development. Capacity-building is the process by which individuals and organizations obtain the skills and knowledge necessary to perform, improve and retain their jobs.</p>
Modalities/ resources	<p>The project is characterized by its superior flexibility and capacity for continuous development, since human resources and the business environment are undergoing accelerated development and innovation, requiring continuous training programmes to keep pace. The project is in line with labour-market needs. The capacity-building system seeks to empower individuals by inculcating the capabilities and specialized skills of the future that will qualify them to occupy senior positions, and develop and manage projects and the work assigned to them. It also contributes to raising the global competitiveness index of the Sultanate in the human-resource development sector.</p>
Target beneficiary group/s	<p>Target beneficiaries: Students, teachers, school leaders, administrative staff Target education level for students: All stages of education (from kindergarten to higher education) Specific target groups: Girls/women, children with disabilities, others: all categories of students, employees in the government and private sectors, and members of society can benefit from training programmes for capacity-building and talent management.</p>
Scale and scope	<p>Number of beneficiaries: N/A Geographical scope: National</p>
Monitoring and evaluation	<p>N/A</p>
Lessons learned	<p>N/A</p>

III. Block Funding Programme

Objectives and outcomes	The programme aims to achieve various objectives, including finding solutions to local and global problems, promoting a research culture, contributing to the realization of Oman Vision 2040, creating a knowledge-based economy, enhancing competitiveness, improving research excellence and building research capacity.
Programme executor and funding	MoHERI Total amount of money dedicated: The total budget spent since the start of the programme is USD 21,189,585 (OMR 8,157,449)
Programme description	N/A
Modalities/ resources	N/A
Target beneficiary group/s	Target beneficiaries: Students, members of academia, higher education institutions Target education level for students: Ph.D., Master of Science, Bachelor of Science, undergraduate students, senior specialists for medical doctors
Scale and scope	Number of beneficiaries: 3,049 applications since programme inception; 1,439 funded projects (students and members of academia); 33 higher education institutions Geographical scope: Institutional
Monitoring and evaluation	Each academic institution sorts and evaluates research according to criteria approved by the programme. The programme receives institutions' applications, verifies that they meet the necessary conditions and verify their validity. Then financial shares are then distributed according to each institution's performance indicators.
Lessons learned	It is necessary to contact more researchers, become acquainted with the standards of scientific research, acquire skills in research, and delve deeper into the foundations of scientific research and research evaluation standards. This is also very helpful when it comes to producing development plans to improve the management of research projects.

IV. Strategic Research Policy Network Operation (Strategic Research Programme)

Objectives and outcomes	This programme aims to address national priorities and come up with scientific solutions to achieve the Sustainable Development Goals; increase the number of researchers and research projects; build national capacity in research and innovation; enhance cooperation among government entities, members of academia and the private sector; contribute to a knowledge-based economy and diversify income sources; generate recommendations for decision-makers to modernize public policies and legislation; and provide a platform for announcing research topics, receiving proposals and ensuring quality and follow-up for achieving research objectives.
Programme executor and funding	MoHERI Total amount of money dedicated: Depending on the number of research proposals submitted, the cap for each project is OMR 50,000 (USD 129,872)
Programme description	The MoHERI's Strategic Research Programmes support and finance research projects.
Modalities/ resources	N/A
Target beneficiary group/s	Target beneficiaries: Members of academia, higher education institutions, industry partners Target education level for students: Ph.D.
Scale and scope	Number of beneficiaries: 48 members of academia and 10 government institutions Geographical scope: National
Monitoring and evaluation	The Research Information Management System provides all research results for beneficiaries, stakeholders and researchers. Those data and evidence can also be requested through official letters from MoHERI.
Lessons learned	Government institutions showed strong interest in participating in the programme. Through research, they are looking for a scientific method to find solutions to their challenges, instead of using traditional methods.

V. Oman Animal and Plant Genetic Resources (Mawarid)

Objectives and outcomes	The general objective is to promote the recognition, sustainable exploitation and valuation of Oman's genetic diversity in animals, plants and microorganisms as a valuable natural heritage and resource. The project outcomes include the initiation of collections, characterization and utilization of national genetic resources in areas such as plants, animals, marine life and microbes. Additionally, a database management system for genetic resources has been established. Programmes like 'Manafa'a' have successfully identified individuals and companies that can utilize genetic resources, while events such as 'Science Café' and 'Treasures of Oman' have raised awareness and engaged participants from different fields and schools in North Oman.
Programme executor and funding	MoHERI
Programme description	Mawarid is a collaborative organization that aims to advance the sustainable use of the unique genetic resources of Oman, to address the threats that are jeopardizing the local resources, as well as the challenges faced in terms of climate change and a functioning pattern involving all the stakeholders of the country.
Modalities/ resources	This collaborative organization strengthens cooperation between all stakeholders in the country, including governmental organizations and universities, and private companies.
Target beneficiary group/s	All organizations and individuals associated with animal, plant and microbe (microorganisms) sectors in the country
Scale and scope	Organizations: Government: Ministry of Agriculture, Fisheries and Water Resources; Environment Authority; Ministry of Tourism, Sultan Qaboos University; private companies, universities and colleges; Individuals: farmers, herders, fishermen, etc.
Monitoring and evaluation	Ongoing programmes on the collection, evaluation, characterization and use of genetic resources related to the animal, marine, plants and microbe sectors are monitored periodically and evaluated annually to assess the progress and development of Mawarid.
Lessons learned	The programmes have to be designed according to national needs, and aligned as much as possible with the objectives of the common programmes of G20 countries to strengthen capacity-building and produce viable outcomes.

VI. Institute of Advanced Technology Integration (IATI)

Objectives and outcomes	IATI's objectives include improving the quality of research and enhancing its readiness for the market by increasing the country's Global Innovation Index ranking, which in turn will lead to increased industry spending on R&D. Additionally, IATI aims to promote collaboration and integration between the research sector and various industries and sectors.
Programme executor and funding	MoHERI
Programme description	Ejaad is a collaborative organization that serves as a mediator between industry and academia, focusing on R&D of new technologies and innovative products. It aims to bridge the gap between these two sectors and enhance the capability of the R&D ecosystem. As a membership-based collaborative platform, EJAAD facilitates meaningful engagement and collaboration among stakeholders from academia, industry and other relevant sectors. Its contributions align with Oman Vision 2040 priorities, reflected in 69% of Oman's priorities and 34% of its national goals, ultimately contributing to the development of a knowledge-based economy.
Modalities/ resources	N/A
Target beneficiary group/s	<p>Target beneficiaries: Government, members of academia, industry, small and medium-sized enterprises (SMEs)</p> <p>Target education level for students: Ph.D., Master of Science</p> <p>Specific target groups: Researchers</p>
Scale and scope	<p>Number of beneficiaries: 33 members have joined Ejaad</p> <p>Geographical scope: National</p>
Monitoring and evaluation	Monitoring is done through organization's electronic platform
Lessons learned	<ol style="list-style-type: none"> 1. Ejaad should provide support to develop product prototypes. 2. Ejaad should develop a techno-commercial report and promote commercialization. 3. The project should be moved from lab scale to pilot scale. 4. The programme needs a support system and process improvement.

VII. Oman Research and Education Network (OMREN)

Objectives and outcomes	The goal is to establish a dedicated network and collaboration infrastructure for the research and education community in Oman. This includes providing high-speed, reliable connectivity for users within the network, as well as access to international research and education networks. The objective is to facilitate e-collaboration, knowledge sharing and the adoption of advanced internet technologies for researchers, faculty and students. Additionally, OMREN focuses on developing excellent management and representation of the National Research and Education Network to benefit the community through adapted organization, processes and skills.
Programme executor and funding	MoHERI
Programme description	OMREN is a national network that aims to provide a dedicated high-speed and efficient communications network connecting research and academic institutions locally, as well as to regional and global research networks. OMREN works to build research capacity and local capabilities in various scientific fields in the Sultanate of Oman.
Modalities/resources	Shuaa, Masader, Mirsal, eduGAIN, internet connection, MPLS connection, FBB connection, eduroam, domain hosting, MPLS speedtest, OMREN Federation, OMREN Data Centre, SSL certificates, text messages, NOC, IPv6, IPv4
Target beneficiary group/s	Target beneficiaries: Academic sector, higher education institutions, industry partners, technology partners, Omantel, Oman Data Park and global research network
Scale and scope	Number of beneficiaries: 48 members of academia and 10 government institutions Geographical scope: National
Monitoring and evaluation	Evaluation is done by the Department of the Innovation Sector.
Lessons learned	OMREN is the partner of choice for the research and education sector in the Sultanate of Oman by providing sustainable, reliable, world-class e-infrastructure and services that continuously meet the sector's needs.



Republic of Korea



I. The 1st Comprehensive Plan to Guarantee Basic Education

Objectives and outcomes	The plan aims to offer systematic and intensive educational support to reduce learning deficit in basic education of elementary, middle and high school students as a result of the prolonged COVID-19 pandemic.
Programme executor and funding	Ministry of Education (Eojin-dong, Sejong City, Republic of Korea) Total amount of money dedicated: USD 4,472,032
Programme description	The programme aims to build a national system under which the government takes full responsibility for national education by guaranteeing that all students will reach the basic level of education. It advocates the use of AI-driven diagnostic tools for basic education; establishing a safety net for basic education that links together the entire country, regions and schools; and strengthening the foundation for learning support.
Modalities/ resources	The programme aims to introduce an accurate and precise diagnostic system; establish step-by-step student-centred support that links regular classes, in-school resources, provincial offices of education and external resources; and offer a comprehensive approach to student learning, psychology and emotion. With the use of Edtech, students' basic education level is diagnosed, remedial learning guidance is offered, and a basic education safety net is established to link the entire country, regions and schools.
Target beneficiary group/s	Target beneficiaries: Students Target education level for students: All grades of elementary, middle and high school Specific target groups: Low socio-economic status, population groups in rural areas, population groups in urban areas, minority groups (e.g. linguistic), migrant population groups, refugees/displaced population groups, children with disabilities
Scale and scope	Number of beneficiaries: 500,000 students Geographical scope: National, provincial, district, local
Monitoring and evaluation	The National Basic Education Support Centre monitors and conducts consulting services regarding the status of local basic education support projects, and deliberates on the outcome of regional implementation plans through the Basic Education Guarantee Committee. It analyses the performance of projects to support regional basic education levels. The analysis is reflected in the implementation plan for the following year, and the results of projects in all regions are shared via a year-end outcome report meeting.
Lessons learned	

II. Digital-based Education Innovation Project

Objectives and outcomes	The project aims to recapture the essence of education by achieving Education for All through technology.
Programme executor and funding	Ministry of Education Total amount of money dedicated: Financial allocation is planned for both central and provincial governments (the specific amounts have not yet been set).
Programme description	N/A
Modalities/ resources	The programme includes developing AI-driven digital textbooks; providing teacher training to produce competent, innovative and leading teachers; developing and supporting teaching-learning methods utilizing technology; cooperating with demonstration offices of education to operate digital model schools; and creating a 'One device for one student' environment with a stable network connection.
Target beneficiary group/s	Target beneficiaries: Students, teachers, school leaders, parents/caregivers, administrative staff Target education level for students: Primary and secondary schools (except first and second graders in primary schools)
Scale and scope	Number of beneficiaries: N/A Geographical scope: National
Monitoring and evaluation	A cooperative system involving both the Ministry of Education and the metropolitan and provincial offices of education monitors and evaluates the implementation of the project. The National Assembly also conducts an evaluation and examination of budget use.
Lessons learned	N/A

III. Lifelong Learning Promotion Plan

Objectives and outcomes	The plan aims to contribute to improving the quality of life and promoting happiness for all citizens, by guaranteeing the right of all citizens to learn and receive education throughout their lives.
Programme executor and funding	17 metropolitan and provincial municipalities Total amount of money dedicated: The 2023 national budget is USD 82.63 million; each provincial government organizes and supports a lifelong education budget, taking local contexts into consideration.
Programme description	The plan supports basic and digital literacy education programmes for underprivileged adults, and organizes events to raise public awareness. A comprehensive lifelong education information system is at a developmental stage to allow learners to receive individualized lifelong learning services throughout their life cycle (design based on learning diagnosis → provision of educational content → managing learning history → utilizing learning results).
Modalities/ resources	Learners can choose and combine online lectures in digital fields (K-MOOC, Match-Up, university online lectures, corporate online lectures) such as metaverse and AI to obtain a degree. The academic credit bank system continues to expand to include new technologies and industries, further incorporating new systems such as the new credit recognition system, the national learning experience recognition system and the online lecture combination degree system.
Target beneficiary Group/s	Target beneficiaries: Students Target education level for students: Adult learners
Scale and scope	Number of beneficiaries: 20,438,197 students, 67,381 teachers and 21,758 administrators Geographical scope: National, provincial
Monitoring and evaluation	Performance evaluation happens for each project every year. Performance evaluation results are used as basic data for the next year's budgeting.
Lessons learned	N/A

IV. 2022 Education Policy Network Operation

Objectives and outcomes	N/A
Programme executor and funding	Korean Educational Development Institute Total amount of money dedicated: USD 9,400
Programme description	The operation helps education policies take firm root by establishing a cooperative system between implementing institutions (Ministry of Education and provincial offices of education) and research institutions.
Modalities/ resources	The operation conducts regular educational policy consultation meetings and workshops with the heads of research institutes, directors of planning departments and operational personnel. The objective is to communicate and cooperate closely with policy institutions and discuss research findings.
Target beneficiary group/s	Target beneficiaries: Teachers, academics, public officials in charge of educational policy and researchers at public research institutes Target education level for students: All educational levels including preschool, elementary, middle and high school, as well as lifelong learning
Scale and scope	Number of beneficiaries: 52 teachers, 26 members of academia, 15 public officials in charge of educational policy and researchers at public research institutes Geographical scope: National
Monitoring and evaluation	This programme is jointly established and implemented on a yearly basis; its performance is evaluated by the evaluation committee at the end of the programme (December).
Lessons learned	N/A



Russian Federation



I. SuperService Online University Admission

Objectives and outcomes	It is expected that SuperService will function during admission campaigns along with traditional ways for applications to submit documents.
Programme executor and funding	Ministry of Science and Higher Education (regulating authority in higher education)
Programme description	SuperService organizes information within the federal information system. The objective is to ensure final state attestation of students who have mastered the basic general and secondary general education, and admission of citizens to educational institutions for secondary vocational and higher education, using an infrastructure that ensures information and technological interaction, and the execution of state and municipal functions in electronic form.
Modalities/ resources	The target model of SuperService provides for development of the functionality and corresponding increase in the number of pilot testing participants in the more than 80% of educational institutions.
Target beneficiary group/s	<p>Target beneficiaries: Students, parents/caregivers, administrative staff, other: citizens of the Russian Federation, foreign citizens and stateless persons who enrol in higher education institutions and their branches in the Russian Federation, under Bachelor's degree programmes and specialty programmes, including individuals and (or) legal entities.</p> <p>Target education level for students: Higher education</p> <p>Specific target groups: Low socio-economic status, population groups in rural areas, population groups in urban areas, migrant population groups, refugees/displaced population groups, children with disabilities</p>
Scale and scope	<p>Number of beneficiaries: During the 2022/23 admission campaign, 3.6 million applications were submitted through SuperService.</p> <p>Geographical scope: National</p>
Monitoring and evaluation	The programme's monitoring is automated through structured and unstructured data from information systems, as well as regular reporting by project participants. The results of the admission campaign for the 2021/22 academic year show that 975 educational organizations (including 77 private organizations) were connected: 551 parent organizations and 424 branches. For the 2022/23 academic year, educational organizations have provided information on 1,039 admission campaigns; 15,258 training areas (specialties); 105,792 competitive groups; 1,538,308 entrance tests; and 28,690 individual achievements.
Lessons learned	N/A

II. Single Digital Platform (SDP) for Scientific and Scientific-Technical Interaction between Researchers

Objectives and outcomes	The Ministry of Science and Higher Education of the Russian Federation uses SDP as a single point of authorization for science-related information systems. It accumulates and stores information on scientific activities, enables scientific and technical interaction, creates a single register of grants and competitions, and automates scientific service management functions. SDP also facilitates the sharing of scientific and technical information between project participants, provides additional staff for scientific research, and allows planning and ordering of scientific equipment at collective use centres. Integrated solutions with other platforms, such as REC and WCSC, are also possible.
Programme executor and funding	SDP is executed by the Ministry of Science and Higher Education of the Russian Federation and receives funds from the federal budget of the Russian Federation, within the framework of the federal 'Infrastructure Development for Scientific Research and Training' project of the national 'Science and Universities' project.
Programme description	SDP intends to automate the processes for interaction between researchers, interdisciplinary scientific groups, customers and other parties interested in R&D and other activities to create scientific products, as well as the accounting and analysis of these activities' outcomes.
Modalities/ resources	SDP offers tools and services to facilitate scientific and technical collaboration among researchers and businesses. It provides a centralized platform for remote work and virtual collaboration in research projects. The platform offers standardized accounting for publication activity, regulated access for foreign scientists, and tools for monitoring project implementation and generating reports. Additionally, it enables access to external distributed systems and integration with external identification systems, and allows for future updates.
Target beneficiary group/s	Target beneficiaries: Members of academia, higher education institutions, others Target education level for students: Researchers, scientific institutions, scientific research support funds
Scale and scope	Number of beneficiaries: 50,000 persons in academia; 50,000 in higher education institutions; 100,000 in industry Geographical scope: National
Monitoring and evaluation	Monitoring is carried out annually, using controls within the framework of the federal 'Infrastructure Development for Scientific Research and Training' project of the national 'Science and Universities' project.
Lessons learned	N/A

III. Federal Project ‘Professionalitet’

Objectives and outcomes	Training personnel in order to synchronize the educational process in vocational education institutions with the request of employers.
Programme executor and funding	Ministry of Education of the Russian Federation Total amount of money dedicated: Annually, RUB 7.0 billion is allocated to establishing educational and production centres (clusters). From 2023, an additional RUB 3.915 billion will be allocated to creating educational clusters of secondary vocational education.
Programme description	In 2022, the federal project ‘Professionalitet’ was launched as part of the socio-economic development of Russia. The project aims to synchronize vocational education with the needs of employers through an industry-specific approach to training personnel. Throughout the year, work was carried out in various areas, including creating a new management mechanism involving over 200 representatives from the real sector of the economy, branding 347 educational programmes and training academic staff in modern competencies.
Modalities/ resources	Interdepartmental cooperation has been established between the sectoral executive bodies of the regions. As part of the commissions, representatives of the supporting enterprises participate in determining type of personnel training (as well as professions and specialties). The Russian Ministry of Education has developed a set of indicators ensuring a comprehensive view of the compliance of the vocational training system with the needs of the regional economy and the needs of employers in the region.
Target beneficiary group/s	Target beneficiaries: Students, teachers, others
Scale and scope	Number of beneficiaries: By 2026, 89 constituent entities of the Russian Federation, 3,561 vocational education institutions, and over 1million students will have benefited from the programme. Geographical scope: Federal
Monitoring and evaluation	N/A
Lessons learned	N/A

IV. Federal Project ‘Platform of University Technological Entrepreneurship’

Objectives and outcomes	The ‘Professionalitet’ initiative aims to synchronize vocational education with employer needs, allow students and employees to gain entrepreneurial competencies, create technology teams for start-up projects and involve them in technological entrepreneurship, and increase private investment in university start-up projects.
Programme executor and funding	Ministry of Science and Higher Education of the Russian Federation Total amount of money dedicated: Over RUB 312 billion (about USD 4 billion) will be allocated during the period of implementation of the federal project from 2022 to 2030. In 2022, financing amounted to over RUB 7 billion (about USD 95 million).
Programme description	The project aims to develop the entrepreneurial potential of young people and create a sustainable ecosystem for launching start-ups based at higher education institutions.
Modalities/ resources	The initiative has implemented various measures, such as creating a new management mechanism, training academic staff, and diagnosing entrepreneurial competencies to encourage entrepreneurship among students and employees. Educational organizations are involved through gaming technologies, intensives, business games and trainings based on ‘Entrepreneurial Boiling Points’ and created with the support of the Ministry of Science and Higher Education of the Russian Federation.
Target beneficiary group/s	Target beneficiaries: Students Target education level for students: Higher education
Scale and scope	Number of beneficiaries: 3,000 students and employees of higher education institutions are planned to be involved in technological entrepreneurship by 2030. Geographical scope: National, federal
Monitoring and evaluation	The Ministry of Science and Higher Education has provided quarterly and annual activity reports since 2022, including information on the support and results achieved by the federal project. Collegial bodies of the federal project have been formed, and methodological and consulting support is provided to participants annually. The ministry has also approved methods for calculating indicators to monitor the federal project.
Lessons learned	Worldwide, 24 % of start-ups are created at universities, compared to less than 3% in Russia. However, more than 40 % of students in today’s Russia would like to start their own business in the years following graduation.

V. Carbon Test Sites

Objectives and outcomes	The purpose of the work is to develop standardized methods for collecting and processing data, which will be used in particular when deploying agricultural, forestry and water projects, and will serve as the basis for the certification and audit of such projects.
Programme executor and funding	Ministry of Science and Higher Education of the Russian Federation Total amount of money dedicated: RUB 1 billion
Programme description	Carbon test sites are located in 20 locations and cover 20 % of all ecosystems in Russia. Each site examines ground-based ecosystem data and remote sensing data from satellites and unmanned systems. After processing these data using AI methods, the carbon balance of the studied ecosystems, and the amount of absorbed and emitted greenhouse gases are calculated.
Modalities/ resources	The collaboration focuses on conducting joint scientific research on monitoring greenhouse gases in ecosystems, managing different types of ecosystems to sequester and store carbon, and developing uniform certification methods for natural and climate projects. Additionally, there are plans to launch joint educational programmes for personnel training in the low-carbon industry, organize cross-visits to research infrastructure and conduct scientific expeditions. Given the multidisciplinary nature of this collaboration, educational programmes are being prepared to train new personnel for climate monitoring and the low-carbon economy.
Target beneficiary group/s	Target beneficiaries: Students, members of academia, higher education institutions, industry partners Target education level for students: Young scientists, graduate students, university students
Scale and scope	Number of beneficiaries: 10,000 students; 100 members of academia; 500 higher education institutions; 50 industry partners Geographical scope: National
Monitoring and evaluation	The Carbon test sites project is managed, monitored and evaluated by a specially created Expert Council under the Ministry of Science and Higher Education of Russia, which makes all major decisions on the project's development and new participants, and evaluates existing sites' operational results. The Expert Centre, established through the Institute of Oceanology, monitors the programme's implementation, conducts an expert assessment of scientific R&D, evaluates the results obtained and makes recommendations to individual teams on research methods.
Lessons learned	The main lesson today is the need for practical testing of the obtained 'raw' models and prototype methods for calculating the carbon balance of ecosystems, to test solutions for climate projects under real conditions, with subsequent refinement based on the results obtained. The second lesson is that the importance of using IT methods, especially AI, in the early stages of data collection and processing should not be underestimated.



Saudi Arabia



I. Review and Update the Curriculum to Enhance Basic and Future Skills

Objectives and outcomes	This initiative aims to improve educational outcomes and enhance students' skills through advanced pedagogies. It involves updating curricula, authoring textbooks, and assessing students' needs for new materials. It also includes selecting private sector service providers, implementing the updated curricula, and creating high-quality educational content. The focus is on developing higher-order thinking skills, social and emotional skills, and Chinese language proficiency. The initiative further involves adapting the curricula to future skills and ensuring ongoing modifications.
Programme executor and funding	Curriculum Centre
Programme description	N/A
Modalities/ resources	N/A
Target beneficiary group/s	Target beneficiaries: Students Target education level for students: Primary to secondary
Scale and scope	Number of beneficiaries: N/A Geographical scope: National
Monitoring and evaluation	Curricula are evaluated through a body called the Education and Training Evaluation Commission.
Lessons learned	N/A

II. Motivating Outstanding Teachers to Work in Schools with Low Educational Performance

Objectives and outcomes	The programme aims to improve learning outcomes in schools with low educational performance and provide equal access to quality education, regardless of social and geographical differences. It seeks to motivate 17,280 distinguished teachers through regulations, standards and incentives, building a guide to improve the educational process, and selecting work teams responsible for implementing the initiative. The programme will measure its impact through procedures and specifications of the monthly and quarterly calendar for students, developing models for excluding teachers who do not achieve the required performance indicators.
Programme executor and funding	Ministry of Education
Programme description	The initiative seeks to improve basic education outcomes by selecting distinguished teachers to work in schools with low educational performance to develop students' performance.
Modalities/ resources	The project aims to improve the educational process in schools with low educational performance by developing regulations, standards and procedures for selecting and incentivizing distinguished teachers. A guide will be created to identify the causes of low performance and determine the number of distinguished teachers needed. Criteria will be prepared for selecting work teams to implement the initiative, and procedures and specifications for measuring the impact of the change on student performance will be determined. Models will also be built to exclude teachers who do not achieve required performance indicators.
Target beneficiary group/s	<p>Target beneficiaries: Students, teachers, school leaders</p> <p>Target education level for students: All levels of general education (primary, middle and secondary)</p> <p>Specific target groups: Girls/women, low socio-economic status, population groups in rural areas, population groups in urban areas</p>
Scale and scope	<p>Number of beneficiaries: The number is not currently determined; the expected number is 2,300 schools at all academic levels and 17,280 teachers, principals and student counsellors.</p> <p>Geographical scope: National</p>
Monitoring and evaluation	Selected teams evaluate the level of students and teachers monthly. At the end of each semester (the academic year is three semesters), the programme is also evaluated through an external party (Education and Training Evaluation Commission) to measure students' average performance in national tests.
Lessons learned	N/A

III. Teacher Mentorship Programme Initiative

Objectives and outcomes	The main objectives of the initiative are to ensure continuous professional development for teachers; promote qualified human resources through the interaction of new teachers with experienced teachers; and improve teachers' self-awareness by focusing on strengths and weaknesses. The expected outputs include improving students' learning outcomes in all subjects, in all schools and at all academic levels; improving the educational practices of new teachers and teachers in key subject areas, in line with modern global trends; and creating vibrant professional learning communities.
Programme executor and funding	Tatweer Educational Services Company (a wholly government-owned company)
Programme description	This initiative aims to provide a mentorship programme for new teachers and low-performing teachers in all disciplines and at all levels of general education schools, by supporting them with distinguished teachers/mentors. This creates providing an environment for developing effective professional practices, leading to improved student outcomes in basic education.
Modalities/resources	Through the Teacher Mentorship Programme, new and low-performing teachers will develop their skills on the job in the following three areas: scientific research skills; thinking skills; and management and planning skills, which are consistent with 21 st -century skills.
Target beneficiary group/s	<p>Target beneficiaries: Teachers</p> <p>Target education level for students: Teachers of all three grades of general education</p> <p>Specific target groups: New teachers and low-performing teachers</p>
Scale and scope	<p>Number of beneficiaries: 55,000–60,000 teachers expected to benefit from the initiative</p> <p>Geographical scope: Provincial, covering all 47 education regions and governorates</p>
Monitoring and evaluation	Programme implementation will be followed through quality assessment tools, field visits to schools and periodic reports.
Lessons learned	N/A. Implementation has not begun.

IV. Remote Areas School Development

Objectives and outcomes	The goal is to improve access to education in remote areas by reviewing school networks and introducing distance learning tools and resources to expand access to high-quality education for all students.
Programme executor and funding	Ministry of Education
Programme description	The lack of access to education for students in remote areas leads to poor enrolment in universities or institutes, low participation in the labour market and limited ability to meet labour-market needs. Therefore, this programme reviews the network of schools and enhances the use of distance learning tools ensures access to high quality education for all students.
Modalities/ resources	Partnerships to equip students with devices; improvements to electronic infrastructure, in collaboration with the Ministry of Communications and Information Technology.
Target beneficiary group/s	Target beneficiaries: Students, teachers, school leaders, parents/caregivers, administrative staff Target education level for students: Kindergarten to secondary
Scale and scope	Number of beneficiaries: N/A Geographical scope: National
Monitoring and evaluation	The educational process and students' performance in national and international tests are monitored. The results (data and evidence) from monitoring are evaluated in digital reports that are provided to students, parents, school leaders, teachers and decision-makers.
Lessons learned	The electronic infrastructure in the areas where the students live has presented some challenges, and the Ministry of Communications and Information Technology has worked to improve the quality of internet services in those areas. The necessary partnerships have also been established to equip students who do not have devices.

V. Student Profiling and Assessment

Objectives and outcomes	The objectives of the programme are to enhance learning outcomes, by providing data on students' achievements focusing on learning outcomes and skills; increasing students responsibility and independence, by changing their role from passive learners to active learners who are informed of their own assessments and performance; and helping parents and teachers to better support students.
Programme executor and funding	Ministry of Education
Programme description	There is a lack of comprehensive student assessment tools and student records for all educational levels measuring measure educational, behavioural and skill-acquisition progress. Therefore, the goal of the programme is to increase students' responsibility and independence by changing their role from passive learners into active learners who seek to raise their educational level through educational technology by improving student access to their own learning data.
Modalities/ resources	Student assessment systems measure skill-related learning outcomes and leverage data-driven diagnostic tools to provide regular feedback (including detecting at-risk students) through digital profiling and categorizing of students.
Target beneficiary group/s	Target beneficiaries: Students, teachers, school leaders, parents/caregivers Target education level for students: Kindergarten to secondary
Scale and scope	Number of beneficiaries: N/A Geographical scope: National
Monitoring and evaluation	This will be done by reviewing progress in building the system according to performance standards and analysing the results of student evaluation and treatment plans. The results will be shared through digital reports provided to students, parents, school leaders, teachers and decision-makers
Lessons learned	The initiative is still in the implementation phase, and lessons learned are being collected.

VI. Lifelong Learning R&D and Innovation Programme

Objectives and outcomes	The programme aims to develop innovative solutions to improve lifelong learning in the local context, coordinating and driving the implementation of innovative solutions in all areas and across the entire lifecycle of the ecosystem for human capability development.
Programme executor and funding	Education and Training Evaluation Commission
Programme description	The programme specializes in promoting research, development and innovation (RDI) in the field of lifelong learning.
Modalities/ resources	A national foresight strategy provides context and acts as an umbrella for R&D in future skills, in addition to publishing periodic reports on future skills and innovative solutions for lifelong learning. The programme will publish periodic reports on future skills and innovative solutions for lifelong learning to reduce the mismatch between supply and demand.
Target beneficiary group/s	Target beneficiaries: All age groups Target education level for students: All Specific target groups: All
Scale and scope	Number of beneficiaries: N/A Geographical scope: National
Monitoring and evaluation	The programme will publish periodic reports on future skills and innovative solutions for lifelong learning.
Lessons learned	N/A

VII. Labour-market supply-demand foresight unit

Objectives and outcomes	The unit will act as a data source for all government agencies in determining future labour-market needs to prepare and equip citizens to fill demand gaps. The unit will also build a system responsible for publishing supply-demand forecasting reports.
Programme executor and funding	Ministry of Human Resources and Social Development
Programme description	Since there is no systematic forecasting of supply and demand within the country, the initiative aims to create a national unit for demand and supply forecasting, and determine current major skill demands and the future skills needed in the job market.
Modalities/resources	The initiative aims to provide different stakeholders with the data on both supply and demand in the job market. These data will aid in revising academic programmes, for example to meet the needs of the job market.
Target beneficiary group/s	<p>Target beneficiaries: Government agencies, labour market, employees in private and public sectors, students, job seekers</p> <p>Target education level for students: N/A</p> <p>Specific target groups: N/A</p>
Scale and scope	<p>Number of beneficiaries: N/A</p> <p>Geographical scope: National</p>
Monitoring and evaluation	The programme is run by the Ministry of Human Resources and Social Development, under the supervision of the Human Capability Development Programme. It is being monitored by the National Centre for Performance Management, which publishes and disseminates the results to the relevant stakeholders.
Lessons learned	N/A

VIII. Research and Innovation Partnerships

Objectives and outcomes	N/A
Programme executor and funding	Ministry of Education
Programme description	This initiative aims to create the infrastructure to increase the currently limited cooperation between universities and the private sector; raise and link university research outputs by building a platform promoting RDI partnerships between the private sector, the government sector and public universities; launch transitional research centres and innovation centres; transfer advanced technology; and direct investments to RDI on priority areas that match national and regional needs, focusing on the local economy and commercial and industrial activities.
Modalities/ resources	The programme is building a platform that enhances RDI partnerships between the private sector, the government sector and public universities; launching transitional research centres and innovation centres; transferring advanced technology; and directing investments and RDI to priority areas.
Target beneficiary group/s	Target beneficiaries: Students, higher education institutions, industry partners Target education level for students: Universities student
Scale and scope	Number of beneficiaries: N/A Geographical scope: National
Monitoring and evaluation	Several indicators follow up on the progress of research and innovation at the national level; these include the indicator on the number of universities in the Kingdom of Saudi Arabia that are ranked among the top 100 universities globally.
Lessons learned	N/A



Singapore



I. The Learning Support for Mathematics (LSM) Programme

Objectives and outcomes	Students who enter primary school without having numeracy skills, such as the ability to count from one to ten, number recognition and simple pattern recognition, need support to access the primary mathematics curriculum. The LSM programme aims to close these fundamental gaps and equip students with foundational mathematical knowledge, skills and dispositions to enable them to deepen their knowledge of mathematics as they progress through primary school. On a yearly basis, students who have made sufficient progress may graduate from the programme earlier and re-join their class for the common curriculum.
Programme executor and funding	Curriculum Planning and Development Division, Ministry of Education
Programme description	The teaching pedagogies used in the LSM programme provides early intervention support for students who need help in acquiring basic numeracy skills when they begin primary education at public schools (at Primary 1). Students are taught in smaller groups during their regular mathematics periods, or have supplementary lessons by specially trained teachers.
Modalities/ resources	The teaching pedagogies used in the LSM are aligned with the Singapore Teaching Practice (STP). The STP is a model of teaching and learning to guide and strengthen effective teaching that is customized for Singapore's context. Programmatic interventions include (i) Early identification of students; (ii) Pedagogical intervention; (iii) Structured support (pull-out classes during curriculum time or supplementary classes); (iv) Teaching and learning resources; (v) Deployment of specially trained teachers; and (vi) Professional development of all mathematics teachers.
Target beneficiary group/s	Target beneficiaries: Students who need help in acquiring basic numeracy skills when they enter Primary 1 Target education level for students: Primary 1 to Primary 4
Scale and scope	Number of beneficiaries: N/A Geographical scope: National
Monitoring and evaluation	The programme is monitored and evaluated through: (i) Classroom Observations; (ii) Focus Group Discussions with Teachers; and (iii) Measures of Student Performance. Results are monitored at the national level. Data resides within individual schools.
Lessons learned	It is important to provide professional development for teachers and develop resource materials they can use that are appropriate for the students in the programme. Schools also need to work with parents and community agencies to address external factors, such as the learning environment at home, to achieve better outcomes.

II. The Learning Support Programme for English (LSP)

Objectives and outcomes	The Learning Support Programme for English (LSP) provides targeted literacy support for students who enter Primary 1 without developmentally appropriate literacy skills, which may hinder their learning in regular English Language (EL) lessons and other subjects. It aims to equip these students with basic literacy skills, such as reading and spelling words, and help them read grade-level texts with fluency and comprehension.
Programme executor and funding	Curriculum Planning and Development Division, Ministry of Education
Programme description	The LSP provides additional support for students in Primary 1 and Primary 2 who lack basic English literacy skills. LSP students are pulled out of their regular EL lessons for half an hour a day to be taught by specially trained teachers using strategies that will improve their reading ability in small groups.
Modalities/ resources	The teaching pedagogies used in the LSP are informed by evidence-based best practices in beginning reading instruction. They aim to address the five key components of effective reading instruction: phonemic awareness, phonics, fluency, vocabulary and comprehension (National Reading Panel, 2000). The LSP introduces the basic literacy skills using the Gradual Release of Responsibility model, leading to students' independent use of the strategies. To foster alignment between the LSP and regular EL curriculum, the texts used in the LSP are the same as those used in regular EL lessons.
Target beneficiary group/s	Target beneficiaries: Students who require literacy support at entry to Primary 1 Target education level for students: Primary 1, Primary 2
Scale and scope	Number of beneficiaries: N/A Geographical scope: National
Monitoring and evaluation	The Ministry of Education tracks and monitors student outcomes on a yearly basis to inform further programme refinements and support for teachers' professional learning. Regular reviews of the LSP are also conducted to ensure that it continues to fulfil its objective of helping students narrow their literacy gaps.
Lessons learned	Early intervention can help prevent later reading difficulties. LSP has proven effective in helping students who lack developmentally appropriate early literacy skills to narrow the gaps and prepare them to better participate in regular EL lessons. The effectiveness of the LSP can be attributed to the application of research findings in literacy development and literacy intervention to the design of this programme. It is important to provide professional development for teachers to enable them to enact the intervention effectively. It is also important for students to receive support from families and the larger community in their learning and literacy development.

III. Singapore Student Learning Space (SLS)

Objectives and outcomes	The SLS is continually developing new capabilities and tools to support greater customization of learning for students and to augment teachers' professional practice. It supports advanced features such as gamification, text-to-speech reader and speech evaluation in Mother Tongue Languages (MTL) to better support students' self-directed and independent learning. Gamification allows game-based elements (e.g., experience points and levels, game stories, and achievements) to be introduced in courses within the SLS by teachers to boost students' engagement and interest in learning. The Text-to-Speech feature that is available for all MTL reads aloud text selected by students to help them learn how to pronounce words. The Speech Evaluation feature allows students to record themselves reading an oral passage and receive immediate feedback from the system on their fluency and accuracy. This allows students to independently practice and improve their reading at their own pace or to seek feedback from teachers and peers.
Programme executor and funding	Educational Technology Division, Ministry of Education
Programme description	The SLS is Singapore's national online learning platform that provides students with access to quality curriculum-aligned resources for self-directed learning, and teachers with tools and resources to enhance teaching and learning.
Modalities/ resources	As part of Singapore's National AI Strategy, the capabilities of SLS will be further enhanced with AI-enabled features to support greater customization of learning, and enable more immediate and targeted feedback for students. Examples of such AI tools which are being developed and planned for integration with SLS include a Learning Feedback Assistant for English Language (LFA-EL) and an Adaptive Learning System (ALS) for Mathematics. The LFA-EL will provide basic and personalized feedback directly to students in areas such as spelling and grammar. The ALS for Mathematics will use machine learning to customize learning for each student; based on how students respond to learning materials and activities, it will recommend suitable learning activities, motivate, and keep students engaged during challenging tasks.
Target beneficiary group/s	Target beneficiaries: Students, teachers Target education level for students: Primary, secondary and pre-university levels
Scale and scope	Number of beneficiaries: 450,000 students; 50,000 teachers, school leaders and administrators Geographical scope: National
Monitoring and evaluation	Monitoring and evaluation of the programme is conducted through user focus-group discussions and surveys. The evaluation is shared at various internal reporting platforms, and the insights gathered are used to refine the system and pedagogical practices.
Lessons learned	N/A

IV. SkillsFuture

Objectives and outcomes	The four key thrusts of SkillsFuture are: (i) Help individuals make well-informed choices in education, training and careers; (ii) Develop an integrated high-quality system of education and training that responds to constantly evolving needs; (iii) Promote employer recognition and career development based on skills and mastery; and (iv) Foster a culture that supports and celebrates lifelong learning.
Programme executor and funding	Ministry of Education and its statutory board, SkillsFuture Singapore (SSG). Total amount of money dedicated: In 2022, the government spent SGD 0.9 billion (around USD 0.67 billion) on continuing education and training.
Programme description	The national SkillsFuture movement aims to provide Singaporeans with opportunities to reach their fullest potential, regardless of their starting point in life.
Modalities/ resources	MOE continues to step up efforts under the Next Bound of SkillsFuture to encourage continual learning throughout life. At the individual level, Singaporeans are encouraged to take personal ownership of their skills journey. Within the Institutes of Higher Learning (IHLs), SkillsFuture Work-Study Programmes were launched as a new modality of learning. These programmes closely interconnect theory and practice, through a combination of institutional learning and structured on-the-job training. At the enterprise level, the focus is on strengthening the role of employers in training their workers. There is also an enhanced focus on career transition opportunities for mature workers.
Target beneficiary group/s	Target beneficiaries: Resident workforce
Scale and scope	Number of beneficiaries: Working youth/adults: the Singapore resident labour force was 2.4 million in 2022 Geographical scope: National
Monitoring and evaluation	SkillsFuture Singapore (SSG), the Ministry of Education's statutory board, works closely with the IHLs and private training providers to deliver a wide range of SkillsFuture programmes. Post-training surveys, including programme-specific surveys, are conducted with the trainees to monitor course quality and training outcomes, and collect data on indicators such as employment and retention rates, as well as graduates' wage outcomes.
Lessons learned	The national SkillsFuture movement has shown good progress. The Training Participation Rate for the labour force had increased from 35% in 2015 to 49.1% in 2022. There are plans to step up efforts to enhance the quality, accessibility and employment outcomes of lifelong learning. These include closely monitoring the feedback from trainees and outcomes on wages and employment, and undertaking a deeper analysis of the outcomes of training programmes to ensure that training remains responsive to the needs of industry, employers and workers.

V. Campus for Research Excellence and Technological Enterprise (CREATE)

Objectives and outcomes	Research at CREATE is highly interdisciplinary and addresses large and important problems. CREATE enables effective and coherent collaborations for challenges to be addressed at a scale that enables them to achieve greater impact, and to provide solutions and options both for Singapore and internationally.
Programme executor and funding	National Research Foundation
Programme description	CREATE was established by the National Research Foundation in 2006, as part of a strategy to increase the vibrancy and diversity of Singapore's R&D ecosystem. CREATE is an international research campus of institutional partnerships with leading academic institutions. Today, researchers from 9 partner universities – Massachusetts Institute of Technology (MIT), University of California Berkeley (UCB), University of Illinois Urbana-Champaign (UIUC), Cambridge University, ETH Zurich, Technical University of Munich (TUM), Centre National de la Recherche Scientifique (CNRS), Hebrew University of Jerusalem (HUJ), and Shanghai Jiao Tong University (SJTU) – are co-located in CREATE, and collaborate with Singapore's Autonomous Universities (AUs) – Nanyang Technological University (NTU) and The National University of Singapore (NUS) – on 14 interdisciplinary research programmes. By bringing together international research talent to work on projects of important scientific, societal and economic importance, CREATE represents a unique model for research collaboration.
Modalities/ resources	CREATE is working towards an evolved model of partnerships that encourages greater multilateral collaborations through thematic grant calls. It aims to promote research collaborations beyond the CREATE network by encouraging CREATE partner institutions to submit joint applications with principal investigators from other overseas universities.
Target beneficiary group/s	Target beneficiaries: Students, members of academia, higher education institutions, industry partners
Scale and scope	Number of beneficiaries: More than 100 Ph.D. and graduate students; more than 1,000 researchers; 9 overseas universities collaborating with Singapore local universities Geographical scope: National, institutional
Monitoring and evaluation	CREATE's research programmes are evaluated through a rigorous process involving independent international reviewers, an overarching review panel and the CREATE Scientific Advisory Board. All ongoing programmes are also reviewed by independent scientific advisory panels at least once every 18 months. The Governing Boards of each CREATE entity oversee the management of the programmes. CREATE is overseen by a Governing Council, which steers its vision and strategic intent, and guides CREATE's collaborative efforts and research directions that create synergies for high impact research through the portfolio of programmes that are aligned to national priorities.
Lessons learned	CREATE has facilitated collaborations at the institution level for interdisciplinary research in science and technology with strong societal dimensions.



South Africa



I. Primary School Reading Improvement Programme (PSRIP)

Objectives and outcomes	The PSRIP strives to improve subject advisers' and teachers' understanding of programme approaches, policy and assessments. The envisaged outcome is an improved quality of teaching and learning for reading.
Programme executor and funding	Department of Basic Education, Pretoria
Programme description	The PSRIP was developed to strengthen foundational reading and literacy skills for students in Grades 1–7 by providing training and support for department officials, school management teams and teachers. The programme instils international best practices in routines and methodologies, and offers a structured approach to reading instruction. The goal is to enhance teachers' ability to teach reading so that learners read more effectively.
Modalities/ resources	The PSRIP implements the Curriculum and Assessment Policy Statement (CAPS) effectively and develops learners' English language and literacy skills systematically, using routines and core methodologies to support the teaching of reading. The programme's main activities consist in the provision of resources (lesson plans, reading texts, videos); training in methodology, pedagogy and the use of the resources; and implementation support.
Target beneficiary group/s	Target beneficiaries: Teachers, school leaders, parents/caregivers Target education level for students: English First Additional Language, Grades 1–7 Specific target groups: Children with disabilities
Scale and scope	Number of beneficiaries: 37,067 teachers; 6,838 school leaders; 351 subject advisers Geographical scope: National, provincial, district
Monitoring and evaluation	The PSRIP is monitored and evaluated by the Department of Basic Education (DBE) and the National Education Collaboration Trust (NECT). The monitoring process includes real-time reporting, participant evaluations, monitoring reports, and analysis of pre and post-assessment outcomes for each training cycle. Additionally, internal quality assurance measures ensure that international best practices are observed in the teaching of reading.
Lessons learned	The lessons learned include the need to streamline teacher training and classroom implementation at the provincial/district level. Stakeholders are consulted throughout, from the conceptual design stage to monitoring and evaluation. The PSRIP includes ongoing review and feedback processes with programme beneficiaries and district officials. Data information management systems and cross-checking with stakeholders have been improved. Materials have been developed to align with CAPS policy, and processes to achieve milestones and deliverables have been undertaken. The programme also supports beneficiaries in incorporating changes, including revised curriculum delivery due to COVID-19 disruptions.

II. Department of Higher Education and Training (DHET) – Digital Transformation of TVET

Objectives and outcomes	The objectives of the programme are to enhance access to TVET colleges, improve communication and generally optimize student engagement.
Programme executor and funding	DHET; DBE; NECT Total amount of money dedicated: Connectivity: approx. USD 17,043,934; GIZ/DHET Digital transformation project: +/- USD 1,277,880; DHET capacity-building: amount unavailable at present
Programme description	The programme is in line with the White Paper for Post-School Education and Training (2013), which emphasizes the use of digital technologies to improve the capacity of the post-school education and training system. The programme focuses on improving connectivity; capacity-building in the use of learning management systems; digital skill training; and capacity-building in online and blended modes of teaching and learning, including remote learning.
Modalities/ resources	Launched in 2013, the SA Connect programme aims to create an inclusive information society and provide broadband access to underserved district municipalities. The DHET ensured that over 244 TVET college sites had high-speed connectivity by 2022, with all colleges encouraged to use a learning management system by the same year. Over 50% of TVET lecturing staff have received training in digital skills, and most educational websites have been zero-rated by telecommunications companies.
Target beneficiary group/s	Target beneficiaries: Students, teachers, college leaders Target education level for students: Post-school education and training college sector, particularly students but also lecturers (teachers) and management Specific target groups: Girls/women, low socio-economic status, population groups in rural areas, population groups in urban areas, minority groups (e.g. linguistic), migrant population groups, refugees/displaced population groups, children with disabilities
Scale and scope	Number of beneficiaries: 50,000 students at exit levels; 11,264 lecturers; 400 college leaders; 200 administrators. Geographical scope: National
Monitoring and evaluation	The Project Steering Committees play a vital role in overseeing project implementation. Project implementers report to them on a regular basis, with detailed quarterly and annual reports submitted to ensure accountability. In addition, project management uses various tools to monitor and evaluate the projects' progress, allowing timely corrective actions to be taken if necessary.
Lessons learned	Collaborations and partnerships among government departments are crucial to provide well-coordinated capacity-building for TVET lecturers and students. It is important to encourage collaborations and partnerships among various providers and stakeholders, to ensure coherence and avoid duplication of efforts. However, some TVET colleges located in deep rural areas face connectivity challenges and require further investments, including support from telecommunication companies, to improve network reception.

III. DBE – Remote and Digital Learning (RDL) Campaign

Objectives and outcomes	The education sector can better support learners, teachers and parents by offering supplementary learning and teaching resources, and providing care and support for teaching and learning resources aligned with the curriculum and built on existing RDL interventions and networks.
Programme executor and funding	Department of Basic Education (DBE); DHET; NECT. Total amount of money dedicated: ZAR 35 million (USD 1,933,044)
Programme description	The RDL Campaign seeks to address the quadruple challenges of digital inequality, systemic learning losses, system capacity constraints and dominant technology-centred models through effective implementation of learner-centred RDL models.
Modalities/ resources	The South African government has made all educational content broadcast on TV/radio available for free through websites and YouTube channels, and zero-rated content on partner websites has also become accessible at no cost. Support and resources (e.g. the 2Enable app, Matric live and MTN Online School) also became freely available to learners, teachers and parents, and Matric study guides were distributed digitally to provinces for Matric learners.
Target beneficiary group/s	<p>Target beneficiaries: Students, teachers, school leaders, parents/caregivers</p> <p>Target education level for students: Tswelopele: Grades R–11; foundation phase: Grades R/1–3; intermediate: Grades 4–6; senior: Grades 7–9; FET: Grades 10–11; Woza Matrics: Grade 12; further education and training (FET)</p> <p>Specific target groups: Girls/women, low socio-economic status, population groups in rural areas, population groups in urban areas, minority groups (e.g. linguistic)</p>
Scale and scope	<p>Number of beneficiaries: 1.2 million students (600,000 General Education and Training; 600,000 Further Education and Training); 50,000 teachers, including parents</p> <p>Geographical scope: National, provincial, district, local</p>
Monitoring and evaluation	The RDL Campaign management team monitored implementation progress and tracked targets regularly, holding management meetings with the 2Enable technical and implementation support provider for the Tswelopele and Woza Matrics platforms, and weekly meetings with NECT provincial managers to ensure effective communication and distribution of materials. 2Enable and the Broadcast Research Commission helped collect monthly platform analytics data to determine the platforms' reach and uptake, and the campaign management team consolidated the data.
Lessons learned	The RDL Campaign should be integrated into the national RDL strategy of the DBE in a systematic manner. Demand-side factors should be considered in the campaign's design to ensure relevance to learners, teachers and parents, since including their voices can improve programmatic outcomes. Additionally, the RDL Campaign needs to strengthen its supply-chain management and partnership-development systems, by better linking with NECT supply-chain and partner-development systems.

IV. DHET – Unfurling Post- School Education and Training (UPSET)

Objectives and outcomes	UPSET establishes articulation hubs in South Africa’s nine provinces/regions; sets an articulation implementation plan for each hub, public higher education institution and TVET college; promotes the joint (collaborative) development and delivery of Higher Certificates located in, and expanding, learning pathway opportunities; and tracks the progress of diverse transitioning learners following diverse pathways.
Programme executor and funding	South African Qualifications Authority (SAQA)
Programme description	The UPSET initiative, led by Durban University of Technology in partnership with SAQA, is funded by the DHET’s University Capacity Development Programme (UCDP). The project aims to collaborate with various organizations such as the Department of Higher Education and Training, Quality Councils (Umalusi, Council on Higher Education, Quality Council for Trades and Occupations), Sector Education and Training Authorities, and coordinating bodies such as Universities South Africa and the South African Public Colleges Organization, to improve capacity development in universities.
Modalities/ resources	The DHET has signed a memorandum of understanding with the United Nations Development Programme, funded by the Government of Japan and Toyota South Africa, with the objective of increasing the economic empowerment of vulnerable women and youth by providing them with skills relevant to the automotive industry. The ‘High Gear’ initiative provides TVET students with equitable access to high-quality, relevant training and improved employment opportunities.
Target beneficiary group/s	<p>Target beneficiaries: Students, teachers and graduates, and youth NEET</p> <p>Target education level for students: Post-school education and training, i.e. TVET and higher education</p> <p>Specific target groups: Girls/women, low socio-economic status, population groups in rural areas, population groups in urban areas, minority groups (e.g. linguistic), migrant population groups, refugees/displaced population groups, children with disabilities</p>
Scale and scope	<p>Number of beneficiaries: N/A</p> <p>Geographical scope: National</p>
Monitoring and evaluation	The programme is ongoing.
Lessons learned	The programme is ongoing.

V. DBE – Strengthening of the National Curriculum Statement

Objectives and outcomes	The Curriculum Strengthening initiative aims to achieve two overarching goals. First, it seeks to enhance the relevance of the knowledge, skills, character and values taught in the current curriculum, to ensure that learners are well-prepared for the rapidly changing world. Second, it aims to promote greater alignment across the education sector, with the ultimate goal of equipping learners with the necessary skills for life beyond school.
Programme executor and funding	DBE
Programme description	While there have been some improvements in learning outcomes in the past decade or so, there is still much work to be done to achieve quality education throughout the sector. Poor learning outcomes in the early years have been found to contribute to the high number of learners who leave basic education without the knowledge and skills necessary to succeed later in life – which, along with other structural factors, exacerbates youth unemployment. To address these challenges, the education sector plans to take deliberate action in five areas: curriculum, assessment, teaching, learning environment, and learning and teaching support material.
Modalities/ resources	The current South African schooling curriculum is predominantly focused on academic/theoretical learning. It does not cater adequately to vocational, technical and occupational learning. In an attempt to move away from these ideologies and improve the educational landscape, the DBE developed the concept of a ‘three-stream model’, which refers to multiple learning pathways for schooling within the academic, vocational and occupational streams in the context of the National Senior Certificate (NSC). The idea of multiple learning pathways give learners greater choices in pursuing the NSC, which is registered in the National Qualifications Framework and articulates with the post-school education and training system.
Target beneficiary group/s	<p>Target beneficiaries: Students, teachers, school leaders</p> <p>Target education level for students: Early childhood education to Grade 12</p> <p>Specific target groups: All learners enrolled in schools in South Africa</p>
Scale and scope	<p>Number of beneficiaries: 14,000,000 students; 460,000 teachers; 18,000 school leaders</p> <p>Geographical scope: National</p>
Monitoring and evaluation	A gradual implementation trajectory with feedback loops is suggested to enable stability while introducing changes across the five levers of the education system. A 20-year plan is proposed, with 2–3 years for planning, advocacy, alignment and system preparation, including pilots. Implementation and incremental changes are proposed for 8–12 years, with ongoing maintenance, monitoring, evaluation and revision for the remaining 5–7 years to prepare for the next 20 years.
Lessons learned	The following key lessons learned continue to inform revisions and updates. The curriculum is dynamic and cyclical by nature, and policy frameworks should be revised and updated accordingly, using effective change management and international best practices. Closer alignment between the intended, implemented, taught and assessed curriculum will ensure sustainable improvement in learning outcomes. Clear, simple terminology and design features, realistic timelines and adequate planning are needed to ensure that all stakeholders can understand and implement the plan without being overwhelmed by amendments. A conceptual progression of content, skills, attitudes and values is a critical lever for success. A clear link between skills and content knowledge is needed to develop competencies. Long-term short-memory (LTSM) is important for developing self-agency in learners. Finally, immediate and ongoing high-quality teacher training support is essential.

VI. University Capacity Development Programme (UCDP)

Objectives and outcomes	N/A
Programme executor and funding	DHET Total amount of money dedicated: N/A
Programme description	UCDP promotes an integrated approach to capacity development in universities across three focus areas: student success, staff development and curriculum development. It also encourages a collaborative approach to capacity development, enabling universities to work together and beyond South African borders to address common needs.
Modalities/ resources	The aim is to share knowledge and experience on education, research and skill development among member states by identifying each other's strengths in education and technology. Existing data in each state will be used, and a centralized coordination of knowledge development and planned collaborations will be established. Collaboration agreements will be reached in areas of common interest. A biennial or triennial education conference will be held to share research and study outcomes, involving practitioners and finding new pathways for knowledge generation. Planned collaborations will include activities related to mobility and internationalization.
Target beneficiary group/s	Target beneficiaries: Students, members of academia, higher education institutions Target education level for students: University education Specific target groups: N/A
Scale and scope	Number of beneficiaries: Students: as per the need in each of the 26 universities; teachers: – 725 lecturers have been appointed and supported by the DHET and the universities to become full-fledged academics (400 women and 325 men; 700 black and 25 white). Geographical scope: National, institutional
Monitoring and evaluation	There are ongoing visits to various institutions implementing the UCDP.
Lessons learned	Increased international partnerships strengthen capacity development.



Spain



I. Programme to promote the first cycle of early childhood education and care (ECEC)

Objectives and outcomes	The programme aims to increase participation in the first cycle of ECEC, especially in areas and among families with a lower percentage of schooling; 60,000 new quality and affordable public places for ECEC will be created, prioritizing rural areas and urban areas with the highest vulnerability index.
Programme executor and funding	Ministry of Education and Vocational Training (MEFP) Total amount of money dedicated: The total financial allocation is USD 713 million, broken down as follows: USD 213.56 million (2021); USD 354.67 million (2022); USD 144.76 million (2023).
Programme description	The programme promotes schooling in the first cycle of ECEC. Given the benefits of early schooling in terms of results, performance and permanence in the education system, the programme focuses on improving the availability, accessibility and affordability of a high-quality ECEC service in those areas presenting a greater number of people in vulnerable situations.
Modalities/ resources	The Education Sector Conference in Spain ensures coordination between the MEFP and the regional education authorities, and decides on educational programmes, execution deadlines and fund distribution. Once agreed upon, funds are transferred to the regions, which hire companies to build ECEC facilities. Funding criteria include the educational level of the population 25–64, net enrolment rates in ECEC, population dispersion and population aged 0–2.
Target beneficiary group/s	Target beneficiaries: Students, teachers, school leaders, parents/caregivers, administrative staff Target education level for students: First cycle of ECEC Specific target groups: Girls/women, low socio-economic status, population groups in rural areas, population groups in urban areas, minority groups (e.g. linguistic), migrant population groups, children with disabilities
Scale and scope	Number of beneficiaries: 60,000 students Geographical scope: National
Monitoring and evaluation	Regular meetings are held with the regions, both generally and bilaterally. The programme must be completed by the end of 2024. In March 2023, an interim report was prepared detailing progress on its development. Upon programme completion, the following documentation will be available: certification of completion for the newly created publicly owned places; certification of completion of construction and/reform/ rehabilitation and equipment for the new places; a national certification of the first cycle of ECEC centres with an initial certificate; control and conformity by the MEFP of the certifications of the Treasury interventions and executing ministries of the autonomous communities, as well as the delegated intervention and the provincial directorates of the MEFP for Ceuta and Melilla.
Lessons learned	Educational programmes that require the creation of infrastructures require an extended implementation period. The design must take into account possible dysfunctions in the delivery of materials and execution costs. When programmes are executed by several educational administrations, coordination is essential. For a new service to generate demand, a cultural change is sometimes necessary and takes time.

II. PROA+ programme

Objectives and outcomes	The programme aims to strengthen those schools with a higher percentage of students in vulnerable situations. Individual programme contracts/agreements will be signed with 3,000 educational centres, committing them to remaining in the programme for three years. The programme contract includes the actions to be carried out and the necessary resources to implement them. The programme aims to reduce early school leaving rates to 9% and improve the inclusiveness of the entire educational system.
Programme executor and funding	MEFP Total amount of money dedicated: The total financial allocation is USD 384.33 million, broken down as follows: USD 128.11 million (2021); USD 128.11 million (2022); USD 128.11 million (2023).
Programme description	Reducing early school leaving, improving the acquisition of key competencies and applying the pedagogical principles featured in the Spanish Education Law (LOMLOE) underpin this programme. In this sense, the programme's objectives are aligned with the principles of quality, equity and inclusion that guide the Spanish education system, as well as with European-level objectives for education and training in this decade.
Modalities/ resources	Schools participating in PROA+ sign a contract committing them to carry out Lever Activities, which influence structural elements and can bring about school-wide change. A catalogue of activities has been developed collaboratively, and schools can decide on the most appropriate ones. A strategic improvement plan is being developed over three years to improve inclusiveness, and all activities are evaluated for effectiveness. The goal is to change the institutional culture of the participating centres, leading to a systematic transformation of the Spanish educational system.
Target beneficiary group/s	<p>Target beneficiaries: Students, teachers, school leaders, parents/caregivers, administrative staff</p> <p>Target education level for students: ECEC, primary education, compulsory secondary education, baccalaureate, vocational training</p> <p>Specific target groups: Girls/women, low socio-economic status, population groups in rural areas, population groups in urban areas, minority groups (e.g. linguistic), migrant population groups, refugees/displaced population groups, children with disabilities, individuals with any kind of educational disadvantage</p>
Scale and scope	<p>Number of beneficiaries: 1.5 million students</p> <p>Geographical scope: National</p>
Monitoring and evaluation	The evaluation process involves an online platform that requires all schools to input data on various aspects, including academic results, vulnerable student identification and accountability. Experts analyse and process the data, and visit educational centres to evaluate activities and issue reports.
Lessons learned	Each educational centre has its own specific needs, and it takes time for the educational programmes to be fully internalized. Once this is achieved, implementation can be efficient and effective. It is important not to lose confidence in the programme's benefits because of initial difficulties.

III. Inclusive Education programme

Objectives and outcomes	The goals of this initiative are to mobilize resources to support schools, promote universal accessibility and design, encourage coordination between ordinary and special education centres, facilitate relationships in reception plans, and create specific protocols for supporting students in the first and second cycles of ECEC.
Programme executor and funding	Ministry of Education and Vocational Training Total amount of money dedicated: USD 40,465,528 (2022)
Programme description	The aim of this programme is to increase the provision and optimize the organization of specialized resources to cater to the diversity of students, promote early detection and intervention, and enhance the central role of families in the initial stages of the educational process.
Modalities/ resources	N/A
Target beneficiary group/s	Target beneficiaries: Students Target education level for students: ECEC and first cycle of primary education Specific target groups: Children with disabilities
Scale and scope	Number of beneficiaries: N/A Geographical scope: National
Monitoring and evaluation	Once the programme has been approved and the funds for its financing are distributed, the regions will send to the Ministry of Education and Vocational Training an initial report identifying the actions to be carried out and the timetable for their execution, the objectives to be achieved (number of actions and population benefited) and the financing granted. The ministry and the regions are committed to designating and maintaining a coordination structure for the implementation, support and monitoring of the programme, and to constitute a monitoring commission comprised of responsible persons appointed by the parties. The commission will meet by mutual agreement when necessary, and at least once every six months.
Lessons learned	N/A

IV. Plan for Digitization and Digital Competences of the Educational System (Plan #DigEdu)

Objectives and outcomes	This programme aims to develop a digital education ecosystem and improve the digital competencies of teachers, students and schools to achieve a successful, inclusive and high-quality digital transition.
Programme executor and funding	Ministry of Education and Vocational Training (national level), in coordination with regional administrations Total amount of money dedicated: EUR 1.297 million (USD 1.371 million) from the EU Recovery and Resilience Facility have been allocated for this investment (C19.I2), articulated through annual agreements with the regions.
Programme description	The National Plan for Digital Skills aims to identify the measures needed to ensure that all citizens have the tools to acquire and develop digital competencies. It features several lines of action, including the Plan for Digitization and Digital Competencies of the Educational System, also known as 'Plan #DigEdu', which was developed by the MEFP in cooperation with the Regional Education Authorities of the autonomous communities. The plan's aims to provide digital media to schools and students; bolster develop teachers' digital competencies through specific training programmes and digital educational resources; and develop advanced digital methodologies and skills.
Modalities/ resources	The #DigEdu action plan intends to improve digital education through four action lines: i) develop the digital competencies of students, teachers and schools; ii) digitize schools to enhance the availability of digital media; iii) create digital educational resources; and iv) promote advanced digital methodologies and skills. The Educational Resources for Online Learning website provides information on various resources for teachers, families and students.
Target beneficiary group/s	Target beneficiaries: Students, teachers, school leaders, parents/caregivers Target education level for students: Pre-university levels Specific target groups: No specific target groups are covered by the programme, as it is a national programme encompassing all schools.
Scale and scope	Over 4 million students now have access to high-speed broadband connectivity in schools, and 80% of Spain's 700,000 teachers are offered continuous professional development training to certify their digital competence. Additionally, 22,000 schools will have a School Digital Plan and connectivity. To bridge the digital divide, 500,000 connectivity devices and 300,000 portable devices will be provided to students from low-income families. Geographical scope: National
Monitoring and evaluation	The MEFP has a structure that collaborates with teams in the autonomous communities to support and monitor the implementation of the programme. The regions provide all the necessary data to ensure monitoring, evaluation and compliance with regulations, and underpin the preparation of reports under the operational agreements between the monitoring commission and the Spanish government.
Lessons learned	The success of the digitalization of education in Spain relies on several key factors: collaboration among all regions; the availability of equipment, teacher training and support; a digital plan in place in all schools; alignment with European initiatives; and the sharing of best practices.

V. National network of centres of excellence

Objectives and outcomes	Methodological and digital transformation of the centres' spaces and equipment Incorporation of applied disruptive technology Teacher training at state level Development of innovation and applied research projects, and networking
Programme executor and funding	MEFP and the autonomous communities Total amount of money dedicated: USD 52.80 million
Programme description	The programme focuses on promoting innovative ecosystems, new methodologies and the latest technologies at the service of vocational training. The creation of this new network is an important step towards consolidating the new model of vocational training connected to the different productive sectors, and based on applied research, sustainability and entrepreneurship.
Modalities/ resources	The schools and institutions in this programme will collaborate in detecting the productive sectors' needs, as well as revise the curricula of related training offers. They will maintain close collaboration with companies in their environment, business and trade union associations, training centres and third-sector entities, in order to become a driving force for innovation throughout the territory and promote internationalization. Vocational guidance shall aim to facilitate occupational integration and reintegration, upskilling and labour mobility.
Target beneficiary group/s	Target beneficiaries: Students, teachers, school leaders Target education level for students: Initial VET Specific target groups: Population groups in rural areas, population groups in urban areas
Scale of the programme	Number of beneficiaries: 45 educational centres in 2022 Geographical scope: National, provincial
Monitoring and evaluation	To justify the granting of subsidies, each centre must send a report certifying its compliance with the conditions imposed in the grant award and indicating the activities carried out and the results obtained.
Lessons learned	N/A

VI. DUAL VET

Objectives and outcomes	The main objectives of the DUAL VET programme are to help learners acquire professional competencies, understand the labour environment, develop an enterprising professional identity and acquire permanent skills, as well as to facilitate their insertion into the workforce. Participants acquire specialized competencies and gain awareness of the realities of the labour environment. Special attention is given to employment and entrepreneurial opportunities in rural areas and areas in demographic decline. The programme also provides an opportunity for participants to develop lifelong learning skills, adapt to changes in the productive or service sectors, and gain real-world experience.
Programme executor and funding	MEFP and the autonomous communities Total amount of money dedicated: USD 9,248,327
Programme description	DUAL VET intends to expand and entrench the dual nature of vocational training.
Modalities/ resources	<p>General dual vocational training:</p> <ul style="list-style-type: none"> - Should comprise between 25% and 35% of training duration - Up to 20% of learning outcomes should be achieved within the company - Has no contractual link with the company <p>Intensive dual vocational training:</p> <ul style="list-style-type: none"> - Should comprise upwards of 35% of training duration - More than 30% of learning outcomes should be achieved within the company - Is contractually bound
Target beneficiary group/s	<p>Target beneficiaries: Students</p> <p>Target education level for students: Initial and higher VET</p> <p>Specific target groups: Girls/women, low socio-economic status, population groups in rural areas, population groups in urban areas, minority groups (e.g. linguistic), migrant population groups, refugees/displaced population groups, children with disabilities</p>
Scale of the programme	<p>Number of beneficiaries: 37,841 students</p> <p>Geographical scope: National, provincial, district, local</p>
Monitoring and evaluation	The plan aims to increase the number of students studying dual VET and to incorporate companies, including small and medium-sized companies (SMEs) and micro-SMEs, into the VET ecosystem. The duration of the workplace training module in VET courses are being extended, and companies and entities involved in the VET system are engaging in increased cooperation.
Lessons learned	The programme is still being implemented.

VII. Applied research, innovation projects and knowledge transfer in VET

Objectives and outcomes	These projects test new formulas in response to the evolution experienced by families, sectors and professional profiles in terms of management and business organization, the requirements of emerging technical processes, the needs for methodological change to improve students' skill development and enhance their transition to the labour market, as well as meet the needs of professionals through science, technology, engineering, arts and mathematics training.
Programme executor and funding	MEFP Total amount of money dedicated: USD 251,777,698
Programme description	Innovation and applied research and knowledge transfer projects in vocational training have the capacity to generate, share and mobilize knowledge between educational centres, companies and socially useful entities, and apply it to the training context with the aim of adding value to the practices and developments of vocational training.
Modalities/ resources	The projects focus on methodological innovation promoting cross-modular project work and/or the incorporation of transversal competencies; interdepartmental collaboration; and other pedagogical innovations applied to vocational training, including the design of possible technical and structural adaptations of educational spaces to the new methodologies being developed.
Target beneficiary group/s	Target beneficiaries: Students, teachers, higher education institutions, industry partners Target education level for students: Initial and continuous vocational training
Scale and scope	Number of beneficiaries: N/A Geographical scope: National
Monitoring and evaluation	To facilitate monitoring and feedback, participants must maintain fluid and daily communication among themselves throughout the project, as well as develop joint face-to-face activities (such as visits or exchanges) to facilitate contact and learn about each other's productive and cultural environment. A final report shall be submitted at the end of the project. The selected projects are monitored by the General Secretariat for Vocational Training of the Ministry of Education and Vocational Training, in collaboration with the educational administrations of the autonomous communities.
Lessons learned	The programme is being implemented.



The Netherlands



I. Masterplan Basic Competencies

Objectives and outcomes	The Dutch government plans to improve education in the country by giving teachers more time and resources to develop their skills and curricula, and providing them with evidence-based teaching methods. The strategy includes activities to strengthen the connection between schools and the environment, improve monitoring and oversight of student progress, and provide schools with clearer guidelines on students' expected capabilities.
Programme executor and funding	Ministry of Education, Culture and Science Total amount of money dedicated: USD 1.06 billion (EUR 1 billion)
Programme description	National and international statistics show that Dutch learners' abilities in FLN are declining, which has led the Ministry of Education to initiate the Masterplan Basic Competencies. The masterplan focuses on improving FLN such as literacy, numeracy, digital competencies and citizenship. The programme will work on curriculum interventions, reforming teaching and learning materials, and creating professional development programmes.
Modalities/ resources	Curricula are being updated to specify what competencies students should possess after certain grades, including digital and citizenship competencies. Schools are encouraged to participate in monitoring research and to use verified IT solutions as student monitoring systems by 2025. Teacher unions and employers will grant teachers time and space to improve their skills through collective labour agreements. The government provides evidence-based tools to improve curricula, which will be supervised by the Education Inspectorate applying clear requirements for schools.
Target beneficiary group/s	Target beneficiaries: All K-12 students, teachers, school leaders, parents/caregivers and administrative staff Specific target groups: Low socio-economic status
Scale and scope	Number of beneficiaries: All K-12 learners and their teachers; roughly 1.8 million children Geographical scope: National
Monitoring and evaluation	Although the agreements with schools include evaluations at the school level, these have not yet been established. The effectiveness of the measures and interventions will be monitored through student performance, motivation and mental well-being, using verified student monitoring systems. The Ministry of Education aims to improve Dutch learners' scores in international statistics such as PISA, the Progress in International Reading Literacy Study, TIMSS, and the International Civic and Citizenship Education Study. The Ministry of Education and the Netherlands Initiative for Education Research (NRO) are launching a research programme to enhance and improve the use of educational materials.
Lessons learned	Schools are not the only drivers in improving FLN for learners: equally important is learners' environment outside school. The country promotes a language-rich environment by incorporating books and libraries in childcare and schools. To improve the usefulness of statistics, the government makes it easier for schools to submit statistics while also considering making the submission of certain statistics compulsory.

II. NPuls – Push for Digitalization in Education

Objectives and outcomes	Learners aged 16–99 must find education that fits their needs, both within their institution and outside. Teachers have the means to renew their education. Institutions can adapt to a changing labour market. Education is organized in a way that supports teachers. Teachers have easy access to digital materials. Learners are equipped with digital skills to meet the needs of the labour market. Through data monitoring, student guidance is in tune with the student’s needs.
Programme executor and funding	Ministry of Education, Culture and Science Total amount of money dedicated: USD 590 million (EUR 560 million)
Programme description	Npuls is a programme in which all VET institutions, research universities and universities of applied sciences in the Netherlands join forces to enable system transformation by improving the quality of education, increasing flexibility and improving the digital skills of teachers and learners (aged 16–99). Investments will be made in a joint IT infrastructure and a knowledge infrastructure for the sector. Educational systems will set up their own centres for teaching and learning, where teachers and their teams can go for advice and training on rethinking their teaching.
Modalities/ resources	All education institutions will set up their own centres for teaching and learning where teachers obtain advice about enhancing their education through digital solutions. The centres make training in digital skills available to teachers so that all students can benefit from all the possibilities achieved through digital education. In addition, investments will be made in a joint IT infrastructure and a knowledge infrastructure for the sector. It will soon be easier for learners to register for the education provided by all institutions and to find all study results in one place. Agreements with publishers and libraries will ensure that learners can also find all their learning resources in one place.
Target beneficiary group/s	Target beneficiaries: Students, teachers, school leaders Target education level for students: Learners 16–99 years
Scale and scope	Number of beneficiaries: Students: all aged 16–99; Teachers: all in mentioned institutions; all 113 public educational institutions, including 57 TVET institutions, 36 universities of applied sciences and 14 research universities Geographical scope: National
Monitoring and evaluation	N/A
Lessons learned	N/A

III. STAP

Objectives and outcomes	STAP aims to stimulate participation in lifelong learning by all adults, especially people with lower incomes. The government recently decided to discontinue the programme and to allocate the money differently.
Programme executor and funding	Ministry of Social Affairs and the Ministry of Education, Culture and Science, in cooperation with two governmental organizations: the Dutch Employee Insurance Agency (UWV) and the Education Implementation Service (DUO). Total amount of money dedicated: USD 215 million (EUR 200 million) per year
Programme description	Though STAP, every citizen can receive funding of EUR 1,000 per year to help pay for an educational programme. STAP aims to stimulate participation in lifelong learning. It replaces the previous tax deduction for educational costs, which incurred considerable 'deadweight loss' and less use among the poor because people had to pay upfront for their courses. Low-income people appear to derive more benefit from STAP, although it aims to reach even more people in low-income groups.
Modalities/resources	Each person can receive funding of EUR 1,000 per year. The programme has a limited budget of EUR 200 million per year; when the budget is depleted, applications must stop. STAP encourages people to participate in educational programmes for skilling, upskilling or reskilling.
Target beneficiary group/s	Target beneficiaries: Students, teachers, school leaders, parents/caregivers, administrative staff. Target education level for students: All levels, but there is an extra budget to help people with a maximum educational level of 4. Specific target groups: People with low socio-economic status. Although the funding is available to everyone, the objective is to reach people who did not avail themselves of the previously available tax deduction, as well as those who are less eager to participate in lifelong learning programmes, such as people with lower incomes, self-employed individuals and older workers.
Scale of the programme	Number of beneficiaries: 200,000 people per year (since the budget totals EUR 200 million per year and the funding is EUR 1,000 per person). Geographical scope: National
Monitoring and evaluation	The STAP programme is being evaluated and monitored financially, factually and technically, and with respect to the number of beneficiaries. It has been adjusted to prevent abuse funding by ill-intentioned training providers who, for example, raised the prices of relatively cheap courses up to the maximum budget.
Lessons learned	The programme generated great interest and every round of applications reached full capacity in just a matter of days. However, the Dutch government also found points for improvement, such as ensuring all trainers and courses meet programme conditions. Given concerns about the scope of funding possibilities, it will review the STAP-programme and look into possible other ways to stimulate lifelong learning and development.

IV. Merian Fund

Objectives and outcomes	N/A
Programme executor and funding	<p>The Merian Fund falls under the responsibility of the international portfolio holder of the Dutch Research Council (NWO) executive board. The WOTRO Science for Global Development Steering Group is responsible for the various calls.</p> <p>Total amount of money dedicated: USD 11.3 million (EUR 10.5 million)</p>
Programme description	<p>The fund promotes research collaboration with emerging science nations to address global challenges and contribute to the Sustainable Development Goals. Interdisciplinary research involving societal partners is prioritized, and international collaboration is crucial for tackling transnational issues. The Dutch Research Council invests equally with partner organizations, with each country funding their respective parts of the programme.</p>
Modalities/ resources	<p>A maximum of seven calls per year are published, with a maximum of EUR 1.5 million available for each call. The frequency and size of the programmes depend on the availability of funds at NWO and partner organizations. NWO and its partners jointly invest an equal amount in bilateral scientific collaboration. The Dutch part of the programme is funded by NWO, while the partner country funds its counterparts. The fund also collaborates with Brazil, China, India, Indonesia and South Africa, owing to the enormous growth of science in these countries. Cooperation takes place within the framework of bilateral agreements at the national level.</p>
Target beneficiary group/s	Target beneficiaries: Members of academia, higher education institutions, industry partners
Scale and scope	<p>Number of beneficiaries: N/A</p> <p>Geographical scope: International</p>
Monitoring and evaluation	N/A
Lessons learned	N/A



Türkiye



I. Creation of instructional videos for students with disabilities

Objectives and outcomes	This project resulted in the creation of 1,500 instructional videos to help students with disabilities with their education.
Programme executor and funding	Ministry of National Education, General Directorate of Special Education and Guidance Services
Programme description	During the Covid-19 pandemic, the Ministry of National Education developed 1,500 instructional videos to support the education of students with disabilities.
Modalities/ resources	The videos were created and posted on the Education Informatics Network (EBA) platform. State actors were involved in the process of production, so that no big budget was required to drive the programme.
Target beneficiary group/s	<p>Target beneficiaries: Students</p> <p>Target education level for students: All grade levels</p> <p>Specific target groups: Children with disabilities</p>
Scale and scope	<p>Number of beneficiaries: Approximately 600,000 students</p> <p>Geographical scope: National</p>
Monitoring and evaluation	Student and teacher feedback is gathered continuously.
Lessons learned	Instructional videos would be helpful for students with disabilities.

II. Audio library for students with visual impairments

Objectives and outcomes	With this programme, middle and high school students with visual impairments will have access to audio-described textbooks, which will help them to learn.
Programme executor and funding	General Directorate of Special Education and Guidance Services
Programme description	The Ministry of National Education has developed an audio library that offers audio-described textbooks to enhance the educational performance of middle and high school students with visual impairments.
Modalities/ resources	N/A
Target beneficiary group/s	<p>Target beneficiaries: Students</p> <p>Target education level for students: Primary school, third grade</p> <p>Specific target groups: Children with disabilities</p>
Scale and scope	<p>Number of beneficiaries: 3,115 middle and high school students with visual impairments</p> <p>Geographical scope: National level</p>
Monitoring and evaluation	Feedback from students is gathered on a regular basis.
Lessons learned	N/A

III. Remedial Programme in Primary Schools (IYEP)

Objectives and outcomes	The Remedial Programme in Primary Schools (IYEP) aims to ensure that all students who do not have special education diagnoses in the third grade attain the standard learning outcomes in reading, reading comprehension, writing skills, natural numbers and four operations. The programme targets the acquisition of basic skills in Turkish and mathematics.
Programme executor and funding	Ministry of National Education, DBE
Programme description	IYEP has been designed as a supportive programme for third-grade students in primary schools who do not have special education needs or diagnoses but were unable to successfully complete the Turkish and mathematics curriculum for a variety of reasons over the course of their previous educational and training.
Modalities/ resources	IYEP consists of six main components: curriculum, assessment and evaluation tools, system (e-school), materials, legislation and teacher training.
Target beneficiary group/s	<p>Target beneficiaries: Students</p> <p>Target education level for students: Primary school, third grade</p> <p>Specific target groups: Any child who does not have a disability, but has not acquired basic skills in mathematics and reading</p>
Scale and scope	<p>Number of beneficiaries: Approximately 1.3 million students in the third grade of primary school</p> <p>Geographical scope: National level</p>
Monitoring and evaluation	The IYEP module can be used to monitor each student's level at the start of the programme and at the end of the programme, making it possible to monitor students' performance. Monitoring is also carried out through school visits.
Lessons learned	IYEP has been implemented throughout the country since 2018/19 and is still being implemented.

IV. Digitalization of Mathematics Materials

Objectives and outcomes	The aim of this project is to provide equal educational opportunities and make the learning of mathematics accessible to all students, even those in schools with limited access to these 60 materials.
Programme executor and funding	Ministry of National Education, Directorate General for Basic Education
Programme description	The 'Digitalization of Mathematics Materials' project aims to change the perception of mathematics as a dry, abstract subject by emphasizing its practical, real-life applications. It provides students with hands-on materials such as tangrams, blocks, scales and weights to encourage their participation, and plans to digitize mathematics materials and make them available on an open educational resource platform called the 'Mathematics Platform' (mathematic.eba.gov.tr).
Modalities/ resources	Specialists in national education, primary school teachers and academics collaborated on developing the platform's content, including instructional videos and educational games. The videos demonstrate how to use the materials in the classroom, while the games incorporate them into an interactive and engaging learning experience. As the project progressed, it became apparent that a more engaging and accessible format was needed for the activities produced in the first two workshops. Therefore, a workshop with 50 participants (teachers, academics and education specialists) was held from 3 to 6 October 2022 to digitize the activities and create new interactive digital content based on the mathematics materials.
Target beneficiary group/s	The project aims to benefit students, teachers, school leaders, parents/caregivers, administrative staff and anyone else who can access the open educational resource. The target education level is basic education, from early childhood education to primary and middle school levels (pre-K to K-8). Specific target groups include girls/women, low socio-economic status, population groups in rural and urban areas, minority groups, migrant and refugee populations, children with disabilities, and others who may face limitations in accessing mathematics education resources.
Scale and scope	Number of beneficiaries: Approximately 12.5 million students; approximately 750,000 teachers Geographical scope: National
Monitoring and evaluation	Use of the website is regularly monitored by tracking the hit rate. However, as the project is ongoing and not all of the digital content has been published on the website to date, it is currently challenging to assess its impact. Nevertheless, data will be collected from schools regarding the website's usefulness in the classroom to determine its effectiveness at a later date.
Lessons learned	At the onset of the project, some of the teachers and education specialists may lack familiarity with digital content creation, making it crucial to provide proper training ahead of time. A well-planned training programme must therefore be established prior to the project's launch, with a clear roadmap to guide teachers and specialists towards achieving their objectives.

V. 'I am Special. I am in Education'

Objectives and outcomes	The goal is to support the education and career of students and youth with disabilities.
Programme executor and funding	Ministry of National Education, Directorate General for Special Education and Guidance Services
Programme description	The Ministry of National Education has created applications to give students with disabilities opportunities to undertake educational activities by themselves, as well as prepare them for the Public Personnel Selection Examination.
Modalities/ resources	Modalities include needs analysis, preparation of digital educational materials, development of the application and making the application accessible through a digital platform.
Target beneficiary group/s	Target beneficiaries: Students Target education level for students: Students with disabilities at all grade levels Specific target groups: Children with disabilities
Scale and scope	Number of beneficiaries: Approximately 600,000 students Geographical scope: National
Monitoring and evaluation	Feedback from the applications has been gathered in a regular basis.
Lessons learned	These applications help students with disabilities educate themselves.

VI. Digital Transformation in Higher Education

Objectives and outcomes	This project targets enhanced use of digital facilities in higher education to improve the quality and efficiency of education.
Programme executor and funding	Council of Higher Education
Programme description	The Digital Transformation Project in Higher Education aims to make significant contributions to Türkiye's educational processes during and beyond the COVID-19 pandemic. The project includes trainings and studies done in collaboration with universities and Council of Higher Education (YÖK)-CISCO Education since 2018.
Modalities/ resources	A compulsory 'Digital Literacy' course for students and a course on 'Learning and Teaching in Higher Education in the Age of Digital Transformation' to provide lecturers with in-service training on preparing digital course materials were offered in higher education institutions within the scope of the project'. In addition, the 'YÖK Virtual Laboratory Project' ensures that general chemistry and general physics courses offered by various university programmes, especially science and engineering faculties and vocational schools, are carried out through virtual laboratories.
Target beneficiary group/s	<p>Target beneficiaries: Students, teachers</p> <p>Target education level for students: Higher education</p> <p>Specific target groups: Low socio-economic status, population groups in rural areas, population groups in urban areas</p>
Scale and scope	<p>Number of beneficiaries: 60,000 students; 10,000 teachers</p> <p>Geographical scope: Provincial</p>
Monitoring and evaluation	The Council of Higher Education coordinate and regulate the programme. The number of students and teachers enrolled in the training is monitored.
Lessons learned	As this is an ongoing project, there is currently no official report evaluating the programme's outcomes.

VII. Development of Foreign Language Education, Turkish Presidency Investment Programme

Objectives and outcomes	This programme intends to improve the quality of foreign language education at the K–12 level.
Programme executor and funding	Ministry of National Education, Board of Education Total amount of money dedicated: TRY 50 million
Programme description	The overall goal of this project is to enhance the quality of language education at the K–12 level, including the teaching, learning and assessment of Turkish, English, German and other languages. The main expected outcomes include the development and delivery of professional development activities for language teachers, including conferences on best practices, and the design of digital language-learning materials.
Modalities/ resources	To promote the use of the Common European Framework of Reference for Languages (CEFR)/CV for the teaching, learning and assessment of multiple languages taught in Türkiye, the English version of the CEFR/CV was translated into Turkish, and a cascade teacher-training programme was developed. Within the scope of this programme, language teachers from different parts of Türkiye currently receive intensive training on how to use the CEFR/CV in their teaching and assessment practices. Furthermore, to disseminate best practices implemented in language classes across language teachers, conferences on best practices are organized, and relevant technical reports will be prepared.
Target beneficiary group/s	Target beneficiaries: Students, teachers, staff working at ministry headquarters Target education level for students: ISCED 1, 2, 3 Specific target groups: population groups in rural areas, population groups in urban areas
Scale and scope	Number of beneficiaries: 15 million students; 1 million teachers Geographical scope: National
Monitoring and evaluation	N/A
Lessons learned	N/A

VIII. 2232 A – International Fellowship for Outstanding Researchers Programme/2232 B – International Fellowship for Early-Stage Researchers Programme

Objectives and outcomes	The outputs of these programmes include preparing academic publications, developing patented products, establishing R&D laboratories, and training up to five graduate and doctoral students.
Programme executor and funding	Scientific and Technological Research Council of Türkiye (TÜBİTAK) Total amount of money dedicated: Approximately USD 45 million
Programme description	To contribute to projects 2232 A/2232 B, which will be executed in research fields of strategic importance to Türkiye within the scope of the programme, the following actions are planned: encourage qualified researchers/young researchers under the age of 40, particularly Turkish scientists, who have come to the fore with top-level scientific and/or technological achievements in their fields and have experience working in an international environment, to conduct their research in Türkiye; and help them pursue their work in leading state or foundation universities, research infrastructures deemed competent within the scope of Law No. 6550, public research institutes, private-sector companies with R&D, design centres or equity companies established in Türkiye's techno parks.
Modalities/resources	The programme will invite a maximum of five graduate students and post-doctoral researchers to join the research team in Turkey.
Target beneficiary group/s	Target education level for students: The 2232 A initiative targets researchers with a doctoral degree and at least four years of experience as assistant professors, team leaders or independent researchers in a university or public research centre abroad, or graduate researchers with six years of full-time research experience abroad and at least three years of work experience in the private sector. Initiative 2232 B, on the other hand, focuses on early-career researchers who have completed their doctoral degree within the past four years and have at least one year of post-doctoral experience abroad, or graduate researchers with four years of full-time work experience abroad and at least one year of work experience in the private sector.
Scale and scope	Number of beneficiaries: 160 members of academia (113 men and 47 women); 22 instructors (16 men and 6 women); 8 industry partners (7 men and 1 woman) Geographical scope: International
Monitoring and evaluation	Applications will be evaluated in three stages: eligibility check, scientific evaluation, information/document control. TÜBİTAK will transfer the monthly scholarships and family allowances to the applicant from the coordinator's account beginning on the starting date of the fellowship until the tenth day of each month within the framework of the budget and cash status.
Lessons learned	Such programmes were needed to reverse the brain drain. Researchers from abroad have contributed to strengthening the R&D ecosystem by obtaining jobs in Türkiye.



United Arab Emirates



I. UAE Storytime

Objectives and outcomes	UAE Storytime is an online programme that uses augmented reality (AR) to create an interactive literacy experience for young learners aged 4–11 across the United Arab Emirates (UAE) and globally. Hosted on the Ministry of Education’s YouTube channel, the programme was introduced in June 2020 during the Covid-19 pandemic to engage young learners in literacy and technology.
Programme executor and funding	Ministry of Education
Programme description	The study examines the impact of AR-enhanced content on reading engagement in national and global communities. UAE Storytime was introduced as an after-school activity to support distance learning during the pandemic and provide a fun educational tool for parents and children. The programme not only supported families, but also provided opportunities for active learning through AR technology, encouraging exploration and understanding of the real world.
Modalities/ resources	A cross-organizational team of local publishers, University of Cambridge authors, curriculum specialists and actors collaborated to develop an innovative and safe learning environment for children during the COVID-19 pandemic. Bilingual story time episodes were hosted in Arabic and English, featuring guest authors who read stories to an international online audience. The Ministry of Education worked with local UAE publisher Al Rawy and Cambridge University Press to select titles based on local and global contexts. Immersive AR technology was used to create personalized 3D objects to illustrate key concepts in each storyline and enhance understanding through interactive games.
Target beneficiary group/s	<p>Target beneficiaries: K-6 students, teachers, parents/caregivers</p> <p>Specific target groups: Girls/women, low socio-economic status, population groups in rural areas, population groups in urban areas, minority groups (e.g. linguistic), migrant population groups, refugees/displaced population groups, children with disabilities</p>
Scale and scope	<p>Number of beneficiaries: 1,563 students</p> <p>Geographical scope: National and global</p>
Monitoring and evaluation	The programme was monitored via viewer-engagement data (90,493 views across 20 countries) and parental surveys. Responses indicated that students engaged with the initiative. The majority of viewers (99%) stated that they scanned the QR codes to access the 3D objects, confirming that the objects were accessible and user-friendly. The results were presented internally to the University of Cambridge and on our social media platforms.
Lessons learned	The main challenge was the limited availability of compatible devices, as the objects were only functional on Apple devices and proved to be unreliable on Android devices. Future research should focus on developing cross-platform objects to enhance accessibility. On a positive note, the Ministry of Education has successfully introduced the programme at various events catering to both Arabic and English primary school students, where authors read stories aloud and the AR technology enhances the audience’s experience.

II. Arab Reading Challenge (ARC)

Objectives and outcomes	The Arab Reading Challenge (ARC) aims to increase awareness of reading's importance among students in the Arab world, helping them to develop self-learning skills and critical analytical thinking, broadening their perceptions and improving their cultural awareness from a young age. Additionally, the programme aims to build a network of emerging Arab readers and promote a sense of patriotism, Arabism and belonging to one nation.
Programme executor and funding	Mohammed Bin Rashid Al Maktoum Global Initiatives, Dubai, UAE
Programme description	The ARC is the largest-ever Arab knowledge initiative, which seeks to instil in young students the habit of reading Arabic-language literature. The annual challenge was launched during the 2015/16 academic year, initially inviting students from Grades 1 to 12 across the Arab region to participate before expanding in scope to include Arab students from all over the world. The challenge runs throughout the school year in staged qualifiers, beginning at class level and proceeding to school, country and regional levels, leading up to the crowning of the ARC Champion at the final ceremony in Dubai. With 22.27 million participants from 49 countries, the ARC model can be adopted as a global model to encourage and instil in students the habit of reading.
Modalities/ resources	N/A
Target beneficiary group/s	Target beneficiaries: Students in Grades 1–12, teachers, school leaders, parents/ caregivers
Scale and scope	Number of beneficiaries: 22.27 million students; 126,061 teachers; 92,583 participating schools Geographical scope: Global – reaching Arabic speakers in 49 countries, with a focus on Arab countries
Monitoring and evaluation	A comprehensive review is conducted every year and feedback from all country leads and participants is received. At the end of every feedback cycle, all participating country leads submit a full report. The ARC team revise the findings and reports, and enhance the programme accordingly. In addition, annual workshops are held for country leads in Dubai to review the results and plan the way forward.
Lessons learned	The ARC has evolved over different cycles, improving the judging process and methods of engagement. The programme has also expanded beyond Arab countries to include other countries where Arab students reside. In a recent development, a special award has been created to recognize the best participant, the best school and the best coordinator in non-Arab countries, to foster the growth of the programme beyond the Arab world.

III. Digital School Basic Literacy and Numeracy (BLN) Programme

Objectives and outcomes	The Digital School offers a two-three-month Digital School BLN programme aimed at providing FLN skills to students. After passing the basic exam, these students will enrol in an accelerated learning programme to help them recover from missed academic years. Once they successfully complete the accelerated learning programme, they will be able to join formal education at their respective grade levels.
Programme executor and funding	Human Aid and Development NGO (HAND), Lebanon Total amount of money dedicated: N/A
Programme description	Many students in rural areas and underserved communities miss a few years of education and many others did not have the chance to get any formal education before. This resulted in a very low level of foundational literacy and numeracy levels. Such levels are a showstopper for all these students to be able to continue their academic studies and does not allow these students to comprehend most of the related subjects they are supposed to study. The digital school developed the BLN programme aims to help students in underserved communities to acquire fundamental literacy and numeracy skills. This programme is delivered in English and Arabic and now is also developed in French and Spanish
Modalities/ resources	In collaboration with the implementation partner HAND, over 3,500 Syrian refugees in Lebanon were given a BLN test to ensure they had the necessary skills for formal education. A two-month BLN programme was designed to teach foundational skills to the 500 students who did not pass the test, with support from trained teachers and engagement in individual and group learning activities in dedicated classrooms. The programme also introduced the students to ICT literacy skills.
Target beneficiary group/s	Target beneficiaries: Students aged 10–15 (Grades 4–9) Specific target groups: Refugees/displaced population groups
Scale and scope	Number of beneficiaries: 500 students Geographical scope: District (by location of intervention, so this could be a city, village or district)
Monitoring and evaluation	To monitor progress, the BLN programme tracks students' performance through initial BLN tests taken before starting the programme, as well as observations made by teachers and educators during the programme. This feedback loop helps to improve the programme's efficacy and allows continuous improvement. At the end of the programme, a final BLN test is administered to measure progress. Currently, the BLN programme is being implemented with Syrian refugees in Lebanon, and initial results show a success rate of over 90%.
Lessons learned	Effective communication and the active engagement of students are essential to drive successful programmes that teach FLN skills. Involving students in individual and group learning activities at a school's premises can increase their engagement and desire to enrol in formal education, leading to improved learning outcomes.

IV. Mohammed Bin Rashid Smart Learning Programme

Objectives and outcomes	This programme aims to establish a unique learning environment in schools by introducing 'smart classes', in which students will utilize smart devices as a means of acquiring knowledge. The initiative aims to create a solid and integrated 'Smart Learning' initiative that actively involves teachers, students and parents to enhance the learning experience.
Programme executor and funding	Ministry of Education and UAE Telecommunications Regulatory Authority, in cooperation with the UAE Prime Minister's Office Total amount of money dedicated: USD 17.52 million
Programme description	The programme explores the relationship of AR-enhanced content with engagement in reading for pleasure across national and global communities.
Modalities/ resources	The Ministry of Education aims to enhance education in the UAE through several key components. First, the 'Emirati School Smart Learning Ecosystem' integrates various systems, such as the Almanhal Student Information System and WinjiGO, to provide a user-friendly experience. Second, the LMS Container seamlessly connects content and sub-components to maximize students' learning experiences. Third, intelligent systems are being developed to support 'Gifted and Talented' education and optimize students' development. Finally, the adaptive learning component consolidates acquired knowledge over an extended period to allow students to master their skills.
Target beneficiary group/s	Target beneficiaries: Students, teachers, school leaders, parents/caregivers, administrative staff Target education level for students: ISCED 0 (early childhood and pre-primary), ISCED 1 (primary), ISCED 2 (lower secondary), ISCED 3 (upper secondary) Specific target groups: Girls/women, low socio-economic status, population groups in rural areas, population groups in urban areas, minority groups (e.g. linguistic), children with disabilities
Scale and scope	Number of beneficiaries: 394,659 students; 29,075 teachers; 1,338 school leaders; 344,095 parents Geographical scope: National
Monitoring and evaluation	N/A
Lessons learned	To adopt the new way of learning effectively and sustainably, organizational change management is crucial. The ADKAR Change Model can simplify the process and guide leaders in identifying where individuals are in their change journey, helping them to move forward. However, leading change requires unique leadership knowledge that often conflicts with traditional management practices. Enhancing the Smart Learning Programme depends on change leaders who can manage the goal of increasing teachers' technical knowledge while considering their experience of change. To improve students' productivity in learning and encourage them to take responsibility for building 21 st -century skills, teachers need to change what and how they teach.

V. Madrasa Arabic eLearning Platform

Objectives and outcomes	The Madrasa eLearning platform aims to bridge the knowledge gap in the Arab world by removing barriers to educational resources and creating a new generation of qualified researchers, scientists, innovators and inventors. It provides quality education in science and mathematics, aligned with the latest international curriculum, and establishes the foundations of self-learning and methodology alongside traditional educational institutions.
Programme executor and funding	Mohammed Bin Rashid Al Maktoum Global Initiatives Total amount of money dedicated: USD 2.2 million per year (average over the past four years)
Programme description	Madrasa is a leading e-learning platform under the Mohammed bin Rashid Al Maktoum Global Initiative. It provides more than 6,700 high-quality Arabic-language educational video content for all subjects including mathematics, science and Arabic literacy. The platform is available for free to more than 50 million Arab students, wherever they are. Mathematics and science video lessons were recreated in Arabic based on Khan Academy lessons. Arabic literacy lessons, on the other hand, are an original product of the madrasa.org initiative.
Modalities/ resources	Strategies and programmatic interventions were designed to support the development of a high-quality, accessible e-learning platform for Arabic-speaking students around the world.
Target beneficiary group/s	Target beneficiaries: Students, teachers, parents/caregivers Target education level for students: K–12 Specific target groups: Low socio-economic status, population groups in rural areas, population groups in urban areas, minority groups (e.g. linguistic), refugees/displaced population groups
Scale and scope	Number of beneficiaries: 3.2 million student subscribers to the platform and more than 100 million lessons provided since October 2018 Geographical scope: Regional and global, for all Arabic-speaking students
Monitoring and evaluation	The website's video content is monitored and approved by subject-matter experts, with detailed user analysis provided by specific systems. Surveys have also been conducted among students and teachers to gather feedback and suggestions for new lessons. The process involves tracking and capturing results, and maintaining an open feedback channel with beneficiaries to improve the content's quality.
Lessons learned	To ensure Arabization, consider using the White Arabic language to ensure that all Arab students can use the platform.

VI. Data-gathering Programme for Higher Education Graduates

Objectives and outcomes	The programme provides a comprehensive, 360-degree evidence base to inform policy decisions on programmes and other interventions that support skill development in new graduates.
Programme executor and funding	Ministry of Education Total amount of money dedicated: The graduate destination surveys are funded by the ministry and all participating institutions. The resources are all in-house and a dollar amount has not been calculated. The employer survey is largely outsourced and costs about AED 1.0 million (USD 272,500).
Programme description	This is programme of survey-based evidence-gathering to identify graduate employment outcomes in the short and medium term, as well as assess graduates' skills from the perspective of employers and graduates.
Modalities/ resources	The programme consists of three surveys which have been benchmarked against international best practice. The surveys provide a considerable body of evidence to inform decisions for the Ministry of Education as the regulator, but also for individual institutions. The data are shared with participating institutions and other ministries to support the design of educational and employment-related interventions. They are also used in the Ministry of Education's university classification framework, which is an essential tool for monitoring institutional quality.
Target beneficiary group/s	Target beneficiaries: Students Target education level for students: Recent graduates of higher education institutions
Scale of the programme	Number of beneficiaries: Each destination survey targets approximately 26,000 graduates. The employer survey gathers skill satisfaction data on approximately 2,500 graduates. Geographical scope: National
Monitoring and evaluation	The destination survey was thoroughly reviewed by the Ministry of Education's Data Centre to check for reliability and validity. The department closely monitors survey response rates, both overall and for each institution. Call backs to monitor accuracy are undertaken from time to time.
Lessons learned	It is absolutely essential to take all possible steps to engage with stakeholders, minimize the burden on them of collecting the data and ensure follow-up to complete the loop.

VII. Private-sector Internships in Higher Education

Objectives and outcomes	The portal aims to encourage students to enter into internships with employers in the UAE who are market leaders in knowledge economy (KE) industrial sectors or innovative start-ups. Employers are either private-sector or government-owned entities active in KE sectors. All internships are high-quality, supervised and allow learning valuable new skills for the future.
Programme executor and funding	Ministry of Education Total amount of money dedicated: The portal was designed by a market-leading external provider which currently hosts the site under an annual contract totalling AED 100,000 (around USD 27,000).
Programme description	The Ministry of Education has developed an internships portal. The portal's first edition is dedicated to high-performing national students in sophomore, junior and senior years of study, and to scholarship students at international universities.
Modalities/ resources	Selecting the employers that will be invited to register on the portal is an essential feature of the proposition, since they are identified as market leaders in KE industrial sectors or are innovative start-ups. The Ministry of Education follows OECD guidance on KE industrial sectors. Employers are encouraged to offer internships that provide opportunities to learn the skills needed for graduate jobs. The quality standards applied by the ministry for internships are based on the Commission for Academic Accreditation.
Target beneficiary group/s	Target beneficiaries: National students in sophomore, junior and senior years in ministry-accredited higher education institutions; scholarship students at international universities Specific target groups: In its first edition, the beneficiaries are national students from the top ten UAE universities and international universities with a minimum GPA of 3.0. As the portal grows in scale and more internship opportunities are posted, it is hoped that the portal will be extended to all students.
Scale and scope	Number of beneficiaries: In its first edition, the eligible student base comprises approximately 12,000 national students, all of whom were invited to register on the portal; of these, approximately 40% registered. To date, some 130 employers have registered, offering approximately 1,000 internship opportunities. Geographical scope: National
Monitoring and evaluation	The portal is monitored for activity and quality. Several KPIs are monitored and targets have been established regarding the number of registered students, registered employers, opportunities/vacancies posted by employers and students offered internships. Regular surveys of students and employers are conducted to collect feedback.
Lessons learned	For potential users to engage with the portal, there has to be a compelling proposition. The portal needs to build scale quickly to be successful. Once a portal has been established, it needs to be developed and improved, with constant updates in both content and supporting materials.

VIII. Emirate Skills National Competition

Objectives and outcomes	The Emirates Skills National Competition provides young talents with a unique platform for showcasing their skills, competing with peers, and receiving recognition in their chosen discipline. It encourages continuous improvement and offers opportunities for selection in regional and international competitions as representatives of the UAE.
Programme executor and funding	Abu Dhabi Centre for Technical and Vocational Education and Training (ACTVET). The total financial allocation in 2023: AED 4,454,000 or USD 1,212,868.
Programme description	Under the patronage of Her Highness Sheikha Fatima Bint Mubarak, Chairwoman of the General Women's Union, President of the Supreme Council for Motherhood and Childhood, and Supreme Chairwoman of the Family Development Foundation, ACTVET organizes Emirates Skills National Competition on a yearly basis to appreciate Emirati talents, encourage and motivate young people to follow a career path based on technology. The Competition is in line with Abu Dhabi Economic Vision 2030 and constantly striving to raise awareness about the importance of TVET and skill development, as well as embracing "Skills of the Future" as important areas where the national TVET system needs to focus attention.
Modalities/ resources	Competitors are evaluated by a technical committee and international experts based on the World Skills organization's standards and judging criteria. In addition to the significant rewards in cash prizes, Emirates Skills provides the highest achievers with extensive applied training in the UAE and abroad through a network of experts, local public and private entities, industry partners, and TVET providers. Winners of the Emirates Skills National Competition are also eligible to compete in World Skills GCC and World Skills Competitions. To this end, the Advanced Training Programme includes workshops designed to enhance the competitors' skills up to the standard required to compete in the UAE National Team at the regional and international levels.
Target beneficiary group/s	<p>Target beneficiaries: Adolescents 16 – 22 years, school grades from 6 to 12, college and university undergraduates</p> <p>Specific target groups: Women, young people in rural and urban areas, disadvantaged youth, learners with disabilities</p>
Scale and scope	<p>Number of beneficiaries: Students: 332 competitors (females and males); Teachers: 168 Experts</p> <p>Geographical scope: National</p>
Monitoring and evaluation	International experts provide training and coaching to participants across different skill categories. Competitors demonstrate their abilities based on industry standards, evaluated through specialized software. The competition offers a platform for participants to showcase their talents, gain valuable experience, and learn from industry experts. It also serves as a means to identify areas for further workforce development and training.
Lessons learned	Two critical factors for the competition are experienced trainers and effective training. As a result, there has been a focus on improving training techniques, teaching methodologies, and upgrading test projects to align with real-life scenarios. Specialized sessions with world-class experts have also been introduced. Infrastructure plays a vital role in enabling competitors to participate in skills competitions. The Competition's infrastructure requirements have therefore been upgraded to meet the standards outlined in the World Skills Occupation Standard. This includes ensuring safety measures and providing specialized tools necessary for the competitions.



United Kingdom



I. Schools White Paper

Objectives and outcomes	<p>The Schools White Paper sets two ambitions for 2030:</p> <ol style="list-style-type: none"> 1) 90% of primary school children will achieve the expected standard in reading, writing and mathematics, and the percentage of children meeting the expected standard in the worst-performing areas will have increased by a third. 2) In secondary schools, the national General Certificate of Secondary Education average grade in both English language and mathematics will have increased from 4.5 in 2019 to 5.
Programme executor and funding	Department for Education
Programme description	<p>As described in the white paper, literacy and numeracy are the bedrock of a great education, unlocking the whole curriculum and turbocharging social mobility. They are essential tools that allow children to pursue further training and employment, and live fulfilled lives. They are the gateway to the broad and rich curriculum that children need.</p>
Modalities/ resources	<p>The objectives described above will be achieved through the following approaches:</p> <ul style="list-style-type: none"> - An excellent teacher for every child: by 2030, every child will be taught by an excellent teacher trained in the best-evidenced approaches; 500,000 teacher training and professional development opportunities will have been delivered by 2024, giving all teachers and school leaders access to world-class, evidence-based training and professional development at every stage of their career. - Specialist training will drive better literacy through a new National Professional Qualification for Leading Literacy; a new National Professional Qualification for Early Years Leadership; and up to GBP 180 million invested in the early years workforce, including training to support literacy and numeracy teaching. - 30k a year starting salaries will be offered to attract and retain excellent teachers, with additional incentives to work in the schools with the most need.
Target beneficiary group/s	<p>Target beneficiaries: Schools, teachers, pupils Target education level: Primary and secondary education</p>
Scale and scope	<p>Number of beneficiaries : N/A Geographical scope: National</p>
Monitoring and evaluation	<p>The Office for Standards in Education, Children’s Services and Skills (Ofsted) will inspect all initial teacher training providers by July 2024, and thereafter every three years.</p>
Lessons learned	N/A

II. Schools White Paper: Digital technology

Objectives and outcomes	The UK Department of Education will provide funding, infrastructure and technology for an effective system. We have delivered the biggest funding boost for schools in a decade and continue to deliver year-on-year increases to per pupil school funding in real terms. Every school in the country should have the right infrastructure to allow it to make the most of modern digital technology for its pupils, including the high-quality tools provided by England's flourishing EdTech market.
Programme executor and funding	Department for Education Total amount of money dedicated: We will invest an additional GBP 7 billion by 2024/25 compared to 2021/22 for the core schools' budget in England.
Programme description	Schools white paper: https://www.gov.uk/government/publications/opportunity-for-all-strong-schools-with-great-teachers-for-your-child
Modalities/resources	<p>We will work with commercial providers to accelerate gigabit-capable broadband rollout to enable all schools to have access to a high-speed connection by 2025.</p> <p>We will set out the core technology that we expect all schools to have in place by publishing new digital, data and technology standards so that teachers and pupils can be confident that technology will work in the classroom, and will invest up to GBP 150 million to upgrade schools which are the furthest from meeting our standards in priority areas.</p> <p>We will also establish a strong evidence base for effective use of technology and embed this evidence across our world-class school system, so that it will be easy for schools and families to use the best products at the right time.</p> <p>This will be delivered through the Education Technology Strategy, backed by GBP 10 million to support innovation and raise the bar in schools, colleges and universities across England.</p>
Target beneficiary group/s	Target beneficiaries: Pupils and students Target education level: Primary and secondary education
Scale of the programme	Geographical scope: Nationwide
Monitoring and evaluation	N/A
Lessons learned	N/A

III. Skills White Paper

Objectives and outcomes	This white paper sets out reforms to the further education and technical training system. Subject to parliamentary approval, the government intends to see many of these reforms implemented through future primary legislation. We will also consult on proposals where appropriate, in which case the final policy will take into account consultation responses.
Programme executor and funding	Department for Education Total amount of money dedicated: We have made available an extra GBP 1.6 billion for ages 16–19 education in 2024/25 compared with 2021/22. This is the biggest increase in 16–19 education funding in a decade and will help fund the additional students anticipated in the system, 40 extra hours per student and an affordable increase in funding rates per 16–19 student. We are investing GBP 125 million in the 2023/24 financial year, including increased funding for specific high value courses in engineering, manufacturing, construction and digital by increasing programme cost weightings to help institutions with the additional costs of recruiting and retaining teachers in these vocational areas.
Programme description	As outlined in the Skills white paper , the government set out its ambition for skill reform in the Skills for Jobs (January 2021) and Levelling up (February 2022) white papers. We are introducing key skill reforms that will provide a ladder of opportunity for young people and adults to attain good jobs and progress in their careers.
Modalities/ resources	Lifetime Skills Guarantee: We will provide a Lifelong Loan Entitlement, the equivalent of four years of post-18 education from 2025, and we will transform the funding system so that it is just as easy to obtain a loan for a higher technical course as for a full-length university degree. Wherever individuals are in their career, the Lifetime Skills Guarantee allows them to access the skills they need to succeed. Through our Lifetime Skills Guarantee, we will invest in top-quality provision, funding upgrades to further education colleges across the country and improving our already successful apprenticeships. Local skills improvement plans (LSIPs): The Department for Education has introduced LSIPs, which will provide an agreed set of actionable priorities that employers, providers and stakeholders in a local area can embrace to drive change. Plans will clearly articulate employers' skill needs, as well as the priority changes required in a local area to help ensure that post-16 technical education and training provision is more responsive and flexible in meeting local labour-market skill needs.
Target beneficiary group/s	Post-16, post-18
Scale and scope	Number of beneficiaries: N/A Geographical scope: National
Monitoring and evaluation	N/A
Lessons learned	N/A

IV. International Science Partnerships Fund (ISPF)

Objectives and outcomes	<p>ISPF is designed to: 1) deliver important research and innovation that can only be fully realized by working internationally; 2) tackle global challenges and develop future technologies, positioning UK researchers and innovators at the heart of global solutions; 3) enable groups of countries to collaborate in an agile way; and 4) strengthen the connections of the UK R&D community around the world.</p> <p>Collaboration under ISPF will give researchers and innovators access to global talent, large-scale facilities, research ecosystems and markets, to swiftly move forward ideas with greater maturity, applicability and commercialization opportunities. ISPF projects will be designed and delivered by a consortium of the UK's leading research and innovation bodies, which will work with their international partners to design programmes and promote their impact.</p>
Programme executor and funding	<p>Department for Science, Innovation and Technology. ISPF projects are designed and delivered by a consortium of the UK's leading research bodies, including UK Research and Innovation (UKRI) and the UK National Academies</p>
Programme description	<p>ISPF is part of the UK's commitment to prioritize strategic science partnerships. It will allow researchers and innovators around the world to collaborate with the UK, and help the UK and its partners deliver bigger, better science than one country can achieve alone. ISPF puts research and innovation at the heart of our international relationships, supporting UK researchers and innovators to work with peers around the world on the major themes of our time: planet, health, tech and talent.</p>
Modalities/ resources	<p>ISPF has four themes where the Department for Science, Innovation and Technology and its UK and international partners feel they can achieve the most tangible societal impact through interdisciplinary research and innovation. Partner organizations will establish their programmes under these four themes: Resilient Planet: leading the green industrial revolution to protect the planet; Healthy People, Animals and Plants: researching and innovating for secure and healthy populations; Transformative technologies: developing responsible technologies to secure our place in tomorrow's world; Tomorrow's talent: nurturing talent to drive inclusion, research and innovation.</p>
Target beneficiary group/s	<p>Target beneficiaries: Researchers and innovators</p>
Scale of the programme	<p>Geographical scope: International</p>
Monitoring and evaluation	<p>ISPF will be subject to ongoing monitoring and evaluation by the Department of Science, Innovation and Technology.</p>
Lessons learned	<p>N/A</p>



United States



I. Individuals with Disabilities Education Act (IDEA), Part C: Programme for Infants and Toddlers with Disabilities

Objectives and outcomes	The programme objectives are to enhance families' capacity to meet the developmental and learning needs of their infants and toddlers with disabilities, minimize developmental delays and reduce the need for later special education services for infants and toddlers with disabilities, and maximize the potential of individuals with disabilities.
Programme executor and funding	The Department of Education, Office of Special Education Programmes is responsible for administering the IDEA Part C programme. At the state level, a governor-appointed lead agency is responsible for overseeing the administration and implementation of the grant. Total amount of money dedicated: The fiscal year 2023 budget for IDEA Part C was USD 540 million.
Programme description	IDEA Part C provides grants to states to implement a state-wide, comprehensive, coordinated and interagency system that provides early intervention services to infants and toddlers with disabilities and their families.
Modalities/ resources	IDEA Part C provides individualized services to address the developmental needs of infants and toddlers, as identified by an Individualized Family Service Plan team. Services the state system must make available include assistive technology, audiology services, family training, counselling and home visits, health services, medical services, nursing services, nutrition services, occupational therapy, physical therapy, evaluation and assessment, mental health services, service coordination, social work, special instruction, speech-language pathology, transportation and vision services.
Target beneficiary group/s	Target beneficiaries: Students (infants/toddlers) and parents/caregivers Specific target groups: Children with disabilities
Scale of the programme	Number of beneficiaries: In 2020, 363,387 (3.2%) of all infants and toddlers nationally received IDEA services. (This number is lower than typically owing to the impact of the pandemic.) Geographical scope: National
Monitoring and evaluation	States submit an annual State Performance Plan/Annual Performance Plan (SPP/ APR) to the federal government, reporting on their compliance with or performance in implementing the law related to IDEA Part C. The U.S. Department of Education assesses the state's performance and shares the SPP/APR and determinations publicly. Additionally, states respond annually to an IDEA 618 data collection, and the Office of Special Education Programmes conducts site visits to selected states to monitor compliance.
Lessons learned	Lessons learned from the programme include the importance of considering the state context, recognizing the difference between system improvement and implementing specific interventions, prioritizing high-quality personnel, utilizing state-level data systems for monitoring and improvement, and involving families as partners in implementation.

II. National Educational Technology Plan (NETP)

Objectives and outcomes	N/A
Programme executor and funding	U.S. Department of Education Office of Educational Technology
Programme description	NETP is the lighthouse educational technology policy document for the United States. This document shares a vision for how schools and districts across the country can continue to use technology to improve equity and opportunity for all students. The document also addresses the infrastructure needed to support this vision. This document is available to the public.
Modalities/ resources	The NETP includes key ideas, recommendations and examples regarding technology-enabled learning, teaching and assessment, as well as the leadership and infrastructure needed to support this vision. The 2017 NETP discusses the need to provide greater equity of access to technology itself, and the 2024 NETP will continue to provide guidance on closing the digital access divide. The NETP further discusses how to close the digital design divide to ensure technology tools are accessible and supportive of learner variability and the digital use divide to ensure equity of access to transformational, active learning experiences enabled by technology.
Target beneficiary group/s	Target beneficiaries: Students, teachers, school leaders, administrative staff Target education level for students: The NETP focuses on elementary and secondary education. The 2017 NETP included a higher education supplement.
Scale and scope	Number of beneficiaries: N/A Geographical scope: National
Monitoring and evaluation	The U.S. Department of Education has limited authority and cannot enforce implementation of the NETP at state or local levels.
Lessons learned	N/A

III. Digital Equity Education Roundtables (DEER)

Objectives and outcomes	The DEER initiative aims to identify barriers that learner communities face in adopting reliable, high-speed internet and technology tools for learning, recommend strategies that leaders can leverage to navigate these barriers, amplify examples of solutions, and spur community action and commitment to close the digital divide.
Programme executor and funding	U.S. Department of Education Office of Educational Technology
Programme description	N/A
Modalities/resources	The DEER initiative has produced a publication identifying barriers and strategies related to digital equity in education. This publication is intended to inform state leaders developing digital equity plans in order to ensure that the needs and assets of the education sector are addressed. The DEER initiative publication, <i>Advancing Digital Equity for All</i> , discusses the need for digital inclusion strategies that address human-level adoption barriers, such as lack of access to information, technical support and digital skill-building opportunities, and the need to build public trust and collaboration.
Target beneficiary group/s	<p>Target beneficiaries: Students, teachers, school leaders, parents/caregivers, administrative staff</p> <p>Target education level for students: The DEER initiative addresses elementary, secondary, post-secondary and adult education.</p> <p>Specific target groups: Low socio-economic status, population groups in rural areas, population groups in urban areas, minority groups (e.g. linguistic), migrant population groups, refugees/displaced population groups, children with disabilities, others (e.g. indigenous groups)</p>
Scale and scope	<p>Number of beneficiaries: N/A</p> <p>Geographical scope: National</p>
Monitoring and evaluation	The U.S. Department of Education is not the administering agency for State Digital Equity Planning grants and cannot enforce implementation of the DEER Initiative's recommendations at state or local levels.
Timeline	The DEER initiative was launched in autumn 2021.
Programme status	Ongoing
Lessons learned	N/A

IV. Integrated Education and Training

Objectives and outcomes	N/A
Programme executor and funding	U.S. Department of Education Total amount of money dedicated: Funding for the U.S. adult education programme amounts to about USD 730 million annually.
Programme description	Adults who have not completed secondary schooling and adults who are not proficient in English must typically complete basic skills and English language instruction before they can access occupational training in the United States. Integrated education and training combines the two programmes and teaches basic skills and English in the context of careers, saving learners time and helping them advance in the labour market more quickly than if they had to complete basic skills/English language instruction and occupational training sequentially. There is also research evidence that this method of instruction is more effective in improving education and labour-market outcomes than the typical sequential method.
Modalities/ resources	Significantly increasing opportunities for integrated education and training is a major priority for the U.S. Department of Education in its adult education programme. It has invested millions of dollars in training and technical assistance to help the field of adult education develop curricula for integrated education and training.
Target beneficiary group/s	Target beneficiaries: Students, teachers Target education level for students: Adults who have not completed secondary schooling and adults who have completed secondary schooling but are not proficient in English Specific target groups: Low socio-economic status, refugees/displaced population groups
Scale and scope	Number of beneficiaries: Approximately 50,000 students and 400 teachers annually Geographical scope: National
Monitoring and evaluation	The U.S. Department of Education holds states accountable for the performance of adult education programmes by establishing targets for participants' learning gains, as measured by standardized assessments, secondary credential attainment, employment, retention in employment and median earnings. Local programmes report annually on their participants' success against these indicators of performance. Under some circumstances, poor performance can result in funding reductions to state and local programmes. Several integrated education and training programmes have been rigorously and independently evaluated, and found to be promising or effective.
Lessons learned	N/A

For more info on the G20 Indian Presidency:





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