



G20 INDONESIAN
PRESIDENCY
EDUCATION
WORKING GROUP

COMPENDIUM



RECOVER TOGETHER,
RECOVER STRONGER
THROUGH EDUCATION

SEPTEMBER 2022

Disclaimer

This compendium was prepared by the G20 Education Working Group and submitted to the G20 Education Ministers' meeting on 1 September 2022.

It has been referenced in the Chair's Summary issued by the Indonesian G20-presidency on 1 September 2022.

The examples in the tables were submitted by G20 countries in response to the surveys conducted by the Indonesian Presidency of the G20. They are neither representative nor exhaustive of the practices undertaken by G20 and invited countries. Some countries, especially federal countries, submitted more examples than others.

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 Indonesian Presidency of the G20 forum recognizes the importance of collective action among major advanced and emerging economies around the world to recover from the COVID-19 pandemic. Therefore, it has selected the theme of 'Recover together, recover stronger' to guide the direction of the 2022 forum's work.

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 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 Indonesian G20 Presidency in 2022, the invited countries are: Cambodia, the Netherlands, Rwanda, Singapore, Spain and the United Arab Emirates. Several international and regional organizations also participate, ensuring the forum represents a wide cross-section of countries globally.

Building on the legacy of previous G20 summits, and taking the new situation created by the COVID-19 pandemic into account, the Education Working Group under the Indonesian presidency has identified four priority areas that are part of the educational policy recovery and transformation of education: (i) Universal Quality Education and (ii) Digital Technology; (iii) Solidarity and Partnerships; and (iv) Future of Work. The focus on collaboration, expressed more broadly through the principles of solidarity and partnerships, carries particular resonance in Indonesia, where the concept of *gotong royong* (mutual assistance) represents 'notions of moral obligation and generalized reciprocity', has been an intrinsic feature of Indonesia's approach to development. Accordingly, the Government of Indonesia has put solidarity and partnerships at the core of its G20 Presidency education agenda.

This compendium presents the programmes submitted by countries in response to a survey that all G20 members and participating countries were invited to complete between February and July 2022. The survey responses were requested around the four G20 Education Working Group priority areas, and the results presented here illustrate promising practices shared by G20 countries that could guide other countries as they seek to make changes to their education systems. Assessed collectively, the survey results provide a broad understanding of the field, from which emerge implications for the present and the future.

In light of the many short and longer-term impacts of the pandemic on teachers, learners, and education systems, G20 countries may need to reflect on what worked well and what may need to be strengthened or transformed to achieve national and international commitments. The short-term impacts include abrupt changes in modalities of teaching and learning, loss of learning, and declines in well-being. Longer-term impacts on individuals include disruptions in lifelong learning journeys, economic losses, interruptions in career trajectories, disengagement from learning, and early school-leaving. Longer-term impacts on education systems include changing pedagogical methods, deepening the integration of digital technology into teaching and learning experiences, reforming curricula to strengthen digital skills and literacies, improving school sanitation measures, and increasing coordination between education and the world of work.

To mitigate these short- and long-term impacts, many G20 countries have implemented specific programmes to target pandemic-triggered declines in academic achievement, health and well-being. Many urgent programmes have themselves transformed into longer-lasting shifts in the structures – physical, pedagogical, financial, technological, operational – of education systems. The programmes presented in this Compendium are an illustration of this movement towards recovery and transformation of education. Given the relevance and transversality of the themes of solidarity and partnerships and digital technology in education systems today, these two priority areas are addressed with a distinct box in each programme table.

Outline of findings for G20 member countries and special invitees¹

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¹ At the time of writing, programme information had not been submitted by the following countries: Belize, Fiji, Senegal, Suriname.

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ARGENTINA



I. CONECTAR IGUALDAD

Program executor	Argentine Ministry of Education (priority responsibility) with 24 jurisdictional ministries of education.
Program description	This program is a federal digital inclusion policy that includes the distribution of educational and technological material and the deployment of connectivity actions.
Objectives and outcomes	This program seeks to reduce the digital, educational and social gaps throughout the country.
Modalities/ resources	CONECTAR IGUALDAD distributes to state-managed educational establishments, computers in one-to-one mode to all students. This program also provides a digital platform with open educational resources, created collaboratively by all the country's jurisdictions, and a system of virtual classrooms for teachers to prepare their classes online.
Target beneficiary group/s	Target beneficiaries: Students, teachers, principals, school staffs, parents Target education level: ISCED 2 (lower secondary), ISCED 3 (upper secondary) Specific target group: Linguistic minorities, rural areas
Scale of the program	Geographical scope: National Number of beneficiaries: For the first stage of the Program, it will achieve: - Netbooks for students/families: 745,725 - Netbooks for school use (teachers/administrative team): 31,483 Total amount of money dedicated to the program: N/A
Monitoring and evaluation	The distribution and use of technologies is monitored jointly with the 24 jurisdictions
Timeline	This program started on January 11 th , 2022.
Program status	Ongoing
Challenges and obstacles	- The distribution of equipment in the 1 to 1 modality - the provision of connectivity in all state-managed educational establishments throughout the national territory - reaching each school, due to the great dispersion and geographic accessibility that the country has
Role of digital technology	Level of importance: Essential Digital application utilization: It was necessary to develop a platform for loading and validating school enrollment, used by the members of the educational system. ICT tools utilization: A virtual classroom system is provided for teachers to prepare their classes.
Role of solidarity & partnership	Embodiment of partnership and collaboration: N/A Involvement of non-government institutions: N/A

II. PROG.R.ES.AR.

Program executor	The National Ministry of Education and the National Social Security Administration (ANSES), the 24 jurisdictions (provinces), and municipalities
Program description	The Program provides scholarships and learning environments for indigenous peoples, students with disabilities, trans population and refugees. Young scholarship recipients who are parents in a single-parent family can access ProgresAR up to 35 years of age.
Objectives and outcomes	The Support Program for Students of Argentina (PROG.R.ES.AR) was created to mitigate educational, social and economic inequalities that make it difficult for adolescents and young people from 18 to 24 years old to access and exercise the right to education.
Modalities/ resources	<p>ProgresAR Scholarships: Monthly Scholarship allocation for 12 months in Compulsory Education, Higher Education, Nursing, and Vocational Training and Work.</p> <p>Puntos ProgresAR (ProgresAR Points): A series of devices for dissemination, management and support to young people.</p> <p>Espacios ProgresAR (ProgresAR Spaces): Spaces to strengthen learning through tutorials, recreational activities, etc., with the aim of effectively guaranteeing the right to equal and quality education for all.</p> <p>“ProgresAR+”: Benefits, devices and opportunities offered to students who have been assigned the ProgresAR Scholarship, including: Tutorial System; Communicational Approach; Local articulation with national and jurisdictional Public Policies and formation of the ProgresAR+ Community.</p>
Target beneficiary group/s	<p>Target beneficiaries: Students</p> <p>Target education level: ISCED 3 (upper secondary), ISCED 4 (post-secondary and non-tertiary), ISCED 5 (short-cycle tertiary education), ISCED 6-8 (bachelor’s and above), others.</p> <p>Specific target group: Low socio-economic status</p>
Scale of the program	<p>Geographical scope: National</p> <p>Number of beneficiaries: 1.415.000 students in 2021</p> <p>Total amount of money dedicated to the program: \$37.718.000.000 Argentine pesos in 2021.</p>
Monitoring and evaluation	The Program has its own follow-up and monitoring team. Furthermore, it is periodically evaluated by the SIEMPRO (System of Information, Evaluation and Monitoring of Social Programs).
Timeline	This program started in 2014.
Program status	Ongoing
Challenges and obstacles	N/A
Role of digital technology	<p>Level of importance: Somewhat important</p> <p>Digital application utilization: Platform for student registration and certification. Communication with scholars through the platform and SMS messages.</p> <p>ICT tools utilization: N/A</p>
Role of solidarity & partnership	<p>Embodiment of partnership and collaboration: N/A</p> <p>Involvement of non-government institutions: N/A</p>

III. NATIONAL PROGRAM “VOLVÉ A LA ESCUELA” (“BACK TO SCHOOL”)

Program executor	National Ministry of Education together with the educational portfolios of the 24 jurisdictions.
Program description	The program integrates, supports and complements jurisdictional strategies. It articulates actions aimed at guaranteeing the continuity of learning pathways, with emphasis on secondary school students; It carries out actions for the reconnection and follow-up of the learning pathways of the young scholar of the PROGRESAR 16 and 17.
Objectives and outcomes	The objectives of the program are to recover the link between the school and the girls, boys, young people and adults that has been totally or partially interrupted; implement strategies to strengthen the teaching-learning processes for the fulfillment of compulsory schooling; and carry out follow-up actions for reconnected students to guarantee effective schooling.
Modalities/ resources	The implementation of the program is organized through annual work plans prepared by the jurisdictional teams, detailing the specific lines of action, the resources requested and the expected deadlines. The lines of action include: 1) identification and search; 2) relink, re-entry and permanence; and 3) institutionalization of learning.
Target beneficiary group/s	Target beneficiaries: Students Target education level: ISCED 0 (early childhood and pre-primary), ISCED 1 (primary), ISCED 2 (lower secondary), ISCED 3 (upper secondary). Specific target group: Low socio-economic status
Scale of the program	Geographical scope: National Number of beneficiaries: 500.000 students. Total amount of money dedicated to the program: Five billion Argentine pesos (\$5,000,000,000)
Monitoring and evaluation	Each of the 24 jurisdictions must present a quarterly progress report with qualitative and quantitative characteristics. The report model will be provided in due time by the national team of “Volvé a la Escuela”.
Timeline	The actions of the program in the territory began on January 1, 2022.
Program status	Ongoing
Challenges and obstacles	Many of the programs on which the “Volvé a la Escuela” proposal was based, were disjointed, due to limited jurisdictional capacity and, in general, to the will and specific situations of each school. One of the first remedial actions carried out by the Program offered the jurisdictions the necessary financial resources to reactivate and sustain their proposals in the territory.
Role of digital technology	Level of importance: Essential Digital application utilization: N/A ICT tools utilization: N/A
Role of solidarity & partnership	Embodiment of partnership and collaboration: N/A Involvement of non-government institutions: The Program enables jurisdictions to establish agreements with any governmental and non-governmental organizations to implement the “Volvé a la Escuela” in their territory. In every case, they need the approval of the national team.

IV. ARGENTINE PRESIDENCY 2022 OVER THE COMMUNITY OF LATIN AMERICA AND THE CARIBBEAN STATES (CELAC)

Program executor	Argentina's Ministry of Education is in charge of the educational track, with the technical and political assistance of the Ministry of Foreign Affairs, International Trade and Worship.
Program description	The CELAC is an intergovernmental mechanism for dialogue and political agreement created in 2010. Its membership includes the countries of Latin America and the Caribbean, with the commitment to advance and balance the political, economic, social and cultural unity and diversity of the more than 600 million inhabitants of Latin America and the Caribbean.
Objectives and outcomes	The Ministry of Education of Argentina leads the educational working group meetings during 2022. The Ministers of Latin America and the Caribbean are expected to reach a Declaration on Education.
Modalities/ resources	Modalities: Virtual drafting and working group's meetings. Duration: One year.
Target beneficiary group/s	Target beneficiaries: Other: educational policy makers. Target education level: ISCED 0 (early childhood and pre-primary), ISCED 1 (primary), ISCED 2 (lower secondary), ISCED 3 (upper secondary), ISCED 4 (post-secondary and non-tertiary), ISCED 5 (short-cycle tertiary education), ISCED 6-8 (bachelor's and above) Specific target group: Girls/women linguistic minorities, low socio-economic status, rural areas, linguistic minorities, migrant background.
Scale of the program	Geographical scope: Regional (Latin America and the Caribbean) Number of beneficiaries: It is a regional program, without any specific direct category rather than the policy makers. Total amount of money dedicated to the program: N/A
Monitoring and evaluation	The Ministerial Declaration will be sent to the Heads of State and Government of the CELAC 2022 and will be monitored and evaluated during the following Summits.
Timeline	This program started in January, 2022
Program status	Ongoing
Challenges and obstacles	The uncertainties caused by the COVID-19 pandemic during and after the meetings. Therefore, the consequences on the reopening schools procedures in each country are different and affect the commitments made by the 33 member States on education.
Role of digital technology	Level of importance: Essential Digital application utilization: N/A ICT tools utilization: N/A
Role of solidarity & partnership	Embodiment of partnership and collaboration: Since its launch in December 2011, CELAC has strengthened dialogue between all the countries of the region. CELAC constitutes the central voice of the region, promoting Latin America and the Caribbean on the global agenda. Involvement of non-government institutions: N/A

AUSTRALIA

I. JOBTRAINER

Program executor	The Australian Department of Employment and Workplace Relations Each State and Territory Training Authority
Program description	JobTrainer Fund provides free or low fee training for job seekers and young people, including school leavers, to upskill and reskill in areas of identified skills need. Any Australian wanting to enrol in a digital skill, aged care, disability care or childcare course, regardless of their age, employment status or prior qualifications, can also access a JobTrainer funded training place.
Objectives and outcomes	The fund aims to support around 463,000 additional training places, in both full qualifications and short courses. It also prioritises 33,800 training places to support aged care skills needs and 10,000 places for digital skills courses, to ensure a strong pipeline of qualified care workers and workers with digital skills.
Modalities/ resources	JobTrainer funding is available for specific courses based on an agreed list between the National Skills Commission and each State and Territory Government. Other than that, The Australian Government and the State and Territory Governments have partnered on a 50:50 investment basis to offer the JobTrainer Fund.
Target beneficiary group/s	Target beneficiaries: Students Target education level: ISCED 5 (short-cycle tertiary education) Specific target group: Linguistic minorities, rural areas, migrant background, girls/women, low socio-economic status, young people
Scale of the program	Geographical scope: National Number of beneficiaries: As at 31 January 2022, there have been over 327,000 enrolments in JobTrainer funded training places nationally. Total amount of money dedicated to the program: \$2 Billion AUD
Monitoring and evaluation	Each State and Territory Government is responsible for the implementation and delivery of JobTrainer funded training places in their jurisdiction. Under the terms of the JobTrainer Fund Schedule, State and Territory Governments report monthly to the Australian Government on the delivery of the Fund.
Timeline	This program started in October 2020.
Program status	Ongoing
Challenges and obstacles	To facilitate rapid roll-out and exercise some control over quality, the JobTrainer Fund required States and Territories to give preference to training providers that: a) had an existing government training contract in place; b) had a track record of delivering high quality training; c) had the qualification or skill set on scope of registration, and d) demonstrated capacity to commence delivery rapidly.
Role of digital technology	Level of importance: Essential Digital application utilization: The JobTrainer Fund prioritises 10,000 training places in digital skills courses to help Australia grow its digital workforce. ICT tools utilization: The MySkills website is the central point of information for JobTrainer funded courses that are offered within in jurisdiction.
Role of solidarity & partnership	Embodiment of partnership and collaboration: The JobTrainer Fund is a partnership between the Australian Government and State and Territory Governments, established under the JobTrainer Fund Schedule to the National Partnership for Streamlined Agreements. Involvement of non-government institutions: N/A

II. JOB-READY GRADUATES PACKAGE

Program executor	This package involves funding for all public universities in Australia.
Program description	This program will play a critical role in supporting Australia economic recovery by creating 30,000 new university places in 2021, increasing to 100,000 by 2030.
Objectives and outcomes	This program provides for 50,000 short course places in 2021 and 2022. The package will lift investment in regional university campuses, provide additional support for students in regional and remote Australia, and further develop skills essential to the labour market especially to assist in driving economic recovery from COVID-19.
Modalities/ resources	The Job-ready Graduates package continues the provision of over \$7 billion each year to support domestic higher education students. The JRG makes it cheaper for students to study in areas of national priority, while also providing funding to increase the number of subsidised places.
Target beneficiary group/s	Target beneficiaries: Students Target education level: N/A Specific target group: Rural areas
Scale of the program	Geographical scope: National Number of beneficiaries: The Job-ready Graduates package creates 30,000 new university places, increasing to 100,000 new places by 2030. The package also provides for 50,000 short course places in 2021 and 2022. Total amount of money dedicated to the program: Government university funding of \$18 billion (AUD) in 2020 will grow to \$20 billion (AUD) by 2024. In 2021 an additional \$1 billion (AUD) has been allocated to support the vital research activities of Australia's universities.
Monitoring and evaluation	The Government has agreed to review the implementation of the Job-ready Graduates program 18 months after its commencement (mid-2022).
Timeline	The majority of JRG measures commenced on 1 January 2021.
Program status	Ongoing
Challenges and obstacles	N/A
Role of digital technology	Level of importance: N/A Digital application utilization: The JRG package does not involve developing or utilising digital applications, but the cost of studying IT was reduced as part of the changes to student contributions. ICT tools utilization: N/A
Role of solidarity & partnership	Embodiment of partnership and collaboration: The National Priorities and Industry Linkage Fund (NPILF), introduced under the Job-ready Graduates package, will allocate block grants to universities to support engagement with industry to produce job-ready graduates. Involvement of non-government institutions: Funding is provided to Australian public universities so they can partner with industry to produce graduates with experience and skills relevant to workforce needs.

III. THE 2020 REVIEW OF THE DISABILITY STANDARDS FOR EDUCATION

Program executor	The Australian Department of Education
Program description	The Department of Education reviewed the Disability Standards for Education in 2020 and found the need to better inform students with disabilities (and their parents and carers) of their rights, and build awareness, capability and support schools and other education providers to meet their obligations and make reasonable adjustments for students with disabilities.
Objectives and outcomes	The Department of Education is working with disability and education peak bodies and education authorities to develop information products which will support students, their families, and educators/providers to understand and deliver those rights and obligations. The program also focuses on how to better embed accountability for meeting the Standards within the education system.
Modalities/ resources	The final report of the review made 13 recommendations which reflect four reform directions: 1) empowering and supporting students with disability and their families; 2) strengthening the knowledge and capability of educators and providers; 3) embedding accountability for the Standards throughout the education system; and 4) building awareness and capability in the early childhood education and care sector.
Target beneficiary group/s	Target beneficiaries: Students, teachers, principals Target education level: ISCED 0 (early childhood and pre-primary), ISCED 1 (primary), ISCED 2 (lower secondary), ISCED 3 (upper secondary) Specific target group: N/A
Scale of the program	Geographical scope: National Number of beneficiaries: Students: one in five school students have a disability; Parents: the parents of students with disability; Educators: all; Education providers: all Total amount of money dedicated to the program: Around \$2,000,000 AUD
Monitoring and evaluation	The Department of Education reviews the Standards on a five-year cycle.
Timeline	This work is cyclical. The next review will occur in 2025.
Program status	Ongoing
Challenges and obstacles	The key challenge is the need to consult with a wide range of stakeholders to inform decisions and build consensus throughout the implementation process.
Role of digital technology	Level of importance: N/A Digital application utilization: N/A ICT tools utilization: N/A
Role of solidarity & partnership	Embodiment of partnership and collaboration: N/A Involvement of non-government institutions: Implementation work is progressing in close consultation with disability and education peak bodies, and education stakeholders including non-government education providers.

IV. UNIVERSAL ACCESS NATIONAL PARTNERSHIP AGREEMENT (UANP) 2018-2021 AND PRESCHOOL REFORM AGREEMENT (PRA) 2022-2025

Program executor	Responsibility for implementation of the PRA is shared by the Australian Government and the States and Territories.
Program description	Since 2009, the Australian Government has provided a contribution to State and Territory Governments – who are responsible for the delivery of preschool in their jurisdictions – to support the delivery of preschool for 15 hours per week (600 hours per year) to children in the year before full time school.
Objectives and outcomes	Through the PRA, the Australian Government and States and Territories will work to continue to support the delivery of preschool for 15 hours per week to children in the year before full time school. UANP arrangements have been in place since 2009 and ended on 31 December 2021.
Modalities/ resources	Work has recently commenced on the development of reforms agreed to in the PRA that are aimed at improving preschool participation and maximising the benefits of the preschool year. These reforms require the development of new attendance and outcomes measures, which may necessitate development of systems to collect, analyse and report the required data.
Target beneficiary group/s	<p>Target beneficiaries: Students</p> <p>Target education level: ISCED 0 (early childhood and pre-primary)</p> <p>Specific target group: Low socio-economic status</p>
Scale of the program	<p>Geographical scope: National</p> <p>Number of beneficiaries: The UANP and PRA benefit more than 300,000 children and supports around 12,000 preschool services each year.</p> <p>Total amount of money dedicated to the program: Since 2018 the Australian Government delivered \$1.77 billion in funding to the States and Territories through the UANP. From 2022 to 2025 through the PRA the Australian Government has made \$1.84 billion of funding available to States and Territories.</p>
Monitoring and evaluation	In 2019, a review of the UANP was undertaken. A copy of the review can be found at UANP Review: Final Review Report - Department of Education, Skills and Employment, Australian Government (des.gov.au) . Each year under the UANP and the PRA States and Territories are assessed against a set of agreed performance indicators. Achievement against these performance indicators is linked to the receipt of a proportion of Commonwealth funding available for any given program year.
Timeline	Preschool funding arrangements have been in place since 2009. The UANP began in 2018 running until the end of 2021. The PRA provides funding from 2022 to the end of 2025.
Program status	Ongoing
Challenges and obstacles	Anticipated challenges include the implementation of reforms and costs associated with any changes to existing systems or new systems.
Role of digital technology	<p>Level of importance: Somewhat important</p> <p>Digital application utilization: As reform work progresses, development or utilizing digital applications to deliver reforms could be considered.</p> <p>ICT tools utilization: The reforms require the development of new attendance and outcomes measures, which may necessitate development of systems to collect, analyse and report the required data.</p>
Role of solidarity & partnership	<p>Embodiment of partnership and collaboration: Through the PRA the Australian Government and States and Territories work collaboratively to lift preschool enrolments and attendance and maximise the benefits of preschool.</p> <p>Involvement of non-government institutions: The Australian Government consulted with the preschool sector, including representatives from preschools, Child Care Subsidy approved providers, and the Catholic and Independent schools' sectors.</p>

V. SKILLS FOR EDUCATION AND EMPLOYMENT (SEE)

Program executor	The Department of Employment and Workplace Relations is responsible for the management of the SEE program.
Program description	SEE is a cost-free program specialising in adult language, literacy, numeracy and digital skills, helping prepare job seekers for employment or further study by addressing basic gaps in reading, writing, maths and digital literacy.
Objectives and outcomes	The program improves people's communication skills, and confidence, supporting better community engagement and strong attachment to the workforce (to ensure more Australians could get help to improve their foundation skills).
Modalities/ resources	The SEE program is delivered by a national network of registered training organisations, with training delivered flexibly through full-time or part-time hours, via face-to-face, distance, or mixed-mode training. The training courses may be foundation-skill focused, concentrating on language, literacy, numeracy or digital literacy.
Target beneficiary group/s	<p>Target beneficiaries: Students</p> <p>Target education level: ISCED 0 (early childhood and pre-primary), ISCED 1 (primary), ISCED 4 (post-secondary and non-tertiary).</p> <p>Specific target group: Linguistic minorities</p>
Scale of the program	<p>Geographical scope: National</p> <p>Number of beneficiaries: In 2020-21, the SEE program assisted 25,378 job seekers.</p> <p>Total amount of money dedicated to the program: The SEE appropriation over the forward years is: 2021-22 - \$116,715,000; 2022-23 - \$125,048,000; 2023-24 - \$131,704,000; 2024-25 - \$139,705,000</p>
Monitoring and evaluation	The SEE program has in place a number of measures in its current contract to support outcomes, including: a) Key Performance Indicators; b) Compliance monitoring monthly by State and Territory contract managers to support quality service delivery; c) Risk assessments (undertaken by State and Territory contract managers) to identify potential risks and treatments; and d) An independent Quality Assurance Provider to review assessments, course material and training delivery
Timeline	The SEE program has been operating since 2002.
Program status	Ongoing
Challenges and obstacles	The challenges for people with language, literacy and numeracy deficiencies are in identifying the problem and overcoming the associated stigma. A further challenge is convincing the individual and interested parties (for example Employment Service Providers) to invest the time in developing their foundational skills to help them gain better employment or move onto further training.
Role of digital technology	<p>Level of importance: Somewhat important</p> <p>Digital application utilization: N/A</p> <p>ICT tools utilization: N/A</p>
Role of solidarity & partnership	<p>Embodiment of partnership and collaboration: N/A</p> <p>Involvement of non-government institutions: The program is delivered by a national network of 20 registered training organisations, contracted by the Department of Employment and Workplace Relations which bear primary responsibility for its student outcomes.</p>

BRAZIL

I. FEDERAL NETWORK OF PROFESSIONAL, SCIENTIFIC AND TECHNOLOGICAL EDUCATION (REDE FEDERAL DE EPCT)

Program executor	Ministry of Education, involving the 64 institutions of the EPCT Federal Network.
Program description	This program provides funding and governance for the EPCT Federal Network, a network of institutions which offer professional and technological education, in all its levels and modalities, training and qualifying citizens with a perspective on professional performance in different sectors of the economy, with emphasis on local, regional and national socioeconomic development.
Objectives and outcomes	This program aims to maximize the value of public management and to balance the accounts and the resources available to support the EPCT Federal Network.
Modalities/ resources	The program is based on 5 strategic pillars: 1) Strengthening the Management of the Institutions of the EPCT Federal Network; 2) Supporting projects within the EnergIF Program (i.e. Renewable Energies and Energy Efficiency); 3) Supporting Maker Culture and Innovation spaces (i.e. prototyping labs, STEAM integration, Maker training and qualification); 4) Training and Valorization of the Professionals of the Federal Network EPCT; and 5) Resources and educational support environments to reduce school dropout.
Target beneficiary group/s	Target beneficiaries: Students, teachers, principals, parents/caregivers, school staffs, community/partnerships Target education level: ISCED 1 to 6-8 Specific target group: N/A
Scale of the program	Geographical scope: Nationwide. The coverage area served by the Network's institutions affects 584 Brazilian municipalities. Number of beneficiaries: in 2020, there were 1,462,519 enrollments, 44,522 teachers, and 35,054 administrative technicians. Total amount of money dedicated to the program: In 2021, MEC invested BRL 121,078,097.00 in the program's initiatives.
Monitoring and evaluation	The management indicators are annually tracked by means of the Nilo Peçanha Platform, which can be accessed at http://plataformanilopecanha.mec.gov.br/2021.html
Timeline	This program started in 2021
Program status	Ongoing
Challenges and obstacles	N/A
Role of digital technology	Level of importance: Essential Digital application utilization: The program relies on computer systems and support technologies, such as the 'Aprenda Mais Platform' (https://aprendamais.mec.gov.br/). the server qualification platform 'PlaforEdu', the educational repository Proedu (http://proedu.mp.br/). ICT tools utilization: The Network institutions have the required computational tools. The RNP offers conference facilities, the Eduplay video portal and digital repository, and Moodle platforms.
Role of solidarity & partnership	Embodiment of partnership and collaboration: The Program works directly with 41 of the 64 institutions of the Network. Under the Ministry of Education, the Secretariat for Professional and Technological Education (Setec/MEC) is responsible for planning and developing the Network, including ensuring appropriate Budget and Financial availability. Involvement of non-government institutions: N/A

II. LABORATORY OF CREATIVITY AND INNOVATION FOR BASIC EDUCATION (LABCRIE)

Program executor	Federal University of Mato Grosso do Sul, State Departments of Education and Department of Education of the Federal District.
Program description	This program provides 27 Laboratories of Creativity and Innovation for Basic Education, one in each of the 26 Brazilian states and in the Federal District, to promote the development of teachers and managers for the pedagogical use of technologies in order to meet the demands of the current educational context.
Objectives and outcomes	The laboratories will help to foster innovation and educational technology for the 26 states and the Federal District through dynamic spaces dedicated to continuing education, equipped with cutting-edge resources. These efforts will support Goals 2, 3, 10 and 16 of the National Plan for Education.
Modalities/ resources	Teacher development is carried out through: a) Listening to previous knowledge and experiences of the participants; b) Collective construction about the topic, supported by the mediator and collaboration resources; c) Experimentation/planning of teaching activities based on the theme; d) Sharing of materials among participants/self-assessment and peer assessment strategies/reflection; and e) Space for recording new syntheses and re-elaborations.
Target beneficiary group/s	Target beneficiaries: Teachers, principals Target education level: ISCED 1 and 2 Specific target group: N/A
Scale of the program	Geographical scope: 1 LabCreate in each of the 26 states and the Federal District Number of beneficiaries: - 638,974 teachers from the state network - 28,853 state directors Total amount of money dedicated to the program: BRL 17,000,000.00
Monitoring and evaluation	N/A
Timeline	This program started in March 2022.
Program status	Ongoing The resource was transferred to the university that prepared the bidding process and is installing the equipment in the states.
Challenges and obstacles	N/A
Role of digital technology	Level of importance: Essential Digital application utilization: N/A ICT tools utilization: LabCrie utilizes multiple ICT tools, such as Multimedia projectors, notebooks, laser printer, CNC Laser Router, Microphone, Sound Box, Projection Screen, Wireless Router, Camera, Tablets and Tripod.
Role of solidarity & partnership	Embodiment of partnership and collaboration: The program collaborates with Federal Universities to transfer resources Involvement of non-government institutions: N/A

III. EDUCATION AND FAMILY

Program executor	Ministry of Education
Program description	This program aims to foster and improve family participation in students' school life, focusing on four strategic actions: financial support to schools, development projects for teachers and families, the strengthening of the School Board and broader access to the Clique Escola app.
Objectives and outcomes	To foster the family's participation in the student's school life and in the construction of their life project, focusing on the process of reflection on what each student wants to be in the future and on the planning of actions to build that future.
Modalities/ resources	The strategic actions of the Education and Family Program include: a) PDDE Education and Family: transfer of financial resources to the schools selected by the Program to enable the execution of the Action Plan; b) Development Projects: carrying out permanent and constant processes for the improvement of knowledge, - School Board: implementation of activities to strengthen the School Board; and c) Clique Escola: mobile application that aims to speed up and democratize access for families and education professionals to educational, infrastructure and financial information about the school.
Target beneficiary group/s	Target beneficiaries: Students, teachers, principals, parents/caregivers, school staffs Target education level: ISCED 1 and 2 Specific target group: Low socio-economic status
Scale of the program	Geographical scope: Nationwide Number of beneficiaries: Family members: 634,782; Students: 878,039; Education Professionals: 101,176 Total amount of money dedicated to the program: In 2021: BRL 12,748,000.00; In 2022: BRL 40,472,337.00
Monitoring and evaluation	After executing the Action Plans, the schools inform the National Secretariat of Basic Education. In addition, there is a School Counselor in each of the schools who is responsible for monitoring all the planning and execution of actions.
Timeline	The Education and Family Program started on August 2, 2021, when it was established by Ordinance No. 571/2021.
Program status	Ongoing. The Education and Family Program is continuous and criteria are annually established for the selection of eligible schools to prepare and submit Action Plans for the Program.
Challenges and obstacles	The expansion of financial resources to serve a greater number of schools.
Role of digital technology	Level of importance: Essential Digital application utilization: The Clique Escola aims to streamline and democratize access for families and education professionals to educational, infrastructure and financial information about the school. ICT tools utilization: In addition to Click Escola, the Education and Family Program uses the Interactive PDDE System for schools to prepare and send their Action Plans.
Role of solidarity & partnership	Embodiment of partnership and collaboration: N/A Involvement of non-government institutions: N/A

IV. EDUCA+ EDUCATION FOCUSED ON LEARNING FOR THE WORLD 4.0

Program executor	Federal Institute of Education, Science and Technology of Minas Gerais (IFMG); National Service of Industrial Learning (SENAI); Steinbeis Sibe do Brasil
Program description	Education for World 4.0 changes the way learning takes place, enhancing “learning by doing” and the development of creative socioemotional skills. It aligns a well-defined strategic pedagogical planning and teacher training.
Objectives and outcomes	This program seeks to develop the strategic plan, the training of education professionals (teachers, technicians, and managers), and invest in institutions dedicated to professional and technological education for the World 4.0.
Modalities/ resources	The first stage of the project aims to propose a Strategic Plan for Education for the World 4.0. The second stage will aim at training education professionals and developing solutions/practices in Education for the World 4.0. A Latu Senu Post-graduate course in Digital Education is being developed to upgrade professional skills for the use of digital technologies in professional and technological education. And the 4.0 Workshops for problem-based learning (extracurricular workshops for technical high school, undergraduate and graduate students) aim at building solutions using technologies such as machine learning, 3D modeling, virtual reality, robotics, and applications for mobile devices.
Target beneficiary group/s	Target beneficiaries: Students, teachers, principals, school staffs, productive sector partners Target education level: ISCED 3 to 6-8 Specific target group: N/A
Scale of the program	Geographical scope: Nationwide Number of beneficiaries: 1700 Education professionals and 200 Brazilian professional and technological education institutions. Total amount of money dedicated to the program: BRL 4,719,818.00
Monitoring and evaluation	The program is monthly followed up by an inter-institutional committee composed of professionals from MEC and IFMG. The ordinary meetings are held every two months.
Timeline	This program started in 2021 and will continue for 30 months.
Program status	Ongoing. The Strategic Plan of Education for the World 4.0 is under development with the institutions of the EPCT Federal Network and the State Networks. The Professional Qualification Program in Innovation Management and the Latu Senu Post-Graduation in Digital Education started in April 2022.
Challenges and obstacles	N/A
Role of digital technology	Level of importance: Essential Digital application utilization: Education professionals are expected to plan and implement solutions in Education for the World 4.0 using or developing applications, virtual environments and 3D printers, for example. ICT tools utilization: The attendees of the Professional Qualification Program in Innovation Management and of the Latu Senu Post-graduation in Digital Education must have their own devices for work (cell phone, laptop, computer) and Internet access (at home or at work).

Role of solidarity & partnership

Embodiment of partnership and collaboration: The partners for the development of this initiative are: Federal Institute of Education, Science and Technology of Minas Gerais (IFMG); Federal Institute of Education, Science and Technology of Espírito Santo (IFES); Foundation for Support to the Development of Extension, Research, Vocational and Technological Education (FADEMA); National Service of Industrial Learning (SENAI) Steinbeis Sibe do Brasil, <http://www.steinbeis-sibe.com.br/inscricoes-imp-ifmg-2101/>
Involvement of non-government institutions: N/A

V. PROFESSIONAL EDUCATION FOR GREEN ECONOMIC DEVELOPMENT AND EMPLOYMENT

Program executor

GLZ - German International Cooperation Development agency; Ministry of Education - MEC

Program description

The Project seeks to improve the employability conditions of graduates of professional education courses in sustainable sectors of the Brazilian economy. The Project will contribute to the implementation of multiple MEC programs and strategies, as well as programs from other ministries.

Objectives and outcomes

This program seeks to improve the employability conditions of graduates of professional education courses in sustainable sectors of the Brazilian economy which involves the planning, offering and execution of professional training, involving professional qualification courses and technical courses, in the areas of Bioeconomy, Circular Economy, Digitalization and Renewable Energy.

Modalities/ resources

The project will include the following: a) demand-based vocational education courses in sustainability sectors offered by national vocational education institutions; b) private sector representatives confirm that vocational education offerings meet the sector's demand; c) international experiences of demand-based vocational education will be included in Brazilian national policy, as well as new models of vocational education; and d) Four agreements on cooperations with the private sector.

Target beneficiary group/s

Target beneficiaries: Students, teachers, principals, school staffs, companies and industries that are partners of the program
Target education level: ISCED 2 to 4
Specific target group: Girls/women, low socio-economic status, rural areas

Scale of the program

Geographical scope: Nationwide
Number of beneficiaries:
 - 14,000 students graduating from professional education courses (of which at least 2,800 young people, 2,800 women, 2,800 from vulnerable groups),
 - 9,800 students in employment after graduation (of which at least 1,960 young people, 1,960 women, 1,960 from vulnerable groups)
 - 7,000 in occupied work positions in Brazil's sustainability sector.
Total amount of money dedicated to the program: The Government of the Federal Republic of Germany will provide to GTZ, as part of the German contribution, the amount of up to EUR 6,000,000.00.

Monitoring and evaluation

N/A

Timeline

2022

Program status	<p>Planning stage</p> <p>In the stage of identifying partners, people and institutions, and operational planning. The collective construction of teaching projects and course offerings should start in the second half of 2022.</p>
Challenges and obstacles	N/A
Role of digital technology	<p>Level of importance: Somewhat important</p> <p>Digital application utilization: The training that will be developed in the project Professional Education for Green Economic Development and Employment are based on the use of digital solutions.</p> <p>ICT tools utilization: N/A</p>
Role of solidarity & partnership	<p>Embodiment of partnership and collaboration: The partnerships for this program include: GIZ - German International Cooperation; Brazilian Ministry of Education; Secretariat of Professional and Technological Education - Setec/MEC; Federal Network EPCT; National Service of Industrial Learning - SENAI; National Rural Learning Service - SENAR</p> <p>Involvement of non-government institutions: N/A</p>

CAMBODIA

I. SECOND UPPER SECONDARY EDUCATION SECTOR DEVELOPMENT PROGRAM

Program executor	Ministry of Education, Youth and Sport
Program description	<p>The Upper Secondary Education Sector Development Program (USESDP) is focused on improving the access, quality and relevance of upper secondary education and strengthening the institutional capacity for planning, management and service delivery of the Ministry of Education, Youth and Sport (MoEYS). The goal of the program is the development of high-quality human resources.</p> <p>To achieve this goal, three program outputs are proposed:</p> <ul style="list-style-type: none"> - improved quality of teachers in upper secondary schools; - improved quality and labour market relevance of upper secondary education; and, - strengthened institutional capacity for planning, management, and delivery of education.
Objectives and outcomes	The outcome of the program is an improved and more effective upper secondary education system.
Modalities/ resources	The Upper Secondary Education Sector Development Program (USESDP) is financed by the Asian Development Bank (ADP).
Target beneficiary group/s	<p>Target beneficiaries: Students, teachers, principals, and school staff</p> <p>Target education level (for students): ISCED 3</p> <p>Specific target group: Girls/women, low socio-economic status, and rural areas</p>
Scale of the program	<p>Number of Beneficiaries:</p> <ul style="list-style-type: none"> - 1,100 Secondary STEM teachers from 50 secondary resource schools - 2,000 STEM teachers from 87 secondary network schools - 40 STEM teacher trainers from National Institute of Education - Personnel from various Departments of MOEYS - 312 school directors and deputy directors receiving training on SBM - 273 school administrative and finance staff and 100 staff from the provincial office of education are receiving training on SBM and regional inspection respectively <p>Geographical Scope: Nationwide</p> <p>Total Amount of Money Dedicated: 53.5 million USD</p>
Monitoring and evaluation	A design and monitoring framework has been established with clear indicators, targets and baselines by outcomes and outputs to monitor the progress of the program and to evaluate its effectiveness.
Timeline	Started in December 2018
Program status	Ongoing
Challenges and obstacles	N/A
Role of digital technology	<p>Level of Importance: Essential</p> <p>Elaboration on digital application utilisation:</p> <p>Database hardware and software for administering and piloting the teachers' professional development database have been developed to ensure that the program includes Continuous Professional Development and Teacher Career Pathway, which are important interventions to upskill teachers' qualifications.</p> <p>Elaboration on ICT tools utilisation: N/A</p>

Role of solidarity & partnership

Ministry of Education, Youth and Sport
Development Partners
KAPE and VSO with expertise in specific program activities such as SBM and STEM are contracted to support the program's implementation.
Asian Development Bank

II. SCIENCE AND TECHNOLOGY PROJECT IN UPPER SECONDARY EDUCATION (STEP-UP)

Program executor

The Ministry of Education, Youth and Sport

Program description

The proposed Science and Technology Project in Upper Secondary Education (STEP UP) is part of the phased support of the Asian Development Bank (ADB) to develop high-quality human resources by improving the effectiveness of upper secondary education (USE). The project aims to produce high quality human resources for the development of a knowledge-based society.

STEP-UP will support the implementation of career guidance and counselling services throughout the target upper secondary schools and their network schools to develop strong and active relationships with the private sector and higher education institutions. USS students will participate in short-term work experience at local businesses and industries, hear from classroom speakers on career development, attend public and private sector site visits (emergency services, hospitals, IT firms, factories, construction sites, etc.), and tour higher education institutions.

Objectives and outcomes

The outcome will be the improvement and increased effectiveness of upper secondary education. The outcome will be measured by the following indicators: (i) at least a 1.5 percentage point increase in the proportion of female and male USE science stream students from secondary resource schools (SRSs) passing the Grade 12 national exam; (ii) proportion of upper secondary schools (USSs) meeting minimum service standards for outputs increased; and (iii) at least five new SRSs accredited as new generation schools (NGSs).

This project consists of three outputs:

Output 1: Equitable access to standards-based upper secondary education expanded
Output 2: Quality of STEM teaching and learning strengthened
Output 3: Institutional & school leadership & management capacity strengthened

Modalities/ resources

STEP-UP proposes partnerships with civil society to enhance the improvement of targeted upper secondary schools, in particular with Kampuchean Action to Promote Education (KAPE), one of the well-known NGOs in Cambodia that assist MoEYS in creating New Generation Schools focused on STEM.

Target beneficiary group/s

Target beneficiaries: Students, teachers, principals, and school staff
Target education level: ISCED 3
Specific target group: Girls/women, low socio-economic status, rural areas, and linguistic minorities

Scale of the program

Number of Beneficiaries:
50 resource upper secondary schools and 347 upper secondary network schools. All school directors and all students and teachers in the STEM stream are beneficiaries of this project.

Geographical Scope: 25 provinces in Cambodia

Total Amount of Money Dedicated:
Project Cost: \$80.2 million (as of 09 June 2022)
Indicative ADB Loan Size: \$71.0 million
Indicative Government Counterpart: \$9.2 million

Monitoring and evaluation	The M&E has been created. An ADB-MoEYS Mission review is conducted every 6 months.
Timeline	It is projected to start in November 2022
Program status	Planning Stage
Challenges and obstacles	N/A
Role of digital technology	<p>Level of Importance: Essential</p> <p>Elaboration on digital application utilisation: This project focuses on the promotion of STEM at upper secondary schools and the application of LMS/KMS for teacher PRESET and CPD and strengthening EdTech in target schools.</p> <p>The Cambodia Science and Technology Center (CSTC) will be established and promote STEM in an interactive and innovative way to the public through a physical presence in Phnom Penh at the Institute for Technology of Cambodia (ITC) and a digital outreach program for access in schools and communities nationwide. It will also provide a STEM eco-system hub and connection link for many parties.</p> <p>Elaboration on ICT tools utilisation:</p> <p>This project focuses on the promotion of STEM at upper secondary schools. The project will focus on:</p> <ul style="list-style-type: none"> - provision of enhanced STEM equipment in target SRS/NWS; - provision of digital technology in all target schools; and - harmonisation of USS education and technical training programs and certifications.
Role of solidarity & partnership	<p>STEP-UP proposes partnerships with <i>civil society</i> to enhance the improvement of targeted upper secondary schools, in particular with <i>Kampuchean Action to Promote Education (KAPE)</i>, one of the well-known NGOs in Cambodia that assist MoEYS in creating New Generation Schools focusing on STEM. Also, targeted schools will work closely with the industry to provide career orientation to students. It is also supported by the Asian Development Bank.</p>

III. GENERAL EDUCATION IMPROVEMENT PROJECT (GIEP)

Program executor	The Ministry of Education, Youth and Sport
Program description	The project aims to improve the quality of and equitable access to general education in target areas and to provide immediate and effective response in case of an eligible crisis or emergency.
Objectives and outcomes	<p>The project comprises three main components:</p> <p>Component 1: Improving Student Learning Outcomes</p> <p>Component 2: Improving sub-sector performance and monitoring and evaluation</p> <p>Component 3: Contingent emergency response.</p> <p>Indicators:</p> <p>Students benefiting from direct interventions to enhance learning (Number; Disaggregated by gender)</p> <p>Percentage of targeted schools which have achieved minimum standards (Percentage; Disaggregated by subsector)</p> <p>Percentage of teachers using effective teaching practices in reading and mathematics at upper grades of primary school (Percentage; Disaggregated by gender)</p> <p>Number of classrooms or laboratories constructed and rehabilitated in new and existing secondary schools, teacher training institutions and special education schools to expand</p>
Modalities/ resources	<p>GIEP is financed by an International Development Association (IDA) Credit (US\$ 60.0 million) and a GPE grant (US\$ 9.25 million). The World Bank co-financing will fund secondary sub-sector interventions while the GPE funds will support pre-primary and primary interventions.</p> <p>Along with that, the program champions strong community engagement in school development.</p>
Target beneficiary group/s	<p>Target beneficiaries: Students, teachers, principals, school staff, and parents/caregivers</p> <p>Target education level: ISCED 0, 1, 2, and 3</p> <p>Specific target group: Girls/women, low socio-economic status, and rural areas</p>
Scale of the program	<p>Number of Beneficiaries:</p> <p>(i) approximately 230,000 students from pre-primary, primary, secondary and special needs education schools (50.7 percent female) in 1,633 targeted schools who will benefit from newly constructed classrooms, improved teaching and learning, and improved school management through SBM implementation. 1,633 targeted schools include: 420 public secondary schools (both lower and upper secondary levels); 1,000 primary schools; and 213 public separated preschools.</p> <p>(ii) approximately 13,000 teachers/school leaders/educational officers who will be enrolled in the bachelor's and master's degree programs and receive in-service teacher training.</p> <p>(iii) 3,200 local authority or community representatives who sit in the school management committee by receiving training and coaching from the project to perform their roles professionally; and</p> <p>(iv) 500 sub-national and national officers and teacher trainers who will receive qualification upgrading, training or coaching throughout the project's lifespan.</p> <p>Geographical Scope:</p> <p>203 districts of the 25 provinces/capital across the country</p> <p>Total Amount of Money Dedicated:</p> <p>Approximately USD\$69.25 million from the International Development Association and a GPE grant, as well as additional funding from the World Bank if needed.</p>

Monitoring and evaluation	Monitoring and evaluation framework has been created to monitor and evaluate each indicator annually.
Timeline	Started in May 2022
Program status	Ongoing
Challenges and obstacles	N/A
Role of digital technology	Level of Importance: Somewhat Important Elaboration on digital application utilisation: N/A Elaboration on ICT tools utilisation: N/A
Role of solidarity & partnership	The Cambodian Government is supported by the International Development Association, the GPE, and the World Bank.

IV. CAPACITY DEVELOPMENT PARTNERSHIP FUND (CDPF) (III)

Program executor	The Ministry of Education, Youth and Sport
Program description	<p>The Capacity Development Partnership Fund (CDPF), Phase 3 is a program that provides capacity building to the MoEYS to produce impactful results and long-lasting change.</p> <p>The CDPH is driven to achieve six strategic outcomes, reflecting the capacity development needs and sectoral priorities identified jointly with MoEYS.</p> <ol style="list-style-type: none"> 1. Policy Development - Legislation, policy development and implementation are based on evidence from research and policy dialogue. 2. Results-oriented Planning - Development, implementation and monitoring of education plans and budgets at all levels is results-based and of high quality. 3. Financing - Financing of quality education is equitable, efficient, and accountable to all stakeholders. 4. Personnel Management - Human resource planning, deployment and performance management is of high quality and gender-equity is promoted. 5. Inclusion - Education service providers are increasingly committed to, and accountable for, the delivery of education services that are equitable and efficient, and of enhanced quality and relevance. 6. Leadership - MoEYS' organizational and technical leadership is gender-equitable. <p>In the context of Covid-19, CDPF have added some new priorities, including digital education and school health.</p>
Modalities/ resources	<p>The CDPF Phase III is a partnership between the Royal Government of Cambodia, EU, SIDA, USAID, the Global Partnership for Education (GPE) and UNICEF.</p> <ul style="list-style-type: none"> - It continues and builds upon CDPF Phases I and II (MoEYS, EU, SIDA and UNICEF) - Expansions and changes: <ul style="list-style-type: none"> › Budget increase: from \$27m to \$32m › Timeline extension: from 2018-2021, to 2018-2023 (June). <p>The majority of the funding will be delivered by youth-serving organisations that deliver critical programming to underserved students who face greater barriers to education.</p>
Target beneficiary group/s	<p>Target beneficiaries: Students, teachers, and principals</p> <p>Target education level: ISCED 0, 1, 2, and 3</p> <p>Specific target group: Girls/women, low socio-economic status, rural areas, and linguistic minorities</p>
Scale of the program	<p>Number of Beneficiaries (per year):</p> <p>In the new context of Covid-19, this program focuses on the development of policy, strategies, and planning in some key areas: teacher education reform and teacher development (pre- and in-service), particularly in the context of COVID19 learning loss assessment and recovery; early grade learning and recovery from learning loss/remedial education; assessing learning and ensuring the quality of learning outcomes; digital education; inclusion and gender; and school health and safety.</p> <p>Geographical Scope: National level, sub national level, and school level.</p> <p>Total Amount of Money Dedicated: \$32 million with extensions from 2018-2021 to 2018-2023.</p>
Monitoring and evaluation	M&E Framework has been created to monitor and evaluate the implementation of this program.

Timeline	The programme was started in 2018 and the timeline has undergone several changes
Program status	Ongoing
Challenges and obstacles	The challenges include re-prioritization and re-budgeting required by changes in context. The data and evidence needed to inform the policy and interventions are not sufficient, and coordination between the MoEYS departments and sub national levels in the program are not aligned or coherent.
Role of digital technology	<p>Level of Importance: Essential</p> <p>Elaboration on digital application and ICT tools utilisation:</p> <p>The program supports the MoEYS to promote the national strategy to develop digital education, to create digital platforms and resources, and to provide capacity building on using digital applications.</p>
Role of solidarity & partnership	MoEYS at national (Technical Departments) and provincial levels

CANADA



I. SUPPORTING EARLY LEARNING AND CHILD CARE (ELCC)

Program executor	Government of Canada, in partnership with provincial and territorial governments and indigenous partners
Program description	A Canada-wide early learning and child care (ELCC) system aims to ensure that all families have access to high-quality, affordable, flexible, and inclusive ELCC no matter where they live.
Objectives and outcomes	The goal is to bring fees for regulated child care in Canada down to CAD 10/day on average by 2025-2026. By the end of 2022, the aim is to reduce average fees for regulated ELCC spaces by 50% to make it more affordable for families.
Modalities/ resources	ELCC is equipped with a transformative investment of over CAD 27 billion over five years to bolster the provincial and territorial early learning and childcare systems across Canada, including signing an asymmetrical agreement with Québec that will allow the province to make further improvements to its pioneering ELCC system, which is already the most affordable in Canada. Combined with previous investments announced since 2015, as of 2025-2026, a minimum of CAD 9.2 billion will be provided every year -permanently - for ELCC and Indigenous ELCC.
Target beneficiary group/s	<p>Target beneficiaries: Parents/Caregivers, Indigenous People, Youth and Children</p> <p>Target education level (for students): ISCED 0</p> <p>Specific target group: Girls/women, low socio-economic status, rural areas, linguistic minorities, migrant background, and youth with disabilities</p>
Scale of the program	<p>Number of Beneficiaries: Funding to support 250,000 new high-quality child care spaces and hiring 40,000 more early childhood educators by March 2026.</p> <p>Geographical Scope: Nationwide</p> <p>Total Amount of Money Dedicated: Up to CAD 30 billion for about five years (including investment/budget from the government and other investments for special groups)</p>
Monitoring and evaluation	As the new ELCC system will be implemented by building on the successes of the existing ELCC Bilateral Agreements. These new bilateral agreements will have clear targets and a strong commitment to results and annual reporting. In addition, work with provinces and territories through ongoing discussions of the various elements of the bilateral agreements will assess progress and take stock of timelines to meet targets.
Timeline	Started in 2021
Program status	Ongoing
Challenges and obstacles	N/A
Role of digital technology	<p>Level of Importance: N/A</p> <p>Elaboration on digital application utilisation: N/A</p> <p>Elaboration on ICT tools utilisation: N/A</p>
Role of solidarity & partnership	The Government of Canada made a transformative investment to help build a Canada-wide ELCC system in partnership with provincial and territorial governments, and Indigenous partners.

II. CANADA STUDENT FINANCIAL ASSISTANCE (CSFA) PROGRAM

Program executor	Employment and Social Development Canada in collaboration with the provinces and territories.
Program description	The Canada Student Financial Assistance (CSFA) Program provides targeted grants and needs-based loans to eligible students enrolled in post-secondary education programs. It offers a Repayment Assistance Plan (RAP) to borrowers who face financial difficulty in repaying their Canada Student Loan (CSL). In addition, the Repayment Assistance Plan for Borrowers with a Permanent Disability (RAP-PD) is a uniquely designed repayment plan for borrowers with permanent disabilities.
Objectives and outcomes	The CSFA Program provides eligible students with grants and loans to help cover the cost of tuition, books, mandatory fees, living costs and transportation. The CSFA Program does not cover all post-secondary study expenses and aims to supplement funds available to students from other sources, including their own income and assets, parental or spousal contributions, other student awards, and provincial and territorial student assistance programs.
Modalities/ resources	The program offers support specifically targeted to groups such as full-time and part-time students, students from low- and middle-income families, students with dependents, and students with permanent disabilities. In 2019-2020, the Government of Canada has spent over CAD 5 billion on federal student grants and loans, of which CAD 1.6 billion was disbursed in Canada Student Grants (CSG) and CAD 3.4 billion was disbursed in CSLs.
Target beneficiary group/s	<p>Target beneficiaries: Students</p> <p>Target education level: ISCED 4,5, and 6-8</p> <p>Specific target group: Low-and middle-income students and their families, girls/women, low socio-economic status, migrant background, rural areas, persons with disabilities, and Indigenous populations</p>
Scale of the program	<p>Number of Beneficiaries:</p> <p>For academic year 2019-2020 (August 1, 2019 to July 31, 2020):</p> <ul style="list-style-type: none"> - Number of students who received either a CSG and/or CSL: 656,000 - Number of students who received a CSG: 528,000 - Number of students who received a CSL: 608,000 - Number of females who receive either a CSG and/or CSL: 397,000 - Number of females who receive a CSG: 317,000 - Number of females who receive a CSL: 366,000 - Number of recipients of CSG for full-time students: 468,000 (this grant is available to low and middle income students) - Number of recipients of CSG for students with dependants: 70,100 - Number of recipients of CSG for students with permanent disabilities: 52,600 - Number of beneficiaries from RAP: 297,000 - Number of beneficiaries from RAP-PD: 24,800 <p>Geographical Scope: Nationwide (With Québec, Nunavut, and the Northwest Territories opting to manage their own programme)</p> <p>Total Amount of Money Dedicated: over CAD 5 billion on grants and loans (CAD 1.6 billion for CSGs and CAD 3.4 billion for CSL)</p>

Monitoring and evaluation	The Department of Employment and Social Development Canada produces annual reports and statistical reviews, in addition to the standardised reporting to Parliament through the annual department results report. The annual reports informs Parliament and Canadians about student financial assistance for post-secondary education through the CSFA Program.
Timeline	CSL was established in 1964 and has adopted various program amendments as it continues to offer ongoing financial support to students. The Program runs year-round; however, grants and loans are awarded based on academic years that begin on August 1 and end on July 31.
Program status	Ongoing
Challenges and obstacles	The Program is delivered in collaboration with the provinces and territories. This warrants consultation with their respective governments in order to achieve alignment between federal and provincial/territorial policy design as much as possible, as well to prevent delivery issues.
Role of digital technology	<p>Level of Importance: Essential</p> <p>Elaboration on digital application utilisation: Student applications are done via online portals. Aspects of self-service and identity verification are in the process of developing.</p> <p>Elaboration on ICT tools utilisation: The program has been working collaboratively with the service-provider to modernise the tools used by the program, as well as modernising the deferral intelligence and analytics tools used.</p>
Role of solidarity & partnership	Department of Employment and Social Development Canada, provincial, territorial and Indigenous partners

III. YOUTH EMPLOYMENT AND SKILLS STRATEGY PROGRAM (YESSP)

Program executor	YESSP is a horizontal Government of Canada initiative led by Employment and Social Development Canada and delivered in collaboration with 11 other federal departments, agencies and Crown Corporations, as well as third-party service providers and non-profit organisations.
Program description	The Youth Employment and Skills Strategy Program (YESSP) helps young people aged 15-30, particularly those facing barriers to employment, get the information and wrap-around support they need to gain the skills, work experience and abilities needed for a successful transition into the labour market
Objectives and outcomes	Expected outcomes from YESSP for youth depend on the life stage of the youth served, ranging from: job readiness, career advancement, and employment acquisition
Modalities/ resources	The YESSP aims to provide a range of flexible services and supports tailored to each individual's needs to help break down possible barriers and better prepare young Canadians for work and develop their skills. Support may include wage subsidies, skills development and training, mentorship, and wrap-around services (e.g. dependent care support, mental health counselling, Indigenous language training).
Target beneficiary group/s	<p>Target beneficiaries: Students, youth ages 15-30 - especially those facing barriers</p> <p>Target education level: N/A</p> <p>Specific target group: Girls/women, low socio-economic status, rural areas, linguistic minorities, migrant background, Indigenous peoples, youth with disabilities and visible minorities.</p>
Scale of the program	<p>Number of Beneficiaries (2020-2021): 28,000 youth</p> <p>Geographical Scope: National</p> <p>Total Amount of Money Dedicated: 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. 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.</p>
Monitoring and evaluation	The YESSP has a number of immediate performance indicators (e.g. participant counts and demographic breakdowns), intermediate indicators to understand the quality of YESSP-funded supports (e.g. skills development and follow-on employment), and longer-term outcome indicators to understand the overall impact of the program (e.g. average employment earnings after five years of youth participants in YESSP-funded supports versus youth who did not participate in any YESSP-funded programming). Evaluated every 5 years.
Timeline	Modernised in 2019
Program status	Ongoing
Challenges and obstacles	As a horizontal program involving 12 federal departments, agencies and Crown Corporations, the YESSP has encountered challenges related to standardisation of data across the program, given that each partner Department or Agency administers its own program.
Role of digital technology	<p>Level of Importance: Essential</p> <p>Elaboration on digital application utilisation: YESSP is a key partner in the development of the Youth Digital Gateway, a single-window platform for youth to access information about youth support offered by the Government of Canada. YESSP is also exploring the use of emerging digital tools and methodology to better understand the program's reach and impact.</p> <p>Elaboration on ICT tools utilisation: N/A</p>
Role of solidarity & partnership	Employment and Social Development Canada, 11 other federal departments, agencies and Crown Corporations, in collaboration with third party and non-profit services

IV. GLOBAL COMPETENCIES IN CANADA

Program executor	Council of Ministers of Education, Canada (CMEC)
Program description	The pan-Canadian global competencies represent a collaborative effort by provinces and territories to prepare students for a complex and unpredictable future with rapidly changing political, social, economic, technological, and ecological landscapes.
Objectives and outcomes	<p>The Global Competencies in Canada are guided by an overarching set of attitudes, skills, knowledge and values that are interdependent, interdisciplinary, and leveraged in a variety of situations both locally and globally. They are designed to assist students in being able to:</p> <ul style="list-style-type: none"> - meet the shifting and ongoing demands of life, work, and learning; - be active and responsive to their communities at a range of levels from local to global; - benefit from new technologies; - engage in meaningful relationships with people from countries and cultures around the world; - act responsibly to new challenges and issues; and, - embrace opportunities as they arise”
Modalities/ resources	This provincial and territorial initiative is a pan-Canadian effort that resulted from extensive consultations, studies, recommendations, and reviews undertaken across the country. Provinces and territories continuously work to incorporate content about global citizenship and sustainable development into their primary and elementary curricula and teaching practices.
Target beneficiary group/s	<p>Target beneficiaries: Students</p> <p>Target education level: ISCED Levels 0, 1, 2 and 3</p> <p>Specific target group: N/A</p>
Scale of the program	<p>Number of Beneficiaries: N/A</p> <p>Geographical Scope: Nationwide</p> <p>Total Amount of Money Dedicated: N/A</p>
Monitoring and evaluation	N/A
Timeline	2016
Program status	Ongoing
Challenges and obstacles	N/A
Role of digital technology	<p>Level of Importance: N/A</p> <p>Elaboration on digital application and ICT tools utilisation: N/A</p>
Role of solidarity & partnership	Council of Ministers of Education, Canada (CMEC) and education systems/ stakeholders across provinces and territories.

V. MANITOBA SKILLS, TALENT, KNOWLEDGE STRATEGY (STKS)

Program executor	Province of Manitoba
Program description	This strategy provides a direction to publicly funded post-secondary institutions in the province of Manitoba and outlines actions needed to accelerate recovery, advance Manitoba's economy and promote positive outcomes.
Objectives and outcomes	The goal of STKS is to ensure that Manitoba has people with the right skills at the right time, to quickly rebound from the pandemic, ensure resilience and support economic growth, now and in the future.
Modalities/ resources	This strategy is a shared vision and a call to action to advance economic prosperity and positive outcomes for individuals, communities, and businesses, focused on four high-level objectives: (1) Anticipate skills needed for the future; (2) Align education and training to labour-market needs; (3) Foster entrepreneurial and innovative skills; (4) Grow, attract, and retain talent.
Target beneficiary group/s	<p>Target beneficiaries: Postsecondary institutions and students, employers, and industry sectors</p> <p>Target education level: ISCED 4, 5, and 6-8</p> <p>Specific target group: Girls/women, low socio-economic status, rural areas, linguistic minorities, and migrant background</p>
Scale of the program	<p>Number of Beneficiaries: N/A</p> <p>Geographical Scope: Province of Manitoba</p> <p>Total Amount of Money Dedicated: N/A</p>
Monitoring and evaluation	N/A
Timeline	Launched in February 2021
Program status	Ongoing
Challenges and obstacles	N/A
Role of digital technology	<p>Level of Importance: N/A</p> <p>Elaboration on digital application utilisation: N/A</p> <p>Elaboration on ICT tools utilisation: N/A</p>
Role of solidarity & partnership	Government of Manitoba and partners (post-secondary institutions and employers).

VI. FUTURE NB-FUTURE WABANAKI

Program executor	Province of New Brunswick
Program description	This program aims to embed experiential education in New Brunswick's education system from early childhood to the end of post-secondary education. It promotes sustainability, success for students and support for employers.
Objectives and outcomes	Future NB-Future Wabanaki aims to foster meaningful experiential learning opportunities across New Brunswick to: a) Provide students with a variety of experiential learning opportunities with employers prior to graduation from high school, community college and university, b) Strengthen the job-readiness of students related to their field of study, strengths and interests, and c) Support labour force growth through recruitment and talent retention for New Brunswick employers.
Modalities/ resources	All stakeholders support the co-owned Future NB initiatives either through funding, thought leadership or in-kind contributions. Each institution manages a Future NB office to ensure a coordinated provincial approach. These offices are co-subsidised by government funding to increase capacity and reach. A formalised provincial leadership structure also ensures a broad inclusive vision of all stakeholders in relation to experiential learning.
Target beneficiary group/s	Target beneficiaries: Students and employers Target education level (for students): ISCED 0, 1, 2, 3, 4, 5, and 6-8 Specific target group: Girls/women, low socio-economic status, rural areas, linguistic minorities, migrant backgrounds, and indigenous peoples
Scale of the program	Number of Beneficiaries: 11,500+ students and 650 employers Geographical Scope: Province of New Brunswick Total Amount of Money Dedicated: CAD 5.85 million from the Government of New Brunswick
Monitoring and evaluation	Regular reporting on funding received and experiential learning opportunities offered across New Brunswick is required to be submitted bi-annually to New Brunswick's Department of Post-Secondary Education Training and Labour.
Timeline	Started in 2018
Program status	Ongoing
Challenges and obstacles	The demand from students and employers for placements quickly surpassed the available funding, a clear indication of interest and support.
Role of digital technology	Level of Importance: Essential Elaboration on digital application utilisation: Digital applications provide a systemic approach to monitoring students' experiential learning, and allow students and employers to connect and learn about one another. Elaboration on ICT tools utilisation: Universities are now utilising Future NB Campus Connect IT Portal powered by Orbis (Outcome Plus) and Magnet. Colleges and the K-12 system are preparing to onboard the platform in the next 3 years.
Role of solidarity & partnership	New Brunswick government departments, National experiential-learning partners, employers, post-secondary institutions, and Indigenous organisations of New Brunswick.

VII. THE MEMORANDUM OF UNDERSTANDING 2019-2024 (THE MOU) BETWEEN THE PROVINCE OF NOVA SCOTIA AND UNIVERSITIES / THE MEMORANDUM OF UNDERSTANDING 2019-2024 BETWEEN THE PROVINCE AND THE NOVA SCOTIA COMMUNITY COLLEGE (NSCC)

Program executor	<p>MOU with universities: Province of Nova Scotia, 10 university partners, Council of Nova Scotia University Presidents.</p> <p>MOU with NSCC: Province of Nova Scotia, senior leaders from NSCC.</p>
Program description	<p>MOU with universities: Provides a policy framework for government and universities to work collaboratively and strategically to support universal quality post-secondary education in Nova Scotia</p> <p>MOU with NSCC: Formalises the roles of the Province and the NSCC in supporting high quality, relevant learning opportunities and occupational training that are accessible to all Nova Scotians to enhance the economic and social well-being of the province.</p>
Objectives and outcomes	<p>MOU with universities: Key strategic priorities include: innovation, mental health, prevention of sexual violence; standardisation and strengthening of the student consultation process; tuition policies that maintain accessibility; and enhancing the learning experiences of students with disabilities by implementation of accessibility standards.</p> <p>MOU with NSCC: Key strategic priorities include: meeting the occupational training and labour markets needs of the province; supporting student success and completion rates for all students, including apprentices; supporting an increase in participation and completion rates for students from under-represented groups; and removing barriers to post-secondary education.</p>
Modalities/ resources	Both programs are conducted for five years (2019-2024)
Target beneficiary group/s	<p>Target beneficiaries: students</p> <p>Target education level: ISCED 4, 5, and 6-8</p> <p>Specific target group: N/A</p>
Scale of the program	<p>Number of Beneficiaries: All students currently enrolled in universities and the NSCC. In 2020-2021 Universities: 46,888 students; NSCC: 10,049 students</p> <p>Geographical Scope: Province of Nova Scotia</p> <p>Total Amount of Money Dedicated: MOU with universities: Annual funding for five years. 2020-2021 receives CAD 372,099,164 and increases by 1% based on achievements; Post-Secondary Innovation Team: CAD 1.685 million; e-mental health: CAD 600,000; and sexual violence prevention: CAD 470,000; MOU with NSCC: an annual operating grant to the NSCC. In 2021-22 the operating grant is CAD 148,439,000.</p>
Monitoring and evaluation	<p>MOU with universities: University outcome agreements have been established, and signed with every university, as required by the MOU. Specific measures that will be taken by the universities to advance their long-term strategies and commitment to quality education, sustainability, and advancement of the priorities of the Province of Nova Scotia. Should they be achieved, universities will receive an additional 1% grant in the following year</p> <p>MOU with NSCC: The college provides to the Nova Scotia Government information as required to evaluate the delivery of training, programming and workforce development activities, including but not limited to the collection and provision of information required by the Department to satisfy its reporting and audit requirements under the Federal-Provincial Labour Market Transfer Agreements.</p>
Timeline	It started in 2019 and will be operating until 2024
Program status	Ongoing
Challenges and obstacles	N/A
Role of digital technology	<p>Level of Importance: Somewhat important</p> <p>Elaboration on digital application utilisation: N/A</p> <p>Elaboration on ICT tools utilisation: N/A</p>

Role of solidarity & partnership

The program is conducted by the Council of Nova Scotia University Presidents, Senior Leaders and actors of NSCC and the province's advanced education institutions, and 10 partnering universities.

VIII. SUPPORTING MICRO-CREDENTIAL DEVELOPMENT IN SASKATCHEWAN

Program executor

Province of Saskatchewan - Ministry of Advanced Education

Program description

This program takes the form of a guide that can help students know more about micro-credentials and which institutions offer the said credentials.

Objectives and outcomes

The Ministry of Advanced Education has recently released *Saskatchewan's Guide to Micro-credentials* (the Guide). The Guide is designed to provide learners, post-secondary institutions, employers and industry groups with a foundational understanding of micro-credentials along with meaningful ways to utilise micro-credential programming.

Modalities/ resources

The Guide was created through consultations with Saskatchewan post-secondary institutions as well as employer and industry stakeholders. The Ministry has also created a landing page where learners can find more information on micro-credentials. The Guide was created through consultations with Saskatchewan post-secondary institutions as well as employer and industry stakeholders. The Ministry has also created a landing page where learners can find more information on micro-credentials and which institutions offer them.

Target beneficiary group/s

Target beneficiaries: students and employers
Target education level: ISCED 5
Specific target group: N/A

Scale of the program

Number of Beneficiaries: 5,000 to 10,000 students
Geographical Scope: Province of Saskatchewan
Total Amount of Money Dedicated: N/A

Monitoring and evaluation

N/A

Timeline

N/A

Program status

The guide has been completed, but it will remain an evergreen document that will be updated/added based on the evolution of micro-credentials in Saskatchewan.

Challenges and obstacles

Some institutions do not have strong connections with employers/industry partners and struggle with developing programming that strongly relates to current and emerging needs in the labour market. In addition, developing micro-credential programming with employer/industry partners can be resource intensive, especially for smaller post-secondary institutions.

Role of digital technology	<p>Level of Importance: Somewhat Important</p> <p>Elaboration on digital application utilisation: Several post-secondary institutions are utilising digital platforms for the creation and issuance of micro-credentials <i>as digital credentials</i>, with several adopting the MyCreds digital credential platform. Micro-credentials issued as digital credentials provide the earner with full control to share the credential in any way they deem appropriate. The digital credential also allows the viewer (e.g., an employer) to seamlessly review all of the relevant information in the credential (e.g., assessments, skills/competencies earned, etc.).</p> <p>Elaboration on ICT tools utilisation: N/A</p>
Role of solidarity & partnership	The Saskatchewan Ministry of Advanced Education developed and maintains the Guide, and post-secondary institutions can develop micro-credential programming as they deem appropriate.

IX. THE ONTARIO LITERACY AND BASIC SKILLS (LBS) PROGRAM

Program executor	Province of Ontario - Ministry of Labour, Training, and Skills Development
Program description	The Ontario LBS program helps adults in Ontario to develop and apply communication, numeracy, interpersonal, and digital skills to achieve their goals to successfully transition to employment, postsecondary education, apprenticeship, secondary school, and increased independence. This is a free and learner-centred program that focuses on learners who have a range of barriers to learning.
Objectives and outcomes	<p>The LBS program serves adult students whose literacy and basic skills are assessed at intake as being less than the end of Level 3 in one or more of the following Ontario Adult Literacy Curriculum Framework (OALCF)* competencies: a) Find and Use Information, b) Communicate Ideas and Information, and c) Understand and Use Numbers. These adult students will then be taught communication, numeracy, interpersonal, and digital skills to achieve their goals.</p> <p>* The OALCF is based on the same 500-point complexity scale that underpins the OECD's Program for the International Assessment of Adult Competencies.</p>
Modalities/ resources	In addition to the general English-language program, three program streams provide culturally relevant learning methods and resources to deaf, Indigenous, and Francophone adults. The program is offered in-person at more than 300 locations across Ontario, online E-channel, and hybrid formats with multiple learning approaches.
Target beneficiary group/s	<p>Target beneficiaries: Students</p> <p>Target education level: ISCED 4 and adult learners</p> <p>Specific target group: Low socio-economic status, rural areas, linguistic minorities, indigenous people, and deaf individuals</p>
Scale of the program	<p>Number of Beneficiaries: 39,400 adult learners</p> <p>Geographical Scope: Province of Ontario</p> <p>Total Amount of Money Dedicated: CAD 106.1 million/year</p>
Monitoring and evaluation	Generally, learner success in LBS is understood in relation to their persistence, their progress, and their transition readiness. Transfer payment agreements are negotiated annually for both service delivery and program development. Performance is monitored throughout the annual cycle using the program's Performance Management Framework that assesses service-provider performance.

Timeline	The program has been running since 1996
Program status	Ongoing
Challenges and obstacles	The challenges for this program include: a) Service-provider capacity and staff turnover, particularly in the Indigenous and Deaf cultural streams, b) the ability to provide digital and hybrid learning methods at the scale they are desired by learners, and c) delivering adult education to learners who are experiencing poverty and multiple other barriers to learning.
Role of digital technology	<p>Level of Importance: Essential</p> <p>Elaboration on digital application utilisation: The program involves developing digital applications for learning activities.</p> <p>Elaboration on ICT tools utilisation: Service providers may use ICT tools to teach and administer the program. Learners may use ICT tools to improve their digital skills or complete other learning activities.</p>
Role of solidarity & partnership	The Province of Ontario - Ministry of Labour, Training, and Skills Development, over 200 service providers (community, non-profit organisations, school board, colleges) and 26 support organisations throughout Ontario.

X. DIGITAL COMPETENCY FRAMEWORK

Program executor	The Government of Québec – Ministère de l'Éducation (Ministry of Education) and Ministère de l'Enseignement supérieur (Ministry of Advanced Education)
Program description	The Digital Competency Framework is part of the Government of Québec's Digital Action Plan.
Objectives and outcomes	The aim of this framework is to foster the development of digital competency throughout the education community so that Québecers may be autonomous and exercise critical judgement in their use of digital technologies in order to prepare future workers for the challenges of tomorrow.
Modalities/ resources	A pedagogical guide and a development continuum have been produced to facilitate the implementation of the Digital Reference Framework. The Pedagogical Guide helps all education and higher education stakeholders undertake pedagogical planning or educational projects to develop digital competency. The Digital Competency Development Continuum defines the scope of the elements of the 12 dimensions of digital competency and situates them on a progress matrix consisting of three possible levels: beginner, intermediate and advanced.
Target beneficiary group/s	Target beneficiaries: Educational Community in the province of Québec Target education level: N/A Specific target group: N/A
Scale of the program	Number of Beneficiaries: N/A Geographical Scope: Province of Québec Total Amount of Money Dedicated: N/A
Monitoring and evaluation	N/A
Timeline	Unveiled in April 2019
Program status	Ongoing
Challenges and obstacles	N/A
Role of digital technology	Level of Importance: N/A Elaboration on digital application and ICT tools utilisation: The aim of this framework is to foster the development of digital competency throughout the educational community so that Québecers may be autonomous and exercise critical judgement in their use of digital technologies.
Role of solidarity & partnership	The Government of Québec – Ministère de l'Éducation (Ministry of Education) and Ministère de l'Enseignement supérieur (Ministry Advanced Education), Groupe de recherche interuniversitaire sur les impacts pédagogiques des technologies de l'information et de la communication (GRIIPTIC), Réseau pour le développement des compétences par l'intégration des technologies [RÉCIT], the Network of ICT Respondents [ITREP Network].

CHINA



I. “24/365 ALL DAY AND ALL YEAR ROUND” ONLINE RECRUITMENT SERVICE

Program executor	Ministry of Education of China
Program description	Designed to offer employment-related “cloud services” for students, employers, and school staff with an aim to ensure stable and smooth education-work transition in China.
Objectives and outcomes	The program targets online recruitment, providing online career development guidance and supporting the work of college employment counselors. Over 1 million students have gathered information and secured jobs through the program. The program has cumulatively offered 23.3 million job vacancies. Registrations to the service platform go beyond 10.17 million and 86.56 million of students have submitted their CVs through the platform. 42 large-scale job fairs have been hosted which offer 5.25 million jobs
Modalities/ resources	The program has developed various kinds of live-streaming courses which cover employment policies, skill guidance, and psychological counselling. It also offers an online platform for employers to advertise jobs and job fairs, for students to send out their CVs, and for school staff to manage the career development processes and collect data.
Target beneficiary group/s	Target beneficiaries: Students Target education level: ISCED 5-8 Specific target group: N/A
Scale of the program	Number of Beneficiaries: All the graduating students in the job hunting market. It also helps around 80 thousand school staffs with their daily employment counselling and management work. Geographical Scope: National Total Amount of Money Dedicated: N/A
Monitoring and evaluation	N/A
Timeline	The program starts in February 2020
Program status	Ongoing
Challenges and obstacles	N/A
Role of digital technology	Level of Importance: Essential Elaboration on digital application utilization: The program uses “New Career Development Network Platform”. Elaboration on ICT tools utilization: Access to the program requires a computer or smart phone
Role of solidarity & partnership	embodiment of partnership and collaboration: Supported for “Government-Institution-Enterprises” partnership as they are all engaged in preparing students for the future of work involvement of non-government institutions: The participation of higher institutions, enterprises and recruitment institutions or organizations.

II. EMPLOYMENT ASSISTANCE PROJECT FOR STUDENTS OF LOW SOCIO-ECONOMIC BACKGROUND SUPPORTED BY CENTRAL SPECIAL LOTTERY PUBLIC WELFARE FUND

Program executor	Ministry of Education of China, Central Special Lottery Public Welfare Fund of China, Ministry of Finance of China
Program description	Employment assistance project for students of low socio-economic background which financially supported by Central Special Lottery Public Welfare Fund
Objectives and outcomes	The major objective of the program is to assist students of low socio-economic background to resolve their employment problems, make them more prepared and competitive for work, and facilitate their education-work transition by offering online and offline training on employability. Since the launching of the program, it has offered offline training for 50,000 students and online training for 580,000 students.
Modalities/ resources	<p>Offline resources: 135 universities and colleges act as national training centers for employability and competency, providing onsite training to local students by using experiential teaching. The training package covers guidance on self-recognition, career exploration, selection of career, making CVs and interview preparation.</p> <p>Online resources: Online courses are consolidated on the National Employability Training Network, which include briefings on employment policies, industries, career analysis and job recommendations. Currently, 118 courses and over 2400 training videos are offered on the Network.</p> <p>Employment assistance resources: Special job fairs for students from low-income families are hosted on a regular basis to offer job information.</p>
Target beneficiary group/s	<p>Target beneficiaries: Students</p> <p>Target education level: ISCED 5-8</p> <p>Specific target group: Low socio-economic status</p>
Scale of the program	<p>Number of Beneficiaries: 50,000 students (offline) and 580,000 students (online)</p> <p>Geographical Scope: National</p> <p>Total Amount of Money Dedicated: N/A</p>
Monitoring and evaluation	N/A
Timeline	2021
Program status	Ongoing
Challenges and obstacles	N/A
Role of digital technology	<p>Level of Importance: Somewhat important</p> <p>Elaboration on digital application utilization: Involving the development and use of the National Employability Training Network.</p> <p>Elaboration on ICT tools utilization: Access to the program requires a computer or smart phone</p>
Role of solidarity & partnership	<p>Embodiment of partnership and collaboration: N/A</p> <p>Involvement of non-government institutions: The participation of higher institutions, enterprises and recruitment institutions or organizations.</p>

III. SCHOOL-EMPLOYER SUPPLY-DEMAND MATCHING PROGRAM FOR QUALITY EMPLOYMENT

Program executor	Ministry of Education of China
Program description	The program aims to facilitate quality employment for college graduates by advancing an effective supply-demand match among the education in schools and the demand of the employers.
Objectives and outcomes	By promoting the interaction among the schools and market, the program also targets optimizing the allocation of human resources and accelerating the training of the talents who are in urgent need by the market. In March, 2022, the program released the first batch of projects. 6595 projects which connected 292 employers and 1293 higher institutions were approved.
Modalities/ resources	Targeted training: Higher institutions design tailored training, both short-term (several weeks or a semester) and long-term (one year or above), based on the urgent demand of the employers. Internship bases: Higher institutions and enterprises work together to offer internship to college graduates to realize successful employment in a flexible way. HR workstations: Higher institutions and enterprises set up workstations to cultivate specialized talents and build closer partnership to realize better supply-demand match.
Target beneficiary group/s	Target beneficiaries: Students, others, employers Target education level: ISCED 5-8 Specific target group:
Scale of the program	Number of Beneficiaries: The beneficiaries cover 292 employers and graduates from 1293 higher institutions. Geographical Scope: National Total Amount of Money Dedicated: N/A
Monitoring and evaluation	N/A
Timeline	The program released the first batch of project in March 2022
Program status	Ongoing
Challenges and obstacles	N/A
Role of digital technology	Level of Importance: Somewhat unimportant Elaboration on digital application utilization: Not currently Elaboration on ICT tools utilization: Not currently
Role of solidarity & partnership	Embodiment of partnership and collaboration: N/A Involvement of non-government institution: The program supports a close partnership among higher institutions and employers.

IV. CAMPUS ASIA (COLLECTIVE ACTION FOR MOBILITY PROGRAM OF UNIVERSITY STUDENTS)

Program executor	Ministry of Education of China, Japan and South Korea are in charge of the program.
Program description	The program provides mobility program in China, Japan, and South Korea which has engaged over 4000 students from 39 universities. It was launched in 2012 and has engaged over 4000 students from 39 top universities including Peking University and Qsinghua University in China, Tokyo University in Japan and Seoul National University in South Korea.
Objectives and outcomes	Promoting the mobility of university students in China, Japan and South Korea and to strengthen quality collaboration and partnership among the three countries.
Modalities/ resources	Universities in the three countries have extended their cooperation beyond student mobility to include curriculum development, faculty mobility, credit recognition and degree award.
Target beneficiary group/s	Target beneficiaries: Students; teachers; other universities Target education level: ISCED 6-8 Specific target group: N/A
Scale of the program	Number of Beneficiaries: Currently, the beneficiaries cover 292 employers and graduates from 1293 higher institutions. Geographical Scope: National and International Total Amount of Money Dedicated: N/A
Monitoring and evaluation	N/A
Timeline	The program was launched in 2012 and it has been running for 10 years (each term lasts for 5 years)
Program status	Ongoing
Challenges and obstacles	N/A
Role of digital technology	Level of Importance: Somewhat important Elaboration on digital application utilization: Not currently Elaboration on ICT tools utilization: Not currently
Role of solidarity & partnership	Embodiment of partnership and collaboration: The program supports governmental partnerships among China, Japan and South Korea. Involvement of non-government institutions: Top universities in China, Japan and South Korea are involved in the program.

V. VIGOROUSLY PROMOTE THE CO-CONSTRUCTION AND SHARING OF DIGITAL EDUCATIONAL RESOURCES, ENLARGING THE COVERAGE OF QUALITY EDUCATION RESOURCES

Program executor	Ministry of Education of China.
Program description	The program involves three initiatives by Ministry of Education of China: the National Public Service Platform for Educational Resources, “One Teacher with A Quality Course, One Course with A Teaching Master” and “Three Classes” (digital classes for backward areas, by teaching masters and from famous schools).
Objectives and outcomes	The objective of the program is to strengthen quality, inclusiveness and convenience of educational resources. By the end of 2021, 234 platforms at various levels have connected to the National Public Service Platform. Over 50 million pieces of free resources are provided, relating to 86 disciplines of primary schools and middle schools.
Modalities/ resources	The program has a gathering of the resources from the three initiatives: the National Public Service Platform for Educational Resources, “One Teacher with A Quality Course, One Course with A Teaching Master” and “Three Classes”.
Target beneficiary group/s	Target beneficiaries: Students and teachers Target education level: ISCED 1-3 Specific target group: N/A
Scale of the program	Number of Beneficiaries: The program benefits nearly all the primary and middle school students and teachers as free resources are offered. Geographical Scope: National Total Amount of Money Dedicated: N/A
Monitoring and evaluation	N/A
Timeline	The National Public Service Platform for Educational Resources was established in 2012. “One Teacher with A Quality Course, One Course with a Teaching Master” was initiated in 2014 and the instruction document that aims to popularized the application of the “Three Classes” was issued in 2020
Program status	Ongoing
Challenges and obstacles	N/A
Role of digital technology	Level of Importance: Essential Elaboration on digital application utilization: The program involves the establishment and utilization of the National Public Service Platform for Educational Resources. Elaboration on ICT tools utilization: Teachers and students need computers, laptops or smartphones to access the online resources offered by the program.
Role of solidarity & partnership	Embodiment of partnership and collaboration: N/A Involvement of non-government institutions: N/A

EUROPEAN UNION



I. ERASMUS+

Program executor	N/A
Program description	Erasmus+ is the EU's programme to support education, training, youth and sport in Europe. It provides funding for translational cooperation in areas that drive forward the EU's policy agenda. It supports priorities and activities set out in the European Education Area, Digital Education Action Plan and the European Skills Agenda
Objectives and outcomes	Erasmus+ offers mobility and cooperation opportunities in higher education; vocational education and training; school education (including early childhood education and care); adult education; youth and non-formal learning; sport. The programme's main focus is on intra-European cooperation, as well as enabling cooperation and mobility between Europe and other region.
Modalities/ resources	This programme uses EU budget to select projects for mobility and cooperation between European stakeholders in the above sectors. Projects are selected under a range of sector-specific calls for proposals. Some parts of the programme are managed at the level of Member States/associated countries, by their Erasmus+ National Agency.
Target beneficiary group/s	Target beneficiaries: Students, teachers, school staffs Target education level: ISCED 3 (upper secondary), ISCED 6-8 (bachelor's and above) Specific target group: N/A
Scale of the program	Geographical scope: National Number of beneficiaries: Some 10 million individuals will benefit from the mobility opportunities over the seven-year period. Total amount of money dedicated to the program: The Erasmus+ programme 2021-27 has a budget of some EUR 26.2 billion, plus EUR 2.2 billion to foster its international outreach.
Monitoring and evaluation	Projects supported by the programme are selected through calls for proposals, which involves an assessment of the objectives. The highest ranked are selected for funding, and are then subject to regular reporting requirements and monitoring.
Timeline	This program started in January 2021
Program status	Ongoing
Challenges and obstacles	N/A
Role of digital technology	Level of importance: Somewhat important Digital application utilization: Enabling the digital transition is a major cross-cutting objective within all the activities of the programme. ICT tools utilization: N/A
Role of solidarity & partnership	Embodiment of partnership and collaboration: N/A Involvement of non-government institutions: N/A

II. EUROPEAN EDUCATION AREA

Program executor	The EEA is a wide-scale and ambitious cluster of action areas, governed by a Strategic Framework with Member States.
Program description	The EEA embraces a future-looking, holistic and people-centred vision of education. It constitutes a significant contribution to strengthening the resilience of European education and training systems, prepare them for the digital and green transitions, while being deeply rooted in quality and inclusive education for all and across the whole life-course.
Objectives and outcomes	The European Education Area actions and initiatives are focused around five strategic priorities: 1) Improving quality, equity, inclusion and success for all in education and training; 2) Making lifelong learning and mobility a reality for all; 3) Supporting the work of teachers and trainers; 4) Supporting higher education; and 5) Promoting the green and digital transitions in education and training.
Modalities/ resources	To achieve the EEA, the EU has made more resources for education available than ever before under the Erasmus+ programme, the European Social Fund+, the European Regional and Development Funds, the Digital Europe programme and the InvestEU fund. The Recovery and Resilience Facility has contributed to the recovery from the effects of the COVID-19 pandemic.
Target beneficiary group/s	<p>Target beneficiaries: Students, teachers, school staffs</p> <p>Target education level: ISCED 0 (early childhood and pre-primary), ISCED 1 (primary), ISCED 2 (lower secondary), ISCED 3 (upper secondary), ISCED 4 (post-secondary and non-tertiary), ISCED 5 (short-cycle tertiary education), ISCED 6-8 (bachelor's and above).</p> <p>Specific target group: N/A</p>
Scale of the program	<p>Geographical scope: N/A</p> <p>Number of beneficiaries: N/A</p> <p>Total amount of money dedicated to the program: N/A</p>
Monitoring and evaluation	N/A
Timeline	In September 2020, the Commission outlined its renewed vision for the European Education Area and the concrete actions to achieve it in a Commission Communication. The Council of the EU responded with a February 2021 Resolution on a strategic framework for European cooperation in education and training for the period 2021-2030.
Program status	Ongoing
Challenges and obstacles	N/A
Role of digital technology	<p>Level of importance: Essential</p> <p>Digital application utilization: A Council Recommendation on blended learning for high quality and inclusive primary and secondary education has been developed, and a proposal for a Council Recommendation on the enabling factors for successful digital education will be developed in 2022.</p> <p>ICT tools utilization: N/A</p>
Role of solidarity & partnership	<p>Embodiment of partnership and collaboration: The European Education Area initiative helps European Union Member States work together to build more resilient and inclusive education and training systems.</p> <p>Involvement of non-government institutions: N/A</p>

III. DIGITAL EDUCATION ACTION PLAN

Program executor	The Digital Education Action Plan is coordinated by the European Commission, in its Digital Education unit within the Directorate-General for Education, Youth, Sport and Culture (DG EAC).
Program 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.
Objectives and outcomes	This action plan aims to ensure that every citizen is equipped with the digital competences and skills to work, learn and realise their full potential. By combining private and public edutech services as an integrated platform, various teaching and learning services and self-directed customized learning environments are provided to users.
Modalities/ resources	The action plan includes: 1) the development of a European digital education ecosystem, which requires infrastructure, connectivity and digital equipment; effective digital capacity planning and development, including up-to-date organizational capabilities; digitally competent and confident teachers and education and training staff; and 2) enhancing digital competences and skills, which includes the development of basic digital skills from an early age and ensures that girls and young women are equally represented in digital studies and careers.
Target beneficiary group/s	<p>Target beneficiaries: N/A</p> <p>Target education level: ISCED 1 (primary), ISCED 2 (lower secondary), ISCED 3 (upper secondary) ISCED 3 (upper secondary), ISCED 4 (post-secondary and non tertiary), ISCED 5 (short-cycle tertiary education), ISCED 6-8 (bachelor's and above), others, lifelong learning and VET.</p> <p>Specific target group: Girls/women, low socio-economic status.</p>
Scale of the program	<p>Geographical scope: National</p> <p>Number of beneficiaries: N/A</p> <p>Total amount of money dedicated to the program: N/A</p>
Monitoring and evaluation	N/A
Timeline	September 2024
Program status	Ongoing
Challenges and obstacles	The DEAP 2021-27 is based on an evaluation of the predecessor programme (2018-20) and on the urgency for action in the digital domain by the COVID-19 pandemic and the ever-accelerating digital transition.
Role of digital technology	<p>Level of importance: Essential</p> <p>Digital application utilization: It focuses more on the way that applications can themselves be applied or adapted to meet the learning and teaching needs of education institutions and of individual learners.</p> <p>ICT tools utilization: This is the central thrust of the programme – both using tools and upskilling learners and teachers at all levels to use them.</p>
Role of solidarity & partnership	<p>Embodiment of partnership and collaboration: N/A</p> <p>Involvement of non-government institutions: Over 2021-22, the DEAP is shaped by a Structured Dialogue, including different sectors and institutions of government, from education and training institutions to infrastructure providers, private sector, social partners and civil society.</p>

IV. EUROPEAN SKILLS AGENDA

Program executor	The European Commission implements this programme across a range of service, led by DG Employment
Program description	The European Skills Agenda calls for a joining of policies and approaches to ensure that people have the right skills, provide tools and initiatives to support people, and unlock financing mechanisms.
Objectives and outcomes	This agenda includes 12 actions, ranging from EU support, collaboration and development of skills programs, strengthening skills of professionals, and developing micro-credentials and digital platforms. The Agenda identifies four sectors as priorities: Health, Construction, Automotive and Transport and Tourism.
Modalities/ resources	N/A
Target beneficiary group/s	Target beneficiaries: school staffs, other: people in work Target education level: others: people in work and employers Specific target group: N/A
Scale of the program	Geographical scope: EU funding, implemented at national, regional and local level. Number of beneficiaries: - Participation of adults aged 25-64 in learning during the last 12 months: Up to 50% from 38% (2016) +32% - Participation of low-qualified adults 25-64 in learning during the last 12 months: Up to 30% from 18% (2016) +67% - Share of unemployed adults aged 25-64 with a recent learning experience: Up to 20% from 11% (2019) +82% - Share of adults aged 16-74 having at least basic digital skills: Up to 70% from 56% (2019) +25% Total amount of money dedicated to the program: The EU is leveraging funding primarily from the European Social Fund and Erasmus+, but will combine other funding sources to a total of some EUR 85 billion for the 2020-2025 period
Monitoring and evaluation	N/A
Timeline	N/A
Program status	Ongoing
Challenges and obstacles	N/A
Role of digital technology	Level of importance: Essential Digital application utilization: The Commission will support the acquisition of skills for the green transition. ICT tools utilization: N/A
Role of solidarity & partnership	Embodiment of partnership and collaboration: N/A Involvement of non-government institutions: Central to the Skills Agenda is the Pact for Skills, which brings together all stakeholders, private and public, in reskilling Europe's workforce. The Pact links other EU initiatives for cooperation such as The Blueprint for Sectoral Cooperation on Skills, the European Alliance for Apprenticeships, and the Digital Skills and Jobs Coalition.

FRANCE



I. PRE-PRIMARY AND PRIMARY CLASS SIZE REDUCTION IN PRIORITY EDUCATION AREAS

Program executor	Directorate General for Schools in the French Ministry of Education, Youth and Sport (<i>Direction générale de l'enseignement scolaire au Ministère de l'Éducation nationale, de la Jeunesse et des Sports</i>)
Program description	This program serves to reduce a class size by up to half of the original class occupants for the pre-primary, first, and second grades in France's priority education areas (20% of schools in France)
Objectives and outcomes	This program reduces the number of students per classroom, helping teachers increase their attention and provide higher quality support for the pupils, especially those with greater difficulties. There was an improvement of scores in the 2018 and 2019 French National Exam for the French and Mathematics courses after the cap of 24 students per class was executed.
Modalities/ resources	This program was set up in 2017 and is meant to be a permanent measure for disadvantaged pupils. To aid this, there was a recruitment of 1,700 additional teachers. All of the first two elementary school grades have been split into half size classes in priority education areas, and half of the last pre-primary classes are already reduced. Outside priority education, all classes will be capped at 24 pupils by the start of the 2022 school year.
Target beneficiary group/s	Target beneficiaries: Students Target education level: ISCED 0 and ISCED 1 Specific target group: Low socio-economic status
Scale of the program	Priority Education - 12 pupils measure: Number of Beneficiaries: 330,000 students (per September 2021) Geographical Scope: Priority Education Areas (REP: <i>Réseaux d'Éducation Prioritaire</i>). REP (disadvantaged background pupils): 12% of schools in France; REP+ (highly disadvantaged pupils): 8% of schools in France Total Amount of Money Dedicated: N/A Outside Priority Education - 24 pupils measure: Number of Beneficiaries: 78% of classes for the pre-primary and the first two primary grades in France (per September 2021) Geographical Scope: Nationwide pre-primary and the first two primary grades in France Total Amount of Money Dedicated: N/A
Monitoring and evaluation	The program is monitored by the Directorate General for schools and evaluated by the <i>Direction de l'Évaluation, de la Prospective et de la Performance</i> (statistical service of the Ministry of Education). Monitoring is done through systematic annual evaluations and specific research work in collaboration with research institutions.
Timeline	September 2017 and is projected to be completed by 2023. No extension to other grades is planned.
Program status	Ongoing
Challenges and obstacles	Due to the reduction of class size, this means that more classes must be opened. The main obstacle from this program is the process of recruiting additional teachers with exceptional quality for these new classes.
Role of digital technology	Level of Importance: Somewhat important Elaboration on digital application utilization: Nothing specific. Teachers take advantage of the digital tools available to all teachers. Elaboration on ICT tools utilization: Nothing specific. Teachers take advantage of the digital tools available to all teachers.
Role of solidarity & partnership	N/A

II. TRADE AND QUALIFICATIONS CAMPUSES

Program executor	Directorate General for Schools in the French Ministry of Education, Youth and Sport (<i>Direction générale de l'enseignement scolaire - DGESCO - Ministère de l'Éducation nationale, de la Jeunesse et des Sports</i>) and Ministry of Higher Education, Research, and Innovation (<i>Ministère de l'Enseignement supérieur, de la Recherche et de l'Innovation</i>)
Program description	The Trades and Qualifications Campuses (<i>campus des métiers et des qualifications</i>) are hubs for vocational education and training (VET) excellence.
Objectives and outcomes	These campuses aim to establish a pathway of excellence and proper links between VET education and the world of business, hence contributing to the future job sectors and international strategies.
Modalities/ resources	To foster elaborate growth of the French education and economic sector, these campuses were developed to cover 12 growth and job-creating sectors, and are set to be solidified in all regions and economic sectors of France. Through these campuses, secondary and higher VET institutions can conduct easier coordination with businesses, companies, apprenticeship centers, and research centers.
Target beneficiary group/s	<p>Target beneficiaries: Students and teachers</p> <p>Target education level: ISCED 5 and ISCED 6-8</p> <p>Specific target group: Low socio-economic status and other target groups such as: Learners in upper secondary, including apprentices, Young people (15-29 years old), Adult learners, Unemployed and jobseekers; Persons in employment, including those at risk of unemployment; Low-skilled/qualified persons, Companies, Small and medium-sized enterprises (SMEs), VET providers (all kinds), and Social partners (employer organisations and trade unions).</p>
Scale of the program	<p>Number of beneficiaries: N/A</p> <p>Geographical scope: Nationwide, with about 113 trades and qualifications already dispatched in every French Region (including overseas region)</p> <p>Total amount of money dedicated to the program: ~ EUR 160 million. EUR 80 million in grants and ten-year endowments (to finance 12 projects), supplemented with an additional EUR 80 million from various players in the territory.</p>
Monitoring and evaluation	The program is steered by an inter-ministerial committee including 4 ministries: Education, Higher education, Labour, and Economics. It is evaluated by the Inspectorate General of the French ministry of education with the support of the EU DG Reform.
Timeline	The program was initiated in 2013, and the first campus was launched in 2014.
Program status	Ongoing. The program is about to be completed and is meant to be a permanent measure. Among the objectives that remain to be achieved are: the implementation of at least 3 <i>Excellence</i> category campuses in each French region and growing participation in the European network of CoVEs (Centres of Vocational Excellence) funded by the Erasmus+ EU Program.
Challenges and obstacles	Organizing full accommodation on vocational campuses acts as one of the key challenges. By the end of 2022, the aim is to create, renovate or develop 40 accommodation premises on vocational campuses at the heart of the future trades and qualifications campuses.
Role of digital technology	<p>Level of importance: Essential</p> <p>Elaboration on digital application utilization, if any: Yes (but it largely depends on the way each campus is oriented and driven)</p> <p>Elaboration on ICT tools utilization, if any: Yes (but it largely depends on the way each campus is oriented and driven)</p>
Role of solidarity & partnership	Different bodies of the French Ministry are involved, including the Directorate General for Schools in the Ministry of Education, Youth and Sport, Ministry of Higher Education, Research, and Innovation, Ministry of Labour, the Ministry of Economy, local schools, and various players and businesses in the territory also participate in this program's success.

III. NATIONAL RECOVERY AND RESILIENCE PLAN (NRRP)

Program executor	The program is mainly executed by the French Ministry for Education, in association with the European Commission
Program description	To help rebuild EU member states following the COVID-19 disruptions, the joint Franco-German initiative for European Recovery paved the way for an institution-wide recovery plan of EUR 750bn. With their share of the recovery plan (EUR 302 million), France added support for France's disrupted education systems.
Objectives and outcomes	France aims to enable massive investment in the green and digital transition of the French education system, safeguarding of employment, youth, disability, and vocational training. All the investments presented in this national recovery and resilience plan are part of the <i>France Relance</i> national plan. The European recovery plan contributes 40% of the financing of the national recovery plan.
Modalities/ resources	Allocation of the EUR 302 million will go towards: Revitalisation of boarding schools of excellence (€50 million), b) Support to <i>Cordées de la réussite</i> (scheme offers support to students in their school career planning and aims at greater social equity in access to higher education courses - €10 million), c) Continuation of studies for new baccalaureate holders (€76 million), d) Pedagogical continuity (€131 million), and e) Digital services to sustain administrative continuity (€32million).
Target beneficiary group/s	Target beneficiaries: Students and school staffs Target education level: ISCED 0,1,2, and 3 Specific target group: Low socio-economic status
Scale of the program	Number of beneficiaries: N/A Geographical scope: Nationwide Total amount of money dedicated to the program: EUR 302 million
Monitoring and evaluation	The program is monitored by the Directorate General for Schools in the Ministry of Education, Youth and Sport. It is then evaluated twice a year by the European Commission.
Timeline	The program started in 2021
Program status	Ongoing. Two measures have been completed so far (Boarding schools of excellence, and <i>Cordées de la réussite</i> - equal opportunities for all in careers guidance). There are three other measures that are planned to be implemented by the end of 2026.
Challenges and obstacles	N/A
Role of digital technology	Level of importance: Essential Elaboration on digital application utilization, if any: N/A Elaboration on ICT tools utilization, if any: There are two measures that target digital modernisation of the education system: Program 1: Digital services to sustain administrative continuity (EUR 32 million); and Program 2: Pedagogical continuity (EUR 131 million).
Role of solidarity & partnership	This program is fully regulated by the French Ministry for Education, in association with the European Commission

IV. THE DIGITAL EDUCATIONAL PLATFORM IMAGINECOLE

Program executor	UNESCO (with the help of French Educational Digital and Expertise Agencies: Réseau-Canopé, ed tech Maskott and France Education International)
Program description	<i>Imaginecole</i> is an e-education system steered by UNESCO that shares resources for the 6.6 million pupils and teachers in 10 French-speaking African countries.
Objectives and outcomes	<i>Imaginecole</i> aims to support emergency educational continuity in French speaking Africa. It acts as a supplement for national e-educational platforms and interacts with them to create a more substantive learning ecosystem. This platform enables: a) educational resources to be shared, b) teachers trained in new teaching practices, and c) teachers to create resources directly online.
Modalities/ resources	<i>Imaginecole</i> offers the opportunity to develop training in the use of digital tools at the regional level to increase the skills and creativity of teachers in the production of resources or in the optimized use of digital technology in their lessons. The platform can also be used as a complement to training for school children and teachers. Institutions may use this platform to share their best practices and inspiration in terms of educational means.
Target beneficiary group/s	Target beneficiaries: Students and teachers Target education level: ISCED 0,1,2, and 3 Specific target group: Low socio-economic status and rural areas
Scale of the program	Number of beneficiaries: 6.6 million pupils and their teachers Geographical scope: 10 African countries so far : Benin, Burkina Faso, Cameroon, Chad, Côte d'Ivoire, Guinea, Mali, Niger, Senegal, Togo Total amount of money dedicated to the program: - Stage 1: EUR 900,000 (EUR 500 000 from the GPE & EUR 400 000 from the French Government) - Stage 2 : EUR 500 000 from the French Government
Monitoring and evaluation	The program is monitored by UNESCO. An evaluation is forthcoming as part of the accountability exercise of the GPE funds. In parallel, an audit could be commissioned by the French Ministry of Foreign Affairs
Timeline	2020
Program status	Stage 1 Completed New extended project to be conducted in 2022 (Mauritania and Djibouti)
Challenges and obstacles	The challenge is to promote the dissemination of <i>Imaginecole</i> in schools as well as in places where future teachers are trained to support the evolution of classroom practices and access to knowledge.
Role of digital technology	Level of importance: Essential Elaboration on digital application and ICT Tools utilization, if any: The program is mainly based on the creation of the digital platform <i>Imaginecole</i> . Support (particularly for training teachers in digital uses) has required the use of online courses (145 sessions between April and October 2021) and the creation of 12 training modules in digital education
Role of solidarity & partnership	This project is a collaboration between the following organizations: UNESCO (as the steering committee); Global Partnership for Education; French Educational, Digital, and Expertise Agencies: Réseau-Canopé, ed tech Maskott, and France Education International (FEI); Ministers of Education of the Governments and States of the French-speaking African countries; French Government: Ministry of Europe and Foreign Affairs, Ministry of National Education, Youth, and Sports; and the 10 invited African Countries.

V. NATIONAL ACCELERATING STRATEGY FOR EDUCATION AND DIGITAL TECHNOLOGY

Program executor	Ministry of National Education and Youth, specifically the Directorate of Digital Education (Direction du numérique pour l'éducation) and Directorate General for Schools (Direction générale de l'enseignement scolaire)
Program description	This program was created to train every pupil, teacher, employee, and citizen with basic digital skills and mannerism. This strategy also highlights the importance of easy and equal access towards digital tools and services.
Objectives and outcomes	This strategy aims to ensure that all French citizens are equipped with knowledge regarding digital culture, how to navigate through it, and how to utilize available digital tools and services.
Modalities/ resources	This program is based on 4 pillars: 1) Training and certification of digital skills (for teachers and learners, for all citizens), 2) Equipment for classes and teachers, with a basic digital foundation (infrastructure, equipment), 3) Tools with resources and services using innovative technologies, and support for free tools and communities sharing 'digital commons', and 4) Accelerating the digital transformation through investments in skills and professions of the future.
Target beneficiary group/s	<p>Target beneficiaries: Students, teachers, school leaders, parents/caregivers, and school staffs</p> <p>Target education level: ISCED 0,1,2, and 3</p> <p>Specific target group: Low socio-economic status, girls/women, and rural areas</p>
Scale of the program	<p>Number of beneficiaries: the whole scope of students and teachers in the French education system</p> <p>Geographical scope: Nationwide</p> <p>Total amount of money dedicated to the program: This program is part of wider EUR 34 billion French program called 'France 2030' that aims to accelerate digital transformation of the French education system</p>
Monitoring and evaluation	This program is monitored by the French Ministry of Education, Youth, and Sports; specifically by the Directorate of Digital Education (<i>la Direction du numérique pour l'éducation</i>) and Directorate General for Schools (<i>Direction générale de l'enseignement scolaire</i>). The program will be jointly evaluated by the General Secretary for Investments (<i>Secrétariat général pour l'investissement</i>), the statistical service of the Ministry of Education (<i>ministère de l'Éducation nationale</i>) and by independent research laboratories.
Timeline	2021-2025
Program status	Ongoing
Challenges and obstacles	The challenge of the program is to achieve a systemic digital transformation of the education system.
Role of digital technology	<p>Level of importance: Essential</p> <p>Elaboration on digital application and ICT tools utilization, if any: Digital technology is at the core of the program.</p>
Role of solidarity & partnership	This program is heavily steered by the French Ministry of Education (DNE & DGESCO), with additional support from independent research laboratories, and other relevant stakeholders. The program finds it necessary to involve all relevant stakeholders, as well as to strengthen the governance in the local and national level to have an integrated, yet global, vision.

GERMANY



I. NATIONALE DIGITALE BILDUNGSPLATTFORM

Program executor	The Federal Ministry of Research and Education
Program description	This program aims to create a user-centered and cross-institutional digital backbone for continuous education workflows and supporting processes.
Objectives and outcomes	This online infrastructure will enable all stakeholders in the educational system to connect in a data-sovereign space. It promises a wide range of educational opportunities by connecting the existing learning possibilities. It supports the users in finding their individual learning paths in a decentralized way, providing a data wallet for a safe documentation of their learning progress, degrees and certificates.
Modalities/ resources	The NBP is separated into different lines, including: a) a pilot project “BIRD”, for the design of technical infrastructure of the NBP; b) three projects developing conceptual technical solutions for the NBP (duration of 4 months); c) funding of educational content suppliers and platforms to connect to NBP; and d) tendering and awarding tenders for the development of the actual infrastructure.
Target beneficiary group/s	<p>Target beneficiaries: Students, teachers, principals, parents/caregivers, school staffs, other, all actors within the educational sector</p> <p>Target education level: N/A</p> <p>Specific target group: N/A</p>
Scale of the program	<p>Geographical scope: The NBP is an online platform, open to all interested users. Some functionalities might relate specifically to the German education system, but European-wide programs will be included as well.</p> <p>Number of beneficiaries: It comprises all members, suppliers, users and stakeholders of the education sector.</p> <p>Total amount of money dedicated to the program: N/A</p>
Monitoring and evaluation	The NBP will be continuously monitored based on various parameters (user activity, provider participation, inclusion of feedback from various stakeholders, etc.). The evaluation concept is under development. The evaluation will be carried out by an independent third party.
Timeline	This program started on 01 April, 2021
Program status	Ongoing
Challenges and obstacles	One of the key challenges so far was to identify the requirements and technical possibilities for the architecture of the NBP.
Role of digital technology	<p>Level of importance: Essential</p> <p>Digital application utilization: The main goal is to support the use of a broad range of digital educational services. Therefore, the development or utilization of digital applications is part within the funded scope of the program.</p> <p>ICT tools utilization: The implementation or utilization of ICT Tools (content collaboration tools, content editor tools, matching tools) are part of several funded projects within the program.</p>
Role of solidarity & partnership	<p>Embodiment of partnership and collaboration: The Nationale Digitale Bildungsplattform supports partnership and collaboration in education by providing a safe, smart and transparent technical infrastructure for suppliers and consumers.</p> <p>Involvement of non-government institutions: The VDI/VDE Innovation + Technik GmbH is a German project management company. Capgemini SE is a consulting firm with high expertise in the implementation of large-scale projects, especially in relation to digitization.</p>

II. INNOVATION COMPETITION INVITE

Program executor	The Federal Ministry of Research and Education is in charge of INVITE. The Ministry is supported by the Federal Institute for Vocational Education and Training (BIBB) in implementing the competition.
Program description	The innovation competition INVITE aims at the development of innovative solutions that – with the help of AI – enable all people to find the right continuing professional training on demand.
Objectives and outcomes	The INVITE funding in three development fields is directed to enabling and realising connection and interoperability of platforms, a stronger user orientation of platforms and the use of AI technologies for an individualised design of learning processes.
Modalities/ resources	A total of 35 projects are funded within the framework of the competition. The funding volume is approximately 80 million euros. Projects in the development fields are funded for 36 months, the meta project for 46 months.
Target beneficiary group/s	<p>Target beneficiaries: Teachers, all people seeking continuing education and training.</p> <p>Target education level: Depending on the goals of each of the 35 projects, focusing continuing vocational education and training.</p> <p>Specific target group: Low socio-economic status, low qualified people</p>
Scale of the program	<p>Geographical scope: Regional and nationwide</p> <p>Number of beneficiaries: INVITE developments benefit both stakeholders in continuing education and training and its users. Users include companies, especially small and medium-sized enterprises, as well as basically all people seeking continuing education and training.</p> <p>Total amount of money dedicated to the program: A budget of EUR 88 million is available for INVITE.</p>
Monitoring and evaluation	INVITE is monitored by the Federal Institute for Vocational Education and Training (BIBB). Monitoring is carried out, for example, on the basis of annual interim reports.
Timeline	The funding guideline was published in February 2020. Project funding started in the period from May to September 2021.
Program status	Ongoing
Challenges and obstacles	A key challenge was to identify innovative projects whose developments are based on a trustworthy handling of data and algorithmic systems, which are permanently and can be operated independently after the end of the project funding, and which are designed to be connectable and scalable.
Role of digital technology	<p>Level of importance: Essential</p> <p>Digital application utilization: The basic goal of INVITE is the linking and further development of internet-based platforms, applications and services.</p> <p>ICT tools utilization: The ICT tools that are being developed include elaborate search engines that allow the most precise matching possible between continuing education and training offers on the one hand and people interested in continuing education and training on the other.</p>
Role of solidarity & partnership	<p>Embodiment of partnership and collaboration: INVITE primarily seeks partnerships between stakeholders of digital education and continuing education and training platforms in order to build an inclusive digital platform ecosystem.</p> <p>Involvement of non-government institutions: The Federal Institute for Vocational Education and Training (BIBB) is a federal institution with legal capacity under public law and an institution for researching and developing initial and continuing vocational education and training.</p>

III. DIGITALPAKT SCHULE

Program executor	Federal government, Governments at Länder level
Program description	The federal government and the Länder launched the programme DigitalPakt Schule 2019-2024 to noticeably improve the digital infrastructure at schools across Germany. The programme ties in with the Federal Ministry of Education and Research's education campaign for the digital knowledge society (October 2016) and the Strategy for Education in the Digital World adopted by the Länder (December 2016).
Objectives and outcomes	The aim is to improve the digital education infrastructure and digital learning. The federal government supports the Länder and municipalities in investing in IT equipment and systems and in bringing schools online in order to create a digital education infrastructure that is fit for the future.
Modalities/ resources	During the Covid-19 pandemic, the federal government and the Länder agreed to extend the DigitalPakt Schule by three further programmes. The federal government agreed to provide additional funding to equip students with their own devices (on loan), to fund administrators for technical support and to equip teachers with devices (on loan). Implementing the programme DigitalPakt Schule falls into the remit which also co-fund the three additional programmes.
Target beneficiary group/s	Target beneficiaries: Students, teachers Target education level: ISCED 1 (primary), ISCED 2 (lower secondary), ISCED 3 (upper secondary) Specific target group: N/A
Scale of the program	Geographical scope: National Number of beneficiaries: About 11 million students and about 827,000 teachers Total amount of money dedicated to the program: The federal government provides 6.5 billion euros for the DigitalPakt Schule and the three additional programmes. In addition, the Länder provide at least 10 per cent to finance the investments and fund additional measures of their own.
Monitoring and evaluation	The programme DigitalPakt Schule is scientifically evaluated by an independent third party during and after its implementation. The evaluation aims at determining whether and to what extent the programme contributed to changes in the digital infrastructure and the use of digital media in schools. The evaluation does not aim at making performance comparisons on learning outcomes in digital education between the Länder.
Timeline	Start: 17 May 2019
Program status	Ongoing
Challenges and obstacles	Applying for and allocating funding to school authorities under the programme differs from Land to Land and usually involves a certain amount of administrative work. Due to the Covid-19 pandemic the need and demand for implementing the measures within the framework of the DigitalPakt Schule has increased. At the same time, however, many service providers (e.g. companies for IT administration) and businesses (e.g. wi-fi equipment) were overwhelmed with requests, resulting in backlogs.

Role of digital technology

Level of importance: Essential

Digital application utilization: N/A

ICT tools utilization: The programme aims to equip students and teachers with ICT. Therefore, the following investments are supported: a) Establishing or improving digital networks in school buildings and on school grounds (e.g. servers and Wi-fi), b) Establishing and developing digital teaching-learning infrastructures (e.g. learning platforms), c) Display and interaction devices (e.g. interactive whiteboards), d) Digital work devices, especially for technical and scientific education or vocational training, and e) School-bound mobile devices (laptops, notebooks and tablets except for smartphones)

Role of solidarity & partnership

Embodiment of partnership and collaboration: Collaboration between federal and Länder level

Involvement of non-government institutions: N/A

IV. SCHULE MACHT STARK

Program executor	Ministries of Education in the 16 Länder, Federal Ministry of Education and Research
Program description	This program is a joint initiative of the federal government and the Länder that aims to support schools in socially difficult locations in rural and urban areas and improve the learning opportunities for socially disadvantaged students, contributing to educational equity in Germany.
Objectives and outcomes	During the first phase (5 years, 2021-2025) scientists from 13 research institutes and universities worked closely with teachers and principals from 200 schools to identify opportunities for school and classroom development, to assess existing potential as well as to develop and test new strategies. During the second phase (5 years, 2026 – 2030), schools will pass on their new strategies to other schools in order to extend the number of schools benefiting from the initiative.
Modalities/ resources	The federal government and the Länder work closely together to implement the initiative. The Länder coordinate the implementation in their area of responsibility by involving school authorities and regional institutes as well as providing human and financial resources to the schools. The Länder also selected the 200 participating schools. The Federal Ministry for Education and Research (BMBF) supports the initiative by funding the research consortium consisting of the 13 research institutes and universities that develops strategies and concepts in close cooperation with the participating schools.
Target beneficiary group/s	Target beneficiaries: Students, teachers, principals, parents/caregivers Target education level: ISCED 1 (primary), ISCED 2 (lower secondary) Specific target group: Low socio-economic status
Scale of the program	Geographical scope: National Number of beneficiaries: N/A Total amount of money dedicated to the program: The funding allocated to this initiative amounts to a total of 125 million euros. The federal government and the Länder share the costs equally.
Monitoring and evaluation	Participating scientists evaluate the initiative. Teachers can contribute their practical experiences to the joint concepts which are immediately tested and adapted and further developed as needed. The researchers incorporate current results and experiences from international and national research into the development process.
Timeline	This program started on 01 January, 2021
Program status	Ongoing
Challenges and obstacles	N/A
Role of digital technology	Level of importance: Somewhat important Digital application utilization: N/A ICT tools utilization: N/A
Role of solidarity & partnership	Embodiment of partnership and collaboration: The initiative emphasises “networking of schools with their social environment” and “networking of schools with each other”, building up a network of schools for the exchange of experiences. Involvement of non-government institutions: There are 13 research institutes and universities participating in the initiative. These are involved in different clusters (e.g. “Extracurricular Learning and Social Space Orientation” or “Classroom Development German and Mathematics”)

V. INNOVET COMPETITION: SHAPING THE FUTURE – INNOVATION FOR EXCELLENCE IN VOCATIONAL EDUCATION AND TRAINING

Program executor	The Federal Ministry of Research and Education oversees INVITE. The Ministry is supported by the Federal Institute for Vocational Education and Training (BIBB) in implementing the competition. Project level: 17 regional coordinators
Program description	In January 2019, the Federal Ministry of Education and Research (BMBF) launched the competition “Shaping the future - innovations for excellent vocational education and training” (InnoVET) to increase the attractiveness, quality, and equivalence of VET through innovation and excellence, with a focus on higher VET.
Objectives and outcomes	<ul style="list-style-type: none"> - Build new types of VET excellence partnership networks, bringing together VET schools, chambers, enterprises, universities, and research centers in order to develop innovative training methods and offers. - Develop Higher VET qualifications at GQF-level 5 and higher, such as “Master Professional” in chemical industry and micro-technologies. - https://www.inno-vet.de
Modalities/ resources	<p>Project funding ends in the period between September 2024 and December 2024. The competition is intended to initiate and consolidate sustainable structural changes. Therefore, the transfer of knowledge and results of the concepts and structures developed within the framework of the projects is of particular importance for sustainability.</p> <p>Priority issues: collaboration in education, preparing students for future work.</p> <p>BMBF is funding (2020-2024) 17 so-called ‘innovation clusters’ in which regional and sector-specific stakeholders, such as enterprises and VET schools, work together to develop and test innovative initial and continuing training programmes.</p>
Target beneficiary group/s	All those seeking VET and higher VET; ISCED 4, 5, 6-8, depending on the goals of each of the 17 projects, focusing on VET and higher VET
Scale of the program	<p>Geographical scope: National</p> <p>Number of beneficiaries: N/A</p> <p>Total amount of money dedicated to the program: Up to €82 million in funding is allocated to this initiative</p>
Monitoring and evaluation	The research deals with questions on structural features, innovation approaches (University of Magdeburg), innovation and transfer processes (University of Paderborn) and fundamental questions of research-based programme design (Federal Institute for Vocational Education and Training (BIBB)). The monitoring is carried out by BIBB. Each project has an internal evaluation.
Timeline	Ongoing. The funding guideline was published in January 2019. Project funding started in September 2019 (concept stage, 6 months) and in September to December 2020 (implementation stage, 48 months).
Program status	Ongoing
Challenges and obstacles	N/A
Role of digital technology	<p>Level of importance: Important</p> <p>Digital application utilization: The development/use of learning platforms, blended learning and digital learning content should make (higher) VET more flexible and individual.</p> <p>ICT tools utilization: Establishing and further developing digital teaching-learning infrastructures (e.g. learning platforms).</p>
Role of solidarity & partnership	The InnoVET Competition was launched to develop higher VET qualification courses and to build new types of VET partnership networks linking enterprises, VET schools, training centers, universities and other players to develop innovative training methods and offers.

INDIA



I. SAMAGRA SHIKSHA

Program executor	Central Government and all 36 States and Union Territories (UT).
Program description	The aim of the Scheme is to enhance access through the expansion of quality school education, to promote equity through the inclusion of disadvantaged groups and weaker sections, and to improve the quality of education across all levels of school education from pre-primary to class XII.
Objectives and outcomes	This Scheme supports States and UTs in implementing the recommendations of the National Education Policy 2020 (NEP 2020) and the Right of Children to Free and Compulsory Education (RTE) Act, 2009. It focuses on: early childhood care and education; foundational literacy and numeracy; a holistic, integrated, inclusive curriculum and pedagogy to impart 21 st century skills; among the students; bridging social and gender gaps in school education and ensuring equity and inclusion at all levels of school education; and promoting vocational education, among others.
Modalities/ resources	The fund sharing pattern as decided by the Ministry of Finance is in the ratio of 60:40 Central and States and Union Territories with Legislature. The ratio is 90:10 with the Centre bearing a larger share of the financial commitment for 8 North-Eastern States viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura and 2 Himalayan States viz. Himachal Pradesh and Uttarakhand, and the UT of Jammu and Kashmir. It will be 100% centrally sponsored for UTs without Legislature. The scheme is continued for the next five years i.e. upto FY 2025-26, with a total project cost of Rs. 2.94 lakh crores (approximately \$40 billion).
Target beneficiary group/s	Target beneficiaries: Students, teachers, principals, parents/caregivers, school staffs Target education level: ISCED 0 to 3 Specific target group: Girls/women, low socio-economic status, rural areas, linguistic minorities, migrant background, others; other disadvantaged social groups including Scheduled Caste (SC), Schedule Tribe (ST), Muslims, Children with Special Needs (CWSN) and marginalized communities, etc.
Scale of the program	Geographical scope: All 36 States and UTs Number of beneficiaries: 1.16 million Government and Aided schools; Over 156 million students; and 5.7 million teachers Total amount of money dedicated to the program: Rs. 37383.36 crore (~ \$ 5 billion for 2022-23)
Monitoring and evaluation	The scheme offers a variety of mechanisms to achieve its Performance Grading Index, including National Achievement Surveys, Social Audits, School Audits, Third-party Monitoring, Comprehensive Review Missions, and Community-level Monitoring.
Timeline	FY 2018-19
Program status	Ongoing. Launched in 2018-2019, the scheme has been continued for the next five years i.e. up to FY 2025-26
Challenges and obstacles	Challenges include: a) improving learning outcomes across grades and providing access to quality education; b) providing access to all children from pre-primary to senior secondary level and addressing the issues of regional disparity; and c) bringing back all out of school children to the school ecosystem and addressing the issues faced during the COVID pandemic.

Role of digital technology

Level of importance: Essential

Digital application utilization: The **PM E- Vidya initiative** offers the DIKSHA (Digital Infrastructure for Knowledge Sharing) platform to teachers, students and parents for engaging learning material. This initiative has created Energized Textbooks in 33 Indian Languages, including International Sign Language (ISL).

ICT tools utilization: The scheme provides support for setting up ICT labs and smart classrooms in schools.

Role of solidarity & partnership

Embodiment of partnership and collaboration: The scheme is implemented in partnership with the States, UTs, other ministries, local bodies and CSOs.

Involvement of non-government institutions: N/A

II. RASHTRIYA UCHCHTAR SHIKSHA ABHIYAN (RUSA)

Program executor	Ministry of Education, GoI State Governments Institutions
Program description	RUSA is a Centrally Sponsored Scheme (CSS) operating in mission mode for funding the state government universities and colleges.
Objectives and outcomes	The schemes objectives include: a) Improving access and equity in higher education by providing adequate opportunities of quality higher education to students from Scheduled Castes (SCs) and Scheduled Tribes (STs) communities, and promoting inclusion of women, transgenders and differently-abled persons; b) Enhancing the overall quality of existing State HEIs by ensuring that all institutions conform to prescribed norms & standards; c) Enhancing employability by equipping students with the necessary skills and training in relevance with the local economy; d) Promoting accreditation; e) Creating an enabling ecosystem for research & innovations; f) Enhancing faculty development
Modalities/ resources	The scheme has been approved and extended from 2021- 2026 by the cabinet. The implementation structure of the scheme includes: a) National level: Project Approval Board, Screening Committee, Technical Support Group; b) State Level: State Higher Education Council, State Project Directorate, Technical Support Group; and c) Institutional Level: Board of Governors, Project Monitoring Unit.
Target beneficiary group/s	Target beneficiaries: Students, teachers, others : institutions Target education level: ISCED 6 to 8 Specific target group: Girls/women, low socio-economic status, rural areas
Scale of the program	Geographical scope: All the states and union territories except Lakshadweep were catered. Number of beneficiaries: All students from the beneficiary institutions. More than 200 teacher posts and 2000 institutions have been supported under the scheme. Total amount of money dedicated to the program: Rs. 14841.857 Crores
Monitoring and evaluation	The scheme is monitored both at the national and state level through a well-defined output-outcome framework with targets set for each year of implementation. The scheme is reviewed on a quarterly basis by the National Mission Authority. Digital and technology-based monitoring platforms are being designed and used in terms of fund tracking.
Timeline	2014
Program status	Ongoing. The extension of the scheme is under process and it's redesigned in such a way that addresses the global as well as local challenges. It majorly focuses on increasing access to education and providing employment to ensure sustainable development of the society.
Challenges and obstacles	India is a country which has different geographical and socio-economical limitations, due to which the implementation takes time and varies from place to place.
Role of digital technology	Level of importance: Essential Digital application utilization: To enhance the efficiency of data collection, monitoring and evaluation, digital applications are proposed to be developed ICT tools utilization: Funds to strengthen ICT infrastructure are provided to HEIs.

Role of solidarity & partnership

Embodiment of partnership and collaboration: The Government of India partners with the Department of Higher Education of different state governments.

Involvement of non-government institutions: N/A

III. PM E-VIDYA

Program executor

Ministry of Education, National Council of Educational Research and Training (NCERT), Bhaskaracharya National Institute for Space Applications and Geo-informatics (BISAG), States/Union Territories, Ministry of Information and Broadcasting (MoIB)

Program description

A comprehensive initiative called PM eVIDYA has been initiated as part of Atma Nirbhar Bharat Abhiyaan on 17 May 2020, which unifies all efforts related to digital/online/on-air education

Objectives and outcomes

The objective is to enable multi-mode access to education which includes DIKSHA (Digital Infrastructure for Knowledge Sharing-One Nation One Digital Platform), SWAYAM Prabha (One Class One TV Channel), Learning through Radio/CommunityRadio/Podcasts and digital learning contents for Children with Special Needs(CwSN).

Modalities/ resources

E-content is available in 36 Languages (32 Indian languages and 4 foreign languages) on DIKSHA. And special e-content for visually and hearing impaired developed on Digitally Accessible Information System (DAISY) and in sign language on National Institute of Open Schooling(NIOS) website/YouTube. Live, interactive sessions are telecast on class-based channels. For Classes 1 to 10, 1542 Live interactive sessions of 30 minutes each have been telecast, while for Classes 11 and 12, 152 live interactive sessions of 60 minutes each have been telecast. Lastly, 3,401 pieces of curriculum-based radio programmes (Classes 1-12) have been broadcast on 230 Radio stations.

Target beneficiary group/s

Target beneficiaries: Students, teachers, principals, parents/caregivers

Target education level: ISCED 1 to 5

Specific target group: Girl/women, low socio-economic status, rural areas, linguistic minorities, migrant background

Scale of the program

Geographical scope: National

Number of beneficiaries: To all students (approx. 26 crores)/teachers (approx. 96 lakhs)/ parents/stakeholders of our education system

Total amount of money dedicated to the program: Rs. 350 Crores

Monitoring and evaluation

At National level through the National Council on Education Research and Training (NCERT)

Timeline

May 2020

Program status

Ongoing

The program has been quite successful and its sustainability/scalability can be found at <https://pmevidya.education.gov.in/>

Challenges and obstacles

N/A

Role of digital technology

Level of importance: Somewhat important

Digital application utilization: DIKSHA requires device access. For accessing the video contents/practice tests, internet connectivity is required and can also be downloaded for offline learning

ICT tools utilization: N/A

Role of solidarity & partnership

Embodiment of partnership and collaboration: N/A
Involvement of non-government institutions: Civil Society Organisations(CSOs) as necessary for Technical support and Outreach

IV. NATIONAL MISSION ON EDUCATION THROUGH INFORMATION COMMUNICATION TECHNOLOGY (NMEICT)

Program executor

Indian Institute of Technology (IIT), Indian Institute of Management (IIM) and Central Universities are primarily involved in development of content for this programme

Program description

NMEICT has been envisaged to leverage the potential of ICT, in providing high quality personalized and interactive knowledge modules over the internet/intranet for all learners in Higher Education in anytime and anywhere mode

Objectives and outcomes

The overall aims of the NMEICT is to enhance access, equity and quality of higher education through the use of ICT-enabled services, such as: SWAYAM (Study Webs of Active Learning for Young Aspiring Minds), National Digital Library, e-YANTRA, Virtual Labs, FOSSEE (Free Open-Source Software for Education), Samarth (University Enterprise Resource Planning: Project Samart), Indian Research Information Network System (IRINS), and E-Shodh Sindhu.

Modalities/ resources

This is a Central Sector Scheme of the Ministry of Education, continuing for a period of 5 years w.e.f. 01.04.2021. The overall projected outlay for five years is Rs.2455 crore.

Target beneficiary group/s

Target beneficiaries: Students, teachers
Target education level: ISCED 4 to 8
Specific target group: Girls/women, low socio-economic status, rural areas, linguistic minorities

Scale of the program

Geographical scope: National
Number of beneficiaries: Around 40 million students and 1.6 million teachers.
Total amount of money dedicated to the program: Rs. 2455 Crores

Monitoring and evaluation

Monitoring and evaluation not centralized - each component does its own.

Timeline

It is a continuing programme. The current phase started on 01.04.2021

Program status

Ongoing

Challenges and obstacles

Due to sudden outbreak of Covid-19, educational institutions were closed. In such a situation, continuing the teaching, learning activity for a large number (around 40 million) of students was a major challenge.

Role of digital technology

Level of importance: Essential
Digital application utilization: For every initiative, digital education technology platform has been developed. Content has been created in electronic form
ICT tools utilization: N/A

Role of solidarity & partnership

Embodiment of partnership and collaboration: The programme relies on partnership across the spectrum including teachers, higher education institutions, and non- governmental organisations.
Involvement of non-government institutions: N/A

V. NATIONAL DIGITAL EDUCATION ARCHITECTURE (NDEAR)

Program executor	Central Board of Secondary Education (CBSE), National Council of Educational Research and Training (NCERT), Department of School Education and Literacy (DoSEL), States/Union Territories (UTs), Civil Society Organisations CSOs
Program description	NDEAR is an architectural blueprint for the educational ecosystem in the country that defines a set of principles, standards and specifications, guidelines and policies to strengthen the digital infrastructure for education.
Objectives and outcomes	The NDEAR will provide a diverse education eco-system architecture for the development of digital infrastructure. It also ensures data empowerment and protection of individual's privacy and confidentiality, strictly adhering to India's data protection bill and laws.
Modalities/ resources	12 key building block categories, consisting of 36 minimum viable building blocks, have been identified within NDEAR across the 3 administrative levels. Out of the 12 key categories, the learning services building block shall provide unlimited access to robust and comprehensive learning experiences and associated services to all the sectors.
Target beneficiary group/s	Target beneficiaries: Students, teachers, principals, parents/caregivers, school staff Target education level: ISCED 0 to 5 Specific target group: Girls/women, low socio-economic status, rural areas, linguistic minorities, migrant background
Scale of the program	Geographical scope: National Number of beneficiaries: To all students (approx. 26 crores)/teachers (approx. 96 lakhs)/parents/stakeholders of our education system including administrators Total amount of money dedicated to the program: Rs. 150 Crores
Monitoring and evaluation	National Level Project Monitoring Unit (PMU)
Timeline	29 th July 2021
Program status	Ongoing. Phase 1: Finalization and Launch of NDEAR Blueprint (July-2021); Phase 2: Setting up of PMU, Steering Committee; Core set of foundational projects which have high usability and impact. Foundational projects help develop core NDEAR building blocks which are leveraged by subsequent projects (Dec- 2021); Phase 3: Projects that provide impetus to National Education Policy (NEP) and Foundation Literacy and Numeracy (FLN) mission implementations leveraging projects from Phase-1 (Dec-2022); Phase 4: Projects that amplify efficiency and outcomes building off projects in Phase-1 and 2 (June 2024)
Challenges and obstacles	N/A
Role of digital technology	Level of importance: Essential Digital application utilization: Revamping of existing applications to make NDEAR compliant is required and the latest ones do adopt it as per the architectural standards ICT tools utilization: Yes, detailed report available at NDEAR Blueprint https://www.ndear.gov.in/resources.html
Role of solidarity & partnership	Embodiment of partnership and collaboration: All states/ Union Territories (UTs), Tech partners, Autonomous bodies of the Ministry of Education, Civil Society Organisations CSOs Involvement of non-government institutions: As per National Education Policy (NEP) 2020, Public Private Partnership (PPP) is encouraged.

VI. NATIONAL INITIATIVE FOR SCHOOL HEADS' AND TEACHERS' HOLISTIC ADVANCEMENT (NISHTHA)

Program executor	The Department of School Education & Literacy have conducted this programme in collaboration with States and UTs through its academic bodies such as National Council of Educational Research and Training (NCERT) and National Institute of Educational Planning and Administration (NIEPA)
Program description	NISHTHA is a national mission to improve learning outcomes at the Elementary level through an integrated teacher training programme which is launched by The Ministry of Education (MoE).
Objectives and outcomes	This integrated programme aims to build the capacities of around 400,000 education providers (teachers, school leaders, officials, etc.) in all States and UTs. Among the expected outcomes from NISHTHA are the improvement in learning outcomes, creating enabling and enriching inclusive classroom environments, and responding to the social, emotional and psychological needs of students.
Modalities/ resources	The prominent feature of this integrated programme is the activity based modules including educational games and quizzes, <i>Social-emotional learning</i> , motivational interactions, team building, preparation for school based assessment, continuous feedback mechanism, online monitoring and support system, training gap and impact analysis (Pre and Post training). Further, digital content such as videos, presentations will be used for training sessions. The ultimate goal is to motivate and encourage teachers to use these activities in classroom transactions so as to ensure engagement of all students and bring the best out of them
Target beneficiary group/s	<p>Target beneficiaries: students, teachers, others : District Institutes of Education and Training (faculties, Officials and Resource Persons from Block Resource Centres (BRCs) and Cluster Resource Centres (CRCs)</p> <p>Target education level: ISCED 0 to 3</p> <p>Specific target group: Others: All Teachers and School Heads in Govt. and Govt. Aided Schools at elementary level</p>
Scale of the program	<p>Geographical scope: National, State, District & Block level</p> <p>Number of beneficiaries:</p> <p>2019-20: 1,723,068 Teachers and School Heads at the Elementary level</p> <p>2020-21: 2,385,503 Teachers and School Heads at the Elementary level</p> <p>Total amount of money dedicated to the program: NISHTHA 2.0 for secondary level teachers (10 lakh) and NISHTHA 3.0 for foundational learning (25 lakh teachers) has been launched in 2021-22.</p>
Monitoring and evaluation	After the completion of the training, the Key Resource Persons (KRP) were in touch with all the teachers through WhatsApp and Facebook Workplace groups. Similarly, National Resource Persons (NRPs) were identified as Mentors for the KRPs at the state level. The Mentor is responsible for providing continuous guidance, feedback and monitoring so that a quality circle is created enabling them in building pedagogical skills and connecting with peers, thereby, creating a long-term sustainable impact on classroom transactions.
Timeline	August, 2014
Program status	Ongoing

Challenges and obstacles

The planning process was time consuming involving a series of consultations with various stakeholders. The COVID pandemic presented challenges for face to face training and technology integration needed to be explored. Accordingly, NISTHA Online on DIKSHA was launched, however, the impact of this online training would need to be assessed to address gaps, if any. Further, as a next step, customized training based on need assessment will be designed to enrich teachers' knowledge and skills in the following years

Role of digital technology

Level of importance: Essential

Digital application utilization: A mobile APP and Learning Management System (LMS) based on MOODLE (Module Object-Oriented Dynamic Learning Environment) was developed by NCERT.

ICT tools utilization: NISHTHA Online was created by customizing modules for online delivery via the DIKSHA Platform of NCERT. It includes: text modules along with videos, live sessions by national resource persons on DTH Swayam Prabha TV Channel, and interactive Voice Responses System.

Role of solidarity & partnership

Embodiment of partnership and collaboration: The programme is implemented in partnership with States and UTs, other Ministries, Teacher Training Institutions and CSOs.

Involvement of non-government institutions: The Modules for NISHTHA have been developed through a consultative process involving the States and UTs and Central Board of Secondary Education, Kendriya Vidyalaya Sangathan (KVS), Navodaya Vidyalaya Samiti (NVS), School Principals and Non-Governmental Organizations, such as Kaivalya Foundation, Tata Trust, Azim Premji Foundation and Aurobindo Society.

VII. PRADHAN MANTRI UCHCHATAR SHIKSHA PROTSAHAN (PM-USP)

Program executor	The Ministry of Electronics and Information Technology, the Department of Financial Services, Scheduled Commercial Banks of India, the Canara Bank, the Department of Higher Education and its autonomous organisations, namely, the UGC and AICTE, and other Ministries in Government of India.
Program description	PM-USP is a central scheme that aims to provide financial aid to nearly 2 million students from the economically weaker sections of our country to pursue higher education during 2021-26.
Modalities/ resources	Up to 82,000 scholarships are awarded each year for pursuing graduate/post graduate degree courses (PM-USP Scholarship for College and University Students). 5000 scholarships are available per annum for poor students of Jammu, Kashmir and Ladakh (PM-USP Special Scholarship for Students of Jammu, Kashmir and Ladakh). The financial aid is provided by the Central Government.
Target beneficiary group/s	Target beneficiaries: Students Target education level: ISCED 6 to 8 Specific target group: Girls/women
Scale of the program	Geographical scope: Entire Nation Number of beneficiaries: Nearly 2 million students in a period of 5 years. Total amount of money dedicated to the program: Indian Rupee 10,158 Crore during 2021-26
Monitoring and evaluation	The schemes are on-boarded on digital platforms maintained by the Government of India. The Ministry provides regular feedback through replies of questions raised in the Parliament of India. In addition, third party evaluation is done by reputed external agencies
Timeline	The scholarship scheme for college and university students started in the year 2008. The central sector interest subsidy scheme started in the year 2009. The special scholarship scheme for Jammu and Kashmir and Ladakh started in the year 2011. The credit guarantee scheme started in the year 2015
Program status	Ongoing
Challenges and obstacles	N/A.
Role of digital technology	Level of importance: Essential Digital application utilization: All the scholarship and fellowship schemes are implemented via online portals managed by respective institutions/departments. Many of the scholarship schemes are onboarded on the National Scholarships Portal of the Government of India: https://scholarships.gov.in/ . This portal processes more than 12 million scholarship applications in a year. ICT tools utilization: The details have already been mentioned above.
Role of solidarity & partnership	Embodiment of partnership and collaboration: N/A Involvement of non-government institutions: Non Government Institutions are not involved in this programme.

VIII. PROGRAMME ON VOCATIONAL EDUCATION

Program executor	The University Grants Commission (UGC) facilitates colleges and Universities
Program description	UGC's vocational education programme facilitates colleges and Universities to offer skill-based programmes under the National Skills Qualifications Framework (NSQF).
Objectives and outcomes	The main objectives of NSQF are to integrate skills education with general education, and to offer flexible access to education through multiple entry and exit options in order to reduce the gaps between education and employment. In order to address the employment needs of the students enrolled in general Undergraduate programmes, UGC has also come up with Guidelines for apprenticeship-embedded degree programme.
Modalities/ resources	The higher educational institutions under UGC's vocational education programme offer skill-based Certificates, Diplomas, Advanced Diplomas, Undergraduate and Post-graduate programmes. The curriculum in the skill-based programmes is a mix of general education (which includes communication skills, environment studies, entrepreneurship development studies, etc.) and skills in the relevant trades. In the apprenticeship-embedded degree programme, the HEIs can offer apprenticeship to students at least for one semester.
Target beneficiary group/s	<p>Target beneficiaries: Students, parents/caregivers</p> <p>Target education level: As UGC deals with higher education, minimum educational qualification prescribed for admission in the skill-based programmes is 10+2</p> <p>Specific target group: girl/women, low socio-economic status, rural areas, others (the younger population irrespective of their background).</p>
Scale of the program	<p>Geographical scope: National Level.</p> <p>Number of beneficiaries: During 2020-21 academic session, more than 1 lakh students were enrolled in various skill-based programmes, approved by UGC</p> <p>Total amount of money dedicated to the program: There are provisions for providing financial assistance for infrastructure development and appointment of faculty/trainers</p>
Monitoring and evaluation	UGC has an online portal where the institutions are required to upload data periodically
Timeline	UGC's vocational programme started in the academic year 2013-14
Program status	Ongoing. It is an ongoing programme. With the continuous focus on vocational education, it is expected that the employment needs of students will be addressed, and there will be an integration of skill education with general education.
Challenges and obstacles	In the initial stage, the lack of Sector Skill Councils in certain skill trades and skill trainers was a challenge.
Role of digital technology	<p>Level of importance: Essential</p> <p>Digital application utilization: Though the skill-based programmes are offered offline, a number of institutions are offering IT-based courses.</p> <p>ICT tools utilization: As mentioned above.</p>
Role of solidarity & partnership	<p>Embodiment of partnership and collaboration: This programme promotes close collaboration between the HEIs and industry. As per the UGC Guidelines related to NSQF, the HEIs need to develop course curriculum in consultation with the industry partners.</p> <p>Involvement of non-government institutions:</p> <p>Both public funded and self-financing educational institutions can participate in UGC's vocational education programme.</p>

IX. NATIONAL APPRENTICESHIP TRAINING SCHEME (NATS)

Program executor	Department of Higher Education (DHE), Ministry of Education (MoE) through four regional Boards of Apprenticeship/Practical Training (BoATs/BoPTs) located at Chennai, Kanpur, and Kolkata and Mumbai.
Program description	NATS is a scheme of the Government of India set up to enhance the employability of students who have completed their undergraduate courses or diplomas. It is a one-year programme equipping technically qualified youth with practical knowledge and skills required in their field of work.
Objectives and outcomes	The objectives of the National Apprenticeship Training Scheme (NATS) are to: (i) promote skill development and to make students more employable; and (ii) facilitate employers to train disciplined and skilled manpower to meet the required human resources.
Modalities/ resources	Industries/institutes generally indicate their criteria on the NATS portal. The system generates its shortlisted candidates from the NATS portal and the shortlisted candidates are subject to further tests leading to their final selection. All selected candidates are required to sign an apprenticeship contract with the industry which is vetted by the respective regional Board of Apprenticeship Training (BOAT/BOPT).
Target beneficiary group/s	Target beneficiaries: students Target education level: ISCED 6 to 8 Specific target group: low socio-economic status, rural areas, Others : All Graduate and Diploma students
Scale of the program	Geographical scope: National Level Number of beneficiaries: Industries: 14,189; Institutions: 2,966; Students: 919,003 since inception; 110,762 in 2021/22 Total amount of money dedicated to the program: Rs.500 Cr.(INR)
Monitoring and evaluation	The scheme is monitored both at the national and state level, through a well-defined output-outcome framework with targets set for each year of implementation. The scheme is reviewed on a quarterly basis by the National Mission Authority. Digital and technology-based monitoring platforms are being designed and used in terms of fund tracking.
Timeline	1st April 2021
Program status	Ongoing
Challenges and obstacles	Not yet faced
Role of digital technology	Level of importance: Essential Digital application utilization: The national web portal is used by industries, institutes and students to apply for and select apprenticeships. ICT tools utilization: N/A
Role of solidarity & partnership	Embodiment of partnership and collaboration: The programme works extensively with employers,,private sectors and with regional Boards of Apprenticeship/Practical Training (BoATs/BoPTs) located at Chennai, Kanpur, Kolkata and Mumbai. Involvement of non-government institutions: All Government, Non-Government Educational Institutions/Establishment are participating as per Apprentices Act, 1961.

X. MULTIDISCIPLINARY EDUCATION AND RESEARCH IMPROVEMENT IN TECHNICAL EDUCATION (MERITE)

Program executor	Yet to be decided
Program description	The scheme aims to modernize the technical education sector in the country through the reforms envisioned in the National Education Policy-2020.
Objectives and outcomes	The objectives include: a) developing standards for student-centered learning; b) improved digital skills and employability among engineering education graduates; c) improved access and equity in engineering education; and improved accountability, efficiency and resilience of the technical education system
Modalities/ resources	MERITE has three components: 1) modernizing teaching, learning and assessments to enhance employability and strengthening equitable access; 2) research for better skills and innovation; and 3) sector steering, including governance and HEI-internal and external quality assurance
Target beneficiary group/s	Target beneficiaries: Students, teachers, others: institutions Target education level: ISCED 6 to 8 Specific target group: Girls/women, low socio-economic status, rural areas
Scale of the program	Geographical scope: Yet to be decided Number of beneficiaries: Yet to be decided Total amount of money dedicated to the program: Total Project Cost- 4200 Cr. (IN INR)
Monitoring and evaluation	The program will be implemented and monitored through a dedicated Program Implementation Unit (PIU) under the guidance of Ministry of Education, Government of India and the World Bank.
Timeline	The MERITE will be implemented with the support of the World Bank for a duration of five years (2022-2027). Start time is October 2022 (tentative)
Program status	Planning stage. The program is currently in the initial planning stage and outlook regarding the MERITE's sustainability, replicability, and scalability is yet to be decided.
Challenges and obstacles	N/A
Role of digital technology	Level of importance: Essential Digital application utilization: The MERITE project envisages use of OER, LMS (Moodle, ILIAS, NEO), MIS, ERP and other digital tools. The MERITE Project also intends to develop Digital infrastructure (connectivity, devices) and capabilities for online/ distance and blended teaching, learning and assessments. ICT tools utilization: It also proposes to introduce Digital governance through ERP with Student tracking and employer feedback systems, 360- degree feedback for faculty accountability and transparency in governance.
Role of solidarity & partnership	Embodiment of partnership and collaboration: MERITE scheme envisions private sector engagement in curriculum reforms, incorporation of future skills & content delivery, collaboration for research on disruptive technologies, partnerships for online education, adaptive learning and assessments & e-content, among others. Involvement of non-government institutions: MERITE envisions active private sector engagement, however key areas are yet to be decided.

INDONESIA



I. TRANSFORMATION OF EDUCATIONAL SYSTEM EVALUATION

Program executor	The Indonesian Ministry of Education, Culture, Research, and Technology
Program description	In 2021, the Indonesian government released Government Regulation No. 57 regarding the National Education Standards, which mandates an evaluation of the education system. The regulation made way for alterations to two stages of the education evaluation process: the data collection and the data distribution.
Objectives and outcomes	This program aims to provide: a) measurement of access, quality, relevance, and governance of education administration; b) an integrated and shareable data management system; c) the alignment of programs and policies for the management of education administration; and d) improvement of access, quality, relevance, and governance of sustainable education.
Modalities/ resources	The National Assessment is carried out on a computer-based basis. The results of the National Assessment are used to produce the Education Profile and the Education Report. The government provides an Education Report Platform that schools and local governments can access as a basis for conducting self-evaluations and preparing plans for improving the quality of education in their capacity.
Target beneficiary group/s	Target beneficiaries: Students, teachers, principals, Ministry of Religious Affairs, Local Governments, Communities Target education level: ISCED 0, ISCED 1, ISCED 2, ISCED 3
Scale of the program	Number of Beneficiaries: There are approximately 260.000 schools that take part in the National Assessment involving more than three million teachers and 6 million students. Scope: All schools in 514 districts and 34 provinces across Indonesia. Total Amount: N/A
Monitoring and evaluation	Monitoring and evaluation for the National Assessment is carried out every year since 2021 to improve the assessment system in the following year. Monitoring and evaluation of the use of education report cards are carried out every year and will only start in 2022 so the results of monitoring and evaluation are not yet known.
Timeline	The National Assessment has been carried out since 2021, while the Education Report has been available since 2022.
Program status	Ongoing. The National Assessment and the Education Report platform are expected to be part of a systemic change towards improving the quality and access of education in Indonesia. The policy will continue to be evaluated and improved. The Education Report platform is also continuously improved to ensure the ease of data access and utilization of the stakeholders.
Challenges and obstacles	The challenges include: a) shifting the national exam paradigm which determined graduation eligibility to that of the new National Assessment, the main objective of which is to map and improve the quality of learning; and b) adopting the practice of data-based planning.

Role of digital technology

Level of importance: Essential

Developing or utilizing digital apps: The Education Report Platform allows schools and local education agencies to download the school-level Education Profile data, which gives a comprehensive portrayal of the education service quality under their capacity. The Education Report Platform also provides a glossary menu of each indicator, as well as a help center containing FAQs, user manuals, video tutorials, and infographics.

Providing or utilizing ICT tools: There are two indicators in the evaluation of the education system that measure the use of ICT, which are: 1) ICT utilization in improving the quality of learning, and 2) ICT utilization for accountable education management.

Role of solidarity & partnership

Partnership and collaboration: The Ministry of Education collaborates with the Ministry of Religious Affairs, the Ministry of Home Affairs, local governments, as well as private educational foundations. The Ministry of Education also collaborates with BAN PAUD PNF and BAN SM in utilizing the Education Report Card platform for the re-accreditation process.

Non-government institutions involved: The Ministry collaborates with private schools to obtain educational data needed to compile the Education Report. Private schools can use the Education Report for planning purposes and to improve the quality of education in the schools they manage. In addition, the government also collaborates with application development companies to help build the platform.

II. TRANSFORMATION OF EDUCATION FUNDING AND GOVERNANCE

Program executor	The Indonesian Ministry of Education, Culture, Research, and Technology, with support from the Indonesian Ministry of Home Affairs, the Indonesian Ministry of Finance, and the Indonesian Ministry of Religious Affairs.
Program description	The transformation of education funding and governance is achieved through six channels: PIP/KIP (scholarship for Indonesian students), calibrated school assistance (BOS Majemuk), early childhood education assistance (BOP PAUD), community learning center assistance (BOP Kesetaraan), school activity plan and budget application (ARKAS), and facility procurement system for schools (SIPLah).
Objectives and outcomes	All channels are aimed at improving education access throughout Indonesia. The PIP/KIP aims to increase access to education by providing funds to students from poor/vulnerable groups to assist them in meeting their educational needs for basic through higher education level. BOS Majemuk, BOP PAUD, and BOP Kesetaraan aim to support schools to fund their operational resources in providing education services. ARKAS and SIPLah aim to facilitate schools in managing the government assistance (BOS) fund to become more effective, efficient, transparent, and accountable.
Modalities/ resources	The transformation of education funding provides funds for students (PIP/KIP) and schools (BOS Compound, BOP PAUD & BOP Equivalence). Meanwhile, the transformation of education governance (ARKAS and SIPLAH), develops electronic applications/platforms to facilitate schools in planning and managing the education activity budget (ARKAS) and implementing goods and services transactions (SIPLah).
Target beneficiary group/s	The beneficiaries: Students, teachers, principals Target education level: ISCED 0, ISCED 1, ISCED 2, ISCED 3, ISCED 6-8 Specific target group: Low socio-economic status, rural areas
Scale of the program	Number of Beneficiaries: N/A. Scope: The transformation is applied nationally, covering the entire territory of Indonesia. Total Amount: N/A
Monitoring and evaluation	The program is yet to be evaluated, but the monitoring is done by the system and through an audit mechanism.
Timeline	The channels in the transformation of education funding have been implemented since 2005 (BOS) and 2014 (PIP). On the other hand, the channels of education governance transformation are fairly new, in 2018 (ARKAS) and 2021 (SIPLah).
Program status	Ongoing. The channels of the transformation are expected to continue being implemented indefinitely. As time goes by, though, the government may make changes to develop the policies further.
Challenges and obstacles	N/A
Role of digital technology	Level of importance: Essential Developing or utilizing digital apps: ARKAS and SIPLah are digital applications. The ARKAS enables schools to plan activities and prepare budgets. The SIPLah application allows schools to procure goods and services needed for their learning activities online, similar to that of an e-commerce platform. Providing or utilizing ICT tools: To be able to use ARKAS and SIPLah schools must have adequate ICT equipment, including good internet network support.
Role of solidarity & partnership	Partnership and collaboration: The Ministry of Education, Ministry of Finance, and Ministry of Home Affairs collaborate in order for the transformation to be implemented properly. Coordination between the Central Government and Regional Governments and the schools and communities is very much needed. Non-government institutions involved: The government acknowledges the role of the community and private schools in the provision of education in Indonesia. The majority of vendors providing educational goods and services on the SIPLah platform are non-state actors and businesses.

III. LEARNING TRANSFORMATION

Program executor	The Indonesian Ministry of Education, Culture, Research, and Technology
Program description	The learning transformation focused on systematic changes in basic, secondary, and higher education.
Objectives and outcomes	At the basic and secondary education level, the government implemented the new Emancipated Curriculum (Kurikulum Merdeka) . At the higher education level, the transformation is implemented through the Emancipated Campus (Kampus Merdeka) which enables autonomous and flexible education. In 2019, the government launched the School Digitalization program , which provides schools with access to technology to accelerate the transformation and promote technology-based learning.
Modalities/ resources	In the early phase of the pandemic, some schools adopted a simplified curriculum, namely the Emergency Curriculum. The outcome shows a positive and promising result, which is considered valuable capital in the implementation of the Emancipated Curriculum. In addition, the network and community of teachers that have been formed became a media for teachers to share and learn from each other in implementing the curriculum.
Target beneficiary group/s	Target beneficiaries: Students, teachers, principals, school staff, university administrators, academician, local governments Target education level: ISCED 0, ISCED 1, ISCED 2, ISCED 3, ISCED 4, ISCED 6-8 Specific target group: Rural areas
Scale of the program	Number of Beneficiaries: N/A. Scope: Emancipated curriculum (national), School Digitalization (only to specific areas/ regions that have access constraints and are designated as program priority areas), Emancipated Campus (all universities across Indonesia) Total Amount: N/A
Monitoring and evaluation	Monitoring and evaluation of these programs are carried out on a regular basis. For example, the Emancipated Campus program carries out tracer studies, which universities are required to conduct every year.
Timeline	Emancipated Curriculum was launched on February 11, 2022, but piloting was carried out in 2021 in schools participating in the Pioneer Schools program. School digitalization has been implemented since 2019, while the Emancipated Campus was launched in January 2020.
Program status	Ongoing. Because of the benefits of each program, the potential for sustainability of the three learning transformation programs is quite good. Since its launch on April 11, 2022, over 47,000 schools have stated their willingness to implement the Emancipated Curriculum. The same thing happened with the School Digitalization program.
Challenges and obstacles	Some schools and teachers believe that they are not prepared to implement the Emancipated Curriculum because they are not used to making adjustments and simplifying their learning. Teachers also have misconceptions and concerns about how curriculum changes will affect their performance and well-being. Meanwhile, the main challenge in the Emancipated Campus program is related to universities' strategy for establishing optimal and sustainable collaboration with fellow education providers, particularly third parties such as the business world, industry and non-profit organizations..
Role of digital technology	Level of importance: Essential. Developing or utilizing digital apps: All three programs are involved in the creation and development of digital applications and platforms that support teaching and learning resources, as well as school management platforms. Providing or utilizing ICT tools: For these programs, ICT tools are required to facilitate the learning process, and the provision/utilization is determined by schools/local governments. .
Role of solidarity & partnership	Partnership and collaboration: The regional education offices, private foundations, and development partners all play a role in the implementation of these programs. Non-government institutions involved: Private institutions/non-governmental organizations, development partners, the teacher professional organization, private sector/edutech, educational providers and third parties such as the business world, industry and non-profit organizations are also involved

IV. TRANSFORMATION OF TEACHERS AND EDUCATION PERSONNEL

Program executor	The Pioneer Schools Program (PSP), Pioneer COmmunities Program (POP) and Pendidikan Pioneer Teachers (PGP) are run by the Ministry of Education, Culture, Research, and Technology in collaboration with the Local Government, community organizations, Ministry of Religion, Ministry of Finance, Directorate General of GTK, Bappenas, and the Learning Community.
Program description	The Ministry of Education, Culture, Research, and Technology seeks to improve the competence of teachers and education personnel through several programs, namely the Pioneer Schools Program, the Pioneer Communities Program, and the Pioneer Teachers Program.
Objectives and outcomes	<p>Pioneer Schools Program focuses on developing student learning outcomes holistically, including literacy and numeracy competencies as well as character.</p> <p>Pioneer Communities Program aims to improve student learning outcomes by assisting educators and education staff in acquiring the necessary competencies.</p> <p>Pendidikan Pioneer Teachers is a professional development program that focuses on developing learning leadership and teacher independence.</p>
Modalities/ resources	<p>The PSP consists of interventions designed to be implemented holistically, beginning with the development of school human resources and progressing to learning, planning, digitization, and mentoring by the local government.</p> <p>The POP is carried out to increase educators' professional abilities in improving the quality of the learning process and student learning outcomes.</p> <p>The PGP includes online training classes, workshops, and mentoring. Teachers continue to teach as usual throughout the program.</p>
Target beneficiary group/s	<p>Target beneficiaries: Students, teachers, principals, school staff</p> <p>Target education level: ISCED 0, ISCED 1, ISCED 2, ISCED 3, ISCED 4, special school</p> <p>Specific target group: Exceptional children</p>
Scale of the program	<p>Number of Beneficiaries:</p> <p>PSP: The program is carried out in stages with the aim for the entire school ecosystem in Indonesia: .</p> <ul style="list-style-type: none"> - 2021/2022: 2,500 education units in 34 provinces and 111 regencies/cities. - 2022/2023: 10,000 education units in 34 provinces and 250 regencies/cities - 2023/2024: 20,000 education units in 34 provinces and 514 regencies/cities. <p>POP: In 2020–2022, 50,000 teachers, principals, and education personnel in 5,000 PAUD/SD/SMP/TKLB/SDLB/SMPLB.</p> <p>PGP: Target of 405,900 people for 2020-2024.</p> <p>Scope: The Pioneer Schools Program extends across all of Indonesia.</p> <p>Total Amount: The Assistance for Pioneer Schools Program has a budget of IDR 96 billion, which is channeled through Non-Physical DAK regional transfers.</p>
Monitoring and evaluation	<p>PSP: M&E will be done regularly through RCT (Randomized Controlled Trial), FGD (Focus Group Discussion), surveys, interviews, and ethnography will be used for monitoring and evaluation.</p> <p>POP: M&E is carried out in each target area by Field Facilitators (PL) and Field Facilitator Supervisors (PPL) to assist, observe, and document the performance of selected community organization programs in improving student learning outcomes, teaching, and management practices.</p>

Timeline	The Ministry of Education, Culture, Research, and Technology launched the PSP on February 1, 2021. The POP began in June 2020. The registration for the first batch of Pioneer Teachers candidates opened in July 2020, and the implementation of Pioneer Teachers Education began on October 5, 2020.
Program status	<p>Ongoing. PSP: Within three years of implementation, in the 2023/2024 academic year, 20,000 drive schools covering all provinces and districts/cities in Indonesia are expected.</p> <p>POP: Based on the program evaluation results, the Ministry of Education, Culture, Research, and Technology will select programs that demonstrate positive results in improving student learning outcomes and will integrate the program nationally beginning in 2021.</p> <p>PGP: This program is still ongoing, intending to reach 405,900 teachers by 2024.</p>
Challenges and obstacles	N/A
Role of digital technology	<p>Level of importance: Essential</p> <p>Developing or utilizing digital apps: The technology platforms used include: a) Emancipated Teaching Platform, for developing teaching practices based on the Emancipated Curriculum; b) School Resource Platform for school resource management; and c) Education Report Dashboard for monitoring education quality.</p> <p>Providing or utilizing ICT tools:</p> <p>PSP: Local budgets can be used to support access to educational technology platforms (including, but not limited to, access and networks) and ICT equipment.</p> <p>PGP: Prospective teacher educators provide laptops/computers and internet access on their own, and the Ministry of Education, Culture, Research, and Technology assist with internet data packages.</p>
Role of solidarity & partnership	<p>Partnership and collaboration: The programs are a collaboration between the Ministry of Education, Culture, Research, and Technology, and the Local Governments, and each stage, from school selection to financing, is carried out and budgeted by both parties, the APBN and APBD.</p> <p>Non-government institutions involved: The programs can partner with universities, social institutions, village heads, leaders, etc.</p>

V. TRANSFORMATION OF VOCATIONAL EDUCATION

Program executor	The Indonesian Ministry of Education, Culture, Research, and Education implements this program in coordination with local governments, vocational universities, and BAN-PT in its implementation.
Program description	The Indonesian Ministry of Education, Culture, Research, and Technology takes a comprehensive approach to encourage linking and matching with industry, allowing education units to provide industry-based learning that prepares graduates to work and become entrepreneurs.
Objectives and outcomes	the Center for Excellence Vocational High School (SMK PK) and Vocational Emancipated Campus (Kampus Merdeka Vokasi) programs aim to strengthen the technical capabilities of educators, improve the quality of facilities and infrastructure, align curriculum with competencies and skills for work, strengthen learning pathways between secondary and higher education, and involve industries and private sector in education.
Modalities/ resources	The Vocational Emancipated Campus transforms vocational high schools through highly immersive industry-based learning, allowing students to develop skills, talents, and interests. This program leverages the Vocational Campus Competitive Fund and the Vocational Matching Fund.
Target beneficiary group/s	Target beneficiaries: Students, teachers, principals Target education level: ISCED 3, ISCED 4, ISCED 5, ISCED 6-8
Scale of the program	Number of Beneficiaries: The Center for Excellence Vocational High School (SMK PK): 491 schools in 2020, 901 schools in 2021, and 1370 schools in 2022. Vocational Emancipated Campus: D2 Fast Track: 33 in 2021, 83 in 2022; D3 to Applied Bachelor: 83 in 2021, 160 in 2022; Matching Fund: 43 in 2021, 70 in 2022 Scope: National Total Amount: The Center for Excellence Vocational High School (SMK PK): 1,22 trillion (2020), 1,15 trillion (2021), 1,5 trillion (2022). Vocational Emancipated Campus: D2 Fast Track: 13 billion (2021), 62 billion (2022); D3 to Applied Bachelor: 69 billion (2021); Matching Fund: 30,19 billion (2021), 90 billion (2022)
Monitoring and evaluation	The Center for Excellence Vocational High School (SMK PK) and Vocational Emancipated Campus programs are monitored and evaluated regularly at the start, middle, and end of the program to examine three aspects: collaboration and alignment with the world of work, school leadership, and absorption of graduates. In the Vocational Emancipated Campus program, tracer studies are also used to determine the quality of universities and study programs.
Timeline	SMK PK: January 2020 Vocational Emancipated Campus: May 2021
Program status	Ongoing. By 2024, SMK PK hopes to have around 2,400 SMKs (nearly 20% of total SMKs). The Vocational Emancipated Campus Matching Fund strengthens the collaboration between vocational higher education and the project's industry partners. The implementation of the project will strengthen relationships and create more opportunities for collaboration.

Challenges and obstacles	<p>The most difficult challenge is to invite as many people as possible to not only understand but also internalize the concept of “link and match” between the worlds of work and education. Another challenge is establishing effective stakeholder management for each program. Covid 19 certainly presents implementation challenges, causing the timeline to be delayed and operations to be slowed due to the availability of less certain resources.</p>
Role of digital technology	<p>Level of importance: Essential.</p> <p>Developing or utilizing digital apps: The three technological platforms used are: a) Teacher training: Teacher Platform, b) Evaluation and School Management (SMK): Education Reporting Platform, ARKAS, SIPLah; and c) Industry Matching: Kedaireka.</p> <p>Providing or utilizing ICT tools: N/A</p>
Role of solidarity & partnership	<p>Partnership and collaboration: Each program is focused on expanding opportunities for vocational education to form and maintain partnerships and collaborations with industry partners.</p> <p>Non-government institutions involved: N/A</p>

ITALY



I. EXTRAORDINARY INTERVENTION AIMED AT REDUCING TERRITORIAL GAPS IN LOWER AND UPPER SECONDARY SCHOOLS

Program executor	Ministry of Education
Program description	The priority program will be developed in 4 years with the aim of providing adequate basic skills to at least 1,000,000 students per year, including through the development of a national platform for online training.
Objectives and outcomes	To mitigate instances of early school leaving, the investment provides specific initiatives of mentoring, counselling and active vocational guidance. There are several related objectives: a) valorization of key competences and reduction of territorial gaps; b) prevention of early school leaving and promotion of educational success, including through the use of online tools; and c) promotion of social inclusion and integrated digital education for people with sensory and/or intellectual disabilities or from disadvantaged areas. A secondary outcome connected to the system of vocational guidance and qualification is to allow a more effective response to the growing demand for more qualified workers.
Modalities/ resources	In order to combat early school leaving, the investment provides specific initiatives of mentoring, counseling and active vocational guidance. In particular, two target groups are considered: a) young people aged 12-18 years at risk of dropping out of school or already outside the school circuit , who are provided individual online tutoring sessions and recovery training; and b) young people between 18 and 24 years of age who have completed the second cycle of education and are not involved in further studies or training , who are provided tutoring courses or consulting interventions to facilitate the return to the education and training pathways.
Target beneficiary group/s	Target beneficiaries: Students, teachers, principals, school staff Target education level: ISCED 3 Specific target groups: Low socio-economic status, rural areas, migrants, most fragile schools and territories
Scale of the program	Geographical scope: Nationwide Number of beneficiaries: - basic skills remedial courses for at least 120,000 young people aged 12-18 years old - mentoring activities for at least 470,000 young people at risk of early school leaving and at least 350,000 young people who have already left education and training Total amount of money dedicated to the program: 1.5 billion euro of the National Recovery and Resilience Plan
Monitoring and evaluation	The implementation of interventions funded through the European Recovery and Resilience Facility is monitored and evaluated by the European Commission through the Central Service for the National Recovery and Resilience Plan at the Ministry of Economy and Finance. The Ministry of Education carries out monitoring tasks to measure the achievement of targets through the system developed under the National Plan for Digital School and based on the mechanisms of the Structural Funds.
Timeline	01/01/2021
Program status	Ongoing. From 2021 to 2026
Challenges and obstacles	N/A

Role of digital technology	<p>Level of importance: Essential</p> <p>Developing or utilizing digital apps: As a measure of support for the actions, the program provides a digital platform for online mentoring and training of students. The digital platform, integrated with the monitoring functions of the program, is made available in both desktop and mobile versions, as well as through a special app.</p>
Role of solidarity & partnership	N/A

II. PLAN FOR AN INTEGRATED EARLY CHILDHOOD EDUCATION AND CARE SYSTEM

Program executor	The program provides for multilevel governance that involves the State, the Regions and local authorities, each with specific competences.
Program description	This priority program aims to enhance education by focusing on the integrated system of Early Childhood Education and Care from birth to 6 years.
Objectives and outcomes	The program aims to both expand the access to educational services in every region, with a special effort on Southern Italy, and progressively reach complete universal access to pre-primary education. In addition to combating educational poverty, the program is also supporting parents and women's work, especially in areas of the country where educational services are most lacking. While the national budget contributes to the implementation of system actions, such as the development of a national reference framework and the realization of training actions for educators, the investments of the National Recovery and Resilience Plan are aimed at reducing regional gaps in the offer of ECEC services through the construction of more than 1,800 new kindergartens and pre-primary schools and the restoration of existing ones.
Modalities/ resources	The construction of the National system includes: the definition of "National Educational Guidelines for Early Childhood Education and care Services"; actions of dissemination in favor of educators and families to support the participation in education and care activities; the implementation of a National Register of Educational Services 0-3 years; monitoring of the interventions and the experimentation of self-assessment activities; support for the spring sections (24-36 months), also with a view to encouraging an increase in the number of places available for children under 3 years of age. In addition, the program is also implemented through infrastructure interventions that make school buildings more innovative, sustainable, safe and inclusive.
Target beneficiary group/s	<p>Target beneficiaries: Students, teachers, principals, school staff, parents/caregivers</p> <p>Targeted education level: ISCED 0</p> <p>Specific target groups: Girls/women, low socio-economic status, most fragile schools, territories, and children</p>
Scale of the program	<p>Geographical scope: Nationwide</p> <p>Number of beneficiaries: 96% of children 3-6 years, not less than 33% of children 0-3 years</p> <p>Total amount of money dedicated to the program: 359 million euro of the national budget; 4.6 billion euro of the National Recovery and Resilience Plan</p>

Monitoring and evaluation	The Ministry of Education guides, coordinates and promotes the integrated system through specific measures, such as the criteria for monitoring and evaluation. The Regions have a partnership role in planning and monitoring, and a specific role in regulating and defining quality standards at local levels. Local authorities (municipalities) have a specific role in the planning and management, as well as in the monitoring and supervision of educational services from ages 0-3. The implementation of interventions funded through the European 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.
Timeline	02/12/2021
Program status	Ongoing. From 2021 to 2026
Role of digital technology	Level of Importance: Somewhat important Developing or utilizing digital apps: With the aim of ensuring the exchange of data and information between the Ministry, the Regions, the Autonomous Provinces and the local authorities, the program provides for the activation of a national information system of children educational services to which the educational services authorised by local authorities must join.
Role of solidarity & partnership	The Ministry of Education guides, coordinates and promotes the integrated system through specific measures and defining the criteria for monitoring and evaluation. The Regions have a partnership role in planning and monitoring, while local authorities (municipalities) have a specific role in the planning and management, as well as in the monitoring and supervision of educational services from ages 0-3.

III. EDUCATIONAL AND ORGANISATIONAL DIGITALIZATION OF SCHOOLS: FROM THE NATIONAL DIGITAL SCHOOL PLAN TO THE NATIONAL PLAN FOR RECOVERY AND RESILIENCE

Program executor	The main responsibility for the investment lies with the Ministry of Education.
Program description	The Italian Ministry of Education is committed to supporting the development of the digital transition of schools, in line with the European Plan for Digital Education, starting from the specific plan on educational and digital innovation, the “National Digital School Plan”.
Objectives and outcomes	The purpose of the investment is to transform the classrooms previously dedicated to frontal teaching in innovative learning environments, equipped with the technologies useful for digital education, in connection with virtual learning spaces. The expected outcomes of the priority program include: a) the transformation of at least 100,000 classes into innovative learning environments supporting curricular innovation, starting from primary schools; b) the connection to the network at the maximum speed available on the territory of all educational institutions by 2023; c) the increase of the ratio of digital devices/students; d) the equipment of all classrooms of digital whiteboards; and e) the creation of “Digital Labs”, laboratories for the digital professions of the future in secondary schools.

Modalities/ resources	<p>The short and long-term actions, based on the specificities of the different types and grades of schools, involve the transformation of school spaces from traditional classes into innovative learning environments, both physical and virtual, connected to the Internet and integrated with digital technologies. For the digital infrastructure of educational institutions, the Italian Ministry of Education is implementing the following actions:</p> <ol style="list-style-type: none"> 1) Creation of innovative spaces for teaching with digital resources and technologies; 2) Upgrading of the digital equipment of classrooms for the study of STEM (Science, Technology, Mathematics and Engineering) subjects; 3) Creation of workshops for the digital professions of the future in each secondary school; 4) Design and implementation of a national measure to strengthen the internal wiring of educational institutions and increase the connection speed; 5) Provision of interactive digital whiteboards in all classrooms and digitalization of school secretariats; and 6) Completion of the “School Plan” to connect in ultrabroadband (1Gbit speed with 100 Mbits of guaranteed bandwidth) all the establishments of the first and second cycle schools, in collaboration with the Ministry of Economic Development.
Target beneficiary group/s	<p>Target beneficiaries: Students, teachers, principals, school staffs</p> <p>Targeted education levels: ISCED 1, ISCED 2, ISCED 3</p> <p>Specific target groups: All education levels</p>
Scale of the program	<p>Geographical scope: Nationwide</p> <p>Number of beneficiaries: All students, school staff at primary and secondary schools</p> <p>Total amount of money dedicated to the program: 2.1 billion euro of the National Recovery and Resilience Plan, in synergy with 0.9 billion euro of React EU funds</p>
Monitoring and Evaluation	<p>The implementation of interventions funded through the Recovery and Resilience Facility is monitored and evaluated by the European Commission through the Central Service for the NRRP at the Ministry of Economy and Finance (Servizio Centrale per il PNRR, MEF/RGS). The Ministry of Education carries out monitoring tasks to measure the achievement of the target through the system developed under the National Plan for Digital School and based on the mechanisms of the European Structural Funds.</p>
Timeline	2020 - 2025
Program status	Ongoing. From 2020 to 2025
Role of digital technology	<p>Level of importance: Essential</p> <p>Providing or utilizing ICT tools: The investment is making available the most innovative digital technologies (coding and devices for robotics, for virtual reality, for inclusive education, etc.) to be used in teaching for at least 100,000 primary and secondary school classes. Moreover, it is making available a laboratory for digital professions in every upper secondary school. Each laboratory is closely interconnected with companies and innovative start-ups to encourage the creation of new specialists in the field of digital professions (such as experts for the development of Artificial Intelligence, robotics, the use of big data, cybersecurity, blue and green economy). Finally, the investment also ensures the internal cabling (Lan and Wlan) of schools aimed at both the development of network infrastructure and the preparation of classrooms and spaces, for the full implementation of blended approaches to teaching and learning.</p>
Role of solidarity & partnership	One activity is conducted in collaboration with the Ministry of Economic Development.

IV. DIGITAL TEACHING AND LEARNING SYSTEM AND THE TRAINING OF SCHOOL STAFF AND STUDENTS IN DIGITAL SKILLS

Program executor	The main responsibility for the program lies with the Ministry of Education.
Program description	The Italian Ministry of Education is committed to developing and enhancing the digital skills of school staff, teachers and students, consistent with technological innovation, thanks to the continuation of the actions foreseen in the National Plan for Digital School and the new activities of the National Plan for Recovery and Resilience.
Objectives and outcomes	The aim of the investment is the creation of a national system for an integrated digital teaching and learning system and the development of digital and teaching skills of the school staff. The main vision is that the digital transition is supported through a structural change of school methodologies and curricula, accompanied by a strategy of lifelong training of school staff in digital innovation. The system for the promotion of digital teaching and the training of school staff also contributes to strengthening the development of the digital economy through the improvement of the digital skills of teachers and learners in the short, medium and long term.
Modalities/ resources	The actions include the development of an integrated system for the enhancement of the digital skills of students, based on the implementation of digital skills curricula in every grade of school, the design of digital platforms for the development of digital skills of teachers and students, the activation of specific measures to promote the digital inclusion of all students, the implementation of initiatives for the implementation of innovative teaching methodologies by the teaching staff. The enhancement of the digital skills of students and teachers is pursued through the following actions: 1) Actions for the promotion and dissemination of innovative teaching methodologies, especially for the promotion of STEAM disciplines; 2) the establishment of a Digital School Award for schools that have implemented innovative projects, characterized both by a high content of knowledge or technology and a strong teaching/ methodological innovation; 3) the implementation of a platform for an integrated training program on integrated digital teaching and on the digital transformation of the school organization; and 4) the implementation of in-service training, both in presence and online, also in synergy with the Erasmus program.
Beneficiary group/s	Target beneficiaries: Students, teachers, school staffs, parents/caregivers Targeted education levels: ISCED 0, ISCED 1, ISCED 2, ISCED 3, Adult education Specific target group: All students and teachers
Scale of the program	Geographical scope: Nationwide Number of beneficiaries: - training of about 650,000 teachers and other school staff - 8,000 Italian educational institutions will be involved in the training projects and in the creation of specific schools' curricula for digital competences Total amount of money dedicated to the program: 800 million euro of the National Recovery and Resilience Plan
Monitoring and evaluation	The implementation of interventions funded through the Recovery and Resilience Facility is monitored and evaluated by the European Commission through the Central Service for the NRRP at the Ministry of Economy and Finance (Servizio Centrale per il PNRR, MEF/RGS). The Ministry of Education carries out monitoring tasks to measure the achievement of the target through the system developed under the National Plan for Digital School and based on the mechanisms of the European Structural Funds.
Timeline	2021 - 2026

Program status	Ongoing. From 2021 to 2026
Role of digital technology	<p>Level of importance: Essential</p> <p>Developing or utilizing digital apps: The program intends to develop an Italian Hub for the digital training of teachers and school staff, connected to a network of territorial hubs, aimed at the development of innovative and digitalized teaching models, consistent with the indications of the European Reference frameworks on digital competences and concerning the most advanced aspects of digital education. It is planned to create a catalogue of about 20,000 training courses on the use of digital technologies in all disciplines at all levels of education, from early childhood education and care to primary and secondary schools, including adult education. The investment also provides the creation of a platform of digital education content and innovative teaching methods that can be used by teachers, students and families.</p>
Role of solidarity & partnership	The investment provides the creation of a Pact for Digital Education and Skills of the Future in order to make schools territorial focal points of exchange of innovation for the development of intergenerational training courses for teachers, students and adults, including through the active participation of local authorities, businesses and associations.

V. REFORM OF TVET AND HIGHER TECHNICAL INSTITUTES ITS (HIGHER VET)

Program executor	Ministry of Education
Program description	The reform is aimed at increasing the educational offer of higher technical institutes and investing in the training of teachers, in order to double the number of trained professionals.
Objectives and outcomes	<p>The reform of technical and vocational schools aims at aligning their curricula with the skills demand coming from the Italian productive system, particularly in relation to the innovation outputs of the Industry 4.0 National Plan and the deep digital change in place in all sectors of the labor market. The main vision is that a higher quality of curricula would encourage employability, and harmonize training programs according to the needs of each territory. The reform of the Higher Technical Institutes (ITS) aims to simplify the organizational and educational model, increasing the number of institutions and students, improving the quality of the connection with the network of entrepreneurs in the territories, in order to bridge the mismatch between labor supply and demand. The reformed ITS will be able to offer increasingly advanced job-oriented tertiary courses for the training of qualified technicians who manage highly complex systems and processes in six areas: energy efficiency; sustainable mobility; new technologies of life; new technologies for Made in Italy; innovative technologies for cultural heritage and related activities; information and communication technologies.</p>
Modalities/ resources	The reform is accompanied by an investment aimed at increasing the educational offer of higher technical institutes, also investing in the training of teachers, in order to double the number of trained professionals. The investment provides: the strengthening of laboratory infrastructures with their adaptation to the new training needs required by the green transition (Energy 4.0, Environment 4.0, etc.) and the digital transition (Enterprise 4.0); the increasing of the training offer, through the creation of a national platform of all active Institutes and courses, allowing students to get information about job offers.
Beneficiary group/s	<p>Target beneficiaries: Students of TVET and Higher TVET</p> <p>Targeted education levels: ISCED 3, ISCED 5</p> <p>Specific target groups: N/A</p>

Scale of the program	<p>Geographical scope: Nationwide</p> <p>Number of beneficiaries: The investment aims at increasing the number of ITS students (+100%).</p> <p>Total amount of money dedicated to the program: 1,5 billion euro of the National Recovery and Resilience Plan</p>
Monitoring and evaluation	The implementation of interventions funded through the Recovery and Resilience Facility is monitored and evaluated by the European Commission through the Central Service for the NRRP at the Ministry of Economy and Finance (Servizio Centrale per il PNRR, MEF/RGS).
Timeline	2022 - 2025
Program status	Ongoing. Full implementation of the reform, which has been recently adopted, is expected in 2025.
Role of digital technology	<p>Level of importance: Somewhat important</p> <p>Developing or utilizing digital apps: The investment provides the realization of a guidance digital platform concerning the tertiary educational offer of ITS.</p>
Role of solidarity & partnership	The reform of Higher Technical Institutes provides a strengthening of the cooperation with companies, universities, research centers and local authorities.

JAPAN



I. GIGA SCHOOL PROGRAM

Program executor	The Ministry of Education, Culture, Sports, Science and Technology (MEXT) in cooperation with the Digital Agency, the Ministry of Economy, Trade and Industry, and the Ministry of Internal Affairs and Communications.
Program description	Global and Innovation Gateway for All (GIGA) School Program is aims to improve the quality of education and utilization of ICT environment.
Objectives and outcomes	To improve the quality of education by the integrated enhancement of personalized, self-regulated learning and collaborative learning through the preparation and utilization of a school-wide ICT environment equipped with high-speed networks in each school and provision of 1 device for 1 student
Modalities/ resources	Concerning the provision of 1 computer device per student, the initial plan to provide these terminals over 4 or 5 years was moved forward, and the national government's subsidies to the budgets of local governments enabled the completion of the plan within 1 year
Target beneficiary group/s	Target beneficiaries: Students, teachers, school staffs Target education level: ISCED 1 to 3 Specific target group: Low socio-economic status, rural areas
Scale of the program	Geographical scope: National Number of beneficiaries: About 12 million children and students Total amount of money dedicated to the program: 481.9 billion yen
Monitoring and evaluation	Indicators include: - % of provision of computer devices - % of provision of high-speed networks
Timeline	Fiscal 2019
Program status	Completed
Challenges and obstacles	Challenges include: improving teaching skills of teachers unfamiliar with ICT technology; local autonomy means regional differences in the usage situation of terminals; and network lines may be slow despite the enhancement of line networks.
Role of digital technology	Level of importance: Essential Digital application utilization: MEXT is developing a CBT system. In addition, we are introducing examples of easy-to-implement classroom practices using basic ICT technology that is easy to obtain. ICT tools utilization: Maintenance of PC terminals used by elementary and junior high school students, and government subsidies support the development of large-scale presentation devices and other devices deployed in schools.
Role of solidarity & partnership	Embodiment of partnership and collaboration: The Ministry of Economy, Trade and Industry and MEXT requested manufacturers to secure adequate supplies. In 2020, telecommunications carriers took measures to consider the communication costs for families with children studying at home. Involvement of non-government institutions: N/A

II. MAKING EARLY CHILDHOOD EDUCATION FREE AND ATTENDANCE ASSISTANCE AT THE COMPULSORY EDUCATION STAGE

Program executor	Cabinet Office; Ministry of Health, Labor and Welfare; Ministry of Education, Culture, Sports, Science and Technology.
Program description	The programs strengthen early childhood education and contribute to the implementation of compulsory education
Objectives and outcomes	The first program provides free education at kindergartens and centers for early childhood education and care for children aged 3 to 5. The second program provides necessary support to parents and guardians of school-aged students for whom attending school has been deemed difficult due to financial reasons.
Modalities/ resources	Since October 2019, early childhood education has been made free of charge through the provision of benefit allowances to facilities or parents. The government provides support for subsidy projects for compulsory education, such as those related to school supplies expenses, school excursion expenses, and school education expenses conducted by local governments.
Target beneficiary group/s	Target beneficiaries: Students, parents/caregivers only for program (2) Target education level: ISCED 0, ISCED 1 (only for point 2) Specific target group: Low socio-economic status
Scale of the program	Geographical scope: National Number of beneficiaries: ECCE- approximately 3,000,000 students, Compulsory Education - approximately 100,000 students Total amount of money dedicated to the program: ECCE - 885.8 billion yen Compulsory Ed - Approximately 600 million yen
Monitoring and evaluation	ECCE program is being examined by committees in which the parties concerned participate. For the Compulsory Education program, the main indicator is the percentage of secondary school graduates who went on to higher education.
Timeline	ECCE free started in October 2019
Program status	Ongoing. The government will continue to implement measures to make early childhood education free of charge. The government aims to continue the compulsory education program and have been working to enhance support by establishing and increasing funding to cover online learning communication expenses in fiscal 2020 and 2021. Funding for the necessary items will be increased in the future.
Challenges and obstacles	For ECCE, improving the quality of early childhood education and securing financial resources for that purpose.
Role of digital technology	Level of importance: For ECCE, somewhat unimportant For Compulsory Education, somewhat important Digital application utilization: For Compulsory Ed, standardized systems, such as the certification and provision of school attendance assistance, to simplify and expedite procedures and improve administrative efficiency are under development.. ICT tools utilization: For ECCE, in order to reduce the administrative burden accompanying the interaction between each facility and local governments, we are supporting the improvement of the ICT environment.
Role of solidarity & partnership	Embodiment of partnership and collaboration: N/A Involvement of non-government institutions: N/A

III. SUPPORT FOR HIGH SCHOOL STUDENTS

Program executor	Ministry of Education, Culture, Sports, Science and Technology in cooperation with the Digital Agency.
Program description	Financial aid for high school students through covering of school supplies expense other than tuition fees
Objectives and outcomes	By providing the High School Tuition Support Fund for covering tuition fees, and the High School Supplemental Scholarship for supporting the coverage of school supplies expenses other than tuition fees, we will reduce the burden of educational expenses at home and contribute to equal opportunities for education.
Modalities/ resources	The High School Tuition Support Fund is government-funded support. The High School Supplemental Scholarship is a system in which the government supports one-third of the budget of projects conducted by prefectures. The target person for receiving the support is certified every year, but households that have experienced rapid and drastic changes in their household budgets will be treated flexibly.
Target beneficiary group/s	Target beneficiaries: Students, parents/caregivers Target education level: ISCED 2 to 3 Specific target group: Low socio-economic status
Scale of the program	Geographical scope: National Number of beneficiaries: Approximately 2.5 million students Total amount of money dedicated to the program: Approximately 430 billion yen
Monitoring and evaluation	Indicators include: - Difference in high school enrollment rates between general households and households on welfare. - High school dropouts due to economic reasons.
Timeline	N/A
Program status	Ongoing. While continuing to acquire the budget, we plan to continue the programs in the future. For the High School Supplemental Scholarship, the unit price has been increased every year, and online learning communication expenses support was established and increased in the previous fiscal year and the fiscal year before that. The funding for the necessary items will be increased in the future.
Challenges and obstacles	N/A
Role of digital technology	Level of importance: Somewhat important Digital application utilization: The High School Tuition Support Fund system is open to online applications. ICT tools utilization: Online platform for the High School Tuition Support Fund
Role of solidarity & partnership	Embodiment of partnership and collaboration: N/A Involvement of non-government institutions: N/A

IV. HYBRID EDUCATION

Program executor	N/A
Program description	The programs to support hybrid education and large-scale financial support for improving learning environment at universities that effectively combines in-person classes with remote and online education, and initiatives that enable universities to share and effectively utilize distance education resources with each other to respond in detail to the diverse needs of students and large-scale financial support for improving the environment for distance learning at universities.
Objectives and outcomes	The objectives include: 1) universities/colleges to become a smart-campus through digital transformation in the current/post COVID-19 crisis environment; and 2) securing learning opportunities by accelerating the construction of the environment for distance learning at universities.
Modalities/ resources	MEXT is supporting universities and colleges which proactively work on preparing an environment that contributes to the “realization of learner-oriented education” and “improvement of learning quality” through adopting digital technology. Large-scale financial support includes system and server maintenance related to remote lesson implementation, equipment maintenance for distance learning (e.g., cameras, audio equipment, mobile routers to lend to students), and support expenses necessary for establishing a technical and educational support system for distance lessons in 2020.
Target beneficiary group/s	Target beneficiaries: Students, teachers, school staffs Target education level: ISCED 6-8 Specific target group: N/A
Scale of the program	Geographical scope: National Number of beneficiaries: N/A Total amount of money dedicated to the program: 6 billion yen for smart campus, and 10 billion yen for distance learning environments.
Monitoring and evaluation	Conducting a situational survey on the development of educational methods in higher education in a post-COVID era that combines digital (online) education and physical (face-to-face and hands-on) classes. The distance learning environments program will present good practices of universities at symposiums.
Timeline	N/A
Program status	N/A
Challenges and obstacles	N/A
Role of digital technology	Level of importance: N/A Digital application utilization: A learning management system (LMS) and an educational system and content to realize experiments and practical training using VR (Virtual Reality) at universities. ICT tools utilization: The program provides support for expenses such as LMS system installation costs, server construction costs, VR content development costs, equipment costs such as VR cameras, etc. necessary to implement initiatives that serve as a leading model for education using digital tools.
Role of solidarity & partnership	Embodiment of partnership and collaboration: N/A Involvement of non-government institutions: N/A

V. NEW LEARNING SUPPORT SYSTEM AND SCHOLARSHIP LOANS FOR HIGHER EDUCATION

Program executor	Ministry of Education, Culture, Sports, Science and Technology and Japan Student Services Organization (JASSO)
Program description	The programs include a new learning support system and scholarship loans for Higher education
Objectives and outcomes	The program provides support for low-income households so that students do not have to abandon their studies due to financial difficulties.
Modalities/ resources	The learning support program targets students attending universities, junior colleges, colleges of technology, vocational schools, etc. in Japan and provides exemption from tuition, scholarships. The scholarship program targets students attending universities (including graduate schools), junior colleges, colleges of technology, vocational schools, etc. in Japan and provides loans at interest-free or low interest rates and return of the loans spread out over a long period of time.
Target beneficiary group/s	Target beneficiaries: Students Target education level: ISCED 6-8 Specific target group: Low socio-economic status
Scale of the program	Geographical scope: National Number of beneficiaries: N/A Total amount of money dedicated to the program: 519.6 billion yen for learning support system, and 101.5 billion yen for scholarships.
Monitoring and evaluation	N/A
Timeline	N/A
Program status	N/A
Challenges and obstacles	N/A
Role of digital technology	Level of importance: N/A Digital application utilization: N/A ICT tools utilization: N/A
Role of solidarity & partnership	Embodiment of partnership and collaboration: N/A Involvement of non-government institutions: N/A

VI. INVESTMENT IN HUMAN RESOURCES

Program executor	Cabinet Secretariat, Ministry of Health, Labour and Welfare (Director-General of Human Resources Development, Employment Security Bureau), Ministry of Education, Culture, Sports, Science and Technology, Ministry of Economy, Trade and Industry.
Program description	Policy package 400 billion JPY for 3 years to reinforce the investment for human resources
Objectives and outcomes	The government aims to realize Japan's "new capitalism" by investing in Human resources in 'green' and 'digital technology'. By investing in human resources, the government will strengthen both the power to create new added values and the distribution of benefits to the people who create the next growth.
Modalities/ resources	In 2021, training through job placement agencies and support for employment through employment placement dispatching and trial employments, and the development of digital human resources. In 2022, reinforcement of human resources development that supports growth fields such as digital technology, career advancement of non-regular workers, promotion of lifelong working through recurrent education, and support for smooth labour mobility to growth fields.
Target beneficiary group/s	Target beneficiaries: Other Target education level: ISCED 6 to 8 Specific target group: Jobseekers
Scale of the program	Geographical scope: National Number of beneficiaries: The number of participants in the public employment training for the jobless persons: Public vocational training: 103,148; Job-seeker support training: 23,734 Total amount of money dedicated to the program: Budget scale of 400 billion JPY for 3 years
Monitoring and evaluation	N/A
Timeline	Fiscal 2021
Program status	Ongoing This policy package is going to continue for 3 years as planned.
Challenges and obstacles	In order that people who were affected by COVID-19 can catch up and complete the courses, we provide appropriate measures such as offering individual supplementary classes for people who were forced to be absent.
Role of digital technology	Level of importance: N/A Digital application utilization: Online training is available so that participants can take courses remotely. ICT tools utilization: Online training for the public vocational training.
Role of solidarity & partnership	Embodiment of partnership and collaboration: N/A Involvement of non-government institutions: The educational training allowance subsidizes a part of the expenses for the educational training at the private training institutions which the Minister of Health, Labour and Welfare specifies (Human resources development subsidy). Although not included in the package, public vocational training and job-seeker support training are conducted at the private educational training institutions.

VII. JAPAN VIRTUAL CAMPUS (JV-CAMPUS)

Program executor	University of Tsukuba
Program description	Japan Virtual Campus (JV-Campus) is an online international education platform to enable the international competitive education
Objectives and outcomes	The objective is to contribute to fostering the internationally competitive educational environment of Japanese universities by creating an environment that leads to study abroad using online education, securing excellent international students, and creating a new study abroad environment for Japanese students.
Modalities/ resources	To build a platform enabling internationally competitive education to be opened up online both inside and outside the country, and moreover provides education that showcases Japan's strengths and appeal overseas, while sharing excellent educational resources among universities.
Target beneficiary group/s	Target beneficiaries: Students, teachers, school staffs Target education level: ISCED 6 to 8 Specific target group: N/A
Scale of the program	Geographical scope: National Number of beneficiaries: N/A Total amount of money dedicated to the program: 130 million yen
Monitoring and evaluation	N/A
Timeline	2021 Project kick-off 2023 Subsidy project period 2024 Project continued under the universities' own budgets
Program status	N/A
Challenges and obstacles	N/A
Role of digital technology	Level of importance: N/A Digital application utilization: N/A ICT tools utilization: N/A
Role of solidarity & partnership	Embodiment of partnership and collaboration: N/A Involvement of non-government institutions: N/A

VIII. MEISTER HIGH SCHOOL

Program executor	N/A
Program description	Project to renovate human resource development for next-generation regional industries
Objectives and outcomes	Professional high schools and industry work together to promote cutting-edge vocational human resources development to produce human resources that will lead local industries.
Modalities/ resources	School establishes commissioned for educational course development to develop cutting-edge vocational personnel who will lead local industries. The consignment period is 3 years in principle.
Target beneficiary group/s	Target beneficiaries: Students Target education level: ISCED 3 Specific target group: N/A
Scale of the program	Geographical scope: N/A Number of beneficiaries: N/A Total amount of money dedicated to the program: N/A
Monitoring and evaluation	We provide guidance advice to contractors in these measures and support the operation of PDCA-cycle management.
Timeline	Fiscal 2021
Program status	Ongoing
Challenges and obstacles	N/A
Role of digital technology	Level of importance: somewhat important Digital application utilization: N/A ICT tools utilization: N/A
Role of solidarity & partnership	Embodiment of partnership and collaboration: N/A Involvement of non-government institutions: N/A

IX. SOCIETY 5.0 AND THE DEVELOPMENT OF HIGHLY SPECIALIZED HUMAN RESOURCES FOR THE POST-COVID ERA IN HIGHER EDUCATION INSTITUTIONS

Program executor	Ministry of Education, Culture, Sports, Science and Technology
Program description	Policy programs to promote the realization of Society 5.0 and the development of highly specialized human resources for the post-COVID era in higher education institutions.
Objectives and outcomes	The objectives include a series of policy programs, such as enhancing mathematics, data science and AI, and exchange programs to promote the realization of Society 5.0 and the development of highly specialized human resources for the post-COVID era in higher education institutions.
Modalities/ resources	Depends on program
Target beneficiary group/s	Target beneficiaries: Students Target education level: ISCED 3, ISCED 5 to 8 Specific target group: N/A
Scale of the program	Geographical scope: National Number of beneficiaries: N/A Total amount of money dedicated to the program: Approx. 9 billion yen
Monitoring and evaluation	N/A
Timeline	Depends on program
Program status	Ongoing
Challenges and obstacles	N/A
Role of digital technology	Level of importance: N/A Digital application utilization: N/A ICT tools utilization: N/A
Role of solidarity & partnership	Embodiment of partnership and collaboration: N/A Involvement of non-government institutions: Higher Education institutions

MEXICO



I. APRENDE EN CASA

Program executor	Secretaría de Educación Pública/Subsecretaría de Educación Básica, Coordinación General @prende.mx , Canal 11, Instituto Mexicano de la Radio
Program description	Aprende en Casa is a national strategy of distance learning, which aims to provide basic educational services through different media such as television, internet, radio and free textbooks to children and adolescents to guarantee their right to education, even in emergency contexts.
Objectives and outcomes	It is designed for children and adolescents who: 1) attend classes face-to-face and need to complement their learning; 2) attend school on a regular basis, but for some reason miss one or more days, weeks, months or the entire school year; 3) attend school to receive classes for a period of time in a face-to-face modality and receive distance classes for another period of time distance learning; and 4) live in remote communities and need additional support.
Modalities/ resources	Classes on television, Videos of the classes through the YouTube Channel, Class sheets through the Aprende en Casa web site, and Radio classes.
Target beneficiary group/s	Target beneficiaries: Students, teachers, parents/caregivers, Target education level: ISCED 0 to 3 Specific target group: Girls/women, low socio-economic status, rural areas, linguistic minorities, migrant background
Scale of the program	Geographical scope: Federal Number of beneficiaries: 24,597,234 students; 1,209,998 teachers, 24,597,234 parents Total amount of money dedicated to the program: N/A
Monitoring and evaluation	A curriculum evaluation was conducted using a mixed methodological approach, that is, integrating quantitative and qualitative methods in a single study in order to obtain a more complete picture of the Strategy.
Timeline	It is broadcast 24 hours a day by all media.
Program status	Ongoing. The relevance of following up on the subject of Lengua Materna in the largest number of indigenous languages spoken in Mexico guarantees the rights of indigenous peoples. Currently, the Mother Tongue subject is translated into 31 indigenous languages and work is underway to translate it into 19 additional languages.
Challenges and obstacles	The biggest challenge was to reach the most remote communities. The lack of connectivity in some cases and the lack of technological resources and infrastructure for coverage at all educational levels.
Role of digital technology	Level of importance: Essential Digital application utilization: In addition to the TV classes, the use of YouTube to maintain agile contact with students stands out, as well as the use of Google Classroom, not only to assign activities and tasks to the group, but also as a means of coordination and collaboration among teachers. ICT tools utilization: Training in the use of applications and materials through different applications and platforms, such as Google Classroom, Hangouts and YouTube, among others, is important.
Role of solidarity & partnership	Embodiment of partnership and collaboration: The involvement of media companies (online, television and radio) to deliver education content. Involvement of non-government institutions: N/A

II. POLÍTICA NACIONAL DE EDUCACIÓN INICIAL (PNEI)

Program executor	Secretariat of Public Education/ Undersecretariat of Basic Education
Program description	The National Early Education Policy (PNEI) promotes the integral development of children from zero to three years of age as part of comprehensive early childhood care.
Objectives and outcomes	The main objective of school-based early education is to provide care for children from 43 days of life to three years of age, in order to promote their comprehensive development.
Modalities/ resources	The policy has three main modalities: 1) to expand the coverage of early education services, giving priority to girls and boys in vulnerable conditions and at risk of exclusion; 2) to improve the quality of the services offered in the modalities (school-based and non-school-based) of early education; and 3) to promote the development of enriched child-rearing practices and strong emotional bonds in families.
Target beneficiary group/s	Target beneficiaries: Students, teachers, principals, parents/caregivers Target education level: ISCED 0 Specific target group: N/A
Scale of the program	Geographical scope: Federal Number of beneficiaries: The coverage of early education services is 680,669 children from zero to three years of age. Total amount of money dedicated to the program:
Monitoring and evaluation	SEP, as the governing body, will ensure the alignment of the PNEI with preschool education and the subsequent educational levels of basic education, in terms of quality standards, progressiveness, training of educational agents and curriculum, thus promoting an integrated approach to education.
Timeline	N/A
Challenges and obstacles	There is a low supply of early education services, especially for the most vulnerable populations, with unequal quality in the services offered by different providers. There is also a lack of confidence of mothers, fathers and caregivers in existing care and early education services. Lastly, there is low knowledge and capacity to promote learning and development from the first months of life, especially on the part of mothers, fathers, or caregivers in vulnerable situations.
Role of digital technology	Level of importance: Somewhat important Digital application utilization: There are plans to create a monitoring system ICT tools utilization: Through teacher training on the use of some applications that favor their practice in the upbringing of children.
Role of solidarity & partnership	Embodiment of partnership and collaboration: Involvement of non-government institutions: N/A

III. MODIFICATION OF THE STUDY PLAN AND PROGRAMS FOR BASIC EDUCATION

Program executor	N/A
Program description	The modification is to make visible the cultural, social, linguistic, territorial, social and gender diversity of the national curriculum.
Objectives and outcomes	The plan, study programs, textbooks and other official educational materials for basic education at all levels, grades and modalities will have an intercultural approach that crosses the entire curriculum map, its formative processes, evaluation, school management, materials and educational technologies.
Modalities/ resources	Each of the proposed phases has a minimum daily workday to be considered; in the case of pre-school it is 7 hours for the Child Care Centers; for preschool it is 3 hours; in primary education it is 4.5 hours and finally in secondary education it is 7 hours. This represents a minimum of 1,400 teaching hours per year for pre-school and secondary education, 600 hours for pre-school and 900 hours for primary education.
Target beneficiary group/s	Target beneficiaries: Students, teachers, principals, parents/caregivers, school staffs Target education level: ISCED 0 to 3 Specific target group: Girls/women, low socio-economic status, rural areas, linguistic minorities, migrant background
Scale of the program	Geographical scope: Federal Number of beneficiaries: Preschool: 4,328,188 students; Primary: 13,677,465 students; Secondary: 6,394,720 students Total amount of money dedicated to the program: N/A
Monitoring and evaluation	To be defined
Timeline	It is expected to be implemented for the next school year 2022-2023.
Program status	Planning stage The curricular grid, the guidelines for the implementation of the 2022 curriculum, the participation of the federation and the states, and the co-design as a policy of diversification and articulation are in the process of construction.
Challenges and obstacles	The disparity of conditions in access to information technologies for children and adolescents, as well as for teachers, has deepened social inequalities, which has had an impact on the education that has been provided. It is evident that the real digital divide begins in the unequal capacities, values, knowledge and skills acquired by students, especially the most vulnerable groups during the contingency.
Role of digital technology	Level of importance: Somewhat important Digital application utilization: The projects formulated in the school will have a large network of learning centers that connects the school with digital libraries, toy libraries, community digital centers, etc. ICT tools utilization: N/A
Role of solidarity & partnership	Embodiment of partnership and collaboration: N/A Involvement of non-government institutions:

IV. NATIONAL STRATEGY TO STRENGTHEN DIAGNOSTIC EVALUATION, IMPROVE EDUCATIONAL ACHIEVEMENT AND REDUCE SCHOOL LAG AND DROPOUT RATES

Program executor	Secretaría de Educación Pública/ Subsecretaría de Educación Básica (Secretariat of Public Education/ Undersecretariat of Basic Education)
Program description	National Strategy to strengthen diagnostic evaluation, improve educational achievement and reduce school lag and dropout rates.
Objectives and outcomes	The objectives are to address and mitigate the academic damages derived from the pandemic, and to guarantee the effective exercise of the right to education of students regardless of their origin or condition. This is not limited to addressing the emergency, but seeks to lay the foundations for a recovery that will allow for long-term improvements in education to achieve development with equity and justice.
Modalities/ resources	N/A
Target beneficiary group/s	Target beneficiaries: Students Target education level: ISCED 0 to 3 Specific target group: Girls/women, low socio-economic status, rural areas, linguistic minorities, migrant background
Scale of the program	Geographical scope: Federal Number of beneficiaries: Pre-school: 4,328,188 learners; Primary 13,677,465 learners; Secondary: 6,394,720 learners Total amount of money dedicated to the program: N/A
Monitoring and evaluation	To be defined
Timeline	N/A
Program status	Planning stage
Challenges and obstacles	The participation of all stakeholders in the times and ways established in the work plan of the Strategy itself.
Role of digital technology	Level of importance: Somewhat important Digital application utilization: There will be a microsite with a bank of good practices, a webinar on good practices in terms of learning recovery and student retention. In addition, we intend to build an Early Warning System. ICT tools utilization: We intend to implement a pilot exercise of the Diagnosis and Protocol of Socioemotional Attention, activate the course on the platform of the General Directorate of Continuing Education for Teachers and Managers, and in Mexico X, and design toolboxes on various topics, online.
Role of solidarity & partnership	Embodiment of partnership and collaboration: N/A Involvement of non-government institutions: UNICEF, OEI, UNESCO, WB, (Laboratory for Research and Innovation in Education for Latin America and the Caribbean) SUMMA and IDB.

V. COMMON CURRICULAR FRAMEWORK FOR UPPER SECONDARY EDUCATION (MCCEMS)

Program executor	Undersecretariat of Upper Secondary Education of the Ministry of Public Education, through the Sectoral Coordination of Academic Strengthening (COSFAC).
Program description	The Common Curricular Framework for Upper Secondary Education (MCCEMS) is the set of subjects and academic activities that are taught in the first three semesters, of all the curricula and the different baccalaureates that young people from 15 to 18 years old study.
Objectives and outcomes	MCCEMS aims to develop the cultural and knowledge base in adolescents and young people, learn for life, and respond to the current needs of the 21 st century. The MCCEMS includes sociocognitive and socio-emotional training for an integral education, with a pedagogical approach that places the development of adolescents and young people at the center.
Modalities/ resources	For the development of the MCC there is a coordinating group, made up of 150 experts, who are the most outstanding teachers of its subsystems. Measuring 9 working groups, these experts have formed the proposals of the documents that detail the various components of the MCC.
Target beneficiary group/s	<p>Target beneficiaries: Students, teachers, principals, parents/caregivers, other</p> <p>Target education level: ISCED 3 and 4</p> <p>Specific target group: Girls/women, low socio-economic status, rural areas, linguistic minorities, migrant background</p>
Scale of the program	<p>Geographical scope: National</p> <p>Number of beneficiaries: It will benefit nearly 5 million students and their families, as well as more than 400,000 teachers, including managers in approximately 21,000 schools across all subsystems of upper secondary education (federal, state, autonomous and private) throughout the country.</p> <p>Total amount of money dedicated to the program: Unknown</p>
Monitoring and evaluation	The monitoring of the work for the development of the Common Curricular Framework is done by the Undersecretariat of Upper Secondary Education of the Ministry of Public Education, through the Sectoral Coordination of Academic Strengthening (COSFAC). COSFAC presented the corresponding documents for analysis and coordinated the activities related to the national discussion tables.
Timeline	It is expected that a new curricular mesh will emerge from this process that can be published in mid-2022.
Program status	Ongoing
Challenges and obstacles	The attention of the health emergency derived from the COVID-19 pandemic, resulted in the suspension of the work of the curricular review, which it was possible to reactivate gradually throughout 2021.
Role of digital technology	<p>Level of importance: Somewhat important</p> <p>Digital application utilization: Various applications were used to facilitate the virtual meeting of the participants in the work, the exchange of information and communication with other users.</p> <p>ICT tools utilization: An ad hoc platform was developed for this project to share information. Likewise, other ICTs were used to manage the communication with the participants in the different activities.</p>
Role of solidarity & partnership	<p>Embodiment of partnership and collaboration: The Common Curricular Framework is discussed by thousands of teachers across the country. The educational authorities of the three levels of government organized the participation of directors and teachers of the schools under their charge.</p> <p>Involvement of non-government institutions: N/A</p>

VI. STATE COMMISSIONS FOR THE PLANNING AND PROGRAMMING OF UPPER SECONDARY EDUCATION (CEPPEMS)

Program executor	Undersecretariat of Upper Secondary Education of the Ministry of Public Education, with the participation of state governments and the subsystems of upper secondary education (federal, state, autonomous and private) of each state.
Program description	The Undersecretariat of Upper Secondary Education (SEMS) leads the coordination strategy with the educational authorities of the states and with all the subsystems, through the formation, reactivation or strengthening of the State Commissions for the Planning and Programming of Upper Secondary Education (CEPPEMS) in each state of the country.
Objectives and outcomes	it is intended to achieve the integration of diagnostic information that describes the conditions of coverage of Upper Secondary Education (EMS), infrastructure, as well as the budgetary needs and priorities of each entity.
Modalities/ resources	It is a permanent strategy that consists of linking the strategic projects of the SEMS and other federal projects with the state educational systems through the CEPPEMS.
Target beneficiary group/s	Target beneficiaries: Students, teachers, principals, parents/caregivers, school staffs Target education level: ISCED 3 to 4 Specific target group: Girls/women, low socio-economic status, rural areas, linguistic minorities
Scale of the program	Geographical scope: National Number of beneficiaries: The strategy will have an impact in all 32 states, in a total of approximately 21,000 schools, benefiting about 5 million students and their families, as well as more than 400,000 teachers, including campus administrators. Total amount of money dedicated to the program: Unknown
Monitoring and evaluation	It is monitored and evaluated in relation to the activity that each State Commission carries out; with the level of progress of the priority projects of the SEMS.
Timeline	N/A
Program status	Ongoing
Challenges and obstacles	Lack of common regulations, government transitions, complexity of subsystems, the resistance of certain political actors to participate; the pandemic; institutional complexity and political diversity in the entities.
Role of digital technology	Level of importance: Somewhat important Digital application utilization: It is a permanent strategy through which the formation and permanent activity of a CEPPEMS in each state (32 in total) is promoted. ICT tools utilization: N/A
Role of solidarity & partnership	Embodiment of partnership and collaboration: The operation of the CEPPEMS implies the linking of the federal system with the state systems as a forum for discussion of the main issues of upper secondary education, which links all subsystems (federal, state, autonomous and private) Involvement of non-government institutions: N/A

VII. NATIONAL INFORMATION SYSTEM FOR UPPER SECONDARY EDUCATION (SEEMS)

Program executor	The Vice Ministry of Upper Secondary Education, with the participation of state educational authorities and the authorities of all public and private educational subsystems.
Program description	Vice Ministry of Upper Secondary Education leads the creation of the Statistical System of Upper Secondary Education (SEEMS). SEEMS will allow the integration of information that explicitly describes the conditions of coverage and infrastructure of educational services, as well as the budgetary needs and priorities of each state.
Objectives and outcomes	SEEMS is intended to examine the entire system of upper secondary education in the country and find a way to solve inequalities. For example, identify those regions without access to an educational service of the upper secondary type, locate population with a secondary school certificate, as well as a map of the location of schools, their conditions and occupation.
Modalities/ resources	A platform is under development for the registration and safeguarding of the information that will be provided by the directors of the schools and staff of the subsystems of upper secondary education. It will also be possible for educational authorities of the educational type to consult the information that will allow them to geographically identify vulnerable populations that are being marginalized from educational services and monitor the conditions of all schools, allowing timely intervention to meet various needs.
Target beneficiary group/s	Target beneficiaries: Students, teachers, principals, parents/caregivers, school staffs Target education level: ISCED 3 to 4 Specific target group: Girl/women, low socio-economic status, rural areas, linguistic minorities, migrant background.
Scale of the program	Geographical scope: National Number of beneficiaries: This strategy will have an impact in all 32 states, in a total of approximately 21,000 schools, benefiting about 5 million students and their families, as well as more than 400,000 teachers, including campus managers. Total amount of money dedicated to the program: Unknown
Monitoring and evaluation	The Vice Ministry of Upper Secondary Education (SEMS) requests from the corresponding authorities in the states and subsystems the necessary information to configure the information sections required by the platform. Once access to the platform is released, the SEMS will make a permanent monitoring to verify the status of the information for each subsystem and will request, through the links, any updates that are required
Timeline	N/A
Program status	Ongoing
Challenges and obstacles	There were some technical difficulties in the design and programming of the computer elements that have been solved. An important challenge was to coordinate the coordination and linkage between the different areas and institutions of upper secondary education at the different levels of government. The pandemic caused the slowdown and the suspension of activities related to the project for a few months.
Role of digital technology	Level of importance: Essential Digital application utilization: The Statistical System of Upper Secondary Education consists of a platform that collects: 1) general information of the campus, 2) data referring to students, teachers and administrators, 3) infrastructure information, 4) detail of the equipment and 5) connectivity data. ICT tools utilization: The System, in addition to the platform, integrates a permanent communication strategy that requires the use of various ICTs.
Role of solidarity & partnership	Embodiment of partnership and collaboration: SEEMS is part of a coordination strategy between the federation and the states. Involvement of non-government institutions: N/A

VIII. TEACHER TRAINING PROGRAM FOR UPPER SECONDARY EDUCATION

Program executor	The Undersecretariat of Higher Secondary Education, through COSFAC.
Program description	The New Common Curricular Framework of Upper Secondary Education (MCCEMS) recognizes teachers as indispensable agents of change to transform teaching in classrooms and campuses. It is essential to sensitize teachers to the need for this change, as well as to guide them to a different way of thinking; through providing them with the relevant elements for this curricular change.
Objectives and outcomes	The training interventions will strengthen the methodologies and didactics that will be applied in the areas of access to knowledge, the sociocognitive and socio-emotional resources, and promote new pedagogical practices related to this methodology.
Modalities/ resources	The training and updating actions are designed and developed mainly by Training Bodies (Higher Education Institutions and Non-profit Civil Associations), which participate in an open call. The courses are mostly online and are taught through the COSFAC platform.
Target beneficiary group/s	Target beneficiaries: Teachers, principals, parents/caregivers Target education level: N/A Specific target group: N/A
Scale of the program	Geographical scope: It is a national program that serves upper secondary teachers from federal and state subsystems. Number of beneficiaries: Until June 2021, 79,952 teachers attended, who enrolled in at least one course of the 36 taught by higher education institutions, non-profit civil associations, foundations and social organizations; as well as the offer generated by SEMS-COSFAC. Likewise, 27,635 teachers were trained in the managerial function, 2,340 in the supervision function and 6,393 with tutoring functions to other teachers. Total amount of money dedicated to the program: Unknown
Monitoring and evaluation	N/A
Timeline	It is a permanent program
Program status	Ongoing The program is ongoing and it is possible to scale it according to the budgetary capacity and the free support of foundations and Non-Governmental Organizations that support the processes of teacher training in this educational type.
Challenges and obstacles	N/A
Role of digital technology	Level of importance: Essential Digital application utilization: the training site was designed where teachers, managers and educational authorities learn about the training, as well as have access to their training history and knowledge of various events carried out by the SEMS. ICT tools utilization: To be able to access the offer that is taught online.
Role of solidarity & partnership	Embodiment of partnership and collaboration: This program seeks the integration of the entire educational community to generate significant learning in the students. Involvement of non-government institutions: N/A

IX. DUAL EDUCATION IN UPPER SECONDARY EDUCATION

Program executor	The Vice Ministry of Higher Secondary Education coordinates the program, with support from technological and technical vocational training, the CONOCER, and the Training Centers for Work of the DGCFT. The Mexican-German Chamber of Commerce and Industry (CAMEXA) also participates.
Program description	The Dual Education System aims to develop the relevant skills of young people and offer options for incorporation into the labor market.
Objectives and outcomes	The program strengthens the design and promotion of flexible curricular paths based on the quality of learning and integral training, for young people to develop knowledge and skills in real learning contexts.
Modalities/ resources	It is a permanent program, which operates with resources provided by the Ministry of Economic Cooperation and Development from the German Government through GIZ. It consists of a system in which students complete their basic training on an academic platform and receive vocational technical training in a company.
Target beneficiary group/s	<p>Target beneficiaries: Students</p> <p>Target education level: ISCED 3 to 4</p> <p>Specific target group: Girls/women, low socio-economic status, rural areas, linguistic minorities, migrant background</p>
Scale of the program	<p>Geographical scope: National</p> <p>Number of beneficiaries:</p> <p>Students: 7,193 registered for 2021-2022. It is intended to scale to 30,000 accumulated by 2023; Teachers: Companies 833</p> <p>Total amount of money dedicated to the program: Unknown</p>
Monitoring and evaluation	Official statistics of the Ministry of Education, follow-up and monitoring in the platforms, evaluation studies, figures of the subsystems GIZ reports, state authorities.
Timeline	It was implemented from 2008, made official in 2015 and strengthened from the new agreement in 2022
Program status	Ongoing
Challenges and obstacles	In the Mexican model, companies pay the chambers an amount per student, which limited the participation of companies in the program. Lack of inadequate spaces or spaces to receive students in companies. Difficulty convincing the different actors of the benefits of the program. Shortage of human resources for the implementation of the program in the different areas. Sometimes, lack of political will. The rigidity of the previous model. Do not consider regional contexts.
Role of digital technology	<p>Level of importance: Essential</p> <p>Digital application utilization: The program is supported by two platforms. The academic platform is a digital Mediation space where the learner develops the generic, disciplinary competencies (basic and extended) with teacher mediation.</p> <p>ICT tools utilization: TICAD tools are used that allow the linking and interaction of the different agents participating in the program.</p>
Role of solidarity & partnership	<p>Embodiment of partnership and collaboration: The program is based on the link between the productive and educational sectors, who collaborate to provide students with the opportunity to train both academically and professionally. Companies invest in this program and ensure that upon graduation, students have the necessary competencies and skills to enter the workplace in which they have been trained.</p> <p>Involvement of non-government institutions: N/A</p>

REPUBLIC OF KOREA



I. COMPREHENSIVE PLAN FOR EDUCATIONAL RECOVERY

Program executor	Ministry of Education, provincial offices of education, elementary and secondary schools
Program description	Formulate a Comprehensive Plan for Educational Recovery to swiftly address educational loss in elementary and secondary school students caused by COVID-19.
Objectives and outcomes	From the second half of 2021 to 2022, comprehensive support to address learning loss, stabilize psychological emotions, foster social skills, and improve physical health.
Target beneficiary group/s	Target beneficiaries: Students Target education level: ISCED 1 (primary), ISCED 2 (lower secondary), ISCED 3 (upper secondary) Specific target group: N/A
Scale of the program	Geographical scope: National Number of beneficiaries: Applicants among 5.32 million elementary and secondary school students Total amount of money dedicated to the program: KRW 263.8billion won as of the second half of 2021 → KRW 614.6billion won as of 2022
Monitoring and evaluation	It is evaluated to monitor how much educational recovery has been achieved; and the evaluation is conducted from the second half of 2021 to the second half of 2022.
Timeline	This program started in July 2021
Program status	Ongoing
Challenges and obstacles	Learning loss, psychological and emotional anxiety, delays in social skills development, and deteriorating physical health, among others.
Role of digital technology	Level of importance: Somewhat important Digital application utilization: N/A ICT tools utilization: N/A
Role of solidarity & partnership	Embodiment of partnership and collaboration: N/A Involvement of non-government institutions: N/A

II. KNOWLEDGE SPRING

Program executor	Ministry of Education, KERIS (The Korea Education and Research Information Service)
Program description	To strengthen remote teaching competency and edutech competency through real-time video conferencing between teachers.
Objectives and outcomes	Edutech companies participate in training development to introduce global trends and new products in relevant fields to support capacity-building of Edutech.
Modalities/ resources	The Ministry of Education established the basic operational plans for the project and commissioned it to KERIS (The Korea Education and Research Information Service). The pilot program began in Sep. 2020 and its official, full-fledged implementation began in Oct. 2020. As of Dec. 2021, the cumulative number of participants was 17,967, establishing itself as a flagship edutech capacity-building platform for teachers
Target beneficiary group/s	Target beneficiaries: Teachers Target education level: Others, Elementary, Secondary school's teachers Specific target group: N/A
Scale of the program	Geographical scope: Regional and nationwide Number of beneficiaries: 500,859 teachers of elementary, secondary schools (as of 2021) Total amount of money dedicated to the program: A KRW 1.136 billion won as of 2022
Monitoring and evaluation	N/A
Timeline	Pilot program implemented in Sep 2020; Official implementation began in Oct 2020
Program status	Ongoing
Challenges and obstacles	N/A
Role of digital technology	Level of importance: Essential Digital application utilization: N/A ICT tools utilization: N/A
Role of solidarity & partnership	Embodiment of partnership and collaboration: N/A Involvement of non-government institutions: N/A

III. INTEGRATED DIGITAL PLATFORM FOR TEACHING AND LEARNING

Program executor	Ministry of Education, provincial offices of education
Program description	By combining private and public edutech services as an integrated platform, various teaching and learning services and self-directed customized learning environments are provided to users.
Modalities/ resources	Establishment of Information System Master Plan (ISMP) project to prepare detailed analysis of Integrated Digital Platform for Teaching and Learning development and Request for Proposal (RFP) (~Nov.2022) and project implementation ('23~'25) (initial implementation in Sep.2024, full-fledged implementation in Sep.2025).
Target beneficiary group/s	Target beneficiaries: Students, teachers, parents Target education level: ISCED 0 (early childhood and pre-primary), ISCED 1 (primary), ISCED 2 (lower secondary), ISCED 3 (upper secondary) Specific target group: N/A
Scale of the program	Geographical scope: National Number of beneficiaries: Students: 5,957,118; teachers: 500,859. Total amount of money dedicated to the program: KRW 600.9 billion won.
Monitoring and evaluation	The establishment of the Information System Strategy Plan (ISP) has been completed in Jun 2021, and as the establishment of the Information System Master Plan (ISMP) was completed in Nov 2021, its construction will be carried out from 2023.
Timeline	September 2024
Program status	Planning stage
Challenges and obstacles	N/A
Role of digital technology	Level of importance: Essential Digital application utilization: It can be used in all digital devices by providing a combination of online and offline educational environment using digital content and edutech services. ICT tools utilization: To utilize content to design classroom instruction and provide edutech services (authoring tools, editing tools, problem banks, etc.); and to provide AI-based customized education on how the course progresses.
Role of solidarity & partnership	Embodiment of partnership and collaboration: N/A Involvement of non-government institutions: N/A

IV. LEADERS IN INDUSTRY-UNIVERSITY COOPERATION 3.0 (LINC 3.0)

Program executor	Ministry of Education, the National Research Foundation of Korea (NRF), Participating universities
Program description	Development of an Ecosystem of Industry-Academic Cooperation through the organic connections between actual demand from industries and universities.
Modalities/ resources	Public contests are conducted among general universities, and universities are selected via evaluation. Participating universities establish an autonomous industry-academic cooperation model based on their conditions and characteristics, and the project supports the promotion of each model.
Target beneficiary group/s	Target beneficiaries: Students, other: Universities, Corporates Target education level: ISCED 6-8 (bachelor's and above) Specific target group: N/A
Scale of the program	Geographical scope: National Number of beneficiaries: The number of students and corporates are uncountable; approximately 75 universities Total amount of money dedicated to the program: KRW 302.5 billion (as of 2022)
Monitoring and evaluation	Annual evaluation, stage evaluation, comprehensive evaluation, and consulting by each university.
Timeline	This program started from 2022.
Program status	Ongoing
Challenges and obstacles	N/A
Role of digital technology	Level of importance: Somewhat important Digital application utilization: N/A ICT tools utilization: N/A
Role of solidarity & partnership	Embodiment of partnership and collaboration: (Cultivating talented people) Convergence and restructuring of major courses to center on industrial fields such as new and high-tech industries. (Industrial Support) To strengthen the functions of the Industrial Cooperation Center (ICC) by field, focusing on the strengths of each university. Involvement of non-government institutions: N/A

V. SUPPORTING VOCATIONAL EDUCATION IN SECONDARY SCHOOL

Program executor	Ministry of Education, provincial offices of education, specialized high schools including Meister High School
Program description	This program provides vocational education opportunities that match students' desire and aptitudes, and fosters technical talent with practical skills by operating a curriculum highly relevant to the industry field.
Objectives and outcomes	The provision of job experience and employment support through field training allows students who wish to directly enter into the job market after graduating from vocational high school be led to high-quality jobs.
Modalities/ resources	After establishing an annual basic plan at the level of central government, it is guided to the provincial office of education and individual schools. The budget is provided in the form of state subsidies and special grants for areas that need common support at the national level, and the provincial education offices organize and support budgets themselves.
Target beneficiary group/s	Target beneficiaries: Students, teachers, principals, school staffs Target education level: ISCED 3 (upper secondary) Specific target group: N/A
Scale of the program	Geographical scope: National Number of beneficiaries: 583 schools in total (Meister High School: 51, Specialized High School: 463, General High School: 69); 241,930 students; 30,456 teachers. Total amount of money dedicated to the program: KRW 258.2 billion (as of 2022)
Monitoring and evaluation	Supporting vocational education in secondary school is being inspected to monitor the progress of the project and collect opinions on the project through regular meetings among people in charge of each project. In particular, the project budget is checked to see how much of the budget has been executed on a quarterly or semi-annual basis, and is inspected and evaluated through performance reports and execution results reports after the project is completed.
Timeline	N/A
Program status	Ongoing
Challenges and obstacles	Information technology has led to changes in the industrial structure.. For this reason, it is difficult to quickly change vocational high school curricula and how such classes operate. It is similarly difficult to secure professional teachers, build facilities to perform practices, and secure relevant equipment in line with the pace of change in industrial demand. There are limitations to preparing relevant sites for field training and employment to secure digital technology capabilities for vocational high school students.
Role of digital technology	Level of importance: Essential Digital application utilization: The curriculum includes handling digital application devices and creating and utilizing content using digital applications. In particular, in the case of vocational high schools, digital applications are used for experiments and field practices. ICT tools utilization: This project supports the reorganization of departments to center around information and communication technology, and the budget includes the cost of improving the environment for practice, purchasing equipment, and developing learning materials.
Role of solidarity & partnership	Embodiment of partnership and collaboration: N/A Involvement of non-government institutions: N/A

VI. FREE EDUCATION FOR ALL HIGH SCHOOL STUDENTS

Program executor (Q10)	Ministry of Education, provincial offices of education, local governments
Program description	Free education for senior high school students began in 2019, and then expanded to all high school students in 2021.
Objectives and outcomes (Q2a)	To ensure right to education by completing free education from elementary to high school levels. To increase the disposable income of households by reducing school-related expenses
Modalities/ resources (Q2b)	Free education for senior high school students began in 2019, and then expanded to all high school students in 2021.
Target beneficiary group/s (Q4)	Students, parents/caregivers – ISCED 3
Scale of the program (Q5)	Number of beneficiaries: All highschool students Scope: National Total amount of money: KRW 1.9855 trillion as of 2021
Monitoring and evaluation (Q6)	N/A
Timeline (Q2b & Q7)	Start time: 2019
Program status (Q7)	Completed
Challenges and obstacles (Q9)	Securing finances
Role of digital technology (Q8)	To utilize digital edu-tech technologies such as real-time imaging systems and LMS to conduct non-face-to-face classes and educational activities according to different contexts and conditions.
Role of solidarity & partnership (Q3b & Q11)	N/A

VII. ENSURING BASIC ACADEMIC SKILLS FOR ALL STUDENTS BY ESTABLISHING A LEGAL FRAMEWORK

Program executor (Q10)	Ministry of Education, National Basic Education Support Center (The National Basic Education Support Center is under the KICE, Korea Institute for Curriculum and Evaluation)
Program description	To establish a system to support basic academic skills at the national level, and to promote individual growth of all students
Objectives and outcomes (Q2a)	Launching a new institution responsible for guaranteeing the basic academic skills of students at the national level in order to level the playing field for all students and provide help to under-achieving students at an early stage.
Modalities/ resources (Q2b)	N/A
Target beneficiary group/s (Q4)	Beneficiaries: Students Targeted education levels: ISCED 1, ISCED 2, ISCED 3
Scale of the program (Q5)	Number of beneficiaries: Under-achieving students Scope: National Total amount of money: KRW 2 billion
Monitoring and evaluation (Q6)	N/A
Timeline (Q2b & Q7)	Start time: 2022
Program status (Q7)	Planning stage
Challenges and obstacles (Q9)	N/A
Role of digital technology (Q8)	Somewhat important
Role of solidarity & partnership (Q3b & Q11)	N/A

VIII. LEADING SCHOOLS AND AI EDUCATION-FOCUSED HIGH SCHOOLS TO PROMOTE DIGITAL AI EDUCATION IN ELEMENTARY, MIDDLE AND HIGH SCHOOLS

Program executor (Q10)	Ministry of Education, Ministry of Science and ICT
Program description	Operating Leading Schools and high schools centering digital AI education to promote digital AI education in elementary, middle and high schools
Objectives and outcomes (Q2a)	To create a space reflecting each school's condition for ICT education; To mainstream AI education in the curriculum; To operate AI-focused schools within the region.
Modalities/ resources (Q2b)	Leading schools of AI education aim to develop various AI educational models with local communities especially elementary, middle, and high schools, and to discover and expand these AI education models. AI-focused high schools serve as regional centers of AI education for general high schools by offering an education emphasizing AI and data science as well as joint curricula.
Target beneficiary group/s (Q4)	Beneficiaries: Students, teachers, principals Targeted education level: ISCED 1, ISCED 2, ISCED 3 Specific target groups: Low socioeconomic status, rural areas
Scale of the program (Q5)	Number of beneficiaries: The students and teachers of the Leading Schools and AI Education-focused Schools (total 1,152 schools as of 2022) Scope: National Total amount of money: KRW 16 billion
Monitoring and evaluation (Q6)	Launching workshops and providing consulting for all Leading Schools and AI education-focused High Schools
Timeline (Q2b & Q7)	N/A
Program status (Q7)	Ongoing
Challenges and obstacles (Q9)	N/A
Role of digital technology (Q8)	Essential
Role of solidarity & partnership (Q3b & Q11)	N/A

IX. UNIVERSITY DISTANCE EDUCATION CENTER (UDEC)

Program executor (Q1o)	Ministry of Education, KERIS (Korea Education and Research Information Service)
Program description	To establish a distance education infrastructure in the central and regional centers opened to university faculties to develop and share distance learning content.
Objectives and outcomes (Q2a)	<p>To provide quality distance education at all universities through the joint development and utilization of distance learning contents and the joint use of infrastructure in the region.</p> <p>To revitalize distance education in universities and the discovery and establishment of new educational models in the post-pandemic era.</p>
Modalities/ resources (Q2b)	<p>To establish a distance education infrastructure in the central and regional centers opened to university faculties to develop and share distance learning contents.</p> <p>For maintaining the center and enhancing the capabilities to operate distance learning for university faculties, it will be continuously supported.</p> <p>The project aims to:</p> <ol style="list-style-type: none"> 1. Establish and operate to co-use distance education infrastructure <ul style="list-style-type: none"> - Establish a co-utilized learning management system (LMS) by region, operate cloud (around 50GB per instructor) - Establish and operate studios for distance learning by region, modernize equipment, employ staff for support in creating content 2. Jointly create and utilize distance learning content <ul style="list-style-type: none"> - Create distance learning content by region to meet the demand - Joint use of distance learning content within and between LMS areas - Enable content sharing through integrated web site 3. Support for enhancing the capability for distance learning at university level <ul style="list-style-type: none"> - Provide training for instructors, such as technologies and institutions related to distance education, and hold workshops - Share best practices and operate university councils
Target beneficiary group/s (Q4)	<p>Beneficiaries: Students, teachers</p> <p>Targeted education level: ISCED 5, ISCED 6-8</p> <p>Targeted groups: Persons with disabilities</p>
Scale of the program (Q5)	<p>Number of beneficiaries: University students and facilities</p> <p>Scope: National</p> <p>Total amount of money: KRW 37.49 billion for the last three years</p>

Monitoring and evaluation (Q6)	<p>Performance evaluation</p> <ul style="list-style-type: none"> - The Headquarter reports project management plan which includes performance indicators and performance management for regional center to the Ministry of Education - At the end of the project period, each Regional Center is evaluated whether performance indicators have been achieved such as project management and operation plan, etc. - The evaluation affects the budget so that the budget would be reduced for under-performing universities and the other way around for well-performing universities. <p>Project Expense Enforcement Management</p> <ul style="list-style-type: none"> - The Regional Center completes execution until the end of the project period, and the project expenses are monitored by the accounting firm. - The Headquarter reports the entire project results to the Ministry of Education within 3 months of the end of the project period. - If there is any illegal or unfair budget enforcement, all the funds are recovered.
Timeline (Q2b & Q7)	March 31, 2020
Program status (Q7)	<p>Ongoing</p> <p>This initiative is part of the Digital New Deal project, especially at the higher education level, and is contributing to the digital transformation of higher education infrastructure. As a result of the long-term learning losses brought about by COVID-19, the role of distance education has changed from a complement for in-person education to a true mode of education where innovation can thrive. It is therefore quite likely that this program will continue in the future.</p>
Challenges and obstacles (Q9)	<p>There is a limit to taking distance learning with regard to credits and lecture video-playing time.</p> <p>Problem: The existing system restricted the number of credits that could be allotted to remote classes to 20 out of 100 credits, and at least 25 minutes per hour-long class.</p> <p>Resolution: Abolishment of existing guidelines and enactment of a directive on the operation of remote classes in colleges and universities (Feb. 2021)</p>
Role of digital technology (Q8)	<p>Depending on the type of teaching mode, infrastructure, content, etc., digital technology which is an important factor in the provision of quality distance education can be utilized in a various way. Therefore, in order to improve the quality of distance education at university level and to narrow the infrastructure gap between regions, which is the purpose of this project, the active utilization of digital infrastructure such as educational platforms, application, software, and infrastructure for creating distance learning materials is required.</p> <ul style="list-style-type: none"> - By evenly arranging the excellent infrastructure with advanced technology by region, all faculty members, regardless of region and university, will be able to produce high-quality remote teaching materials, - By co-creating and utilizing contents, various digital technologies such as AR/VR, metaverse platforms are able to apply to the contents. - Regardless of the university or region in which they belong, students take higher quality remote classes, <p>It is expected to promote field-led teaching and learning innovation.</p>
Role of solidarity & partnership (Q3b & Q11)	N/A

X. LIFELONG EDUCATION VOUCHERS

Program executor (Q10)	Ministry of Education, NIE (National institute for Lifelong Education)
Program description	The project aims to provide practical lifelong learning opportunities for underprivileged groups, such as low-income people, and even the entire population, but to equalize the distribution of resources so that vulnerable groups have access to learning resources, emphasizing the right of learners to choose and manage their own education
Objectives and outcomes (Q2a)	<p>The project aims to provide practical lifelong learning opportunities for underprivileged groups, such as low-income people, and even the entire population, but to equalize the distribution of resources so that vulnerable groups have access to learning resources, emphasizing the right of learners to choose and manage their own education.</p> <p>The project has provided 39 thousands of people with 350,000 won that can be used to take lifelong education courses in 2022, and has supported total 80,000 people since its introduction.</p>
Modalities/ resources (Q2b)	<p>Among low-income adults, a lifelong education voucher, 350,000 won per person per year is paid in the form of a debit card.</p> <p>The outstanding user evaluated by course completion rate, etc. get extra 350,000 won.</p> <p>The voucher can only be used for course attendance, material fees, and textbook fees of the institution registered on the lifelong education vouchers website.</p>
Target beneficiary group/s (Q4)	<p>Beneficiaries: Adult learners</p> <p>Targeted education levels: Others – as it includes supplementary education, vocational skills, etc., it is not able to specify certain school level</p> <p>Specific target groups: Low socioeconomic status</p>
Scale of the program (Q5)	<p>Number of beneficiaries: Approximately 3.3 million adult learner from low socioeconomic status</p> <p>Scope: National</p> <p>Total amount of money: KRW 14.073 billion</p>
Monitoring and evaluation (Q6)	This program encourages the use of non-users through periodic performance assessments and introduces incentives and penalty schemes to improve voucher utilization. We monitor the false and exaggerated advertisements of relevant institutions, operate a report center for illegal use to prevent fraud, and in the event of fraud, we take follow-up measures through the deliberations of the Lifelong Education Utilization Rights Council. In addition, the company establishes and operates a reflux system by conducting a program satisfaction survey for lifelong education voucher users and employees of the institution to develop improvement measures every year.
Timeline (Q2b & Q7)	Start time: 2016
Program status (Q7)	Ongoing – With the advent of the 4th Industrial Revolution and the extension of life expectancy, the participation rate of lifelong education vouchers in the development of capacity and self-realization of adults is constantly increasing, and the support for lifelong education vouchers is also gradually expanding. In particular, in December 2021, the concept of “access to lifelong education for all citizens” was stipulated as a law, laying the groundwork for the expansion of the scope of lifelong education voucher support from the “low-income centered” to the whole population step by step.

Challenges and obstacles (Q9)

Although this project is currently only implemented for low-income adults, we plan to expand it further to cover all citizens. To this end, the use of lifelong vouchers should increase to cover people with disabilities, middle-aged population and vulnerable members of society. Also, the vouchers should be accepted by a variety of institutions to meet the needs of various learners. Considering that those who use the vouchers have only limited access to or understanding of lifelong learning, consultation and guidance should also be provided when the vouchers are given. Finally, the lifelong learning system should be promoted regionally all around the country, going beyond the current system that operates mainly with the central government playing a major role.

Role of digital technology (Q8)

This project uses digital technology in the application and qualification review stage, such as automatically verifying national scholarships and duplicate beneficiaries through information linkages with the Korea Scholarship Foundation. In addition, the company links information from educational institutions so that users of lifelong education vouchers can check the courses they frequently listen to through the system, and uses technology to streamline their work so that institutions can register their learning results in batches. On the other hand, in order to provide more course information to users of lifelong education vouchers and promote smooth use management, the government is developing a system that allows educational institutions to enter the year-round operating curriculum this year, and to ensure that the results of learners' completion through vouchers are directly linked to the lifelong learning account system, so that they can manage their lifelong education history.

Role of solidarity & partnership (Q3b & Q11)

In the case of an educational institution that accepts the Lifelong Education Voucher, the institution must go through the process of registering as a using institution through the Lifelong Education Voucher System, and the institution must provide information about the institution information and the operational curriculum to the government, and if the registration information of the institution is changed, the change must be made directly on the website of the Lifelong Education Voucher or processed through a change application. In addition, if a user of a lifelong education voucher applies for and pays for a course using a voucher card, he or she must register the contents on the voucher homepage and submit the attendance.

RUSSIAN FEDERATION



I. THE NATIONAL PROJECT 'EDUCATION'

Program executor	The Ministry of Education of Russian Federation, with support from interested federal executive authorities and the constituent entities of the Russian Federation
Program description	The national project 'Education' ensures the development of education infrastructure, professional development of teaching staff and management personnel, and the improvement of education content.
Objectives and outcomes	The national project 'Education' aims to provide opportunities for self-realization and the development of talents.
Modalities/ resources	N/A
Target beneficiary group/s	Target beneficiaries: students, teachers, parents/caregivers, school staffs Target education level: N/A Specific target group: rural areas
Scale of the program	Geographical scope: National/Federal Number of beneficiaries: From the federal budget 810.16 billion rubles Total amount of money dedicated to the program: N/A
Monitoring and evaluation	N/A
Timeline	Since 2019
Program status	Ongoing
Role of digital technology	Level of importance: Essential Digital application utilization: The Ministry of Education of the Russian Federation continues to create conditions for the phased implementation by 2024 in educational organizations of all types and levels of a contemporary and safe digital educational environments. ICT tools utilization: The Ministry of Education of Russia has put into trial operation the 1st stage of the federal state information system 'My School', which, includes the subsystem 'Library of Digital Educational Content'.
Role of solidarity & partnership	Embodiment of partnership and collaboration: N/A Involvement of non-government institutions: Educational organizations implementing programs of primary general, basic general, secondary general and secondary vocational education are provided with online access to digital educational resources and services developed by Innopolis University.

II. KVANTORIUM (CHILDREN'S TECHNOLOGY PARK)

Program executor	Ministry of Education
Program description	Children's technology parks (Kvantorium) are equipped with hi-tech tools and devices, provide education of highly qualified engineering specialists, promote development, testing and implementation of innovative technologies and ideas, reflect the forward-looking approach to education.
Objectives and outcomes	The objective is to facilitate the technical education of children and development of scientific and technological potential of Russian adolescents by implementing effective educational forms, accessible for replication in all regions of the country.
Modalities/ resources	The program offers: a) the organization of educational activities by academic subjects of natural sciences and technology with the use of contemporary equipment, means of training and education, ensuring the variability of courses of extracurricular activities; b) in-depth study and practical training of educational material in natural sciences, mathematics, IT, and other subject areas; c) expanding the list of ongoing additional general education programs of natural science and technology with the use of contemporary equipment, training and education facilities, including those aimed at the practical application of the content of the main educational programs of general education; and d) career guidance activities with students, the participation of students in extracurricular activities, olympiads, competitions and other events of natural science and technology.
Target beneficiary group/s	Target beneficiaries: students, teachers, parents/caregivers, school staffs Target education level: N/A Specific target group: rural areas
Scale of the program	Geographical scope: National/Federal Number of beneficiaries: N/A Total amount of money dedicated to the program: N/A
Monitoring and evaluation	N/A
Timeline	Since 2019
Program status	Ongoing
Challenges and obstacles	N/A
Role of digital technology	Level of importance: Essential Digital application utilization: Using of modern equipment for the additional education in the natural sciences and technology ICT tools utilization: N/A
Role of solidarity & partnership	Embodiment of partnership and collaboration: Education Centers «Point of Growth» Involvement of non-government institutions: N/A

III. SUPERSERVICE 'ONLINE UNIVERSITY ADMISSION'

Program executor	The Ministry of Science and Higher Education, with the Ministry of Digital Development, Communications and Mass Media and the Federal Service for the Supervision of Education and Science.
Program description	The program allows students to apply for admission to higher education institutions in electronic format, including through the federal state information system "Single Portal of State and Municipal Services (functions)" (EPGSU).
Objectives and outcomes	The Superservice provides a platform that organizes information and enables technological interaction between higher education institutes and the federal information system to ensure the state final certification of students who have mastered the educational programs of basic general and secondary general education.
Modalities/ resources	The Superservice provides an opportunity to submit documents for admission to organizations (except for the original documents on education and (or) qualifications) remotely for all categories for the period from 2020 to 2024.
Target beneficiary group/s	Target beneficiaries: Students, parents/caregivers, others. Target education level: ISCED 3 (upper secondary) Specific target group: N/A
Scale of the program	Geographical scope: Federal Number of beneficiaries: 2021/22 academic year: 44,500 applicants, the number of submitted applications is about 480,000 thousand, the number of consents for admission is more than 15,000 thousand, the number of those enrolled is more than 12,000 thousand. Results of the admission campaign of the 2021/2022 academic year: 443 state educational organizations (62.6% of all educational organizations, 90% of state educational organizations), 93 branches and 1 non-state educational organization were connected. Total amount of money dedicated to the program: N/A
Monitoring and evaluation	Monitoring is done automatically by submitting structured and unstructured data from information systems, as well as through regular reporting by participants in the project.
Timeline	This program started in 2020
Program status	Ongoing
Challenges and obstacles	Challenges include: tight deadlines; disparate technological solutions used in educational institutions to conduct admission campaigns; no prior action plans for the system integration in educational institutions, including the lack of app developers at educational institutions; difficulties in establishing unified processing solutions amid the diversity of admission rules by educational institutions; and the need to fine-tune information systems supporting the Superservice and information systems of educational organizations in accordance with the requirements set forth by regulatory legal acts of the Russian Federation.
Role of digital technology	Level of importance: Essential Digital application utilization: N/A ICT tools utilization: Yes, enrollment is through a set of information systems.
Role of solidarity & partnership	Embodiment of partnership and collaboration: N/A Involvement of non-government institutions: N/A

IV. LONG-TERM PROGRAM TO PROMOTE YOUTH EMPLOYMENT THROUGH 2030

Program executor	The Ministry of Science and Higher Education and the Ministry of Labor and Social Protection.
Program description	The program provides a list of measures including: a) the provision of subsidies to employers for employing certain categories of young specialists, b) assistance in relocating young people to regions where there is a lack of human resources, c) development of youth entrepreneurial initiatives, and d) further promotion of the “Work in Russia” web portal and introduction of a digital system of practical training.
Objectives and outcomes	The main goal of the program is to promote opportunities for young people to realize their professional, occupational and entrepreneurial potential. The program has the following targets: 1) forming career strategies for young people in accordance with personal and professional aptitudes and the needs of the labor market; 2) ensuring that the training they receive complies with the professional and qualification requirements of employers and business actors; 3) establishing appropriate conditions for the professional development of young people through a combination of educational and working (entrepreneurial) activities; and 4) developing additional mechanisms to mitigate the risks of youth unemployment.
Modalities/ resources	The program is planned until 2030. The plan envisages pilot testing of a comprehensive approach to career support for young people, as well as providing targeted support for certain categories of young people for work placement (employment) by the HR service agencies. Priority activities of the Program will be aimed at facilitating the employment of students and graduates whose areas of training (specialties) may fall into the zone of unemployment risks.
Target beneficiary group/s	Target beneficiaries: Students Target education level: ISCED 6-8 (bachelor’s and above) Specific target group: N/A
Scale of the program	Geographical scope: Federal Number of beneficiaries: About 10 million Total amount of money dedicated to the program: N/A
Monitoring and evaluation	N/A
Timeline	This program started in 2022
Program status	Ongoing
Challenges and obstacles	N/A
Role of digital technology	Level of importance: Essential Digital application utilization: The program involves the use of public and analytical services available via the “Work in Russia” unified digital platform for employment and labor relations. ICT tools utilization: N/A
Role of solidarity & partnership	Embodiment of partnership and collaboration: N/A Involvement of non-government institutions: N/A

V. SUMMER UNIVERSITY

Program executor	Ministry of Science and Higher Education of the Russian Federation
Program description	The program provides foreign students with information about opportunities for admission to Russian universities (the possibility of receiving grant support, preferences based on the results of successful completion of the final stage of international competitions, etc.), which will also create conditions for expanding access of talented young people from abroad to education in the Russian Federation.
Objectives and outcomes	The main goal of the project is to introduce foreign youth to the potential of Russian education. In turn, students from across Russia will be able to find a common language and make friends with their peers from abroad.
Modalities/ resources	Leading Russian universities have prepared special educational programs in the most demanded areas. Students have access to training at 14 Russian higher education institutions from 7 regions in more than 20 supplementary educational programs that correspond to their primary areas of study. The theme-specific educational programs are devised by universities in accordance with the priorities of scientific and technological development of Russia, and focus on cutting-edge research trends. In addition, a Winter University project for undergraduate and post-graduate students of foreign universities is currently being considered.
Target beneficiary group/s	Target beneficiaries: Students Target education level: ISCED 6-8 (bachelor's and above) Specific target group: N/A
Scale of the program	Geographical scope: Federal Number of beneficiaries: At least 600 Total amount of money dedicated to the program: The total amount of subsidies allocated to the participating universities for implementation of the Summer University project in 2022 will amount to RUB 110.0 million.
Monitoring and evaluation	N/A
Timeline	This program started in 2021
Program status	Ongoing
Challenges and obstacles	N/A
Role of digital technology	Level of importance: Essential Digital application utilization: The program involves the use of public services ICT tools utilization: N/A
Role of solidarity & partnership	Embodiment of partnership and collaboration: Involvement of non-government institutions: N/A

RWANDA



I. STRENGTHENED STEM EDUCATION

Program executor	Ministry of Education, Rwanda Basic Education Board, Rwanda TVET board, University of Rwanda, Rwanda Polytechnics
Program description	A nationwide program to strengthen STEM across all levels of education in Rwanda to increase the relevance of education for urban and rural markets.
Objectives and outcomes	The objectives include: a) Greater use of local resources in teaching science in primary schools; b) Improved laboratory facilities in schools with STEM subjects; c) Establishing STEM schools of excellence in every district; d) Increased careers guidance provided in lower secondary schools; and e) Increased number of students, especially girls, who receive scholarships to pursue higher education courses, especially in STEM subjects
Modalities/ resources	This is to be implemented through the Education Sector Strategic Plan (2018 – 2024). Resources come from national treasury
Target beneficiary group/s	Target beneficiaries: students, teachers, parents/caregivers Target education level: ISCED 1 to 3 Specific target group: girls/women
Scale of the program	Geographical scope: Nationwide Number of beneficiaries: Over 4million learners Total amount of money dedicated to the program: N/A
Monitoring and evaluation	Regular follow up by M&E teams, staff in charge of STEM and Inspectors
Timeline	2018-2024
Program status	Ongoing. Once funded, this can be sustainable due to the 4 th Industrial Revolution's demand in the labour market. It can be replicated in any other level of education, other sectors or even other countries. Scalability would be possible only when the program is funded
Challenges and obstacles	Lack of Internet connectivity; Insufficient infrastructure (e.g. labs); Insufficient equipment (lab equipment and ICT related equipment like devices); and Insufficient qualified teachers.
Role of digital technology	Level of importance: Essential Digital application utilization: Yes, in science related lessons, use of ICT in teaching and learning, Engineering and Mathematics. Digital applications are used in every aspect ICT tools utilization: Yes, ICT tools are needed for both teachers and students. Smart classrooms are available in schools however, teachers need to have skills and knowledge in ICT utilization so that they can be able to guide learners
Role of solidarity & partnership	Embodiment of partnership and collaboration: Support in STEM related infrastructure and equipment Involvement of non-government institutions: Development partners

II. ACCESS TO EDUCATION PROGRAMMES, ESPECIALLY AT PRE-PRIMARY LEVEL

Program executor	Ministry of Education, Rwanda Education Board
Program description	A nationwide program to increase access to education programmes, especially at pre-primary level
Objectives and outcomes	The objectives include; a) all children complete school readiness programmes; b) increase in the number of pre-primary centres; c) increase in the number of pre-primary schools that have qualified and salaried staff; and d) providing community and parental education programmes for early learning.
Modalities/ resources	School readiness is one of the most important aspects in Education. The aim is to have all children at pre-primary schools/readiness centers at the right age and support them go through the whole cycles of Education. Currently 25% of children are in pre-primary. Pre-primary level takes 3 years starting from the age of 3yrs.
Target beneficiary group/s	Target beneficiaries: students, parents/caregivers Target education level: ISCED o Specific target group: rural areas
Scale of the program	Geographical scope: Nationwide Number of beneficiaries: N/A Total amount of money dedicated to the program: N/A
Monitoring and evaluation	Through increased access (learners) and teachers on Government payroll
Timeline	N/A
Program status	Ongoing. Pre-primary schools are concentrated more in towns compared to rural areas. This can be replicated and scaled up to all Districts and Sectors to allow sustainability.
Challenges and obstacles	Insufficient classrooms, few teachers on payroll, and age appropriate teaching and learning materials.
Role of digital technology	Level of importance: Essential Digital application utilization: Yes, different creative and innovative games that serve both leisure and learning are needed. ICT tools utilization: Yes, more initiatives (on top of one laptop per child) are needed.
Role of solidarity & partnership	Embodiment of partnership and collaboration: Partnership needed is on classroom construction so that all children attend pre-primary Education. Others include: teachers/ caregivers, age appropriate teaching and learning materials Involvement of non-government institutions: UNICEF

III. ENHANCED USE OF ICT TO TRANSFORM TEACHING AND LEARNING

Program executor	Ministry of Education, Ministry of ICT, Rwanda Basic Education Board, Rwanda TVET Board, University of Rwanda, Rwanda Polytechnics
Program description	A nationwide program to enhance the use of ICT to transform teaching and learning, and to support the improvement of quality across all levels of education in Rwanda.
Objectives and outcomes	The objectives include: a) equipping primary, secondary, TVET and higher education institutions with 'smart' classrooms; b) enhancing teaching skills in ICT across all levels; and c) developing and using digitalised content for all levels of education.
Modalities/ resources	This is an ongoing program as stipulated in ICT in Education Policy. It needs to be strengthened at all levels of Education and used as a tool rather than a subject in itself
Target beneficiary group/s	Target beneficiaries: students, teachers, principals, parents/caregivers Target education level: ISCED 1 to 6-8 Specific target group: girls/women, rural areas
Scale of the program	Geographical scope: Nationwide Number of beneficiaries: N/A Total amount of money dedicated to the program: N/A
Monitoring and evaluation	N/A
Timeline	This program started in 2015
Program status	Ongoing. This program is sustainable due its nature, use of technology in teaching and learning. When funds are available it can be replicated elsewhere and scaled up to all levels of Education
Challenges and obstacles	Limited budget to connect all schools to internet, buy ICT devices and train teachers in ICT usage
Role of digital technology	Level of importance: Essential Digital application utilization: Yes, this can be applied in different fields of Education ICT tools utilization: Yes, all initiatives under this program require internet and ICT devices
Role of solidarity & partnership	Embodiment of partnership and collaboration: Internet connectivity and ICT devices Involvement of non-government institutions: World Bank, USAID

IV. INCREASED ACCESS TO EDUCATION PROGRAMMES, ESPECIALLY AT TVET LEVEL

Program executor	Rwanda TVET Board Rwanda Polytechnics
Program description	A nationwide program to increase access to education programmes, especially at TVET level.
Objectives and outcomes	The objectives include: a) increasing enrolment in TVET; creating clear pathways into different levels of TVET; c) increasing the availability of competence-based, responsive TVET curricula; d) increasing the number of TVET graduates who have the required skills and competencies at graduation; e) establishing partnerships with private sector in design and delivery of courses; and f) strengthening links between TVET institutions, local communities and private sector, particularly in financing and work placements.
Modalities/ resources	TVET is divided into levels 1 to 7 according to the Rwanda Qualifications framework. Level 1 and 2 are short courses that can take 6 to 12 months, level 3 is equivalent to S4 (Upper Secondary) that covers high school up to level 5. Level 6 and 7 are equivalent to University level.
Target beneficiary group/s	Target beneficiaries: students, parents/caregivers Target education level: ISCED 3 to 4 Specific target group: N/A
Scale of the program	Geographical scope: Nationwide Number of beneficiaries: N/A Total amount of money dedicated to the program: N/A
Monitoring and evaluation	Through National Examination and School Inspection Authority, Inspectors and M&E activities.
Timeline	N/A
Program status	Ongoing. The government's vision is to have 60% of students pursuing TVET, TVET wings are being constructed and attached to general education schools to allow access, new TVET schools are built where there is need for them, and different partners are supporting TVET initiatives. This guarantees sustainability and scalability of TVET in near future.
Challenges and obstacles	Insufficient infrastructure, lack of equipment, insufficient consumables and people's negative mindset about TVET.
Role of digital technology	Level of importance: Essential Digital application utilization: Yes, different initiatives need digital applications in TVET ICT tools utilization: Yes, since Rwanda adopted ICT in Education, meaning that ICT is not only regarded as a subject but also a tool in teaching and learning (In all subjects/trades). This cannot be achieved without ICT tools.
Role of solidarity & partnership	Embodiment of partnership and collaboration: Involvement of non-government institutions: JICA, KOICA, GIZ

V. STRENGTHENED CONTINUOUS PROFESSIONAL DEVELOPMENT AND MANAGEMENT OF TEACHERS

Program executor	Rwanda Basic Education Board (REB), Rwanda TVET Board (RTB)
Program description	A nationwide program to strengthen continuous professional development and management of teachers across all levels of education in Rwanda.
Objectives and outcomes	The objectives include: a) ensuring all school teachers, TVET instructors and higher education lecturers have appropriate competencies to deliver the curriculum; b) ensuring all newly qualified teachers to deliver the competence-based curriculum; c) providing school-based mentoring for all newly qualified teachers; d) strengthening the English language proficiency of all teachers and lecturers; e) increasing the number of teachers practicing school-based CPD linked to competence-based curriculum; f) increasing the use of TVET trainers' qualifications framework and occupational curricula for all trades; g) increasing the number of qualified teacher in primary and secondary; h) increasing the use of Teacher Management Information System (TMIS) for effective management and distribution of teachers; and i) improving teachers' welfare in order to attract and retain high quality teachers in the teaching profession.
Modalities/ resources	Every year, teachers recruitment process is done to fill the gaps. Continuous Professional Development is given a priority to teachers. Pre-service training is being strengthened where Teacher Training Colleges are upgraded and supported. Resources come mainly from national treasury and a few partners who support in teacher training
Target beneficiary group/s	Target beneficiaries: students, teachers, principals, parents/caregivers Target education level: ISCED 0 to 2 & 4 Specific target group: N/A
Scale of the program	Geographical scope: Nationwide Number of beneficiaries: N/A Total amount of money dedicated to the program: N/A
Monitoring and evaluation	Through sector monitoring initiatives.
Timeline	N/A
Program status	Ongoing. Teacher statute was put in place. Career path was elaborated. These guarantee sustainability. Focus was also put into attracting intelligent students to join teaching.
Challenges and obstacles	Teacher motivation, teacher's capacity, turnover, and teacher training.
Role of digital technology	Level of importance: Essential Digital application utilization: Yes, attendance can be followed up on a daily basis through digital applications. ICT tools utilization: Yes, in order to implement ICT in Education, teachers need to be equipped with internet and ICT devices
Role of solidarity & partnership	Embodiment of partnership and collaboration: Teacher preparation in TTCs, capacity building of teachers, motivation and teacher management in general Involvement of non-government institutions: N/A

SAUDI ARABIA



I. STUDY PLANS & CURRICULUM DEVELOPMENT INITIATIVE

Program executor	Several MOE institutions/departments are in charge of this initiative: Curriculum Development Center; Ministry Agency of Public Education; General Administration of E-learning and Distance Education; Executive Program for the Development of Secondary School Pathways; Tatweer Company for Education Services (T4edu).
Program description	The initiative will achieve a holistic reform of the curriculum and bridge gaps and overcome shortcomings in K-12 curricula to keep pace with global developments in the field of education.
Objectives and outcomes	Targets include: a) improving learning outcomes and the efficiency of the educational process; b) supporting students' acquisition of 21 st -century skills and meeting the requirements of higher education and the labor market; and c) developing foundational knowledge and skills in/through core subjects to improve student learning and, in turn, their scores on international tests, among others.
Modalities/ resources	K-12 study plans have been developed and updated by implementing a new trimester system, which significantly increases school days per year, allowing sufficient teaching/ learning time across curricula and enriching e-learning activities. The curriculum has been revised with the following: a) an improved <i>Islamic Studies</i> textbook in which Islamic knowledge is presented in a comprehensive and integrated manner; b) <i>Critical Thinking</i> textbooks to 9 th and 10 th graders to empower them to think critically, analyze, argue/ debate, and make sound judgments and decisions; c) <i>Digital Skills</i> in the elementary stage (fourth-sixth grades) to ensure the development of 21 st -century digital competencies and skills from the earliest stages of formal education; d) <i>English Language</i> starting from first grade to enhance student proficiency and language abilities from an early age; e) <i>Physical Education and Self-Defense</i> for all students - both male and female -to promote a healthy lifestyle and raise awareness about the importance of health; f) <i>Life and Family Skills</i> for all students - both male and female -to help them effectively deal with issues and problems; g) <i>Social Studies</i> for all students - at all levels - to shape youth's national identity and to focus on Saudi heritage and tradition; and h) incorporating audiovisual, folk, and performance arts into the <i>Arts</i> curriculum to reflect the cultural life of Saudi society.
Target beneficiary group/s	Beneficiaries: Students, Teachers, Principals, Supervisors Targeted education levels: ISCED 1, ISCED 2, ISCED 3 Specific target groups: Girls/women, low socioeconomic status, rural areas, linguistic minorities, migrant background
Scale of the program	Beneficiaries: 6.315.848 students, 487.930 teachers, 21.097 principals, 22446 supervisors Scope: 47 educational directorates around the Kingdom
Monitoring and evaluation	The Curriculum Development Center regularly monitors and evaluates K-12 study plans and curricula by national and international standards. The Curriculum Development Center receives stakeholder feedback on the curriculum via official textbook reviews, e-mails, and the QR Code printed on the textbooks. A comprehensive study is currently being conducted to evaluate the effectiveness and impact of the developed study plans and curriculum involving all stakeholders (students, teachers, principals, supervisors, and parents).
Timeline	Started May 2021
Program status	Ongoing

Challenges and obstacles

The Study Plans & Curriculum Development Initiative has its share of challenges, especially in the areas of technology and teacher training, for example: a) slow network speed in villages and remote areas, b) the lack of readiness of low-income families, especially when home technology was lacking or wasn't reliable, and c) some teachers found teaching online to be challenging, especially those who had limited connectivity or lacked the required digital skills/technological tools to perform. The MoE worked to address these issues by broadcasting lessons through "IEN lessons" tv channels and on YouTube, providing families with iPads and the internet to ensure that all students have access to educational technology, and providing teachers intensive training programs on using digital technologies.

Role of digital technology

Essential

Role of solidarity & partnership

N/A

II. MADRASTI (LEARNING MANAGEMENT SYSTEM)

Program executor	Ministry of Education
Program description	<i>Madrasati</i> (“my school”) is the national E-learning Management platform that serves three E-learning models (blended, synchronous, and asynchronous, and distance learning and face-to-face technology enhanced learning).
Objectives and outcomes	To enable the implementation of a high-quality education that is in line with national and international goals.
Modalities/ resources	It is integrated with the content repository, the student/staff information system, performance-monitoring dashboard, and other productivity tools to provide a comprehensive solution to facilitate the educational process.
Target beneficiary group/s	All students, teachers, school principals, supervisors, parents, and Saudi students abroad
Scale of the program	National
Monitoring and evaluation	A performance-monitoring dashboard, educational supervisors’ visits, internal studies, governmental bodies reviews, and international organizations reports.
Timeline	Started in 2020
Program status	Ongoing
Challenges and obstacles	Ensuring users readiness (ePedagogy and technically) which has been solved by launching an informative website (https://www.backtoschool.sa), training, webinars, and users’ guides in multi-formats. In addition, by change management plan such as communication, media, and competitions for raising awareness.
Role of digital technology	Essential.
Role of solidarity & partnership	A collaboration and engagement between the Ministry of Education with global and local vendors.

III. RAWDATI (MY KINDERGARTEN) DIGITAL PLATFORM

Program executor	Ministry Agency for Public Education; The General Administration of Early Childhood; The Department of e-learning and distance learning; The General Administration of Digital Transformation; and Tatweer Company for Educational Services
Program description	The “Rawdati” platform is an interactive Saudi model for distance education, and includes an LMS education management system targeting the kindergarten stage, and includes digital education content.
Objectives and outcomes	The platform provides high-quality synchronous and asynchronous interactive education for kindergarten children as well as a variety of services for parents and practitioners.
Modalities/ resources	The platform provides a variety of functions, such as kindergarten timetable and weekly program, activities, digital content, enrichment bank, attendance and absence tracking, events and announcements, reports and statistics, and professional development programs for kindergarten teachers. It allows for synchronous learning, where teachers can communicate with the children directly, and non-synchronous learning, where digital content (visual and interactive) is used in the virtual kindergarten application, the Ain channel for kindergarten (broadcast lessons) and content uploaded by teachers.
Target beneficiary group/s	Beneficiaries: Students, teachers, principals, parents/caregivers, school staffs Targeted education level: ISCED 0, ISCED 1
Scale of the program	Beneficiaries: All kindergartens across the country Scope: National
Monitoring and evaluation	The General Administration of Early Childhood monitors the platform by sharing content and enriching the library, collecting and evaluating reports, displaying the indicator panel, following up on education processes at the Kingdom level, and displaying the qualitative and quantitative reports available in the system. Head of the Kindergarten Department submits qualitative reports to the General Administration of Early Childhood, following up on education processes at the administration level on the platform.
Timeline	Started 15 February 2021
Program status	Ongoing
Challenges and obstacles	N/A
Role of digital technology	Essential
Role of solidarity & partnership	N/A

IV. TRANSFORMATION OF COMMUNITY COLLEGES INTO APPLIED COLLEGES

Program executor	Community colleges
Program description	KSA's labour market needs are evolving in light of the country's economic development plan. This program will transform the community colleges to reflect these changes.
Objectives and outcomes	a) attracting more students; b) aligning education to labour market needs; c) exploring private sector partnerships. d) developing students' skills and their professional abilities; e) providing international professional certificates for students in addition to academic certificate; f) covering occupational gap in some professional jobs with educational outputs with appropriate competencies that meet the need.
Modalities/ resources	Human resources: faculty members, consultants, cooperating trainers. Facilities and infrastructure: classrooms, laboratories and advanced technology. Legislation and regulations: Vision 2030, the executive plan for the transformation of applied colleges, regulations of the Ministry of Education. Financial resources: in preparation phase.
Target beneficiary group/s	Beneficiaries: students, job seekers
Scale of the program	Category of beneficiaries are high school graduates, job seekers, employees looking for on-the-job training Scope: National
Monitoring and evaluation	There are committees and work teams to follow up on the applied colleges' performance and to ensure that the colleges are running in accordance with the implementation plans. There are many performance indicators that measure the progress in implementing the plans.
Timeline	Started in August 2021
Program status	The program has passed the planning stage and moved to the stage of following up on the performance of colleges.
Challenges and obstacles	Difficulty in accepting the change and transformation at the level of students, faculty, and society, more specifically: the disparity in the level of speed of transformation to applied colleges in universities and the length of time it takes to modify curricula to fit the requirements of applied colleges.
Role of digital technology	Essential. The teaching methods depend on a modern technology and virtual environments. In addition, many programs in applied colleges tend to establish programs in digital technology and other programs that integrate current academic majors with the digital field to keep pace with digital economic development.
Role of solidarity & partnership	The idea of establishing applied colleges is based on contracting a group of partnerships with the private sector to keep pace with employment needs, in addition to making partnerships with professional certification bodies to raise the level of skills of students and faculty members.

V. THE KHEBRAT PROGRAM

Program executor	Ministry of Education; International universities hosting the program in several countries (America, New Zealand, Britain, Australia)
Program description	The coexistence program is designed and designed to suit different educational categories, and each educational category has its own goals that seek to transfer the impact gained during the cohabitation period due to the Corona pandemic
Objectives and outcomes	The number of those who completed the program and passed its requirements reached 495 male and female trainees. The decision to stop came in the last period of the program. The partner universities have been contacted to grant them the professional development hours that have taken place up to the date of stopping the program
Modalities/ resources	The goal of the program is to build leaders for change in schools by providing participants with modern skills and knowledge through the Living in Advanced Global Environments program in its educational system.
Target beneficiary group/s	Beneficiaries: Educational practitioners in schools (teacher, teacher, school leader, school representative, educational supervisor)
Scale of the program	Number of beneficiaries: Training of 616 male and female trainees; 495 male and female trainees completed the program in all phases; 121 male and female trainees completed the first stage. Scope: All regions and educational districts
Monitoring and evaluation	There is a pre and post-evaluation of the program.
Timeline	Started February 2019 – May 2020
Program status	Completed
Challenges and obstacles	Due to the Corona pandemic, the qualitative professional development program has been suspended, experiences and arranging the return of all scholarships from abroad. The challenge is the suspension of flights all over the world, especially in the countries hosting the program internationally. A great challenge, especially in light of the suspension decision issued by His Excellency the Minister, which resulted in the suspension of exchange for scholarships.
Role of digital technology	Essential
Role of solidarity & partnership	International universities hosting the program in several countries (America, New Zealand, Britain, Australia)

VI. ELECTRONIC SCHOOL HEALTH SYSTEM

Program executor	Ministry of Education: School health department/ Digital Transformation Department; and Ministry of Health
Program description	This electronic school health system includes several services, which are: 1) Health Monitor; 2) Virtual Clinic; and 3) The Electronic Link of the Student's Health Record.
Objectives and outcomes	The program aims to: a) follow up on the health status of students; b) provide the necessary medical assistance and consultations for students from a distance; c) activate modern technology and remote communication in medical services provided to students; and d) enable decision-makers to view the existing situation and take the necessary decisions.
Modalities/ resources	There are three main functions: 1) Health Monitor: This service allows the possibility of counting and monitoring epidemic infections and immunization against viruses for the school students, and all school employees and taking necessary actions. 2) Virtual Clinic: This enables the student and school staff to communicate safely and directly with the health center doctor during the school day to evaluate health conditions and provide the necessary health care remotely. 3) The Electronic Link of the Student's Health Record: It is a service that automates all health record operations and reflects the student's health data from the health system to the educational system called "Noor".
Target beneficiary group/s	Beneficiaries: Students, teachers, parents/caregivers, administrative staff Targeted education levels: ISCED 1, ISCED 2, ISCED 3, Early childhood Specific target groups: All students and staffs of SA schools
Scale of the program	All students and staffs of SA schools
Monitoring and evaluation	Through periodic reports submitted by school Principals and field visits by the owner of the initiative (School health department) at the MOE.
Timeline	Started in 2022
Program status	Part of the services is completed and the rest is under implementation or in the planning stage.
Challenges and obstacles	Challenges include: a long chain of procedures to be accredited, linking students' data to health authorities (medical staff), and accessing the platform by the Principal at the school.
Role of digital technology	Essential
Role of solidarity & partnership	N/A

VII. RESEARCH AND INNOVATION PARTNERSHIP

Program executor	Ministry of Education
Program description	It is the first national project aimed at directly linking and funding Saudi universities with the industry and the private sectors, thus, the initiative will promote research and innovation partnerships with the industrial and private sectors based on the national priorities.
Objectives and outcomes	The initiative is built to address the gaps in research and development in Saudi Arabia's industrial landscape by enabling industry to directly fund specific research and development at Saudi universities. The initiative's distinctive feature comes in the form of a fund matching mechanism whereby the Ministry of Education will match the funding provided by the private or industrial partner. More than 50 partnerships are expected to be established when the initiative is launched in late 2022, while a number of translational centres and technology transfer centres will be built nationwide to spread the benefits of the initiative across the country while e-services platforms, such as the Knowledge Exchange Platform and the KSA Scholar Platform, will also be launched to promote collaboration and increase local expertise through academic partnerships with key national players.
Modalities/ resources	The initiative's distinctive feature comes in the form of a matching fund mechanism whereby the Ministry of Education will match the funding provided to the researcher by the private or the industrial partner.
Target beneficiary group/s	Beneficiaries: Researchers, faculty members, and private/industrial sectors in Saudi universities Targeted education levels: ISCED 6-8
Scale of the program	Entirety of KSA
Timeline	Late 2022
Program status	Ongoing
Challenges and obstacles	Gaps between universities research activities and the needs of the industrial sector.
Role of digital technology	Support for research
Role of solidarity & partnership	N/A

VIII. INTERNATIONAL TECHNICAL COLLEGES

Program executor	Technical and Vocational Training Corporation (TVTC), Colleges of Excellence (CoE)
Program description	Colleges of Excellence (CoE) was established to support the delivery of the objectives below regarding the development of the International Technical Colleges project.
Objectives and outcomes	The objectives include: a) developing the Technical and Vocational Training curriculum in Saudi Arabia in collaboration with International Technical Providers; b) upgrading and improving the regulatory capacity of TVET by strengthening the involvement of the private sector in National Occupational Skill Standards and contributing to on-the-job training; c) expanding the capacity of the system from 110,000 students in 2013 to approximately 400,000 students over 10 years; d) investing in all means required to upgrade the quality of the system and meet the highest international standards; and e) provisioning education through a Public-Private Partnership (PPP) model.
Modalities/ resources	The International Training providers will develop a program for students consisting of 3 years of study. For each year, providers will deliver a minimum of 1,000 guided learning hours annually for each full-time student, in line with international standards.
Target beneficiary group/s	Beneficiaries: Students Targeted education level: ISCED 4 Specific target groups: Girls/women, rural areas
Scale of the program	Beneficiaries: Total Unique Trainees: 90922 Total Graduated Diploma: 17193 Scope: Students within the provinces of KSA
Monitoring and evaluation	Colleges of Excellences will engage in a regular professional dialogue with Providers to monitor and review each of their colleges' performance. In addition, yearly, the institutional review is conducted (up to 2018) and frequent quality visits are conducted by CoE to monitor the performance of the ITPs.
Timeline	The International Technical College program started in September 2013
Program status	Ongoing
Challenges and obstacles	Challenges include: ensuring Colleges recruited trainers to the required standards, college delivering Specializations to the required standard, managing student expectations, and COVID-19 problems in delivering teaching and learning
Role of digital technology	Essential.
Role of solidarity & partnership	The program ensures collaboration between the Technical colleges and industry partners.

IX. APPRENTICESHIP PROGRAM

Program executor	Technical and Vocational Training Corporation (TVTC)
Program description	This program is developing apprenticeship programs in alignment with industrial and regional strategies, with the participation of the private sector in designing programs to provide a practical experience.
Objectives and outcomes	The aim is to develop students with employable skills before graduation and increase the success of their employment opportunities after graduation. In addition, the program will provide better guidance to students on future career decisions by giving them more data, and hands-on experience in the workplace to make informed choices.
Modalities/ resources	Implementation is carried out by an external company.
Target beneficiary group/s	Beneficiaries: Students Targeted education level: ISCED 4 Specific target groups: Trainees and trainers
Scale of the program	All trainees and trainers in KSA
Monitoring and evaluation	Vision Realization Office at the Ministry of Education
Timeline	This initiative is implemented by an external company and the contract period is 24 months.
Program status	The initiative is currently a study, and if the results of the study are available, implementation will be carried out and the goals of the initiative are achieved.
Challenges and obstacles	N/A
Role of digital technology	Somewhat important
Role of solidarity & partnership	Collaboration between institutions and industry partners

X. EXCHANGE OF TECHNICAL AND VOCATIONAL TRAINEES AND GLOBAL TRAINING TRAINEES

Program executor	Technical and Vocational Training Corporation (TVTC)
Program description	The initiative aims to present and activate a work plan and a business model for the Global Exchange Program for Technical and Vocational Education and Training Students in order to promote the expansion of student exchange programs and enable students of local and international colleges and institutes to study for one or two semesters at an international partner institution.
Objectives and outcomes	The focus is on .improving foreign language and soft skills, providing greater knowledge sharing and learning about the latest trends in the industry, and exposing students to a wider range of industries, resulting in higher student employment locally and globally.
Modalities/ resources	This initiative is implemented by an external company and the contract period is 24 months.
Target beneficiary group/s	Beneficiaries: Students Targeted education level: ISCED 4 Specific target groups: Trainees and trainers
Scale of the program	Beneficiaries: Trainees and trainers Scope: Within the Trainees and trainers of KSA
Monitoring and evaluation	Vision Realization Office at the Ministry of Education
Timeline	Started March 2022
Program status	Ongoing
Challenges and obstacles	N/A
Role of digital technology	Somewhat important
Role of solidarity & partnership	Collaboration between local and international colleges, and institutes

XI. STRATEGIES PARTNERSHIPS INSTITUTES PROGRAM

Program executor	TVTC Technical Colleges and Funding agencies
Program description	Conduct an As-Is study to evaluate the current status of entrepreneurship at TVTC units.
Objectives and outcomes	Doing a benchmark study of 10 countries and looking for best practices to recommend for implementation at TVTC. In addition, developing up to 21 new curricula in Entrepreneurship for vocational programs, develop a full implementation plan with resources, and budget.
Modalities/ resources	The programs will be delivered full-time over 2 Trimesters to cover Entrepreneur Essential Skills (topics include: The Entrepreneurial Mindset, Creating a Vision for your Business Plan, The Business Environment, Researching your Market and Develop a Marketing Plan; Financial Modelling, Soft Skills for Entrepreneurs, Toolkits for Idea Generation, and Enterprise in the Workplace) and Entrepreneur Project (topics include: Entrepreneur Proposal (Product or Services), Developing a Marketing Plan, Develop Account & Financial Modelling, and Product Design (Prototype)).
Target beneficiary group/s	Beneficiaries: Students Targeted education levels: ISCED 5 Specific target groups: Girls/women, rural areas
Scale of the program	Beneficiaries: All TVTC students that are studying for diploma in TVTC colleges Scope: National
Monitoring and evaluation	Technical and Vocational Training Corporation will use its established quality assurance, monitoring, and evaluation procedures to monitor and assure the program to the required standards.
Timeline	Started November 2021
Program status	Planning stage
Challenges and obstacles	A short time of assessing the current situation and a lack of detailed data to deeply study the current state. Also, limited funding for students at the diploma level to start their businesses.
Role of solidarity & partnership	Funding agencies, SMEs, and Social Development Bank

SINGAPORE



I. EARLY INTERVENTION (EI) PROGRAMMES FOR CHILDREN UNDER THE AGE OF 7

Program executor	Early Childhood Development Agency
Program description	The Early Childhood Development Agency (ECDA) serves as the regulatory and developmental agency for the early childhood sector in Singapore, overseeing key aspects of children's development below the age of 7, across both kindergartens and child care centers. Today, children under the age of 7 with developmental needs can receive intervention through Government-funded EI programmes, depending on the level of support needed.
Objectives and outcomes	<p>Three EI programmes are available at EI centres and preschools based on support levels.</p> <p>1) <u>Medium to high levels of EI support</u>: the Early Intervention Programme for Infants and Children (EIPIC) in EI centres aims to: increase the developmental growth potential of the child; minimise development of secondary disabilities; and maximise integration in mainstream settings.</p> <p>2) <u>Low levels of EI support</u>: a) the Development Support - Learning Support (DS-LS) programme for children enrolled at Kindergarten 1 and 2 (K1 and K2) levels aims to provide short-term targeted developmental and learning support, and enhance capabilities of preschools to better support these children in their natural learning environment; and b) the Development Support Plus (DS-Plus) programme is for children who have made sufficient progress under EIPIC, and aims to support these children to transit from an EI centre into a mainstream setting in a preschool</p> <p>3) <u>Medium levels of EI support</u>: The ECDA launched a new Inclusive Support Programme (InSP) pilot in October 2021 to integrate within a preschool setting the provision of early childhood (EC) and EI services for children aged 3 to 6. To date, the pilot has started in 6 preschools, and is on track to be rolled out to the last preschool by June 2022. The InSP pilot is expected to run for three years, for each pilot preschool</p>
Modalities/ resources	<p>All government-funded EI services are designed according to the five key principles below:</p> <p>Family-centred practice, where EI support and services should be designed to meet the needs of the child and family as far as possible, while leveraging the family's strengths.</p> <p>Natural and inclusive environments, where the child may receive intervention. This can be in home, preschool and community settings, as well as an EI centre.</p> <p>Developmentally appropriate intervention, where intervention is pitched at the child's current developmental level. EI is planned based on the child's interest, making the most out of the child's strengths and zone of proximal development.</p> <p>Functional and active child engagement, which promotes participation and interest-based learning opportunities to stimulate the child's learning in both the classroom and at home.</p> <p>Multi-disciplinary team practice is used in delivering EI services.</p>
Target beneficiary group/s	<p>Target beneficiaries: Students</p> <p>Target education level: ISCED 0 (early childhood and pre-primary)</p> <p>Specific target group: Others, Developmental Needs</p>
Scale of the program	<p>Geographical scope: National</p> <p>Number of beneficiaries: in 2021, 6,000 children with developmental needs received government-funded EI services.</p> <p>Total amount of money dedicated to the program: In 2021, the Government spent around \$80 million to fund the provision of EI services for families.</p>

Monitoring and evaluation	<p>El programmes are monitored at various levels:</p> <p>Child-level: Based on accomplishment of Individualised Education Plan (IEP) goals. The IEP articulates specific goals to guide intervention, with the aim of helping the child develop important skills and apply them meaningfully in everyday activities. Progress of intervention is tracked using the IEP goals, with the child showing improved developmental outcomes when his/her IEP goals are met.</p> <p>Provider-level: Programme take-up rates and fidelity of key processes are tracked. On-site assurance audits are also conducted to ensure that El providers are adhering to service requirements.</p>
Timeline	<p>Parents are encouraged to refer to the developmental milestones in the Health Promotion Board's Child Health Booklet as reference points, and take their children for regular childhood developmental screenings at General Practitioner (GP) clinics or polyclinics. If any delays in the child's development are detected, the child will be referred to paediatricians for further diagnosis of developmental concerns. In the preschool, teachers may also flag children with suspected developmental delays to early intervention professionals, who will work with paediatricians to determine the children's needs.</p>
Program status	Ongoing
Challenges and obstacles	N/A
Role of digital technology	<p>Level of importance: Somewhat important</p> <p>Digital application utilization: N/A</p> <p>ICT tools utilization: ECDA utilizes SSNet-ES to monitor and track cases through different stages (e.g. referral, intake screening, enrolment, graduation) so as to better optimise the delivery of El services.</p>
Role of solidarity & partnership	<p>Embodiment of partnership and collaboration: N/A</p> <p>Involvement of non-government institutions: El centres, preschools, social service agencies and clinics/hospitals.</p>

II. LEARNING FEEDBACK ASSISTANT FOR ENGLISH LANGUAGE

Program executor	Ministry of Education
Program description	Under Singapore's National AI (Artificial Intelligence) Strategy, the Ministry of Education (MOE) will extend its Student Learning Space (SLS)* capabilities through the use of AI as an enabler in Teaching and Learning.
Objectives and outcomes	The development of a Learning Feedback Assistant for English Language (LFA-EL) will complement and enable greater personalisation of learning for our students, as students are able to quickly identify basic language errors (e.g. spelling and grammar) and receive feedback. This also complements teachers' efforts to guide students in the more complex tasks of language construction and development of higher-order skills, such as creative expression, persuasiveness and tone.
Modalities/ resources	The LFA-EL will be made available to students and teachers in phases from Q2 2022 onwards.
Target beneficiary group/s	Target beneficiaries: Students, teachers Target education level: ISCED 1 (primary), ISCED 2 (lower secondary), ISCED 3 (upper secondary) Specific target group: N/A
Scale of the program	Geographical scope: National Number of beneficiaries: All students from the primary to secondary levels within general education and English Language teachers. Total amount of money dedicated to the program: N/A
Monitoring and evaluation	The program will be monitored for accuracy and evaluated as part of mid-term and full-term curricular reviews through stakeholders check-ins. Utilization statistics of the LFA-EL will also be collected and analyzed by MOE.
Timeline	Q2, 2022
Program status	Ongoing
Challenges and obstacles	As the LFA-EL has just been implemented, we anticipate upcoming challenges in terms of customization of the LFA-EL to local curriculum standards and, the professional support and training for teachers on using the LFA-EL in teaching and learning.
Role of digital technology	Level of importance: Essential Digital application utilization: Yes. MOE will work with the industry on the LFA-EL's development aligned to our curricular needs. ICT tools utilization: Students can access the LFA-EL through their PLDs, school-provisioned devices and personal devices.
Role of solidarity & partnership	Embodiment of partnership and collaboration: N/A Involvement of non-government institutions: N/A

III. UPLIFT INITIATIVES (UPLIFT ENHANCED SCHOOL RESOURCING AND UPLIFT COMMUNITY NETWORK).

Program executor	<u>UPLIFT Community Network</u> : Ministry of Education and Ministry of Social and Family Development <u>UPLIFT Enhanced School Resourcing</u> : Ministry of Education
Program description	Uplifting Pupils in Life and Inspiring Families Taskforce (UPLIFT) is an inter-agency task force led by the Ministry of Education (MOE) that aims to strengthen upstream wraparound support for students from disadvantaged families so as to help them achieve their fullest potential.
Objectives and outcomes	<u>UPLIFT Community Network</u> : Strengthens community-based support for students from disadvantaged families who need help to attend school more regularly. <u>UPLIFT Enhanced School Resourcing</u> : Additional resources allocated to support whole-school approaches and targeted interventions for students with greater needs.
Modalities/ resources	<u>UPLIFT Community Network</u> : students and their families are referred to appropriate agencies and community-based resources, based on their needs. Examples include financial assistance, casework and counseling support, academic support, after-school support and befriending/ mentoring. UPLIFT Family Befrienders also help to build protective factors at home, by checking in with the families and rendering social-emotional support and practical help. <u>UPLIFT Enhanced School Resourcing</u> : The provision of an additional four to five teacher posts per school for the schools in the first phase, allows them to put in place dedicated teams, processes, and customized programmes to support disadvantaged and at-risk students. For instance, some teachers could provide re-integration and academic support, while other teachers could provide mentoring and conduct after-school programmes. Other forms of support include teaching resources, professional development, and networked learning.
Target beneficiary group/s	Target beneficiaries : Students Target education level : ISCED 1 (primary), ISCED 2 (lower secondary, ISCED 3 (upper secondary) Specific target group : Low socio-economic status, Others, students with greater needs.
Scale of the program	Geographical scope : National Number of beneficiaries : <u>UPLIFT Community Network</u> : about 1,800 students nationwide each year; <u>UPLIFT Enhanced School Resourcing</u> : around 13,000 students from about 100 schools (approximately 30% of all primary and secondary schools). Total amount of money dedicated to the program : N/A
Monitoring and evaluation	<u>UPLIFT Enhanced School Resourcing</u> : Onboarded schools track process and student outcomes through quantitative and qualitative indicators to monitor progress of whole-school efforts and programmes. <u>UPLIFT Community Network</u> : A mix of qualitative and quantitative indicators (such as level of support and improvement in attendance) are used to monitor the progress of the supported students.
Timeline	<u>UPLIFT Community Network</u> : The pilot commenced in 2020 in three towns and was expanded to 12 towns in 2022. <u>UPLIFT Enhanced School Resourcing</u> : A pilot commenced in 2019 with 23 schools, and 24 more schools were onboarded in 2022 in the first phase of implementation.
Program status	Ongoing

Challenges and obstacles	Key challenges include: a) the restrictions on face-to-face interactions as a result of the COVID-19 affected the trust and relationship building amongst the different stakeholders, including parents and other community partners, as well as the ability to strengthen holistic support and uncover underlying reasons for the lack of readiness in the student or their families;b) optimizing the collaboration with and across the multiple stakeholders in the community to reduce duplication and excessive touchpoints to the same family, while ensuring that their needs are met comprehensively and holistically.
Role of digital technology	Level of importance: Essential Digital application utilization: N/A ICT tools utilization: N/A
Role of solidarity & partnership	Embodiment of partnership and collaboration: <u>UPLIFT Community Network:</u> seeks to create a network of agencies including Family Service Centres, Social Service Agencies, and relevant government agencies. <u>UPLIFT Enhanced School Resourcing:</u> Community partnerships, in particular, aim to provide various opportunities, skillsets and perspectives to complement school efforts. Involvement of non-government institutions: N/A

IV. REVIEW OF OPPORTUNITIES AND PATHWAYS IN APPLIED EDUCATION

Program executor	All polytechnics and the ITE are involved in this programme.
Program description	The Institute of Technical Education (ITE) provides technical and vocational education for students through full-time Nitec, Higher Nitec courses, or traineeship programmes conducted in partnership with employers. Polytechnics provide hands-on, practice-based learning experience within a dynamic and progressive learning environment, leading to a diploma qualification.
Objectives and outcomes	The Review on Opportunities and Pathways in Applied Education was conducted in 2021 to study how to better support the diverse needs and aspirations of our students and graduates from the polytechnics and the Institute of Technical Education (ITE), while ensuring they are equipped with relevant skills to remain resilient and thrive in the future economy.
Modalities/ resources	The polytechnics and ITE will progressively implement this recommendation from Academic Year (AY) 2022. Polytechnics and ITE students can look forward to a more fulfilling applied education journey and graduating with deeper industry-relevant skills and broader life skills, and be better primed for future opportunities.
Target beneficiary group/s	Target beneficiaries: Students Target education level: ISCED 4 (post-secondary and non-tertiary) Specific target group: N/A
Scale of the program	Geographical scope: National Number of beneficiaries: 25% (ITE) and 50% (Polytechnic) of our Primary 1 cohort at a future-steady state. Total amount of money dedicated to the program: N/A
Monitoring and evaluation	Monitoring and evaluation of the enhancements will be taken as part of MOE's regular tracking and monitoring of the polytechnic and ITE sector.
Timeline	The program started in 2022
Program status	Ongoing
Challenges and obstacles	As implementation had just started, MOE will continue to monitor the progress of the recommendations.
Role of digital technology	Level of importance: Somewhat important Digital application utilization: N/A ICT tools utilization: N/A
Role of solidarity & partnership	Embodiment of partnership and collaboration: The polytechnics and ITE will continue to engage industry partners to curate quality workplace exposure opportunities for students. Under ITE's enhanced curricular structure, students will be exposed to two linked industry attachments (IA) – a three-month IA in Year 2 and a six-month IA in Year 3. ITE will also engage employers to appoint experienced workplace mentors. The polytechnics will explore options for students to take on additional industry exposure opportunities beyond the compulsory third-year internship. Additionally, the polytechnics are exploring three distinct modalities for additional industry exposure. These include: a) <i>Job shadowing</i> , b) <i>Short job stints</i> , and c) <i>Career Accelerator Programmes</i> . Involvement of non-government institutions: N/A

V. PROFESSIONAL DEVELOPMENT OF TEACHERS IN E-PEDAGOGY

Program executor	Singapore Ministry of Education											
Program description	Under its Educational Technology (EdTech) Plan, the Singapore Ministry of Education (MOE) envisions our teachers to be designers and facilitators of meaningful technology-mediated learning experiences.											
Objectives and outcomes	To implement this program, Singapore MOE provides teachers with professional development (PD) in e-Pedagogy which is the practice of teaching with technology for active learning. The goal is to create a participatory, connected, and reflective classroom to nurture future-ready learners. e-Pedagogy enables teachers to fully capitalise on the new learning modes and contexts, including the use of personal IT devices and blended learning.											
Modalities/ resources	<p>Singapore MOE provides professional development (PD) in e-Pedagogy for teachers through online courses, workshops, clinics, demo lessons and milestone programmes, including for teacher leaders and principals. Teachers are also provided with resources such as a Guide to e-Pedagogy and subject-specific lesson examples designed with e-Pedagogy considerations.</p> <p>Apart from PD opportunities and resources, subject-based Networked Learning Communities (NLCs) are also formed for teachers to collectively inquire e-Pedagogy and co-create resources. These NLCs are facilitated by Master Teachers.</p> <p>An online network learning community, the Singapore Learning Designers Circle, has also been established to provide teachers with a safe space to share technology-enabled lessons, crowdsource for lesson ideas, help each other troubleshoot technical challenges, and provide support and encouragement as they learn to teach effectively with technology.</p>											
Target beneficiary group/s	<p>Target beneficiaries: Teachers</p> <p>Target education level: N/A</p> <p>Specific target group: N/A</p>											
Scale of the program	<p>Geographical scope: National</p> <p>Number of beneficiaries: All Singapore MOE teachers numbering approximately 30,000</p> <p>Total amount of money dedicated to the program: N/A</p>											
Monitoring and evaluation	<p>e-Pedagogy is one of the six Areas of Practice (AoPs) identified as part of SkillsFuture for Educators (SFEd) under Singapore MOE’s Learn for Life movement. Teachers take ownership of their PD and chart their professional growth in e-Pedagogy using the SFEd Levels of Practice (LoPs) which serve as a PD roadmap.</p> <p>The four LoPs are:</p> <table><tr><th>Levels of Practice</th><th>Describes the Practice of a Teacher who is...</th></tr><tr><td>Emergent</td><td>Beginning on his/her journey in this area.</td></tr><tr><td>Proficient</td><td>Broadening and deepening in this area.</td></tr><tr><td>Accomplished</td><td>Skilful and adaptive in this area.</td></tr><tr><td>Leading</td><td>Leading others effectively in this area.</td></tr></table> <p>Teachers can use the SFEd Toolkit to benchmark their current practice against the descriptors of classroom practices at each level to identify specific areas on which to focus their PD.</p>		Levels of Practice	Describes the Practice of a Teacher who is...	Emergent	Beginning on his/her journey in this area.	Proficient	Broadening and deepening in this area.	Accomplished	Skilful and adaptive in this area.	Leading	Leading others effectively in this area.
Levels of Practice	Describes the Practice of a Teacher who is...											
Emergent	Beginning on his/her journey in this area.											
Proficient	Broadening and deepening in this area.											
Accomplished	Skilful and adaptive in this area.											
Leading	Leading others effectively in this area.											
Timeline	<p>2020. The program is ongoing.</p> <p>Schools and teachers in Singapore will continue to focus their PD efforts on e-Pedagogy and Singapore MOE will continue to provide PD opportunities and resources to support our teachers in growing their proficiency in e-Pedagogy</p>											

Program status	Ongoing
Challenges and obstacles	<p>PD approaches must cater to shifts in learning habits of teachers who face competing demands for their time from workload and different PD needs. There is a need to review traditional in-person PD approaches and adopt a Blended PD (online and in-person) approach without compromising the effectiveness of PD.</p>
Role of digital technology	<p>Level of importance: Essential</p> <p>Digital application utilization: Teachers in Singapore are provided access to online tools that support the enactment of e-Pedagogy. For example, all teachers and students in the national school system have equal access to quality curriculum-aligned resources in major subjects from primary to pre-university level on the Singapore Student Learning Space (SLS)⁴, which is Singapore MOE's online learning portal for students. Teachers can also access the growing set of curriculum resources on the SLS for their use or adaptation for teaching and learning.</p> <p>The SLS is continually being developed in response to needs of students and teachers. Curriculum-aligned resources and system tools are continually being improved and developed in line with suggestions and feedback from teachers and students to cater to their diverse and evolving learning needs.</p> <p>Through Singapore MOE's digital learning platform for staff, OPAL2.0, teachers also have access to online learning courses and digital content to support them in their PD and delivery of e-Pedagogy.</p> <p>ICT tools utilization: Singapore MOE provides schools with resources including hardware and software to support them in building an ICT Infrastructure that supports the pervasive use of ICT in education:</p> <p>All teachers are provided with laptops installed with the necessary software and provided with Internet access in schools, which enables them to access blended e-Pedagogy PD resources and enact e-Pedagogy in the classroom.</p> <p>All students are provided with hardware and software through school-owned devices, personal IT devices (for secondary level students) and school internet access so that they can benefit from lessons designed with e-Pedagogy considerations.</p>
Role of solidarity & partnership	<p>Embodiment of partnership and collaboration: N/A</p> <p>Involvement of non-government institutions: N/A</p>

SOUTH AFRICA



I. IMPROVING LEARNING OUTCOMES: EARLY CHILDHOOD DEVELOPMENT

Program executor	The Department of Basic Education/ Ministry of Basic Education
Program description	Early childhood development refers to a comprehensive approach to policies and programmes for children from birth to nine years of age with the active participation of their parents and caregivers.
Objectives and outcomes	Its purpose is to protect the child's rights to develop his or her full cognitive, emotional, social and physical potential. Consistent with Education White Paper 1 on Education and Training (1995) and our Interim Policy for Early Childhood Development (1996), we define early childhood development as an umbrella term that applies to the processes by which children from birth to at least nine years grow and thrive, physically, mentally, emotionally, spiritually, morally and socially.
Modalities/ resources	The strategy includes the provision of learning and teaching support material to all learners in Grade R – 9 to improve literacy and numeracy.
Target beneficiary group/s	Target beneficiaries: students, teachers, parents/caregivers, Target education level: ISCED 0 to 2 Specific target group: N/A
Scale of the program	Geographical scope: National Number of beneficiaries: All learners in the country Total amount of money dedicated to the program: N/A
Monitoring and evaluation	N/A
Timeline	N/A
Program status	Ongoing The programme is scaled to include all learners.
Challenges and obstacles	To ensure standardised quality of teaching and learning at some early development sites/ centres, especially in the rural and poor communities
Role of digital technology	Level of importance: Essential Digital application utilization: N/A ICT tools utilization: ICT tools are provided as part of an ongoing project, but the need outweighs the available devices, but the provision of devices is an ongoing programme.
Role of solidarity & partnership	Embodiment of partnership and collaboration: N/A Involvement of non-government institutions: N/A

II. OPERATION PHAKISA: ICTs IN EDUCATION

Program executor	National Department of Education as well as all 9 Provincial Education Departments
Program description	Operation Phakisa is a programme which provide schools with Connectivity, Teacher and Learner ICT Training, provision of ICT infrastructure and well as development and distribution of digital content
Objectives and outcomes	<p>Objectives: Operation Phakisa is a planning and implementation methodology whose key features include acceleration of service delivery by bringing a range of key stakeholders together for intensive and detailed practical planning and problem-solving. The program aims to fast-track the delivery of collaborative projects. While modelled around the Malaysia's "Big Fast Results" (BFR), this delivery mechanism has been adapted to the South African context and reflects the government's commitment to deliver on priorities outlined in the National Development Plan of 2030 (NDP) in a faster, more efficient, and effective way.</p> <p>Outcomes: The Department of Basic Education report on Quarterly basis on Five work streams which were identified by the Operation Phakisa Lab process: Connectivity; Devices; Teacher Professional Development; Digital Content Development and Distribution; e-Administration.</p>
Modalities/ resources	The Government of South Africa adopted the Big Fast Results (BFR) problem-solving methodology, which was originally developed and implemented by the government of Malaysia. To highlight the urgency of delivery, the approach was renamed Operation Phakisa ("phakisa" meaning "hurry up" in Sesotho). The implementation of ICT in Education is currently in progress through various national and provincial projects which are under the ambit of the Operation Phakisa ICT in Education Initiative.
Target beneficiary group/s	<p>Target beneficiaries: Students, teachers, principals</p> <p>Target education level: ISCED 1 to 3</p> <p>Specific target group: Girls/women, low socio-economic status, rural areas</p>
Scale of the program	<p>Geographical scope: National program that includes 9 provinces and 76 education districts</p> <p>Number of beneficiaries: 26,000 schools; 455,000 teachers and principals</p> <p>Total amount of money dedicated to the program: Difficult to estimate but runs into millions of SA rands</p>
Monitoring and evaluation	The National Department of Education has a responsibility to Monitor and Support the implementation of the Project. There are reporting structures like the Head of Education Committee as well as Council of Education Ministers where progress reports are tabled.
Timeline	2016
Program status	Ongoing
Challenges and obstacles	The availability of sufficient budgets; the cost of devices; the cost of internet and data; and the lack of broadband infrastructure in rural areas and hard to reach communities
Role of digital technology	<p>Level of importance: Essential</p> <p>Digital application utilization: N/A</p> <p>ICT tools utilization: Schools are expected to utilize the provided resources to support teaching and learning as well as school administration.</p>
Role of solidarity & partnership	<p>Embodiment of partnership and collaboration: The Department of National Basic Education is implementing this project in partnership with Provincial Education Departments, the Department of Communications and Digital Technologies, Mobile Networks Operators and the National Broadcaster.</p> <p>Involvement of non-government institutions: Mobile Network Operators</p>

III. INTRODUCTION OF THE THREE STREAM MODEL IN CURRICULUM

Program executor	Department of Basic Education
Program description	The programme refers to the diversification of Learning Pathways into the Academic, Vocational and Occupational Pathways to cater to diverse learner needs based on their interest, aptitude and ability.
Objectives and outcomes	The proposed Three Stream Model seeks to: a) implement learning pathways which meet the diverse needs of the young people of the country; b) empower learners to be creative and organised system thinkers; c) promote the acquisition of skills and competencies for a changing world; d) focus on the foundational skills of reading, writing and counting (arithmetic); and e) improve the quality and efficiency of learning outcomes throughout the sector.
Modalities/ resources	The Department's working groups developed business plans and technical working papers: marketing and communication of new model; project planning; budgeting; auditing; staffing; teacher support; definitions; curriculum and assessment; career guidance; institutional strengthening (DBE/PEDs structures); legislation; pilots; reclassification of school (norms and standards); monitoring and evaluation are being executed.
Target beneficiary group/s	Target beneficiaries: Students, teachers, principals, parents/caregivers, school staffs Target education level: ISCED 2 to 3 Specific target group: Girl/women, low socio-economic status, rural areas, linguistic minorities, migrant background
Scale of the program	Geographical scope: All 75 education districts in the country Number of beneficiaries: 100% students; 40% teachers Total amount of money dedicated to the program: R250 million per year
Monitoring and evaluation	Provinces, national department and the auditor-general monitor the implementation
Timeline	January 2014
Program status	Ongoing. All systems have been put in place to promote and sustain the program
Challenges and obstacles	Funding, because technical education is expensive, especially the practical aspects.
Role of digital technology	Level of importance: Essential Digital application utilization: Both developing and utilization because of the subjects' nature and design ICT tools utilization: Yes it's involved providing or utilizing ICT tools to achieve its objectives because learners design prototypes of equipment and numerous designs
Role of solidarity & partnership	Embodiment of partnership and collaboration: This model affords opportunity for stronger collaboration between schools, businesses, industry, government departments and civil society. Involvement of non-government institutions: The funding received through the European Union

IV. SOUTH AFRICAN RESEARCH AND EDUCATION NETWORK (SANREN) CONNECTIVITY (INCL TVET COLLEGE CONNECTIVITY PROJECT (TCCP)) FOR UNIVERSITIES AND TVET COLLEGES

Program executor	Collaboration between the Department of Science and Innovation (DSI), the Council for Scientific and Industrial Research (CSIR) and the Department of Higher Education and Training (DHET)
Program description	The SANReN was established to provide universities, amongst others, with access to connectivity and internet access. To date all 26 public universities and their campuses (to a total of 350 sites and offices) across all nine provinces have access to broadband connectivity at an aggregate bandwidth in excess of four terabit per second (4 Tbps).
Objectives and outcomes	To provide universities and TVET colleges with access to connectivity and internet access.
Modalities/ resources	To date, all 26 public universities and their campuses (to a total of 350 sites and offices) across all nine provinces have access to broadband connectivity. All TVET Colleges' campuses (despite the rural locations of most of them) are currently connected to the SANReN through the TVET College Connectivity Project (TCCP). All TVET Colleges' campuses are also receiving the same high speed, high quality and excess bandwidth.
Target beneficiary group/s	Target beneficiaries: Students, principals, others: lecturers Target education level: ISCED 4 to 8 Specific target group: Low socio-economic status, rural areas
Scale of the program	Geographical scope: National program that includes 9 provinces and all districts Number of beneficiaries: 26 Universities; 50 TVET Colleges; 9 Community Education and Training Colleges Total amount of money dedicated to the program: N/A
Monitoring and evaluation	N/A
Timeline	N/A
Program status	Ongoing
Challenges and obstacles	Cyber security; Accessibility of the network; Cost of the maintenance and support for the network.
Role of digital technology	Level of importance: Essential Digital application utilization: N/A ICT tools utilization: Students are required to use the network through their mobile or desktop devices
Role of solidarity & partnership	Embodiment of partnership and collaboration: The initiative is implemented through collaboration between the Department of Science and Innovation (DSI), the Council for Scientific and Industrial Research (CSIR) and the Department of Higher Education and Training (DHET) Involvement of non-government institutions: TENET and Network Operators

V. NATIONAL OPEN LEARNING SYSTEM (NOLS)

Program executor	The Department of Higher Education and Training (DHET)
Program description	The already developed NOLS is both a learning and a content management system, with a well-developed content repository.
Objectives and outcomes	A national open learning content/learning management system aims to: a) progressively harness open learning principles in all PSET institutions; b) provide students in the PSET system with an efficient open learning system with viable options for learning; c) use ICT as an enabler for teaching and learning in PSET; and d) make high quality, shared teaching and learning resources increasingly available as OER.
Modalities/ resources	Through the NOLS, the Department does not envisage being a provider of education and training opportunities, but rather to provide high quality, accessible, digitised learning materials and eLearning opportunities available for the use by institutions, especially TVET and CET colleges to improve access to quality teaching and learning opportunities.
Target beneficiary group/s	<p>Target beneficiaries: Students, teachers, principals</p> <p>Target education level: ISCED 4 and 6</p> <p>Specific target group: Girls/women, low socio-economic status, rural areas</p>
Scale of the program	<p>Geographical scope: National program that includes 9 provinces and all districts</p> <p>Number of beneficiaries: 26 Universities; 50 TVET Colleges; 9 Community Education and Training Colleges</p> <p>Total amount of money dedicated to the program: N/A</p>
Monitoring and evaluation	The Department appointed an external service provider to monitor and evaluate the program. This evaluation provides an overview on progress made with the implementation of the program and also identifies challenges and risks associated with the program.
Timeline	N/A
Program status	Ongoing
Challenges and obstacles	Cost, access, speed of connectivity; cost of the development of digital content; and capacity of lecturers to use the online environment
Role of digital technology	<p>Level of importance: Essential</p> <p>Digital application utilization: The Department use open source applications for the National Open Learning System (NOLS). The system provides students and lecturers with access to educational content and courses through the LMS (based on Moodle).</p> <p>ICT tools utilization: Students are required to access NOLS through their mobile or desktop devices.</p>
Role of solidarity & partnership	<p>Embodiment of partnership and collaboration: Through collaboration with PSET institutions, experts, industry, entities and associations/formations the Department is developing learning opportunities with high quality open learning materials that is made available as OER on the NOLS.</p> <p>Involvement of non-government institutions: Service providers and Mobile Network Operators</p>

VI. DEVELOPMENT OF QUALITY LEARNING MATERIALS AS OPEN EDUCATIONAL RESOURCES

Program executor	Department of Higher Education and Training (DHET)
Program description	The development of quality learning materials as open educational resources which consist of 4 subjects, 2 NCV subjects, and a career development practitioners' program.
Objectives and outcomes	The Department is developing learning opportunities with high quality open learning materials that is made available as OER on the NOLS
Modalities/ resources	The materials development project consist of developing: a) 4 subjects for the National Senior Certificate for Adults (NASCA) that will be available on the open learning system; b) 2 NCV subjects for FETTVET Colleges that will be available on the open learning system; and c) Career Development Practitioners' programmes for out-of-school youth to assist in Career Development Centres/walk-in centres/high schools that will be available on the open learning system
Target beneficiary group/s	Target beneficiaries: Students, teachers, principals Target education level: ISCED 4 and 6 Specific target group: Low socio-economic status
Scale of the program	Geographical scope: National program that includes 9 provinces and all districts Number of beneficiaries: 26 Universities; 50 TVET Colleges; 9 Community Education and Training Colleges Total amount of money dedicated to the program: N/A
Monitoring and evaluation	The Department appointed an external service provider to monitor and evaluate the program. This evaluation provides an overview on progress made with the implementation of the program and also identifies challenges and risks associated with the program.
Timeline	N/A
Program status	Ongoing The development of the digital content is ongoing and will be scaled to ensure that all CET and TVET institutions have access to the content and courses
Challenges and obstacles	Cost, access, speed of connectivity; cost of the development of digital content; capacity of lecturers to use the online environment; capacity to develop quality digital content; copyright legislation; and education specific technologies.
Role of digital technology	Level of importance: Essential Digital application utilization: The Department use open source application for the National Open Learning System (NOLS). The system provides students and lecturers with access to educational content through the content repository and courses through the LMS. ICT tools utilization: Students are required to access NOLS through their mobile or desktop devices.
Role of solidarity & partnership	Embodiment of partnership and collaboration: N/A Involvement of non-government institutions: Service providers and Mobile Network Operators

SPAIN



I. PLAN ON VOCATIONAL EDUCATION AND TRAINING, ECONOMIC AND SOCIAL GROWTH, AND EMPLOYABILITY

Program executor	Ministry of Education and Vocational Training (MEFP); Regional and local administrations.
Program description	A nationwide program to improve the VET system, economic and social growth, and employability.
Objectives and outcomes	The program objectives include: a) the launch of a new Vocational Education and Training system; b) validation and accreditation of professional skills; c) support for those excluded from labour market; d) creating a collaborative ecosystem; and e) continuous public-private collaboration.
Modalities/ resources	Actions will focus on 11 strategic guidelines that aim to improve the efficiency and effectiveness of the Vocational Education and Training system, including: a) validating and accrediting basic and professional skills acquired through experience; b) providing flexible and accessible training; c) creating innovative, entrepreneurial and digitalized VET; d) strengthening the Dual VET program and Centres of VET; and e) providing career guidance, among others.
Target beneficiary group/s	Target beneficiaries: students, teachers, school staffs, training providers, SMEs, social agents Target education level: ISCED 2 to 4 Specific target group: N/A
Scale of the program	Geographical scope: Nationwide Number of beneficiaries: Some examples of the scope of the Program: - Accreditation of skills: 3,352,000 people within 4 years - Modular training offer in companies: 125,000 people per year - Aulas Mentor (distance lifelong learning) 3,000 municipalities in 4 years - Specific digital training for teachers: 50,562 teachers in 2 years - Entrepreneurship and VET: 1,800 centres - Resizing of VET provision: 200,000 new places - Conversion of classrooms in applied technology spaces in 850 centres Total amount of money dedicated to the program: 1.497.578.000,00 €
Monitoring and evaluation	Assessment of the VET system is one of the strategic guidelines of the Plan. The main objectives are: a) to create a Quality certificate (Certificación de calidad) aimed at centres and companies; b) to create a digital tool enabling beneficiaries (both unemployed and employed) to assess the VET provision; and c) to design a comprehensive evaluation and assessment model for the single VET system.
Timeline	2020-2024
Program status	Ongoing. The Plan has given place to the development of a New National VET Law, which is about to be passed by the Senate. This law will materialize in different actions and programs at national and regional level, aligned with the principles and objectives of the plan, as well as with other national plans, such as the Plan of Digital Competences; or the National Plan of Adaptation to the Climate Change 2021-2030.
Challenges and obstacles	N/A

Role of digital technology

Level of importance: Essential

Digital application utilization: It involves the integration of digital tools and applications, as well as the training and acquisition of digital competences for students, teachers and public.

ICT tools utilization: It involves the integration of digital tools and applications, as well as the training and acquisition of digital competences for students, teachers and public.

Role of solidarity & partnership

Embodiment of partnership and collaboration: The participation of companies, economic and social agents in the design, development, evaluation and innovation of vocational training.

Involvement of non-government institutions: N/A

II. PLAN FOR THE DIGITALISATION AND DIGITAL COMPETENCES OF THE EDUCATION SYSTEM (#DIGEDU)

Program executor	Ministry of Education and VET
Program description	A nationwide program which aims to strengthen digital competences which are necessary for participation in today's digital society and for the current students to have the necessary skills for their effective incorporation into the labour market.
Objectives and outcomes	The objectives include: a) improving the digital competence of the educational community from a global approach, b) standardizing school access to digital media necessary for a quality education that responds to current employment and social needs; c) encouraging education with digital media by facilitating the creation of Open Educational Resources (OER); and d) promoting a competitive and modern society through advanced digital methodologies and competences.
Modalities/ resources	For a digital transformation of education, the Plan addresses the following lines and actions: a) Digital Competence in Education, for students and teachers; b) Digitalisation and Digital Plan for Schools; c) Creation of educational resources in digital format; and d) Advanced digital methodologies and competences. .
Target beneficiary group/s	Target beneficiaries: students, teachers, principals, school staffs Target education level: ISCED 0 to 3 Specific target group: N/A
Scale of the program	Geographical scope: Nationwide Number of beneficiaries: The entire educational community Total amount of money dedicated to the program: Plan for digitisation and digital competences of the education system 2021-2025: 1.568,1M €
Monitoring and evaluation	The regular meetings of the specific working groups (Learning Technologies WG and Teacher Training WG) and the monitoring commissions, together with the direct management of the cities of Ceuta and Melilla, ensure collaborative and effective governance. Additionally, the supervisory mechanisms for the Recovery and Resilience Facility-EU.
Timeline	2021-2025
Program status	Ongoing. It is expected that the entire educational community will achieve the level of digital competence which is necessary for an adequate participation in today's digital society and for our current students to have the necessary skills for their effective incorporation into the labour market
Challenges and obstacles	N/A
Role of digital technology	Level of importance: Essential Digital application utilization: SELFIE (European Commission's tool), Spanish Digital Competence Framework for teachers, School Digital Plan. ICT tools utilization: 300,000 mobile devices for the students who need them most, which will be added to the almost 500,000 already distributed as part of the Educa en Digital programme; and the installation of some 240,000 Interactive Digital Classrooms for the development of a blended learning system.
Role of solidarity & partnership	Embodiment of partnership and collaboration: N/A Involvement of non-government institutions: N/A

III. PROGRAMME FOR GUIDANCE, PROGRESS AND EDUCATIONAL ATTAINMENT IN SCHOOLS OF SPECIAL EDUCATIONAL COMPLEXITY (PROA+ PROGRAMME)

Program executor	The Education Administrations of the Autonomous Communities and the Ministry of Education and Vocational Training in the cities of Ceuta and Melilla.
Program description	A nationwide program which aims to provide resources to schools with special complexity, including schools located in rural areas where a significant number of students experience difficulties or obstacles throughout their school career.
Objectives and outcomes	The objectives include providing resources to schools that are committed to adapting the school's Educational Project to the needs of the students, offering an open, stimulating place for learning in order to reduce school failure and early school dropout rates. In the majority of cases, these are schools located in socially disadvantaged areas and with pupils belonging to families with a low socio-economic and educational level.
Modalities/ resources	The programme is developed through territorial cooperation with the Education Administrations of the Autonomous Communities, within the framework of the Sectorial Conference on Education. The Council of Ministers' approve the requirements, the criteria for distribution of funds, and the monitoring of implementation. Technical cooperation on the programme will be developed and the mechanisms for monitoring and verifying its implementation will be carried out.
Target beneficiary group/s	Target beneficiaries: Students and students in a situation of educational vulnerability in centres of special educational complexity Target education level: ISCED 1 to 2 Specific target group: Students in a situation of educational vulnerability in centers of special educational complexity
Scale of the program	Geographical scope: Nationwide with implementation through the Education Administrations of the Autonomous Communities. Number of beneficiaries: 3000 schools as final target Total amount of money dedicated to the program: 320.000.000,00 €
Monitoring and evaluation	Regular monitoring and final evaluation of the programme at national level is foreseen.
Timeline	2021-2024
Program status	Ongoing
Challenges and obstacles	N/A
Role of digital technology	Level of importance: Somewhat important Digital application utilization: N/A ICT tools utilization: N/A
Role of solidarity & partnership	Embodiment of partnership and collaboration: N/A Involvement of non-government institutions: N/A

IV. PROGRAMME TO PROMOTE SCHOOLING IN THE FIRST CYCLE OF EARLY CHILDHOOD EDUCATION WITH NEW PUBLICLY-OWNED PLACES (PRIORITY FOR 1 AND 2 YEAR OLDS)

Program executor	The Education Administrations of the Autonomous Communities, the local corporations, through the Autonomous Communities, and the Ministry of Education and Vocational Training through the cities of Ceuta and Melilla.
Program description	A nationwide program to promote early childhood education for children under the age of 3 by investing on both the infrastructure and operation side.
Objectives and outcomes	Programme for the extension of the right of children to have an accessible, affordable, inclusive and high quality place in the first cycle of Early Childhood Education
Modalities/ resources	The program is developed through territorial cooperation with the Education Administrations of the Autonomous Communities, within the framework of the Sectorial Conference on Education. The Council of Ministers' approve the requirements, the criteria for distribution of funds, and the monitoring of implementation Technical cooperation on the programme will be developed and the mechanisms for monitoring and verifying its implementation will be carried out.
Target beneficiary group/s	Target beneficiaries: Students, teachers Target education level: ISCED 0 Specific target group: N/A
Scale of the program	Geographical scope: Nationwide with implementation through the education administrations of the Autonomous Communities. Number of beneficiaries: At least 60.000 places Total amount of money dedicated to the program: 670.990.000 €
Monitoring and evaluation	Regular monitoring and final evaluation of the programme at national level is foreseen.
Timeline	2021-2024
Program status	Ongoing
Challenges and obstacles	N/A
Role of digital technology	Level of importance: Somewhat important Digital application utilization: N/A ICT tools utilization: N/A
Role of solidarity & partnership	Embodiment of partnership and collaboration: N/A Involvement of non-government institutions: N/A

V. CREATION OF PERSONAL AND FAMILY ACCOMPANYING AND GUIDANCE UNITS FOR EDUCATIONALLY VULNERABLE STUDENTS, IN THE EDUCATIONAL OR PSYCHO-PEDAGOGICAL SERVICES LOCATED IN SCHOOL AREAS AND DISTRICTS

Program executor	The Education Administrations of the Autonomous Communities and the Ministry of Education and Vocational Training in the cities of Ceuta and Melilla
Program description	A nationwide program to support learners with difficulties in meeting the demands of formal education and in overcoming the obstacles created by the education and training system (i.e. target is educationally vulnerable learners).
Objectives and outcomes	The objective of these Guidance Units will be to accompany the educational trajectory of students, designing acceleration pathways that promote the enrichment of unachieved learning in collaboration with guidance services, as well as strengthening the link between the family and the educational centre and collaborating with other community resources to reduce absenteeism and early school leaving. These units will help to improve cooperation between different learning frameworks, helping to promote multiple learning approaches and contexts, as non-formal and informal learning plays an important role in supporting the development of essential interpersonal, communicative and cognitive skills by facilitating educational transitions.
Modalities/ resources	The program is developed through territorial cooperation with the Education Administrations of the Autonomous Communities, within the framework of the Sectorial Conference on Education. The Council of Ministers' approve the requirements, the criteria for distribution of funds, and the monitoring of implementation. Technical cooperation on the programme will be developed and the mechanisms for monitoring and verifying its implementation will be carried out.
Target beneficiary group/s	Target beneficiaries: Vulnerable students at risk of repetition or early school leaving Target education level: ISCED 0 to 2 Specific target group: N/A
Scale of the program	Geographical scope: Nationwide with implementation through the education administrations of the Autonomous Communities. Number of beneficiaries: 1,148 Units as the final target Total amount of money dedicated to the program: 124,710,000 €
Monitoring and evaluation	Regular monitoring and final evaluation of the programme at national level is foreseen.
Timeline	2021-2024
Program status	Ongoing
Challenges and obstacles	N/A
Role of digital technology	Level of importance: Somewhat important Digital application utilization: N/A ICT tools utilization: N/A
Role of solidarity & partnership	Embodiment of partnership and collaboration: N/A Involvement of non-government institutions: N/A

VI. FINANCIAL SUPPORT AIMED AT PROMOTING SCHOOL PARTNERSHIPS

Program executor	Ministry of Education and Vocational Training (MEFP)
Program description	This programme provides financial support for the creation of school partnerships, all of them from different autonomous communities or autonomous cities, through the development and implementation of common projects that promote inclusive education and educational innovation.
Objectives and outcomes	This program aims to enhance educational equity and inclusion, reduce school segregation, promote innovation and research initiatives, consolidate collaborative educational networks, contribute to the development of key competences for lifelong learning, develop the ability to work in teams, train students in digital and virtual learning environments, as well as open up education systems to the outside world, all in the interest of improving the quality of education.
Modalities/ resources	The projects of the 2021 Call for proposals will be implemented between 2022-23 and 2023-24 school years. Projects shall include a work plan with a timeline, in which the objectives are aligned with the proposed activities and the expected results. They should also include an evaluation plan, with indicators for the achievement of the objectives and the success of the project.
Target beneficiary group/s	Target beneficiaries: Students, teachers, principals, school staffs Target education level: ISCED 0 to 3 Specific target group: N/A
Scale of the program	Geographical scope: Nationwide Number of beneficiaries: In the 2021 Call, 108 schools were beneficiaries of the grant. It is not possible yet to know the number of students and teachers involved. Total amount of money dedicated to the program: 1.763.284,62 €
Monitoring and evaluation	Regular monitoring for each Call is foreseen.
Timeline	This program started in 2022
Program status	Ongoing
Challenges and obstacles	N/A
Role of digital technology	Level of importance: Somewhat important Digital application utilization: N/A ICT tools utilization: N/A
Role of solidarity & partnership	Embodiment of partnership and collaboration: The Ministry of Education and Vocational Training launches the call for proposals to promote partnerships of educational centres to carry out and implement joint projects that promote inclusive education. Involvement of non-government institutions: N/A

VII. ENVIRONMENTAL EDUCATION FOR SUSTAINABILITY ACTION PLAN (PAEAS) (2021-2025)

Program executor	Ministry for the Ecological Transition and the Demographic Challenge (MITECO), Ministry of Education and Vocational Training (MEFP)
Program description	A program to develop a participatory plan, open to society, capable of providing useful guidelines to contribute to the task of rebuilding a healthy and sustainable society-environment relationship to address the environmental crisis and the challenges for sustainability in the coming years
Objectives and outcomes	To promote a cultural change that allows for an adequate response to contemporary socio-environmental challenges in a coordinated, participatory manner and with institutional and social co-responsibility, including the active and equal contribution of women as agents of change.
Modalities/ resources	This Action Plan is structured on 6 operational axes, 20 objectives and 61 key actions to be developed by the State Administration in a 5-year period since its approval. It also includes working guidelines and proposals for action for other sectors and agents involved. The 6 operational axis are as follows: 1) Mainstreaming of environmental education for sustainability (EES) in public policies; 2) Innovation, research and improvement of EES programmes and activities; 3) Integration of sustainability in the education and training system; 4) Professionalisation and consolidation of the EES; 5) Specific scenarios and spaces for intervention; and 6) Communication, dissemination and citizen action.
Target beneficiary group/s	Target beneficiaries: Students, teachers, principals, school staffs, NGOs, associations, group of environmental educators Target education level: ISCED 1 to 6-8 Specific target group: N/A
Scale of the program	Geographical scope: Nationwide Number of beneficiaries: Not defined Total amount of money dedicated to the program: Depending on the budgets of each department involved
Monitoring and evaluation	In order to measure the degree of achievement of the different actions included in the Plan, the following milestones are set: - Biennial Work Programmes - An interim report on the development and implementation of the Plan. - A final evaluation report: It will identify the goals that have been achieved and the areas for improvement. It will also summarize the conclusions and recommendations for the new strategic planning cycle at national level.
Timeline	2021-2025
Program status	Ongoing
Challenges and obstacles	N/A
Role of digital technology	Level of importance: Somewhat important Digital application utilization: N/A ICT tools utilization: Yes
Role of solidarity & partnership	Embodiment of partnership and collaboration: The Action Plan is promoted by the MEFP and MITECO to incorporate environmental education for sustainability in the formal, non-formal and informal spheres of education, in accordance with 2030 Agenda for Sustainable Development and the Spanish Education Law (LOMLOE). Involvement of non-government institutions: N/A

THE NETHERLANDS



I. NATIONAL PROGRAM ON EDUCATION

Program executor	Ministry of Education, Culture and Science
Program description	A nationwide program which provides schools with funding and frameworks that can be implemented depending on the needs of each school to combat the negative consequences of the COVID-19 crisis.
Objectives and outcomes	To combat the negative consequences of the COVID-19 crisis, The Netherlands has established a National Program on Education. The program aims to help all learners to regain any learning loss during the pandemic.
Modalities/ resources	The program has provided schools with an additional 8.5 billion euros in funding. Under the National Program, schools are asked to assess learning loss and loss of well-being under learners. Schools may then use the resources they have received through the program to implement scientifically proven interventions that can support the learner.
Target beneficiary group/s	Target beneficiaries: Students, teachers, principals, school staffs Target education level: ISCED 1 to 6-8 Specific target group: N/A
Scale of the program	Geographical scope: Nationwide Number of beneficiaries: N/A Total amount of money dedicated to the program: 8.5 billion euros.
Monitoring and evaluation	A research agency was assigned to investigate the interventions schools have chosen, why they have specifically chosen these interventions, what obstacles they have faced, what results they have achieved and what can be learned from their experiences.
Timeline	This program started in 2021.
Program status	Ongoing Since it focuses on combating the results of the pandemic on the education system, the National Program is set up to run for a few years only.
Challenges and obstacles	N/A
Role of digital technology	Level of importance: Somewhat important Digital application utilization: N/A ICT tools utilization: The resources of the National Program may be used by schools to provide digital tools and other resources that children need in order to participate in digital education.
Role of solidarity & partnership	Embodiment of partnership and collaboration: The National Program supports education institutions with funding and a 'menu' of scientifically proven interventions from which schools can choose. Involvement of non-government institutions: N/A

II. EQUAL OPPORTUNITIES ALLIANCE

Program executor	Ministry of Education, Culture, and Science; schools; municipalities
Program description	This program works with schools and municipalities in order to better understand what they need to foster equitable education on a local level and stimulates the sharing of good practices between schools and between municipalities.
Objectives and outcomes	The government cooperates with schools, societal organizations and over a hundred municipalities to foster equal opportunities in education.
Modalities/ resources	Resources consist of a set of proven ‘interventions’ on the local level. The Alliance further strives to connect local actors with one another, to facilitate them, to co-finance interventions, share knowledge and data.
Target beneficiary group/s	Target beneficiaries: Students Target education level: ISCED 1 to 3 Specific target group: Low socio-economic status, migrant background
Scale of the program	Geographical scope: National, but measures are aimed at the local level. Number of beneficiaries: N/A Total amount of money dedicated to the program: N/A
Monitoring and evaluation	N/A
Timeline	This program started in 2016
Program status	Ongoing Since equal opportunities is at the core of Dutch educational policy, the program is here to stay.
Challenges and obstacles	N/A
Role of digital technology	Level of importance: Not important at all Digital application utilization: N/A ICT tools utilization: N/A
Role of solidarity & partnership	Embodiment of partnership and collaboration: Within the ‘Equal Opportunities Alliance’, the government cooperates with schools, societal organizations and over a hundred municipalities to foster equal opportunities in education. Involvement of non-government institutions: N/A

TÜRKİYE



I. INCREASING QUALITY OF AND ACCESS TO EARLY CHILDHOOD EDUCATION SERVICES (ECE) PROJECT

Program executor	Ministry of National Education
Program description	The aim of the project is to increase the quality of and access to early childhood education (ECE) services, especially for the disadvantaged children.
Objectives and outcomes	ECE services will be expanded, especially for the most disadvantaged children, the quality of ECE services will be improved by improving standards, updating the program and developing new materials, the thoughts and attitudes of especially disadvantaged families regarding the quality and value of ECE services will be positively changed, a learning environment that supports increased access to quality ECE services will be promoted through updated ECE legislation.
Modalities/ resources	The program has developed for 36 Months (1 November 2020- 31 October 2023).
Target beneficiary group/s	Target beneficiaries: Students, teachers, principals, parents/caregivers, school staffs Target education level: ISCED 0 (early childhood and pre-primary) Specific target group: Low socio-economic status
Scale of the program	Number of Beneficiaries: This project aims to reach students and teachers in 200 pilot schools in 20 provinces and the parents of those students and the provincial administrators who are responsible for education services at local level. Geographical Scope: This project covers 20 provinces of Türkiye. They are Adana, Ankara, Antalya, Aydın, Bitlis, Bursa, Diyarbakır, Erzurum, Gaziantep, İstanbul, İzmir, Kastamonu, Konya, Manisa, Mardin, Samsun, Şanlıurfa, Tekirdağ, Trabzon and Van. Total Amount of Money Dedicated: Total Budget is about 30 million EUR. It has two component, 15 million EUR for service and 15 million EUR for supply.
Monitoring and evaluation	This project is subject to European Union's monitoring and evaluation processes. In addition to that the Project also has its own monitoring and evaluation activities.
Timeline	The program starts in 1 November 2020
Program status	Ongoing
Challenges and obstacles	Due to the Covid 19 epidemic, the project implementations were delayed and the activities could not be carried out face to face. In the following process, necessary precautions and measures were taken to adapt the project calendar to the structures.
Role of digital technology	Level of Importance: Somewhat unimportant Elaboration on digital application utilization: N/A Elaboration on ICT tools utilization: N/A
Role of solidarity & partnership	embodiment of partnership and collaboration: It has been put into practice with the co-financing of the European Union and the Republic of Türkiye. European Union's support is under The Instrument for Pre-Accession Assistance, or simply IPA, is a funding mechanism of the European Union. involvement of non-government institutions : The participation of UNICEF

II. EDUCATION INFORMATICS NETWORK (EBA)

Program executor	Ministry of National Education
Program description	Education Informatics Network (EBA) has more than 1,900 recorded lessons that taught in schools and more than 60,000 rich, reliable and interactive contents. In addition to textbooks, interactive books, applications and tests at each grade level, there are different types of contents such as video or interactive lectures, exercises, summaries, infographics, project documents, teacher-specific content are exist in the platform. More than 10,000 books and more than 240,000 questions are offered to teachers and students in EBA.
Objectives and outcomes	This program provides online learning facilities supporting face-to-face education by offering a digital education platform to all students, teachers and parents in our country.
Modalities/ resources	There is a “Library” where teachers, students and parents can access contents that will contribute to their personal development and to have fun. There are thousands of contents, such as cartoons, story books, games, documentaries, interviews and magazines in different categories in the library area. A special “Professional Development Area” is offered to teachers where they can access documents and videos they may need in the academic year and interact with their colleagues. Moreover; teachers can also attend the distance education courses that they apply through the Teacher Information Network which is a sub-network of EBA.
Target beneficiary group/s	Target beneficiaries: students, teachers, principals, parents/caregivers. Target education level: ISCED 0 (early childhood and pre-primary), ISCED 1 (primary), ISCED 2 (lower secondary), ISCED 3 (upper secondary) Specific target group: N/A
Scale of the program	Number of Beneficiaries: It serves approximately 18 million students from pre-school to 12th grade level, and their parents, and 1 million teachers. Students from all official institutions affiliated to the Ministry of National Education including private schools can benefit from this online learning platform. Geographical Scope: National Total Amount of Money Dedicated: N/A
Monitoring and evaluation	The “EBA Monitoring and Evaluation Research” was carried out in 2021 to evaluate the effectiveness of the EBA platform, with participation of 1,400 teachers, students and parents in 12 provinces. According to the results of this research, satisfaction rates of students and teachers are in an increasing trend regarding to online learning processes, lecture videos and educational materials.
Timeline	2012
Program status	Ongoing
Challenges and obstacles	Due to the size of the user base, there are difficulties caused by being the only source in the process of meeting digital education needs, since there are no institutions/ organizations that can provide support and experience in the field of educational technologies at similar scales. These challenges are being tackled with the work carried out in line with the feedback from the users and the experience gained.

Role of digital technology

Level of Importance: Essential

Elaboration on digital application utilization: EBA provides multi-platform support with its web application, Android and iOS mobile applications. A special EBA application has also been developed for Android Smart TVs in order to increase the variety of devices that support EBA.

Elaboration on ICT tools utilization: Capacity development works for EBA are carried out continuously and regularly according to the needs. In this context; EBA Assistant was commissioned in order to instantly respond to user questions, solve problems and ensure that EBA is used in the most effective way. The content distribution network (CDN) service is offered in order to securely store EBA contents, present them to the end user in a quality manner, and reduce the internet bandwidth consumption of the data center.

Role of solidarity & partnership

Embodiment of partnership and collaboration: N/A

Involvement of non-government institutions: N/A

III. IMPROVING THE QUALITY OF VOCATIONAL EDUCATION AND TRAINING THROUGH ESTABLISHMENT OF SECTORAL CENTERS OF EXCELLENCE

Program executor	Ministry of National Education
Program description	The quality of vocational and technical education will be increased by training teaching and administrative staff, improving learning environments, providing VET as an attractive option for students, and increasing cooperation between schools, social partners and private sector through establishment of Sectoral Centers of Excellence (SCoE).
Objectives and outcomes	In the scope of the project: a) Quality Assurance Boards will established in 25 provinces; b) On-the-Job Trainings will be provided for 3000 Teachers, c) 15 Sectoral Centers of Excellence will be established to provide a permanent link between vocational and technical education and relevant industries; d) More than 1300 teachers will be trained and 90 teachers will be trained as trainers; e) Learning materials for VET secondary education institutions will be developed and prepared; f) Vocational guidance and career consultancy services will be improved; g) Awareness on vocational and technical education will be enhanced; and h) Grant Schemes will be implemented.
Modalities/ resources	It will be implemented with the co-financing of the European Union and the Republic of Türkiye. It is a 36 month of project. (2021-2024)
Target beneficiary group/s	Target beneficiaries: Students, principals. Target education level: SCED 3 (upper secondary)
Scale of the program	Number of Beneficiaries: Teachers of workshop laboratory, science, mathematics and foreign language that working in vocational and technical secondary education institutions Geographical Scope: National Total Amount of Money Dedicated: 21.7 EUR
Monitoring and evaluation	All schools whose quality assurance system will be revised
Timeline	The program released in March 2021
Program status	Ongoing
Challenges and obstacles	During the COVID-19 pandemic period, there was a problem in the implementation of the project, but a solution was provided with the re-planning
Role of digital technology	Level of Importance: Essential. Elaboration on digital application utilization: N/A Elaboration on ICT tools utilization: The ICT infrastructure of the centers of excellence to be established will be strengthened
Role of solidarity & partnership	Embodiment of partnership and collaboration: Professional development of laboratory, science, mathematics and foreign language teachers will be supported through these centers of excellence that will strengthen the bridge between the business sector and the education. Involvement of non-government institutions : Institutions and organizations like TOBB, TESK, HAK-İŞ, TİSK etc.

IV. SECONDARY EDUCATION MATERIALS (OGMMATERYAL)

Program executor	Ministry of National Education
Program description	The program, “Equal Opportunity in Education”, aims to minimize and eliminate the learning gaps and learning losses of secondary school students in Biology, Geography, Philosophy, Physics, English, Chemistry, Mathematics, History, Turkish Language and Literature courses.
Modalities/ resources	The OGMMATERYAL Internet site, which includes activities for the textbooks prepared by our General Directorate, interactive applications, projects, question bank, dynamic applications, 3D modeling, experiments and exams preparation applications, are accessible from the website of ogmmateryal.eba.gov.tr
Target beneficiary group/s	Target beneficiaries: Students, teachers, principals, parents/caregivers Target education level: ISCED 3 (upper secondary) Specific target group: N/A
Scale of the program	Number of Beneficiaries: The program covers all Secondary Education students. Geographical Scope: National Total Amount of Money Dedicated: N/A
Monitoring and evaluation	N/A
Timeline	The program was launched in 2017
Program status	Ongoing
Challenges and obstacles	There are difficulties in appointing teachers and students’ access to technology.
Role of digital technology	Level of Importance: Essential Elaboration on digital application utilization: Students participating in the program must have technical tools and have knowledge about the use of ICT tools. Elaboration on ICT tools utilization: Students participating in the program must have technical tools and have knowledge about the use of ICT tools.
Role of solidarity & partnership	Embodiment of partnership and collaboration: N/A Involvement of non-government institutions : N/A

V. DIGITAL SPECIAL EDUCATION PROJECT

Program executor	This project is being implemented by the related departments of the Ministry of National Education.
Program description	Improving the quality of special education services offered to children with disabilities in online environments and digitalizing the school-based learning and teaching tools needed by children with disabilities.
Objectives and outcomes	The objectives of the project include: a) strengthening the quality of special education; b) preventing possible learning losses during periods of compulsory education interruptions due to epidemics, natural disasters or any force majeure; c) strengthening the quality of counseling and guidance services needed by the parents of children in need of special education; and d) developing systemic and school-based web-based learning/teaching tools for children with disabilities to access quality education.
Target beneficiary group/s	Target beneficiaries: Students, teachers, principals, parents. Target education level: ISCED 0 (early childhood and pre-primary), ISCED 1 (primary) Specific target group: N/A
Scale of the program	Number of Beneficiaries: Students with disabilities studying in primary schools and pre-school; students studying in the first level of special education at pre-school; classroom teachers, special education teachers, school administrators and parents. Geographical Scope: Currently, pilot implementation studies are carried out in the provinces representing 12 NUT regions of Türkiye and will be opened to national-wide access in 2023. Total Amount of Money Dedicated: The estimated total budget covering the 18-month period of the project, which is funded in 3-month phases, is \$3 million
Monitoring and evaluation	Project monitoring and evaluation activities will be carried out by the Ministry of National Education, General Directorate of Special Education and Guidance Services, and Monitoring-Evaluation Department using web-based evaluation tools. An evaluation report will be prepared after the completion of each phase in the project implementation cycle. Every stage of the project is monitored and evaluated by the relevant UNICEF unit.
Timeline	This project was initiated in September 2021
Program status	Ongoing
Challenges and obstacles	There were no difficulties/obstacles in the implementation phase of the first phase of the program, and the structuring phase continues.
Role of digital technology	Level of Importance: Essential Elaboration on digital application utilization: All materials developed will be open to national access through an interactive platform. Elaboration on ICT tools utilization: The use of ICT tools is one of the main factors in achieving the goals of the project. Teachers will be trained on how to use digital tools in preparing course content, and awareness-raising activities will be organized for parents on how to use ICT tools to guide their children in order to support learning at home.
Role of solidarity & partnership	Embodiment of partnership and collaboration: Involvement of non-government institutions: Representatives of non-governmental organizations were invited to the stakeholder workshop in order to ensure accessibility and include all stakeholders involved in the education of individuals with special educational needs.

UNITED ARAB EMIRATES



I. UNIVERSAL QUALITY EDUCATION

Program executor	Ministry of Education
Program description	Providing excellent quality of education is one of the four core pillars of UAE Centennial 2071.
Objectives and outcomes	The UAE is redesigning its education system with a greater emphasis on establishing an integrated K20 system. A major step towards achieving education for all is the development of the Curriculum Framework for Excellence (CFE) which proposes a model for continuous evolution of curricula to meet the changing needs of progressive society.
Modalities/ resources	The programme integrates the full ecosystem of learning to instill lifelong learning, with a focus on teacher's quality and global values to promote tolerance and coexistence.
Target beneficiary group/s	<p>Target beneficiaries: Students, teachers, principals, school staffs.</p> <p>Target education level: ISCED 0 (early childhood and pre-primary), ISCED 1 (primary), ISCED 2 (lower secondary), ISCED 3 (upper secondary)</p> <p>Specific target group: Girls/women, low socio-economic status, rural areas, migrant background</p>
Scale of the program	<p>Geographical scope: All seven emirates of the UAE.</p> <p>Number of beneficiaries: Students, teachers and the entire community in the UAE and other nationalities.</p> <p>Total amount of money dedicated to the program: N/A</p>
Monitoring and evaluation	Quality control at every stage of program implementation, evaluation checklists and criteria, feedback of project beneficiaries.
Timeline	This program started in 2017
Program status	Ongoing
Challenges and obstacles	<p>Teacher training</p> <p>Ensuring development of quality educational materials</p> <p>Feedback on student learning</p>
Role of digital technology	<p>Level of importance: Essential</p> <p>Digital application utilization: developing and utilizing digital applications is a pivotal part of the Emirati School system and the Curriculum Framework for Excellence. Students are supported by metaverse, virtual reality and AI technologies, along with teacher facilitation and feedback. Teacher training on using digital learning materials is a key factor in the successful implementation.</p> <p>ICT tools utilization: digital devices, provision of educational technology and internet, learning platforms and interactive elements.</p>
Role of solidarity & partnership	<p>Embodiment of partnership and collaboration: UAE pledges to ensure its continuous support to the Global Partnership for Education and fulfilling the fourth goal of the United Nations Sustainable Development Goals 2030 Agenda.</p> <p>Involvement of non-government institutions: National and international educational institutions such as College Board, NGSS, Microsoft, Pearson, McGraw Hill, Al Ain university, Khalifa university, Zayed University and many other local and private organizations.</p>

II. DIGITAL TECHNOLOGIES IN EDUCATION

Program executor	UAE MOE schools, MBRSLP and private schools
Program description	The UAE has developed an e-maturity digital literacy framework to provide essential guidance for teaching and learning in the digital era. The UAE's Mohammed bin Rashid Smart Learning Programme (MBRSLP) is a solid example for digital education model for smaller and disadvantaged communities to benefit from on a global scale. The 'Digital School' is an initiative by Mohammed bin Rashid Al Maktoum Global Initiatives (MBRGI) providing certified online education to students who do not have easy access to formal education.
Objectives and outcomes	The digital technologies programs blend live and self-paced virtual classes in Math, Science, Arabic, Computer Studies and English and aim to raise the standards of education in UAE.
Modalities/ resources	The Emirati school model emphasizes personalized and adaptive learning experience on its fully integrated Learning management system offering students a cutting-edge digital learning experience across K-20. The learning is done through interactive simulation, game-based learning and artificial intelligence-driven learning modules. Students will be assessed through interactive activities, tasks and digital engagement systems.
Target beneficiary group/s	<p>Target beneficiaries: Students, teachers</p> <p>Target education level: ISCED 0 (early childhood and pre-primary), ISCED 1 (primary), ISCED 2 (lower secondary), ISCED 3 (upper secondary), ISCED 4 (post-secondary and non-tertiary)</p> <p>Specific target group: Girls/women, low socio-economic status, rural areas</p>
Scale of the program	<p>Geographical scope: The seven emirates of the UAE</p> <p>Number of beneficiaries: Students, teachers and principals of all government managed public schools and private schools which follow the MOE curricula.</p> <p>Total amount of money dedicated to the program: N/A</p>
Monitoring and evaluation	The Digital education drive is monitored and evaluated by the digital learning framework, direct feedback from students and teachers, evaluation and training of teachers.
Timeline	This program started in 2016
Program status	Ongoing
Challenges and obstacles	Training and equipping teachers on digital platforms, Monitoring student learning and timely feedback, and Cost and maintenance
Role of digital technology	<p>Level of importance: Essential</p> <p>Digital application utilization: The program involves digital technological developments such as metaverse, AI, virtual reality.</p> <p>ICT tools utilization: The program requires students and teachers to have the basic technology devices, such laptops or mobile phones, and internet connectivity.</p>
Role of solidarity & partnership	<p>Embodiment of partnership and collaboration: The UAE MOE partners with national and international leading education providers, national universities, private and public entities in business, economics, science, STEM, AI and space.</p> <p>Involvement of non-government institutions: National and international educational institutions such as College Board, NGSS, Microsoft, Pearson, McGraw Hill, Al Ain university, Khalifa university, Zayed University and many other local and private organizations.</p>

III. SOLIDARITY AND PARTNERSHIPS

Program executor	Local business entities, universities, international organizations such as College Board, Microsoft, McGraw-Hill, and NGSS.
Program description	The UAE MOE has sought multilevel partnerships with its regional countries, local private entities and universities and international educational organizations to ensure exchange of best practices and real-life experiences for the students. The UAE has taken on the lead in boosting regional peace and cooperation by the historical signing of the Abrahamic accord with Israel thereby strengthening stability and peace in the region and promoting values such as tolerance.
Objectives and outcomes	The objective is to promote a holistic model of partnership between private and public institutions locally and internationally to boost the level of exchanging best practices and to support rapid recovery from learning and knowledge gap caused by the COVID pandemic.
Modalities/ resources	Active industry specific collaboration is sought in developing and improving the curriculum with private and public universities in the country and abroad. MOE encourages its partners to share their best practices and experience to be replicated in the curricula to provide the necessary knowledge and skills to students, with financial and technical support to launch student led projects and startups.
Target beneficiary group/s	Target beneficiaries: Students, teachers, principals, parents/caregivers Target education level: ISCED 0 (early childhood and pre-primary), ISCED 1 (primary), ISCED 2 (lower secondary), ISCED 3 (upper secondary), ISCED 4 (post-secondary and non-tertiary) Specific target group: Girls/women, low socio-economic status, rural areas
Scale of the program	Geographical scope: The seven emirates of the UAE Number of beneficiaries: Students, teachers, principals and parents in the country both private and public schools. Total amount of money dedicated to the program: N/A
Monitoring and evaluation	The program is monitored through evaluation forms, checklists, direct feedback, quantitative student performance data.
Timeline	This program started in 2016
Program status	Ongoing
Challenges and obstacles	Challenges are mainly to identify the right partners who have a shared vision and continue the momentum of the work.
Role of digital technology	Level of importance: Somewhat important
Role of solidarity & partnership	Embodiment of partnership and collaboration: Collaboration and partnership with national and international institutions, universities, private sector in reviewing and updating the curricula to reflect the best innovative practices. Involvement of non-government institutions: National and international educational institutions such as College Board, NGSS, Microsoft, Pearson, McGraw Hill, Al Ain university, Khalifa university, Zayed University and many other local and private organizations.

IV. THE FUTURE OF WORK POST-COVID-19

Program executor	Ministry of Education
Program description	UAE MOE schools in the post covid era act as incubators of entrepreneurship and innovation programs. The program promotes the utilization of advanced skills framework, lifelong learning, and social emotional competencies through specialized academies in K-12 and hybridization between academic and advanced technical vocational education.
Objectives and outcomes	The Dual Credit program, Sandbox entrepreneurship program, and MOE capstone program are aimed at preparing students with necessary skill sets for apprenticeship and work placement readiness. The curriculum constantly challenges students to be innovative, self-regulated and lifelong learners.
Modalities/ resources	The flexible and integrated learning options and accelerated programs equip students to earn university credits while at school and introduce them to the world of work. All resources are designed and reviewed constantly in consultation with private and public institutions who are part of the curriculum committees.
Target beneficiary group/s	Target beneficiaries: Students, teachers, principals Target education level: ISCED 0 (early childhood and pre-primary, ISCED 1 (primary), ISCED 2 (lower secondary), ISCED 3 (upper secondary) Specific target group: Girls/women, low socio-economic status, rural areas
Scale of the program	Geographical scope: The seven emirates of the UAE Number of beneficiaries: All students and teachers in the MOE led schools and private schools following MOE curricula. Total amount of money dedicated to the program: N/A
Monitoring and evaluation	Quality control at every stage of program implementation, evaluation checklists and criteria, feedback of project beneficiaries.
Timeline	This program started in 2017
Program status	Ongoing
Challenges and obstacles	Teacher training for quality deliverance of lessons; Work placement matching; and finding the right industry partner who has a shared vision and commitment.
Role of digital technology	Level of importance: Essential Digital application utilization: Yes ICT tools utilization: ICT tools and devices are important part of the successful implementation of the program. Teachers and students (schools) are equipped with the necessary infrastructure and connectivity.
Role of solidarity & partnership	Embodiment of partnership and collaboration: Partnership is extended to national universities, international partners and private partners, who are actively involved in drafting the curricula, authoring the learning materials and designing the various student led projects. Involvement of non-government institutions: National and international educational institutions such as College Board, NGSS, Microsoft, Pearson, McGraw Hill, Al Ain university, Khalifa university, Zayed University and many other local and private organizations.

V. TOLERANCE AND COEXISTENCE

Program executor	Ministry of Education, UAE
Program description	Citizenship and Responsibility, Commitment and Transparency, Participation and Accountability are the core values of tolerance and coexistence embedded in the K-12 curricular and promoted by the MOE. These values are specifically taught right from the young age, not just in the moral science or social science textbook, but strongly encouraged in students as highly desirable values modelled by parents and teachers.
Objectives and outcomes	Promoting tolerance and coexistence are core values in education to become a global citizen. UAE schools are an incubator of promoting the values of tolerance, peace, security and multiculturalism. Students are educated on these values which guarantee justice; respect and equality, with zero tolerance for hatred, fanaticism, and causes of division and difference.
Modalities/ resources	Taught across curricula as essential values with a key emphasis on practicing and modeling in public and private lives.
Target beneficiary group/s	Target beneficiaries: Students, teachers, principals, school staffs, principals, parents Target education level: ISCED 0 (early childhood and pre-primary), ISCED 1 (primary), ISCED 2 (lower secondary), ISCED 3 (upper secondary), ISCED 4 (post-secondary and non-tertiary) Specific target group: Girls/women, linguistic minorities, migrant background
Scale of the program	Geographical scope: The seven emirates of the UAE Number of beneficiaries: All students and teachers of the UAE public and private schools. Total amount of money dedicated to the program: N/A
Monitoring and evaluation	Quality control at every stage of program implementation, evaluation checklists and criteria, feedback of project beneficiaries.
Timeline	This program started in 2017
Program status	Ongoing
Challenges and obstacles	Teacher training for quality deliverance of lessons.
Role of digital technology	Level of importance: Essential Digital application utilization: Digital books and platforms, Learning management system ICT tools utilization: All students and teachers are provided with necessary ICT tools
Role of solidarity & partnership	Embodiment of partnership and collaboration: To ensure that all textbooks and learning materials authored internally and co-authored externally promote principles of tolerance and coexistence and value humanity irrespective of race, region, color and hatred of any kind or manifestation. Involvement of non-government institutions: Ministry of Happiness, Ministry of Tolerance

UNITED KINGDOM



I. SKILLS FOR JOBS: LIFELONG LEARNING FOR OPPORTUNITY AND GROWTH (ENGLAND)

Program executor	Department for Education
Program description	The Skills for Jobs priority aims to reform further education so it supports people to get the skills the English economy needs. Should the priority increase focus on the 16 priority programmes, skills on this core mission will increase productivity, support growth industries, and give individuals opportunities to progress in their careers.
Objectives and outcomes	The objective of this priority is to put employers at the heart of the economic system. This means investing in higher-level technical qualifications, easier access to training and learning flexibility, as well as reform for accountable funding. The expected outcomes are to drive economic growth and apprenticeships through improving the skills pipeline, expanding and raising the profile of technical and higher education, boosting skills for those at risk of unemployment, simplifying and strengthening the funding system, and generally increasing opportunities towards accessing further and higher education.
Modalities/ resources	A variety of priority programmes are included in this priority, some which include: apprenticeship reform, traineeships, career advice, the skills toolkit, skills bootcamps, funding schemes, Adult Education Budget and qualifications such as T levels.
Target beneficiary group/s	Target beneficiaries: Students, Teachers, and School Staff Target education level (for students): ISCED 4 Specific target group: Low socio-economic status
Scale of the program	Number of Beneficiaries: N/A Geographical Scope: National Total Amount of Money Dedicated: N/A
Monitoring and evaluation	The programmes within this priority will be evaluated using outcome data, for example from the individual learner record (ILR) and the longitudinal education outcomes (LEO) data set. The programme success will be judged based on the trends of students that complete courses on their level and subject. An increase in students completing more valuable courses will be one signal of success. The economic value of courses will be assessed using employment and wage outcomes based on the LEO data set.
Timeline	Started on January 2021
Program status	Ongoing
Challenges and obstacles	N/A
Role of digital technology	Level of Importance: Somewhat Important Elaboration on digital application utilization: Digital technology has helped this program, for example, expanding the academic centres in cyber security education. Elaboration on ICT tools utilization: In line with the Lifetime Skills Guarantee, essential online learning will be more accessible and flexible.
Role of solidarity & partnership	The following Departments contribute to this priority: Department for Education; Department for Business, Energy and Industrial Strategy (BEIS); Department for Digital, Culture, Media and Sport (DCMS); Department for Work and Pensions (DWP); Department for Levelling Up, Housing and Communities (DLUHC)

II. FAMILIES (ENGLAND)

Program executor	Department for Education
Program description	An ongoing nation-wide priority that aims to review and help the more vulnerable and disadvantaged children through high-quality local services, as well as to make sure that no one is left behind in terms of education.
Objectives and outcomes	This priority opts to support the most disadvantaged children by providing the best start in life through high-quality education, childcare, loving homes, and improving local public services and childcare market. The main outcomes from this priority are expected to be the improvement of adoption numbers, placement quality and stability, practical support scheme for low-income families, and investments in needed programmes.
Modalities/ resources	The modalities range from: improving effectiveness and timeliness of the adoption system, improving well evidence programmes across children's social care and special educational needs and disabilities (SEND); Childcare Entitlements; Early Years Professional Development Programme; and Early Years Foundation Stage reforms, Family hubs transformation fund.
Target beneficiary group/s	Target beneficiaries: Students, teachers, parents/caregivers, and school staff Target education level (for students): ISCED 0 and 1 Specific target group: Low socio-economic status
Scale of the program	Number of Beneficiaries: N/A Geographical Scope: Nationwide Total Amount of Money Dedicated: N/A
Monitoring and evaluation	N/A
Timeline	Started in 2021
Program status	Ongoing
Challenges and obstacles	N/A
Role of digital technology	Level of Importance: N/A Elaboration on digital application utilization: N/A Elaboration on ICT tools utilization: N/A
Role of solidarity & partnership	The following Departments contribute to this initiative: Department for Education, Department for Digital, Culture, Media and Sport (DCMS), Department for Health and Social Care (DHSC), Department for Work and Pensions (DWP), Home Office, Department for Levelling Up, Housing and Communities, Ministry of Justice.

III. EDUCATION RECOVERY (ENGLAND)

Program executor	Department for Education
Program description	<p>A funding commitment of an overall 5 billion GBP to fund a comprehensive and evidence-based recovery package, providing support to all pupils whilst prioritising the most disadvantaged, vulnerable and those with the least amount of time left in education.</p>
Objectives and outcomes	<p>The outcome of this priority would be to source funding to numerous programs throughout the country. Some examples of education recovery programmes include:</p> <ul style="list-style-type: none"> - Early years settings - Nuffield Early Language Intervention Programme, new training for early years staff, Hungry Little Minds Campaign, STEM learning. - Schools - Catch-up Premium, Recovery premium, Accelerator Fund, National Tutoring Programme, Early Career Framework, National Professional Qualifications, Teacher continuous professional development (CPD) for Primary and Secondary teachers. - Curriculum Resources - Oak National Academy, Isaac Physics, Isaac Computer Science, National Centre for Computing Education (NCCE) and Advanced Mathematics Support Programme (AMSP). - 16-19 Education - Additional Teaching and Learning hours, Repeat Year option, 16-19 Tuition Fund - Mental Health and Wellbeing Support - Guidance, Wellbeing for Education recovery programme and additional training for mental health leads, Education Staff Wellbeing. - Holiday Activities and Food Programme. - Special Educational Needs and Disabilities - Additional Funding, Tutoring and Teaching resources.
Modalities/ resources	Please see resources hyperlinked above
Target beneficiary group/s	<p>Target beneficiaries: Student, teachers, and headteachers</p> <p>Target education level (for students): ISCED 0, 1, 2, 3, and 4</p> <p>Specific target group: N/A</p>
Scale of the program	<p>Number of Beneficiaries: N/A</p> <p>Geographical Scope: National</p> <p>Total Amount of Money Dedicated: Overall 5 billion GBP</p>
Monitoring and evaluation	N/A
Timeline	Started in 2020
Program status	Ongoing
Challenges and obstacles	N/A
Role of digital technology	<p>Level of Importance: Essential</p> <p>Elaboration on digital application and ICT tools utilization: Modules and resources have been delivered in some of the programme's beneficiary, such as the Oak National Academy, Mental Wellbeing Training Modul, and the Education Recovery Resources</p>
Role of solidarity & partnership	N/A

IV. DIGITAL RESPONSE TO THE PANDEMIC

Program executor	Department of Education
Program description	This strategy works to provide children with the best opportunities to access education remotely, throughout the pandemic, when it has not been possible for students to be in the classroom full time.
Objectives and outcomes	The Digital Response to the Pandemic aims to provide a wide range of resources available to support schools and further education (FE) institutions. This is done by providing self-assessment frameworks, additional devices for disadvantaged children, and support to access the internet.
Modalities/ resources	N/A
Target beneficiary group/s	Target beneficiaries: Students, Teachers, and Parents/Caregivers Target education level (for students): ISCED 1,2,3, and 4 Specific target group: low socio-economic status
Scale of the program	Number of Beneficiaries: About 7000 schools have applied with over 2.34 million accounts created. About 1.65 million devices have been delivered to disadvantaged children and relevant institutions. Geographical Scope: Nationwide Total Amount of Money Dedicated: over 520 million GBP
Monitoring and evaluation	N/A
Timeline	Announced on October 1st, 2020 and came to practice in October 22nd, 2020
Program status	Ongoing
Challenges and obstacles	N/A
Role of digital technology	Level of Importance: Essential Elaboration on digital application and ICT tools utilization: The Department for Education is supporting schools and colleges with the infrastructure and capability they need to best take advantage of the opportunities in technology through our new digital strategy for education. The program has received a number of success stories, such as the Oak National Academy digital platform and Get Help with Remote Education
Role of solidarity & partnership	N/A

V. SCOTTISH ATTAINMENT CHALLENGE

Program executor	Scottish Government
Program description	The Scottish Attainment Challenge (SAC) is a policy initiative to tackle the poverty related educational attainment gap.
Objectives and outcomes	The SAC mission is: To use education to improve outcomes for children and young people impacted by poverty, with a focus on tackling the poverty related attainment gap. It is underpinned by The National Improvement Framework, Curriculum for Excellence and Getting it Right for Every Child. It focuses on improvement activity in literacy, numeracy and health and wellbeing across Scotland.
Modalities/ resources	This is a flagship Government initiative supported by £1 billion over the course of the current Parliamentary term (2021 – 2026). This builds on an investment of £750 million over the course of the last Parliamentary term.
Target beneficiary group/s	It is a targeted initiative which distributes funding equitably based on indicators of socio-economic disadvantage and provides support to the system through Education Scotland Attainment Advisors, professional learning and resource.
Scale of the program	Whole national territory.
Monitoring and evaluation	<p>This funding will be equitably distributed to all 32 local authorities in Scotland through Strategic Equity Funding and also continue to allocate funds directly to schools through Pupil Equity Funding. This approach enables us to get resources to our most disadvantaged children and young people and to schools where it can have the greatest impact.</p> <p>The programme is governed by a Framework for Recovery and Accelerating Progress, which requires local authorities to set stretch aims for progress annually and sets out the range of support and challenges provided to the education system through Scotland's improvement agency, Education Scotland.</p> <p>Together with Getting It Right for Every Child and Curriculum for Excellence and Developing the Young Workforce this is a key policy approach through which the Scottish Government is driving excellence and equity in Scottish education.</p> <p>Recognising the impact of the pandemic and that poverty exists in every local authority area in Scotland – from 2022/23 all local authority areas (not just the 9 local authorities with the highest concentrations of deprivation, which had been supported previously) will have a clear role to play and will share £43 million of investment in the form of Strategic Equity Funding to help tackle the poverty related attainment gap.</p> <p>Both Pupil Equity Funding and local authorities' Strategic Equity Funding are confirmed over the next four years, giving headteachers and local authorities much needed clarity to support strategic planning over that period.</p> <p>Through a framework for recovery and accelerating progress, we have also strengthened the support and challenge available throughout the system to ensure progress in supporting children and young people impacted by poverty to achieve the best of their ability and have the same opportunities to succeed as their more affluent peers.</p>
Timeline	This is a flagship Government initiative supported by £1 billion over the course of the current Parliamentary term (2021 – 2026)
Program status	Ongoing
Challenges and obstacles	N/A

Role of digital technology	<p>As well as the Scottish Attainment Challenge, the Scottish Government has made a commitment to ensure that every child has access to a device and connection by the end of this parliament.</p> <ul style="list-style-type: none"> - Almost 280,000 devices have been distributed or are in the process of being rolled out to pupils across Scotland (including the 72,000 devices directly funded by the Scottish Government). - We will ensure access to a digital device for all school-aged pupils by the end of this parliament. In 2022-23 we're investing £15m to undertake preparatory work ahead of deeper investment in devices from 2022-23 onwards.
Role of solidarity & partnership	<p>Through the £1 billion Attainment Scotland Fund, the Scottish Government also provides targeted funding to local authorities to support Care Experienced Children and Young People, and contribute efforts across all services to keep The Promise. National programmes support will also be enhanced. There will be a stronger focus on collaboration with, and investment in, youth work, community learning, development and family support. This programme and its associated funding will continue to empower headteachers and enable local authorities to work with them to implement approaches to support children and young people impacted by poverty in their local contexts. Absolutely key to this will be the work done by teachers and other practitioners.</p>

VI. DIGITAL IN EDUCATION

Program executor	Scottish Government
Program description	The Scottish Government has committed to ensuring access to a device to every school aged child in Scotland by 2026.
Objectives and outcomes	Outcome – every school aged child will have access to a device to support their learning. In the long term, the programme will look to embed use of technology in Scottish schools, working towards the goal of having an education system that is fully digitally enabled with a teaching workforce that know how to use it to best effect.
Modalities/ resources	This is a Scottish Government funded programme and Local Authorities will be key delivery partners.
Target beneficiary group/s	Target Beneficiaries: Students, Teachers, Parents/caregivers
Scale of the program	<p>Number of beneficiaries: Over 72,000 pupils have already received a device and almost 14,000 connectivity packages have been distributed to learners across every local authority area in Scotland as a result of Scottish Government funding. We also know that a number of local authorities invested in technology in line with their own digital strategies. They have indicated that almost 280,00 devices have been, or are in the process of being distributed to learners – this includes the 72,000 provided for by Scottish Government funding. Overall, there are over 704,000 pupils in Scotland who will benefit from this programme.</p> <p>Geographical Scope: Nationwide.</p>
Monitoring and evaluation	TBC
Timeline	Announced in May 2021 with a target date for 2026 – the impact of this commitment aims to be felt well beyond this date.

Program status	Ongoing
Challenges and obstacles	Ongoing financial pressures faced by public sector, differing levels of infrastructure across the country (specifically in rural areas) and teacher training to use new technology in classrooms
Role of digital technology	<p>Level of Importance: Essential</p> <p>Elaboration on digital application and ICT tools utilization – The Scottish Government will improve the availability of infrastructure of schools across the country, preparing them for the wide scale rollout of devices. Beyond providing access to the devices themselves, we need to make improvements to our national Glow online learning platform and ensure appropriate support is in place to support our teachers.</p>
Role of solidarity & partnership	<p>Partnership approach – Partnership board, co-chaired by the Convention of Scottish Local Authorities (COSLA) and with representatives of Local Authority interests is in place to oversee this work.</p> <p>Close working across Scottish Government learning directorate.</p>

UNITED STATES



I. CTE CYBERNET - INCLUDING LOCAL STEM EDUCATION ECOSYSTEMS

Program executor	The Career Technical Education (CTE) CyberNet is managed by a contract to Luminary Labs, LLC in New York, New York. CTE CyberNet Academies are led by postsecondary institutions in the following communities: Chicago – Moraine Valley Community College; San Antonio – San Antonio College; South Dakota – Dakota State University; Miami – Florida International University; and New Mexico – Eastern New Mexico University – Ruidoso. Additional satellite sites are being hosted by the Chicago and San Antonio Academies.
Program description	CTE Cybernet is a network of teacher professional development intensive academies led by 2-year and 4-year postsecondary institutions designated by the National Security Agency (NSA) as Centers of Academic Excellence (CAE). The CTE CyberNet was strategically designed as an education ecosystem development initiative to both develop the cybersecurity skills of high school teachers and create a community support structure, or local “ecosystem” to increase persistence and sustainability of the academies.
Objectives and outcomes	The objectives of the CTE CyberNet include rapidly increasing the capacity of high school teachers to teach CTE cybersecurity courses that align with the NICE framework, increasing the number of teachers certified to teach cybersecurity, increasing access to CTE cybersecurity programs of study for students in underserved communities, and expanding the pathway to cybersecurity programs at technical and community colleges designated as CAEs. The CTE CyberNet program will strengthen the capacity for high schools to prepare students with the range of knowledge, skills, and abilities to enter cybersecurity career and educational pathways by supporting the development of rigorous Career Technical Education (CTE) programs and education of the teaching workforce.
Modalities/ resources	The CTE CyberNet is expanding from the initial CTE CyberCamps program in 2020 in which three pilot sites were established at CAEs to provide intensive professional development to high school CTE teachers in Perkins-funded schools, and the basis of a support network was developed.
Target beneficiary group/s	Target beneficiaries: Teachers, Local Education Ecosystems Target education level: ISCED 2-5 Specific target group: N/A
Scale of the program	Geographical scope: The scope of the academies range from single district to multi-state models. Number of beneficiaries: Currently active in five communities each of which serves at least 10 teachers. Two CTE CyberNet sites are currently piloting a “hub-and-spoke” model to expand the reach from a local to regional or multi-state model. Total amount of money dedicated to the program: \$2.5 million of Federal funds
Monitoring and evaluation	The CTE CyberNet is designed and managed by an external contractor that is also responsible for monthly and annual reports covering each site. Weekly meetings are held to monitor the progress of the contractor and the academy sites. Each site has determined its own performance metrics that include attainment of industry-recognized credentials by teachers.
Timeline	October 2021
Program status	Ongoing
Challenges and obstacles	The most significant barriers to implementation were assisting postsecondary institutions with overcoming their internal policy barriers to structuring the program since this program was implemented using a contract instead of a grant. At the local level, a variety of barriers related to the use of postsecondary faculty at the secondary level and the ability to provide stipends to teachers outside of the traditional postsecondary grant models.

Role of digital technology

Level of importance: Essential

Digital application utilization: Specialized operating systems such as Kali Linux, state and local cyber ranges, and learning management systems, such as Canvas. CAE institutions leading each CTE CyberNet site also use a variety of hardware and software platforms in addition to video conferencing applications such as Zoom and Microsoft Teams.

ICT tools utilization: N/A

Role of solidarity & partnership

Embodiment of partnership and collaboration: The Department facilitates the development of partnerships to establish and enhance local ecosystems that include public and private education systems, state and local governments, economic development organizations, industry and employer representatives, and cybersecurity professionals.

Involvement of non-government institutions: The CTE CyberNet was supported nationally by private sector companies such as Microsoft, Offensive Security (Kali Linux), and MasterCard; local chambers of commerce and industry associations; and local employers.

II. CHALLENGES AND PRIZES IN CAREER AND TECHNICAL EDUCATION

Program executor	The Office of Career, Technical, and Adult Education's (OCTAE) Division of Academic and Technical Education (primary responsibility); General Services Administration
Program description	The Office of Career, Technical, and Adult Education's (OCTAE) Division of Academic and Technical Education in partnership with the General Services Administration supports a series of prize competitions (collectively referred to as "Ed Prizes") to develop new standards, products, and services to both increase access to and expand the capacity of career and technical education.
Objectives and outcomes	The program's objective is to increase access to and expand the capacity of career and technical education.
Modalities/ resources	<p>This program supports development of high quality CTE programs by engaging students in challenges that require innovative approaches to address issues that affect individuals, families and communities throughout the nation with potential to provide impact on the global scale. Challenges are released annually at www.challenges.gov and can vary in duration.</p> <p>Current Challenges: Rural Tech Project</p> <p>Past Challenges: CTE Mission: CubeSat, EdSim Challenge, CTE Makeover Challenge, Reach High Career Ap Challenge</p>
Target beneficiary group/s	<p>Target beneficiaries: Students, teachers, and schools</p> <p>Target education level: ISCED 2-3</p> <p>Specific target group: N/A</p>
Scale of the program	<p>Geographical scope: National</p> <p>Number of beneficiaries: Any school with a designated CTE program can participate in submitting ideas for challenges. The number of beneficiaries is dependent on the number of applicants/entries for each challenge.</p> <p>Total amount of money dedicated to the program: \$9,592,000</p>
Monitoring and evaluation	Challenges are designed and managed by an external contractor that is also responsible for monthly and annual reports. Meetings are held to monitor the progress of the challenge. The success of the challenge is evaluated by a set performance metrics such as the number of entries, communications, and number of schools engaged.
Timeline	Challenges and prizes are ongoing with an inaugural year of 2016
Program status	Ongoing
Challenges and obstacles	The major challenge that emerged during implementation was the COVID pandemic. The number of entries/applicants greatly decreased as a result of increasing demands on teachers and a shift in local school priorities.
Role of digital technology	<p>Level of importance: Essential</p> <p>Digital application utilization: Digital technology usage is not a requirement. However, the challenges inherently require use of digital technology to be successful.</p> <p>ICT tools utilization: ICT tools usage is not a requirement. However, the challenges inherently require use of ICT tools to be successful such as, word processing and spreadsheet applications.</p>

Role of solidarity & partnership

Embodiment of partnership and collaboration: Workforce/Industry partnerships are integral to the success of the challenges to judge challenges, serve as subject matter experts, and to serve as industry sponsors.

Involvement of non-government institutions: Numerous business and industry partners serve as sponsors for challenges, for example: a) CTE Mission: CubeSat partners include: Arduino, Blue Origin, Chevron, EnduroSat, LEGO Education, Magnitude.io, MIT Media Lab Space Exploration Initiative, XinaBox; b) CTE Makeover Challenge partners include: Autodesk, DonorsChoose.org, Dremel, Etsy Manufacturing, LEGO Education, littleBits, Maker Ed, MakerBot, Makerspaces.com, Makey Makey, Microsoft, Mozilla Foundation, National Coalition of Certification Centers (NC3), among others.

III. CTE STEM INDEX – CREATING AN IMPROVED ECONOMIC INDICATOR FOR S.T.E.M. IN OCCUPATIONS AND INDUSTRY

Program executor	This activity was conducted through a contract awarded by the Office of Career, Technical, and Adult Education. The project team included data scientists from Carnegie-Mellon University and private sector data analytics companies.
Program description	The program is using artificial intelligence (AI) to develop a statistical model that can be applied to economic datasets to indicate the extent of science, technology, engineering, and math (S.T.E.M.) in the range of occupations included in the Standard Occupational Classifications (SOC) and industries in the North American Industry Classification System (NAICS).
Objectives and outcomes	The STEM Index will help refine and redefine how S.T.E.M is viewed in the U.S. economy. The aim is to develop a statistical method or “index” that can better approximate indicators such as: a) the extent of S.T.E.M. skills that are required to work in an industry sector; b) the extent of S.T.E.M. skills that are required in an occupation; and c) the career pathway programs that align with occupations and industries with a high demand for S.T.E.M. workers.
Modalities/ resources	This eighteen-month activity was intended to create a framework for future research and validation. The first phase of the project resulted in baseline indicators for occupations that will be made available on https://cte.ed.gov . Underlying code is available on GitHub.
Target beneficiary group/s	Target beneficiaries: Students, teachers, and Local Education Ecosystems Target education level: ISCED 2-8 Specific target group: N/A
Scale of the program	Geographical scope: The is a national statistical index intended to be applied to datasets that can further delineated by state, region, metropolitan statistical area, and postal code. Number of beneficiaries: The STEM Index is intended to be applied to macroeconomic datasets with models adapted to serve a range of use cases including teachers, students, parents, economists, and workforce development systems. Total amount of money dedicated to the program: \$450,000 of Federal funds
Monitoring and evaluation	The initial CTE STEM Index was created by data researchers and is intended to be validated by occupation and industry by outside organizations with more specific knowledge of related disciplines. Research, development, validation, and evaluation are intended to be ongoing.
Timeline	April 2021

Program status	Ongoing
Challenges and obstacles	The most significant barriers to implementation were identifying valid measures where they did not previously exist. The datasets that were used to inform the model were inconsistent and not specific enough for the AI models to ingest or process. Because of these barriers, proxy methods and approximations were used to establish the initial model.
Role of digital technology	<p>Level of importance: Essential</p> <p>Digital application utilization: The CTE STEM Index project resulted in the development of an initial algorithm and dataset that is intended to be used by researchers to continue the development and integration of the STEM index through application programming interfaces (APIs).</p> <p>ICT tools utilization: N/A</p>
Role of solidarity & partnership	<p>Embodiment of partnership and collaboration: The program is currently collaborating with the U.S. Bureau of Labor Statistics and the Census, and the National Science Foundation, among other agencies, to identify datasets that can be used to inform and validate the STEM Index. In addition, data scientists and statisticians are looking to better understand the large datasets that can be mapped using the SOC and NAICS classification systems. The STEM index is intended to foster interdisciplinary teaching and learning by encouraging disciplines traditionally categorized as “STEM” to collaborate with other disciplines such as social sciences and applied learning. The STEM index can also be leveraged in economic and workforce development systems that are part of state and local education ecosystems.</p> <p>Involvement of non-government institutions: N/A</p>

