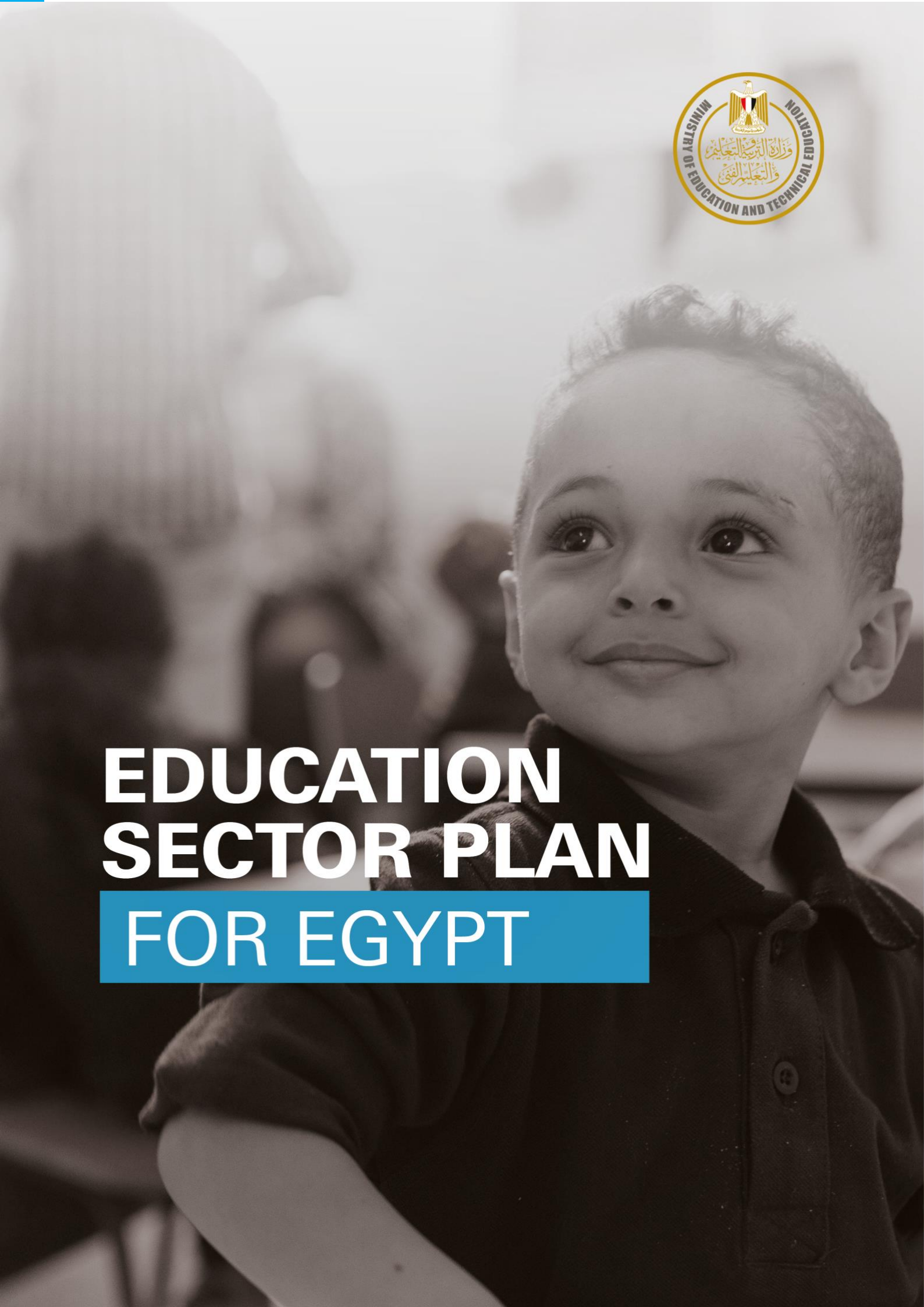

EDUCATION SECTOR PLAN

FOR EGYPT

The Arab Republic of Egypt

Education Sector Plan
2023-2027

Prepared by:
The Ministry of Education and Technical Education, Egypt.

SINCERELY,

Dr. Ahmed Daher
DEPUTY MINISTER
MINISTRY OF EDUCATION & TECHNICAL EDUCATION

Dr. Reda Hegazy
MINISTER
MINISTRY OF EDUCATION & TECHNICAL EDUCATION

Reda Hegazy

Acronyms and Abbreviations

AIR	Annual Implementation Report
ANAR	Adjusted Net Attendance Rate
ATS	Applied Technical Schools
BoTPT	Boards of Trustees, Parents and Teachers
CAOA	Central Agency for Organisation and Administration
CAP	Communication and Advocacy Plan
CAPMAS	Central Agency for Public Mobilization and Statistics
CARE	Care International
CBE	Community Based Education
CCIMD	Centre for Curriculum and Instructional Materials Development
CCT	Conditional Cash Transfers
CDA	Community Development Association
CEDAW	The Convention on the Elimination of All Forms of Discrimination Against Women
CEQAT	Centre for Enhancement of Quality Assurance and Accreditation of Technical Education
COP27	27th Conference of the Parties of the UNFCCC (COP27) in Sharm El-Sheikh
CPD	Comprehensive Professional Development
CRC	Convention on the Rights of the Child
CRPD	Convention on the Rights of Persons with Disabilities
CSO	Civil Society Organisation
CWSN	Children with Special Needs
DHR	Demographic and Health Report
DHS	Demographic and Health Survey
ECD	Early Childhood Development
ECE	Early Childhood Education
EGMA	Early Grade Mathematics Assessment
EGP	Egyptian Pound
EGRA	Early Grade Reading Assessment

EKB	Egyptian Knowledge Bank
ELMP	Egypt Labour Market Panel
EMIS	Education Management Information System
ESA	Education Sector Analysis
ESP	Education Sector Plan
FFA	Framework for Action
FGM	Female Genital Mutilations
FY	Fiscal Year
GAAE	General Authority for Adult Education
GDKG	General Department for Kindergarten
GDP	Gross Domestic Product
GER	Gross Enrolment Ratio
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
GKI	Global Knowledge Index
GoE	Government of Egypt
GPE	Global Partnership for Education
GPI	Gender Parity Index
HDI	Human Development Index
HIECS	Household Income, Expenditure and Consumption Survey
HKP	Haya Karima Programme
HR	Human Resources
ICT	Information and Communications Technology
IIEP	International Institute for Educational Planning (UNESCO)
ILO	International Labour Organisation
IMF	International Monetary Fund
INGO	International Non-governmental Organizations
ISDB	Islamic Development Bank
IT	Information Technology
JESR	Joint Education Sector Review
JICA	Japan International Cooperation Agency

KG	Kindergarten
KPI	Key Performance Indicator
LAN	Local Area Network
LMS	Learning Management System
M&E	Monitoring and Evaluation
MEAL	Monitoring, Evaluation, Accountability and Learning
MENA	Middle East and North Africa Region
MoCIT	Ministry of Communications and Information Technology
MoETE	Ministry of Education and Technical Education
MoF	Ministry of Finance
MoHESR	Ministry of Higher Education and Scientific Research
MoHP	Ministry of Health and Population
MoPED	Ministry of Planning and Economic Development
MoSS	Ministry of Social Solidarity Security
MoU	Memorandum of Understanding
MoYS	Ministry of Youth and Sports
MTR	Mid-term Review
NAQQAE	National Authority for Quality Assurance and Accreditation of Education
NCCM	National Council for Childhood and Motherhood
NCEEE	National Centre for Examinations and Educational Evaluation
NDC	Nationally Determined Contribution
ND-GAIN	Notre Dame Global Adaptation Initiative Index
NEET	Not in Education, Employment or Training
NER	Net Enrolment Rate
NGO	Non-governmental Organization
OAMDI	Open Access Micro Data Initiative
OECD	Organisation for Economic and Development Co-operation
OOSC	Out-of-School Children
PIRLS	Progress in International Reading Literacy Study
PPP	Public-Private Partnership

PTA	Professional Academy of Teachers
QA	Quality Assurance
RTM	Real-Time Monitoring
SABER	Systems Approach for Better Education Results (World Bank)
SCR	Student-Classroom Ratio
SDG	Sustainable Development Goal
SM	Simulation Model
SRGBV	School-Related Gender-Based Violence
SSC	Sector Skills Council
STEM	Science, Technology, Engineering, and Mathematics
STR	Student-Teacher Ratio
T&L	Training and Learning
TE	Technical Education
TEA	Teachers Academy
TIMSS	Trends in International Mathematics and Science Study
TKP	Takaful and Karama Programme
TLM	Teaching and Learning Materials
ToC	Theory of Change
TVET	Technical and Vocational Education and Training
UIS	UNESCO Institute for Statistics
UN	United Nations
UNCC	United Nations Climate Change
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFPA	United Nations Population Fund
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WASH	Water, Sanitation, and Hygiene
WEO	World Economic Outlook
WFP	World Food Programme

Foreword

As the cornerstone of any society, education contributes to the progress of an equitable community and to the advancement of innovation and development. In addition to having a direct economic impact on individuals and society at large, education has many other effects. Therefore, prioritizing and valuing public education is a worthy investment for state government on both a social and economic level. Moreover, increasing employment opportunities, ensuring equality, securing higher incomes and empowering people. Accordingly, the Education Sector Plan aims to ensure that all Egyptian citizens have access to quality education so they can fulfil their potential and contribute to society.

In line with this vision, the Arab Republic of Egypt has developed the Education Sector Plan (ESP) 2023-2027 during a pivotal time in its history. As part of Egypt's overarching Strategic Vision 2030, the ESP provides a five-year roadmap for reforming the education system, setting specific targets, prioritizing strategic goals, and taking action. With the assistance of UNICEF (United Nations Children Fund) Egypt country office, UNESCO (United Nations Educational, Scientific and Cultural Organization) Paris, The Local Education Group (LEG), and the Global Partnership for Education (GPE), the Ministry of Education and Technical Education (MoETE) has developed a five-year Pre-University Education Sector Plan (ESP). Over the next five years, the ESP presents a set of policies and programs to operationalize the Education Reform. This presents much significant progress from the Government of Egypt towards effective education planning that will accelerate progress in the sector and promote equitable, inclusive, quality education for all. Indeed, a key element of the ESP is access to equitable, inclusive education, emphasizing the importance of digital transformation and early childhood education (ECE), which will help marginalized children and young people receive high-quality formal education and lifelong learning opportunities. By implementing the ESP, Egypt hopes to develop a new generation of highly qualified, competent individuals on the global stage.

With sincere gratitude, I wish to acknowledge the contributions of everyone who participated in the ESP development (2023-2027). On behalf of the Government of Egypt, I would like to thank our Local Education Group (LEG) and, Development Partner for their continuing support and willingness to partner with us in developing the education sector in Egypt over the years. Additionally, I would like to thank the technical staff at MoETE for collecting and utilizing relevant and updated data which assisted in the development of the entire ESP. Lastly, I wish to thank UNICEF Egypt Country Office for its role as the Coordinating Agency between MoETE, the UNESCO Paris team, the GPE, and the LEG members.

Dr. Reda Hegazy
Minister of Education and Technical Education

Acknowledgements

The development of the Education Sector Plan (ESP) 2023-2027 comes as a result of extensive consultations with, and engagement of several stakeholders from Government institutions, Development Partners, Civil Society Organizations, the Private Sector, and International & National Experts. The process started several years ago, led and guided by the Ministry of Education and Technical Education (MoETE). The ESP builds on the findings of the Education Sector Analysis (ESA) and the technical analyses. The Local Education Group (LEG), coordinated by UNICEF and with support from the Global Partnership for Education (GPE) Secretariat, played an instrumental role in ensuring the quality of the ESP. UNESCO Paris provided technical assistance for the preparation of the plan and the organization of the policy dialogues on the prioritization of policy strategies and development actions.

The engagement and contribution of the Government institutions and their stakeholders are acknowledged in the following list, including active contribution through technical inputs, advice, review and sharing of resources.

Government institutions:

Ministry of Education and Technical Education, including the following departments:

- Deputy minister for Technological Development
- Technological Development Central Department
- The minister's technical Office
- General Education Central Department including ECE, Primary, Preparatory, Secondary Education and Special Needs
- Technical Education Central Department
- Strategic Planning Central Department
- International Cooperation Unit
- National Center for Examination Education Evaluation (NCEEE)
- Central Department of the Curriculum Development (previously, Center for Curriculum and Instructional Materials Development) CCIMD
- EMIS (Education Management Information System)
- Social Responsibility and Participation Central Department
- Professional Academy for Teachers (PAT)

Ministry of Finance (MoF)

Ministry of Planning and Economic Development (MoPED)

Cairo Demographic Center (CDC)

LEG Members/ Development Partners: USAID, World Bank, EU, Save the Children, GIZ, UNESCO, ISDB, Care, FCDO, British Council, Sawiris Foundation, JICA, and ILO.

Civil society, private sector, and practitioners: Injaz, Elsewedy, Federation of Egyptian Industries (FEI). Parents and Teachers Associations (PTA), and Student Unions.

UNICEF's coordinating team included Ingrid Sanchez Tapia, Amira Fouad, Hanem Ahmed, and Heidi Selim from UNICEF Office in Egypt, with the support of Alberto Begué Aguado (independent appraiser and consultant) who conducted the external appraisal of the ESP which contributed to further improving its quality, and Hanan El Guindy as a consultant.

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Executive Summary

The Arab Republic of Egypt has developed this Education Sector Plan (ESP) 2023-2027 during a pivotal moment in the history of the nation and the wider world. Egypt and its education system feel the effects of both global turbulence and global unity, with development progress curtailed by the COVID-19 pandemic but catalysed by the United Nations Transforming Education Summit and COP 27 in 2022. Against this backdrop of international focus on education, Egypt, and sustainable futures, this ESP seeks to achieve the overall objective of transforming the Egyptian education system to ensure **universal access to high-quality education and training, foundational learning for all** and **skills for the sustainable future**.

Anchored in Egypt's overarching Strategic *Vision 2030*, the ESP provides a prospective five-year roadmap to tackling persistent challenges through a clear vision for reform, specific targets, strategic priorities and action imperatives. This ESP endeavours to operationalize the Ministry of Education and Technical Education (MoETE)'s national *Education 2.0*, which refo aims to go beyond purely cosmetic changes towards a transformational overhaul of the existing system.

To achieve such macro-scale change and transformation, the ESP applies a system-wide reform approach that is structured around four policy priority pillars within each sub-sector: (I) **access and participation**, (II) **quality of learning and teaching**, (III) **equity and inclusion**, and (IV) **governance and management of the system**. Two transversal priority levers of digital transformation and a strong teacher workforce are key enablers across all four policy pillars. Put together, these priorities are the pathways not only to improving the education sector, but also to strengthening the mutually beneficial links between education and societal development.

Despite data showing recent improvement, the education sector suffers from persistent challenges in access, quality, equity, and outcomes. According to the recent Education Sector Analysis, conducted in 2021, one of the most critical issues affecting all aspects of the education system relates to capacity and infrastructure.

Concerning **universal access and participation**, the growth in the school-aged population—coupled with an increase in the number of non-Egyptian students—will strain the already over-crowded school spaces, which has implications on class size, teaching quality, financing, school feeding, WASH facilities, and more.

Regarding **quality learning and teaching**, Egyptian students rank low in foundational knowledge and skills internationally, based on data from both international reading and mathematics assessment (PIRLS and TIMSS). The paucity of trained, qualified, and adequately paid teachers impedes improvements in education and learning outcomes. Overall, teacher and student

absenteeism, disruption, hunger, fatigue, ineffective teaching practices, large class size, corporal punishment, violence in schools, costs of private tutoring, and high-stakes exam pressures are all documented challenges to high-quality teaching and learning.

Relating to **equity and inclusion**, large disparities in educational participation and learning outcomes exist across regions and demographic groups, concerning gender, poverty, geography (urban or rural), and dis/ability, amongst others.

Regarding **governance, management, and financing**, the MoETE has been given a constitutional budget that is equal to 4% of GDP. Yet, after deducting all debt service expenses, which account for 34.7% of the constitutional budget, only 2.6% of GDP is left for the MoETE's operations. Moreover, sector-wide governance and evidence-based decision-making is obstructed by inadequacies in data collection, analysis, monitoring, and evaluation.

Table 1. Education System Challenges

EDUCATION SYSTEM CHALLENGES BY THE NUMBERS
1.5 million children were out-of-school in 2021.
250,000 new classrooms need to be built to accommodate current student population – today, only 15,000 classrooms are built annually.
Only 19% of grade 4 students reach the low benchmark for reading and only 29% for math.
Almost 40% of young adults were not in education, employment, or training in 2018, the majority of which were female.
Although the constitutional budget amounts to 4%, the actual budget spent for pre-university education represents 2.6% of GDP, owing to the huge proportion of the debt service.

To face these challenges, the ESP proposes Key Performance Indicators (KPIs) that translate the four policy priority areas to operationalize the *objectives* and *strategic programmes* across seven components of the education system: (i) pre-primary education, (ii) basic education, (iii) secondary education, (iv) community education, (v) adult literacy programmes, (vi) sector-wide governance and management and (vii) digital transformation and innovation reforms.

In **pre-primary**, the ESP outcomes will expand kindergarten provision, increase availability of adequate classroom facilities, and improve the physical condition of existing kindergarten educational centres. In **basic education**, the ESP targets improvement in foundational learning for all and equitable access to and successful completion of primary and preparatory education for all, addressing the causes of dropout, with particular attention to excluded and marginalized groups, to reduce disparities based on gender, disability, and geographical

location. In **secondary education**, the objectives are to expand equitable access to and participation in both general and technical education, offer competency-based, relevant curriculum, and ensure sufficient availability of schools, classrooms, and teachers to accommodate qualified graduates from basic education.

In **community education sub-sectors**, the ESP aims to reduce early school leaving by identifying and addressing the causes and directing out-of-school children to appropriate learning streams and offering flexible learning opportunities. In **adult literacy programmes**, objectives include increasing government funding and development partner support for adult and non-formal education, expanding access to and quality of centres and facilities, and especially literacy programmes.

In **sector-wide governance and management**, the ESP will put in place an effective management and administration system, including accountability, transparent and efficient governance, and sustainable, equitable financing modalities, which enable system strengthening and mobility through agile partnerships and multiple pathways within and across education subsectors. Finally, in **digital transformation and innovation reforms**, the ESP seeks to transform the educational ecosystem with fully integrated digital components that support fluid management of the system and hybrid/blended learning, providing schools with high-speed internet, equipment, digital content and materials, IT specialists, training, and teaching and administrative resources.

The MoETE is committed to realizing these ambitious goals through strong coordination and collaboration in the design, implementation, monitoring and evaluation of the proposed KPIs. Other ministries, including those in charge of education and training, as well as with other domestic stakeholders and development partners, continue to be critical contributors to the success of this ESP and the greater reform agenda. Following a thorough simulation of educational expenditure, funding deficits were identified, for which two solutions are proposed: either raising government functional and additional budgets for education to 2.9% GDP, mobilizing Development Partners to contribute to quality education development, or a combination of both options. To monitor and evaluate the progress of the implementation of ESP 2023-2027, an **ESP Steering Committee** will be supported by **the ESP Partnership & Advocacy Group** and the **ESP Financing group**, as well as the **Technical Committee** to bridge political and technical aspects of the ESP implementation, ensure an effective communication and advocacy plan, and mobilize financial resources.

Through this ESP, the Arab Republic of Egypt seeks to develop a new generation of Egyptians who are competent, highly qualified, and globally competitive. The ESP's high-level **Theory of Change (ToC)** proposes that *if* digital transformation and innovation can be harnessed and if teachers are supported and empowered to increase access and participation; improve the quality and relevance of

learning and teaching; promote equity and inclusion; and strengthen governance and management, including the financing of education, *then* universal quality education for all will be achieved with solid foundational skills, and learners will graduate with the knowledge and requisite skills they need for lifelong learning and fulfilment, leading to realization of the ESP vision.

Introduction

At the time of the development of Egypt's Education Sector Plan, the world faces a number of challenges of global proportions, which carry far-reaching implications for the economic, social and environmental future of Egypt, and more specifically for the education sector. At a crossroads of crises ranging from the climate to geopolitical conflict to COVID-19 recovery, countries around the world are hard at work to turn these challenges into opportunities for sustainable development and transformation. It is against this backdrop that the United Nations convened the Transforming Education Summit in September 2022, where nations around the world shared their transformational aspirations for the future of education. Within the framework of this summit, the Arab Republic of Egypt made a national statement of commitment to transform education, in which they renewed their commitments to implementing their 2030 vision, ensuring access to high-quality education for all.

1.1 Vision for the Future of Egypt

In 2018, Egypt embarked upon a system-wide education reform to align with the national ***Strategic Vision 2030***, in which education plays a key role in realizing the country's cross-cutting goals of sustainable development, social justice, and sustained growth. The vision is organized along economic, social and environmental dimensions, which are further divided into ten strategic pillars. Although "Education & Training" stands as its own pillar, it is implicated in other strategic pillars, especially in the target areas of economic development and social justice. At the core of the Strategic Vision for Education 2030 are the values of universal accessibility, inclusivity, sustainability, flexibility, and efficiency.

To further hone the vision for education outlined by *Vision 2030*, the mission of ***Education 2.0*** was developed to delineate, in more concrete terms, how Egypt envisions transforming education. Building on the previous education reform efforts begun in 2014, *Education 2.0* focuses on learning and life skills and tackles critical issues, such as moving from rote-learning to competency-based learning, preventing discrimination against women, addressing the challenges of globalization, citizenship, climate change, and creating stronger alignment with the pursuit of the Sustainable Development Goal on education (SDG4). Egypt has also made a bold move towards integrating technologies in education, which ensured learning continuity across the nation during school closures due to the COVID-19 pandemic.

In this context, the Ministry of Education and Technical Education (MoETE) has developed this five-year Pre-University **Education Sector Plan** (ESP) for the

period 2023/24-2027/28.[1] The ESP presents a set of policies and programmes to operationalize *Education 2.0* from kindergarten to Grade 12 over the next five years. The ESP further articulates the long-term vision of *Education 2.0*, identifies strategic priorities, and presents a roadmap for implementation. The ESP also responds to the dynamically changing economic, social, and environmental contexts at the global and national levels.

The Ministry's **Education Sector Analysis** (ESA) critically reviewed the current situation of the education system, highlighting the progress made and identifying the bottlenecks that need to be overcome in order to ensure not only quality education and lifelong learning opportunities for all, but also to respond to the country's aspirations for a sustainable and competitive development. This ESP has been produced to respond to the comprehensive body of evidence the ESA yielded, building on the MoETE Strategic Plan 2020-2025 and integrating the core tenets of the new *Vision 2030* and *Education 2.0* mission.

1.2 Vision for the Future of Education in Egypt

The Education Sector Plan (ESP) presents a set of policies and strategies to operationalize Education 2.0 over the next five years, building on past achievements and drawing lessons from the experience of the recent years, especially during the COVID-19 education disruption. The ESP further endeavours to articulate the long-term vision of *Education 2.0* with the national development vision and identifies strategic priorities for the sector as a whole and the various sub-sectoral and thematic areas that are under the purview of the MoETE. It also presents a number of programmes that need to be designed and deployed to implement policy directions, provides indication of the resources, including financial, required for carrying out programmes and projects and proposes implementation mechanisms and arrangements, including key performance indicators and related monitoring and evaluation framework.

After this introductory **Chapter 1**, the Education Sector Plan 2023-2027 consists of five following chapters:

- **Chapter 2** provides an overview of the status of education in Egypt, examining past achievements as well as persistent and emerging challenges.
- **Chapter 3** summarizes the interplay between existing national developmental visions and explains how the seven components of Education 2.0 are operationalized in the Education Sector Plan 2023-2027 and conceptualized in the Theory of Change.

[1] The ESP title specifies the years 2023-2027, as these are the starting years of both the fiscal and school years. In Egypt, the school year runs from September to June and the fiscal year from July to June. As such, although the budget figure is 2023-2027, the financial requirements span over two years, e.g., 2023/2024 and 2027/2028. This means that the ESP will start its implementation in September 2023 according to the new school year 2023/24.

- **Chapter 4** provides detailed information on policy interventions for each of the sub-sectors of pre-university education.
- **Chapter 5** presents the costs of implementing the ESP and financing strategies.
- **Chapter 6** outlines the ESP operationalization, including the implementation arrangements, management framework, risk analysis, communication strategy, and the monitoring and evaluation framework.

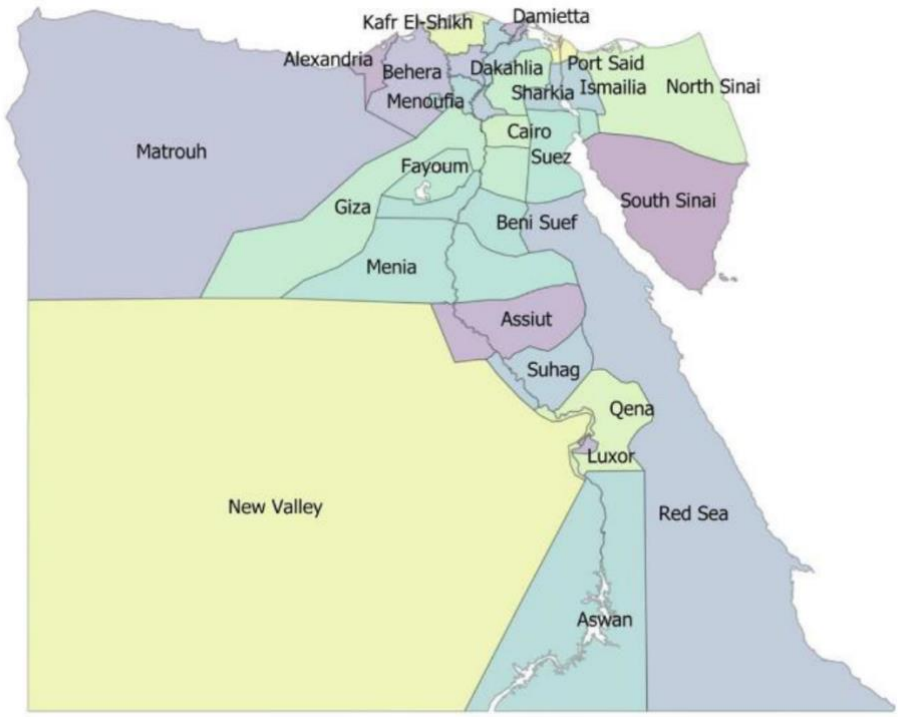
Development of this ESP heralds a new way of working for MoETE and its development partners. It is a platform from which to build mechanisms and capacity for coordination, policy dialogue and shared commitment to achieve results. The process of the ESP development was participatory, and evidence based. A team of MoETE focal points was established, led by a Deputy Minister, and supported by a Technical Lead to coordinate and consolidate contributions to the ESP. Qualitative and quantitative data were collected from the relevant departments of the MoETE and other Ministries. A series of consultations were organized both at the national and sub-national levels engaging various stakeholders. With this ESP, Egypt aspires to take its place among the eighty partner countries of the Global Partnership for Education (GPE), a unique, multi-stakeholder partnership dedicated to transforming education in the countries most in need. Accession to GPE underlines the shared commitment to ensuring that all girls and boys, especially those who are marginalized by poverty, displacement, or disability, can get a quality education. As such, the GPE/IIEP-UNESCO guidelines for the preparation of education sector plans were used as a reference, which include the development of a **Theory of Change** and **financial projections**.

The MoETE acknowledges that the goals of the ESP are lofty, and that the challenges to achieve them are daunting, particularly given the multiple contextual crises unfolding which compound global and national uncertainties. Fortified by the courage of our convictions, however, we stand by our deeply held belief in our ambitious reform agenda and in the vital importance of the education investments set out in this ESP if we are to reach our full national potential and aspirations for a better future for all Egyptian young people. Success will require the concerted efforts of all MoETE units at central and decentralized levels to implement and monitor the plan to achieve ESP goals. Further, the ESP goals cannot be achieved by leadership and in close coordination and collaboration with other central and line ministries, the support of all stakeholders, including local communities, development partners, the private sector, civil society organizations, school leaders, teachers, parents, and children – will be enlisted to reach success.

Context of National Development and Education

Egypt is located in the northeast corner of the African continent with an extension into the Asian continent through the Sinai Peninsula. The total land area of Egypt is a little over one million square kilometres, of which around 8% is significantly inhabited, mainly around the Nile River valley and delta. It comprises 27 governorates, the top level of Egypt's administ (markaz and qism). Egypt hosts multiple ethnic and religious groups including Bedouins (nomads), Copts, Nubians, and Shiites, though the vast majority are Sunni Muslims. The official language of Egypt is Arabic. The Egyptian population was projected at 104 million by 2022, with approximately 51% male and 49% female inhabitants (UN, 2022). This makes Egypt by far the most populous of the 23 Arabic-speaking countries, and the 13th most populous country in the world (UN, 2022). In 2019, it was estimated that 57% of the population lived in rural areas compared to 43% in urban areas (World Bank, 2022). The average annual population growth rate is projected to decline, from 2% during the period 2015 to 2020 to 1.8% for the period 2020 to 2025; however, the rate of annual population growth remains high, considering the global average annual population growth rate, as of 2021, is 1% (World Bank, 2022).

Figure 1. Map of Egypt



Source: Generated using CAPMAS administrative boundaries shapefile and QGIS software.

1.3 Macroeconomic Context

Egypt is a lower-middle-income country that has been subject to severe economic pressures over the last decade, and economic growth is low and volatile. Since the start of the Government's reform programme in 2016, the macroeconomic situation has substantially improved. However, the annual economic growth rate decreased from 5.6% in FY 2018/2019 to 3.6% in FY 2019/2020, and further still to a low of 3.3% in FY 2020/21 as the effects of the COVID-19 pandemic were felt more fully. Before the COVID-19 pandemic, GDP per capita had been increasing from 3.2% in 2018 to 3.3% in 2019. However, the COVID-19 years saw a drop to 1.6% in 2020 and a further drop to 1.4% in 2021, which yields the expected economic growth rate to average 5.5% in FY2021/22 (World Bank, 2022).

Following the outbreak of the pandemic, unemployment peaked at 9.6% but decreased to 7.6% in the third quarter of 2020 (World Bank, 2021). An ILO study showed that the employment rate fell by 8% between February and June 2020 and was slightly more severe in urban areas (-9%) than in rural areas (-7%). The employment decline had gendered effects, with slightly larger decreases for women at -10% than for men at -8%. This resulted in a doubling of male unemployment and increased economic inactivity for women. Workers with lower educational attainment were the most highly impacted by employment losses, while more wealthy, more highly educated workers in urban areas were more likely to be able to work from home. Workers are concentrated in micro and small enterprises (53% and 21% respectively in 2017) and in the informal sector (65% of men and 53% of women in 2018), with women more likely to be employed in the public sector (World Bank 2021).

Figure 2. Key economic aggregates, 2016-2021

	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
GDP per capita (constant 2015 US$)	3639	3712	3831	3965	4028	4085
GDP growth (percentage)	4.3%	4.2%	5.3%	5.6%	3.6%	3.3%
GDP (constant 2015 US$, Billion)	343.6	358	377	398.0	412.3	426
Inflation rate	6.2%	22.9%	21.4%	13.6%	6.2%	4.8%
Unemployment, total (% of total labour force, national estimate)	12.4%	11.8%	9.9%	7.8%	7.9%	NA
Employment in agriculture (% of total employment) *	25.6%	25.0%	21.7%	20.6%	NA	NA
Employment in industry (% of total employment) *	25.5%	26.6%	26.9%	26.9%	NA	NA
Employment in services (% of total employment) *	48.9%	48.4%	51.5%	52.4%	NA	NA

*Modelled ILO estimate

Source: World Bank, Databank (2022) & IMF WEO (2021)

Total government revenue was 19% of GDP in FY 2020/21 while total government spending was 26% of GDP resulting in a negative fiscal balance of 7% of GDP (See Figure 3). Relatively low economic growth combined with a large fiscal deficit may limit the scope to increase public spending on education over the next few years.

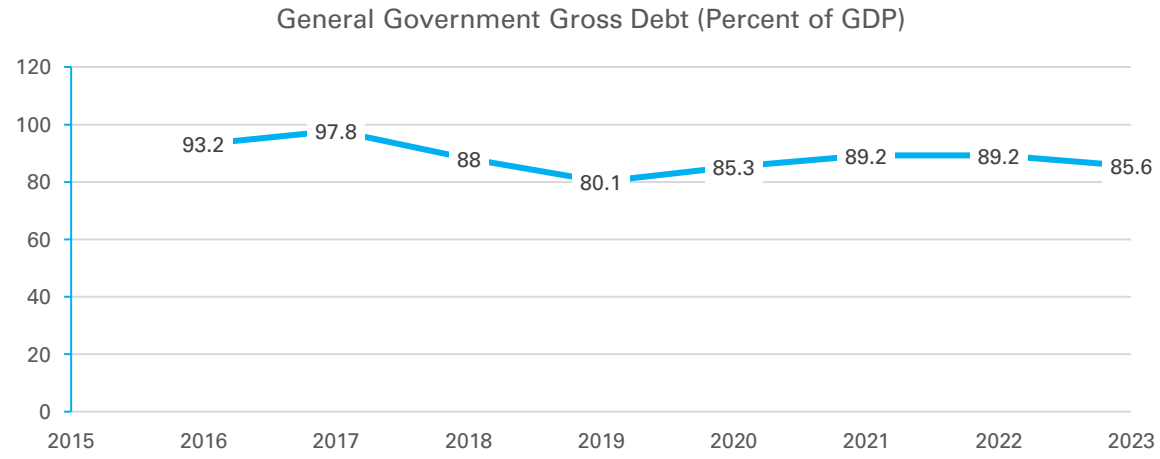
Figure 3. Key fiscal aggregates, 2016-21

	2016	2017	2018	2019	2020	2021
Total Government revenue (% of GDP)	18.1%	19.0%	18.5%	17.7%	16.8%	19%
Total Government spending (% of GDP)	30.2%	29.7%	28.0%	25.7%	24.7%	26%
Total Government fiscal balance (% of GDP)	-12.0%	-10.7%	-9.5%	-8.0%	-7.9%	-7%

Source: IMF WEO (2021)

In recent years, the government's gross debt as a percentage of GDP has fluctuated significantly due to the COVID-19 pandemic and the fallout from the Ukraine war. The debt-to-GDP ratio steadily increased between 2019 and 2022, from approximately 80.1% to nearly 89.2%, which increased fiscal deficits and external financing needs (Figure 3).

General Government Gross Debt (Percent of GDP)



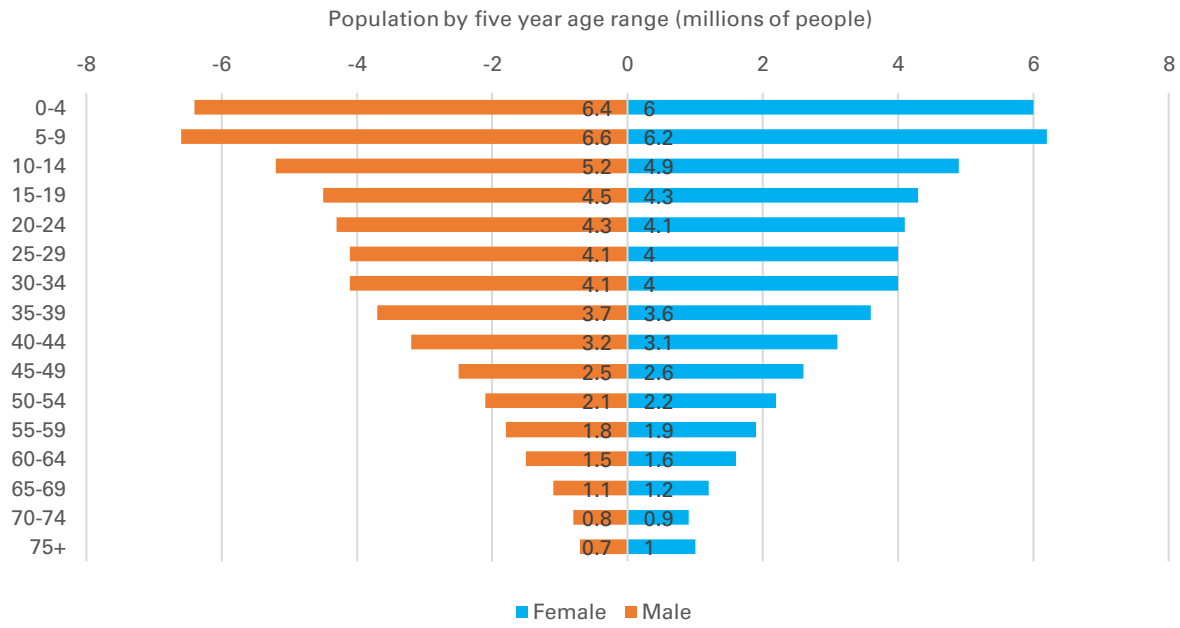
Source: IMF, 2022, World Economic Outlook (October 2022)

Government debt stood at an estimated high of 89% of GDP at the end-FY 2021/22, and is expected to further increase, with depreciation of the currency as an aggravating factor to reverse gains made over the previous six years in reducing the budget-deficit-to-GDP ratio. This presents a constraint on fiscal space, which in turn puts a squeeze on spending on key human development sectors, including education (World Bank, 2022).

1.4 Sociodemographic Context

Egypt has a very young population with about 34% under the age of 14 and 54% under the age of 25 (See Figure 4) in 2021. This means the country is in the early phase of a potential demographic dividend, with a growing working-age population and a decreasing child dependency ratio and is expected to move into the late dividend phase in the decade starting in 2030. Over the period 2015 to 2030, the youth (15-24 years) population is projected to increase by 5.5 million (33%) (UNICEF, 2019), despite declining fertility rates (UNFPA 2019). Child survival rates have dramatically improved in recent years, with the under-5 mortality rate down to 27 child deaths per 1,000 live births in 2014 (MoHP, 2014).

Figure 4. Egypt population pyramid 2021



Source: UN Population Division 2021. Median fertility variant.

To realize the demographic dividend the education system will need to endow graduates with the necessary and relevant skills and competencies required by the evolving labour market. The most critical of these challenges is the ability of the system to accommodate the growing number of students, given the growth in the school-aged population, which in turn will translate into higher demand for school facilities, infrastructure, and human and financial resources across all levels of education.

1.5 Security and Climate Contexts

Geopolitical tensions since early 2022 have laid bare the fragility of the global supply chain on which Egypt's food security importer of grain, and among the top ten importers of sunflower oil globally, Egypt is acutely vulnerable to spiralling prices and the concomitant squeeze on

national and household budgets, with education often a soft target for cutbacks when resources are constrained.

Egypt's dependence on the Nile River for potable and agricultural water, industry, and power generation makes the country highly vulnerable to climate change. Climate change and environmental hazards threaten child health and well-being, especially in poorer communities. The new national climate change strategy is expected to bring climate change higher on the policy agenda. Egypt's chairing of COP27 in November 2022 also showcases the heightening risks of a rapidly changing climate and growing scarcity of water. Egy vulnerable' to cli maGAIN Index and ranked at 107 out of 181D countries in terms of climate change vulnerability and readiness to address it (World Bank, 2020). With the national water supply solely dependent on the Nile, water scarcity is a key and growing issue, exacerbated by climate change and external factors, leading to a UNICEF ratin Index. For education, Egypt has thus documented among its adaptation measures an urgent need to integrate content on climate change into the education curricula. The risks to education include potential damage to infrastructure from NDC extreme weather events, firsts outl updated 'Nati onDetermined Contributions (NDC) to the Paris Agreement on Climate Change (UNCC, 2022).

1.6 Social Context

According to the most recent estimates, 29.7% of people in Egypt live in monetary poverty, with some governorates in Upper-Egypt recording a much higher prevalence of poverty (e.g., Assiut, 67 per cent) (CAPMAS, 2020). Government interventions to tackle povert programme" (HKP), supporting 5,000 poor vill decent employment, and women's empowerment "Takaful and Karama" cash transfer programme (TKP); and the universal health insurance scheme.

Egypt has made tremendous progress in maternal and child health over the past two decades. The under-five mortality rate declined by close to 60 per cent reaching 20 deaths per 1,000 live births in 2020.[2] Progress in child survival has slowed due to the COVID-19 pandemic and remains uneven. The poorest children are more than twice as likely as those from wealthy families to die before reaching the age of 5. Close to 40% of children under 5 are at risk of not fulfilling their full developmental potential, due to risks of poverty, poor nutrition and a lack of access to early development opportunities. Accelerated efforts are needed to address inequalities in health outcomes, strengthen health systems and promote integrated, multisectoral programmes.

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[2] United Nations Inter-Agency Group for Child Mortality estimation

The triple burden of malnutrition – undernutrition, micronutrient deficiencies and overweight – threatens the survival, growth and development of children and adolescents, especially in the poorest communities. One in five children under the age of 5 years suffers from stunting (MoPED, 2021) while at least 22% suffer from micronutrient deficiencies (DHR, 2014). Childhood obesity has increased to over 15%.

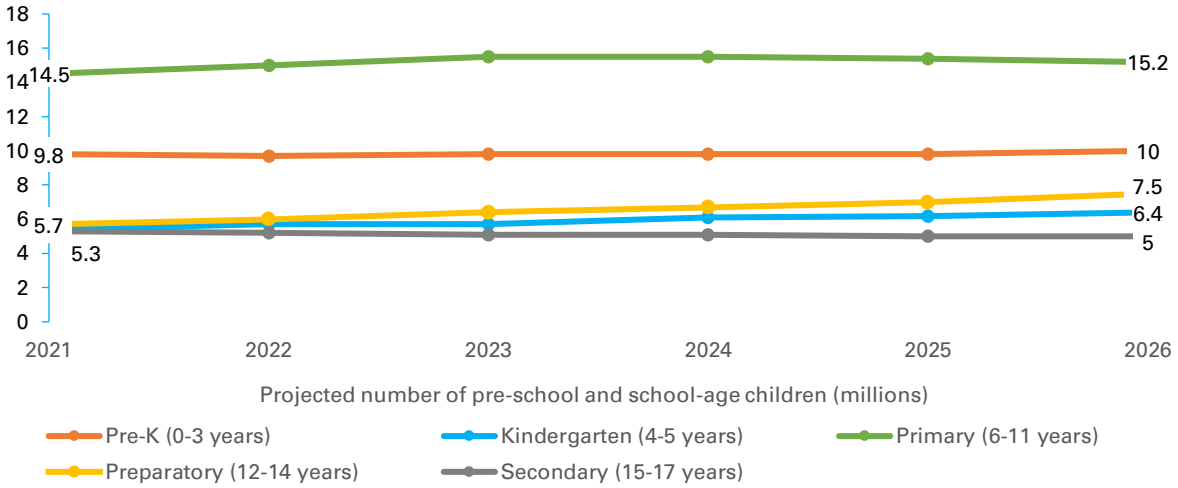
An estimated 93% of children experience some form of violent discipline at home and online violence against children is increasing (DHS, 2014). Bottlenecks to prevention of violence include harmful gender and social norms, limited knowledge of non-violent discipline methods, weak community platforms for child participation, and insufficient prevention and response services. Institutional placement is the prevalent form of alternative care practiced in Egypt, with some 15,000 children in institutional care.

Although decreasing, the prevalence of female genital mutilations (FGM) remains high. According to the most recent estimates available, 61% of women and girls aged 15-19 years have undergone FGM (DHS, 2014). Several essential building blocks to prevent and respond to address violence against children are now in place under government leadership, though progress is constrained by traditional barriers and insufficient resources.

1.7 Education Sector Context

Egypt has the largest pre-university education system in the Middle East and North Africa (MENA) region, and in the 2021/22 school year, just over 25 million students were enrolled in public, private and Azhari schools in Egypt (MoETE, 2022). Between 2021 and 2026, the number of kindergarten-age children is projected to decline by 300,000. By contrast, the projected overall increase in the school-age population during the same period is 3.5 million, equivalent to a 14% rise. The main effects will be felt at the preparatory and secondary levels, with projected increases of 1.7 million (30% increase) and 1 million (20% increase) respectively (See Figure 5).

Figure 5. School-age populations for pre-kindergarten to secondary education



Source: UN Population Division 2021. Median fertility variant.

The Constitution of 2014, Article [19], states that education is compulsory and free from primary until the completion of secondary stage or its equivalent and stipulates that government spending on pre-university education must be no less than 4% of GDP.

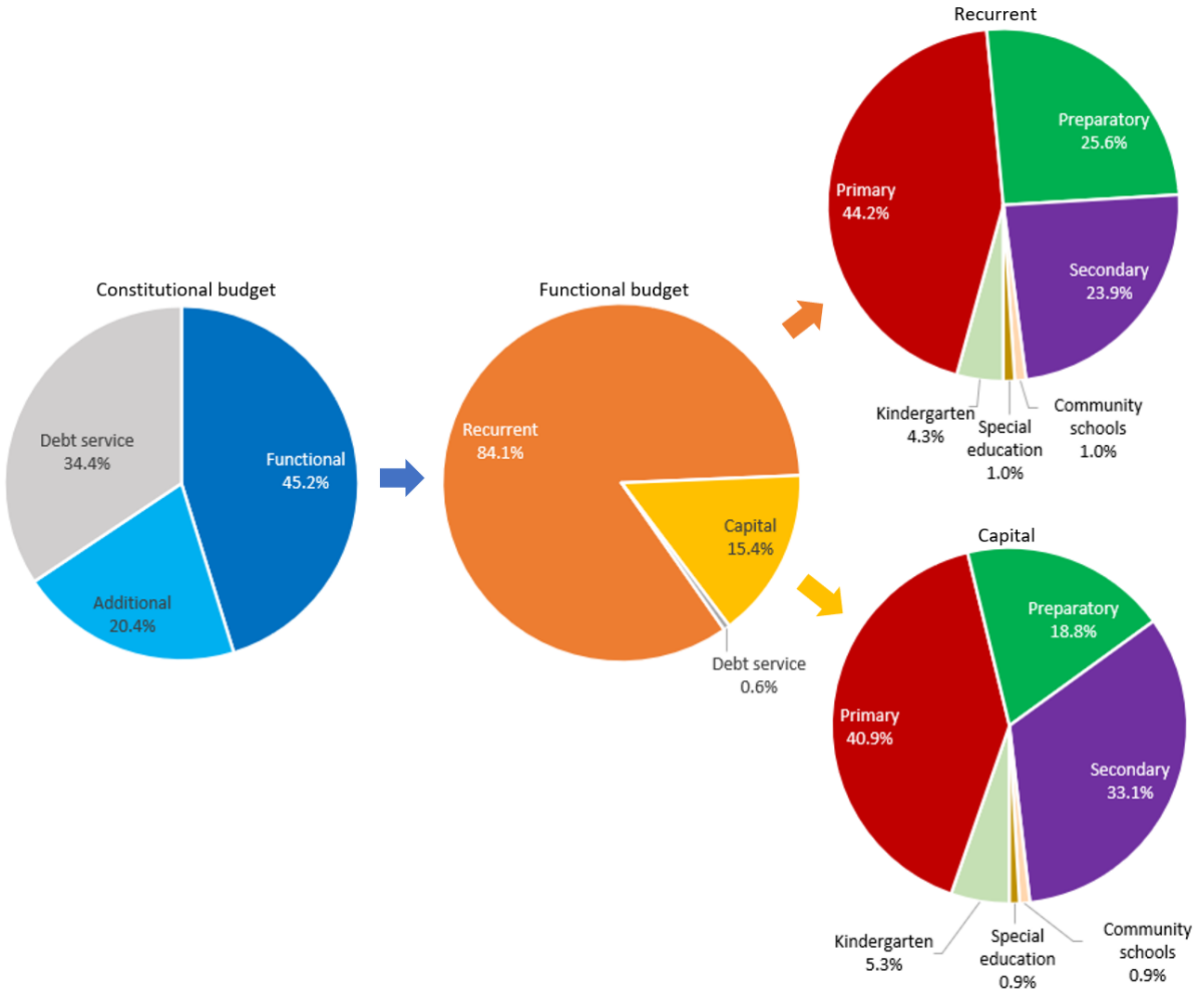
As a result, the government has historically allotted a constitutional budget equal to 4% of GDP. The most recent data shows that the constitutional budget for the fiscal year 2020/2021 was 241.6 billion EGP, approximately 4% of the GDP for the year. The constitutional budget is composed of three components:

1) An initial functional budget is allocated to the MOETE in accordance with its provisions for the year. It totalled 109.2 billion EGP in 2020/2021, or 45.2% of the constitutional budget. It is worth noting that the functional spending included 0.6% of debt interest and instalments.
2) An additional budget serves as a general reserve to cover the amendments to the initial functional budget made by the government and the parliament over time for various reasons, such as greater or lesser economic growth, shifts in the national development vision and changes in priorities accorded to education. In 2020/2021, it accounted for 49.3 billion EGP, or 20.4% of the constitutional budget.[3]
3) A separate budget is preserved for government debt interest payments, with the sector's share in the total governorate for its share in the overall government debt interest burden. This share was 14.6% in 2020/2021; as a result, 83.0 billion EGP, or 34.4% of the constitutional budget, was set aside. This budget, in contrast to the preceding two, is not functional for the MOETE.

[3] In 2020/2021, this budget funded the General Contingencies budget, the National Center for Educational Research and Development, the National Authority for Quality Assurance and Accreditation of Education, the New Urban Communities Authority, and Al-Azhar Al-Sharif.

More precisely, the budget distribution for the year 2020/2021 is illustrated below.

Figure 6. Pre-university education budget distribution, fiscal year 2020/2021



Source: MOETE & MOF, Egypt (2022)

Currently the share of the functional budget stands at 1.8%, complemented by an additional budget of 0.8% of GDP. Given the projected increases in the school-age population over the next five years, additional financing for education will be needed to accommodate the growing number of students while attempting also to increase the quality of education services under the reforms of Education 2.0, as further discussed in Chapters 4 and 5.

1.7.1 Education System Governance and Structure

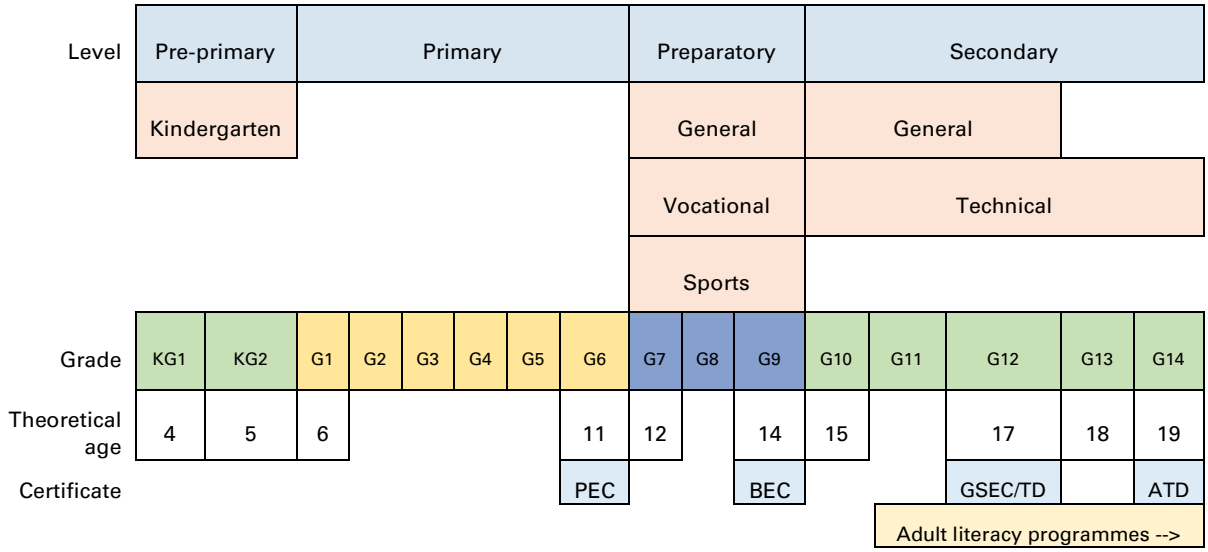
The Egyptian government comprises 33 ministries of which two cover education: the Ministry of Education and Technical Education (MoETE) and the Ministry of Higher Education and Scientific Research (MoHESR). The public education system is made up of four levels of administration: the central MoETE in Cairo, governorate-level Education Directorates (mudirriya), district-level Education Departments (idara), and schools. Legally, the 2014 Constitution is the highest

regulatory framework for education and specifies that it is a right for every citizen. At the next level, education laws and acts regulate public and private education as well as national and sub-national education authorities. The third level is the Ministerial Decrees, which are issued by ministers of education to regulate new school establishment, hiring of education leaders, exam organisation (including calendar and procedures), introduction of new school types, certification of the operation of international programmes at private schools, and more. Ministerial memos are also part of the regulatory documents issued by central MoETE to schools, for example, to set school schedules and the curricula to be taught at classroom level.

Pre-university education falls under the responsibility of the Ministry of Education and Technical Education (MoETE). It comprises four levels:

Two years of kindergarten (ages 4-5)
Six years of primary education (ages 6-11)
Three years of preparatory education (ages 12-14)
Secondary education (ages 15-17), with options for general (3 years), technical (up to 5 years) and vocational education.

Figure 7. Education system structure in Egypt, 2021



MoETE currently operates 12 different types of schools: mainstream, public language (formerly 'experimental schools'), 'future schools', Arabic national, language national, international public, Nile Egyptian, Egyptian-Japanese (EJS), community, STEM and applied technology schools. All except the last three, offer K-12 education. Some public schools charge fees, albeit lower than those of private schools (MoETE, 2021). Private schools are owned and operated by the private sector under MoETE supervision. They all offer K-12 and fees vary considerably among them. They offer three models of education: private Arabic schools, private language schools and private international schools.

MoETE is both the regulator and largest provider with over 38,500 public schools. There are two additional providers: the private sector (national and international) and Al-Azhar Al-Shareef (Azhari education). The latter, more commonly referred to as Azhari Institutes, provide education for Muslim students. The Azhari education system (see Table 2.) is managed by the Azhari Institutes Sector of Al-Azhar Al-Shareef, independent of MoETE, but under the supervision of the Egyptian Prime Minister (UIS, 2022). In total, there are 9,400 Azhari schools and 6,500 private schools.

In total, Egypt has 58,807 schools and more than 539,980 classrooms whose capacity is 25,062,294 students in 2021/22, with a vast majority enrolled in public (government) schools: 91% for primary, 93% for preparatory, 81% for secondary general, and 87% for secondary technical education (MoETE, 2021).[4]

Table 2. Al-Azhar School System

Al-Azhar School System
Azhari schools offer education from kindergarten to grade 12 with a particular focus on religious studies and subjects for Muslim children in three school types: Azhar mainstream schools, Azhar integrated schools and private Azhar schools which are operated by the private sector under supervision of the Azhari Institutes Sector. All Azhari schools/institutes offer the same national curriculum as public schools, in addition to religious subjects. It is, however, an entirely independent system of MoETE. While their assessment system is similar to that of MoETE the actual exams in all grades are developed by their respective departments. This also includes grade 12 final exam with Azhari Thanawiya Amma exams being different from those of MoETE. Graduates of Azhari general secondary education transit to Azhar University through a placement system that is independent from that of the Ministry of Higher Education and Scientific Research (MoHESR) for graduates of public and private general secondary education graduates. Also, it is possible for students to transfer between Azhari and public schools from KGI to grade 8. A protocol between MoETE and Al-Azhar Al-Shareef sets out all the steps and requirements.

1.7.2 Education Policy Framework and Reform Agenda

As outlined in Chapter 1, Egypt is in the midst of reforming its education system with *Education 2.0*, which responds to its national sustainable development agenda, E g y p t *Vision 2030*. The principal goal of this reform is to transform the pre-university education system to include all children and to endow its students with skills that meet international standards and the needs of the 21st century. Egypt also seeks to respond to major challenges related to the quality, relevance and inclusivity of its education system.

As such, this sector plan addresses a wide range of education development issues, structured around: access and participation; quality of learning and

[4] MoETE statistical yearbook does not include Al-Azhar schools. However, separate data from the Al-Azhar system was included in the Education Sector Analysis (ESA).

teaching; equity and inclusion; and governance and management. These policy components are aligned not only with Egypt's national *Vision 2030*, but also with Egypt's international commitments Conventions on the Rights of the Child (CRC), Elimination of All Forms of Discrimination Against Women (CEDAW), and the Rights of Persons with Disabilities (CRPD), as well as the fourth Sustainable Development Goal adopted by all United Nations member states in 2015, committing countries to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all."

1.8 Education achievements and challenges: Past trends and current situation

This section summarizes the current status of education development in Egypt, drawing mainly from the recent Education Sector Analysis (ESA), which provides a thorough assessment of the situation of the Egyptian education sector as of its conclusion in 2021 and highlights the strengths and weaknesses in the sector. The ESA noted areas where progress had been made and also identified an array of major challenges facing the education system affecting access, quality, and equity. The most critical of these challenges is the ability of the system to accommodate the growing number of students, given the growth in the school-aged population. The demographic pressure also strains natural resources and has implications for programmes such as school feeding, WASH facilities, and so on, at schools. In addition, Egypt is also set to host more than 250,000 non-Egyptian students, with a corresponding high demand for education.

In terms of access, some notable successes have been achieved in improving basic and secondary education, narrowing the gender gap in enrolment, and reducing illiteracy rates. The current supply of school facilities, however, is already insufficient to cope with the numbers of students, and this situation will be further exacerbated by the anticipated school-age population growth and financing constraints. Huge disparities exist across regions and demographic groups, concerning gender, poverty, regional, rural, and students with disabilities, amongst others, as further discussed in section 2.6.

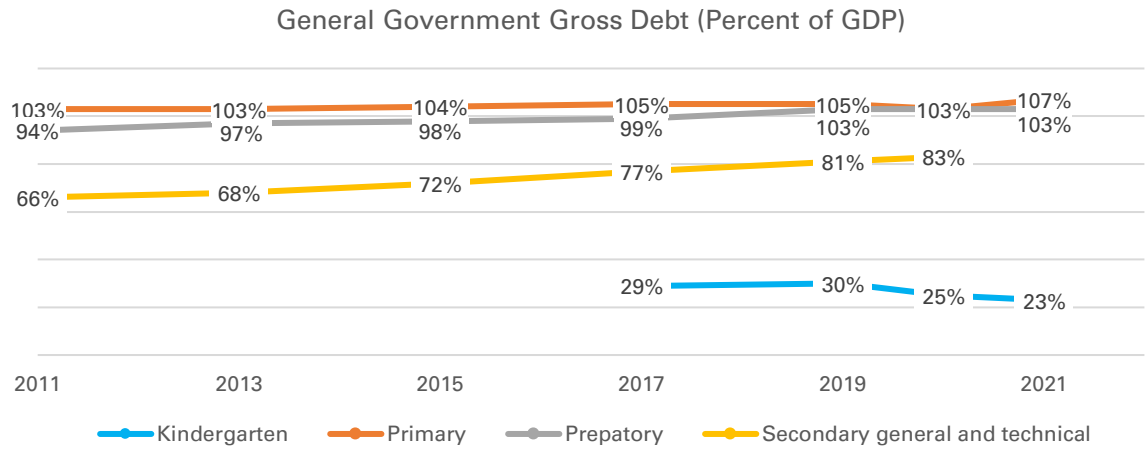
In addition to expanding access to education, there is a need to improve the relevance of education and upgrade its quality in order to equip young people with the 21st-century skills needed to meet the demands of the labour market and national development. Quality of learning and teaching remains a critical challenge for the education system in Egypt, as education performance is considerably lower than peers, as shown by its rank as 134th in the global learning quality index (World Economic Forum 2017). To improve the quality of teaching and learning requires initial and ongoing teacher capacity development, including of those responsible for developing and delivering pedagogical training programmes.

1.8.1 Access and Participation

Egypt has made considerable progress in increasing access to and participation in pre-university education over the last decade. However, a relatively large number of students do not complete their schooling. Latest statistics from CAPMAS 2017 indicate that 1.5 million or 7% of children from 6-17 years old were out of school, including dropouts and those who have never enrolled. As early school leaving has negative impacts on both individuals and societies, it is important to understand the reasons for dropping out and the demographics of out of school populations.

In addition to existing issues, the system's capaci school-age population more broadly over the next few years presents a significant challenge. Enrolment ratios in primary, preparatory and secondary education are relatively high. In 2021, the gross enrolment ratios (GER) were 103% for basic education, which includes primary and preparatory education levels, and 83% for secondary education, including both general and TVET streams (MoETE, 2022). While participation in primary, preparatory and secondary education is relatively high, participation in kindergarten is particularly low, with a GER of only 23% in 2021/2022, (MoETE, 2022).

Figure 8. Trend in GER by education level (all providers) 2011/12-2020/21

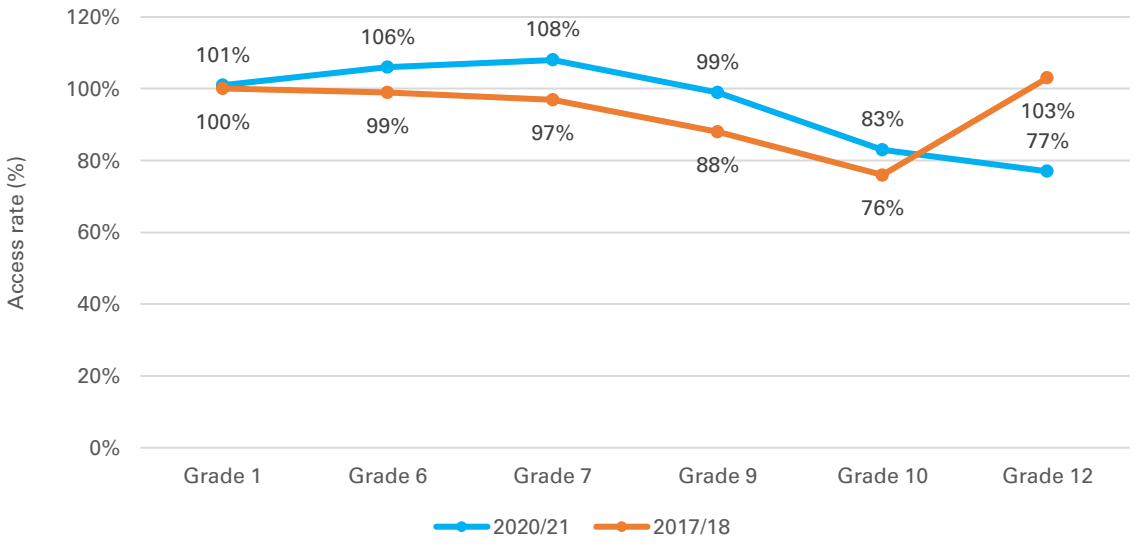


Source: Calculations based on EMIS and UN population data, 2022

For 2020/21, most students complete primary education and between 2017/18 and 2020/21, the completion rates have also improved from 88% to 99% for preparatory education and from 69% to 77% for secondary education. The completion rates are above 100% for primary education due to overage enrolment and/or some under-reporting of repetition. To address this issue, a probabilistic schooling profile based on household survey data that does not suffer from these issues is also presented for 2017/18. In that year, the likelihood of accessing primary education was 99% and completion 98%, meaning that most children who start primary school finish it. Meanwhile, the likelihood of accessing preparatory level was 96%, and of completion, 89%, and access to and

completion of secondary education were 86% and 76%, respectively. Despite the recent progress in completion rates, the available data indicates that a relatively large group of students especially in preparatory and secondary education levels, do not complete the cycle they start.

Figure 9. Schooling profile 2017/18 and 2020/21

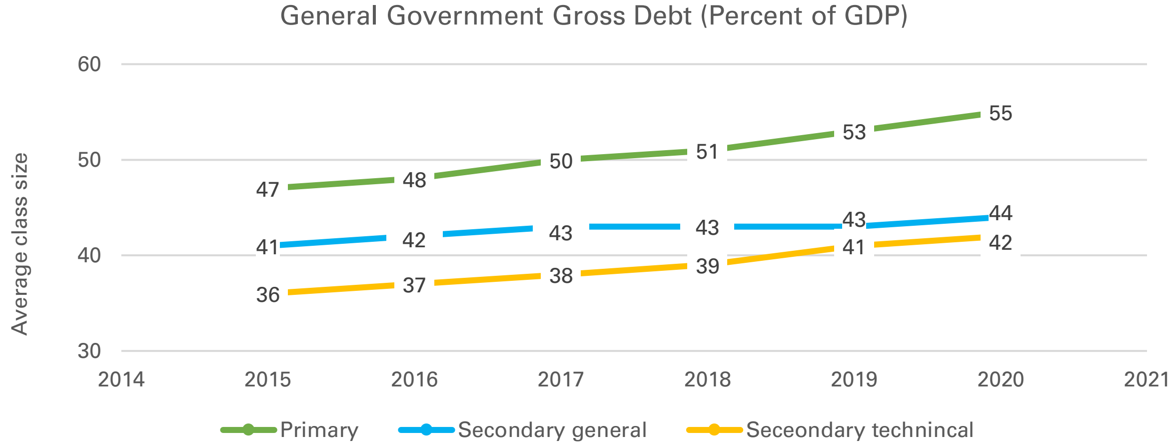


Source: Calculations based on EMIS and UN population data. Note: 1) Cross-sectional schooling profile. 2) There are two possible reasons for access and completion rates being greater than 100%. Under-reporting of repeaters by schools (used to calculate the denominators for the two rates) and/or overage enrolment.

The limited infrastructure hinders access to sufficient school capacity to accommodate the growing numbers of students. At all levels of the system, there is an insufficient supply of classrooms, creating overcrowding, less effective teaching, and preventing proper school expansion. Indeed, even with overcrowded classrooms, classroom space is insufficient for the student population. Among public schools, 19.1% (5,109 schools) have class sizes up to 50 students, 12.9% (2,740 schools) have class sizes ranging between 50 and 60 students, 7.6% (2020 schools) have class sizes ranging between 60 and 70 students, and 6.7% (1797 schools) have class sizes reaching 70 students.

The pace of classroom construction has not kept up with the evolution of enrolment: in general, the average class size stands at 47.1 students per class in 2020/ 2021 compared to 43.7 students per class in 2016/2017. To accommodate current student populations and future enrolment growth, there is a need to build 250,000 new classrooms. However, only 15,000 classrooms are built annually. In view of the estimated annual increase in the number of students by approximately 800,000 students every year, this number is significantly below what is required to achieve the Ministry's t by 2030.

Figure 10. Trend in class sizes by education level 2015/16-2020/21



Source: Calculations based on EMIS data.

Over the next five years, school infrastructure may be both physically and digitally expanded to accommodate student population, including through the use of hybrid learning methods. Without specific interventions, the percentage of out-of-school children may increase to 34% for the 6- to 14-year-olds and 25% for the 15- to 17-year-olds, while the target of *Education 2.0* is to reduce the percentage of out-of-school children to 1%[5]. Classroom density, lack of extracurricular activities, limited teacher efficiency, and negative learning environments contribute to increased absence and early school leaving. Such high-class size significantly undermines teaching quality due to the reduction of teacher-student interaction time, which may ultimately decrease parent demand for schooling, student engagement in learning, and the desirability of the teaching profession.

1.8.2 Quality and Relevance of Learning and Teaching

Article 19 of the Egyptian Constitution affirms that t its aims in education curricula and methods and to provide education in accordance with global quality criteria" (Government of Egypt, 2014). Egypt seeks to develop a new generation of Egyptians who are competent, highly qualified, and globally competitive. Under the new, transformative approach of the MoETE *Education 2.0*, schools will provide the labour market with highly skilled graduates by replacing the country's exam-driven memorization with one of student-centred teaching and competency-based learning by focusing on teacher training and the digital competencies. Egypt has made significant strides in learning quality in recent years, jumping in the Global Knowledge Index (GKI) ranking from 72nd in 2020 to 53rd in 2021, the first place

[5] The growth in the number of out-of-school children is obtained by applying the 2017/18 out-of-school rates to the relevant projected school-age populations in 2026, this provides a crude estimate only.

among African states.[6] This is a leap compared to previous years, where it previously ranked 95th in 2017, 99th in 2018, and 82nd in 2019.

Regarding teaching quality, Egypt has recently improved its teachers' professional training programmes to include effective use of technology, modern assessment techniques, and online teaching and learning. Supporting teachers and investing in their continuous development has been placed at the core of the reform programme. The joint programmes aim to continue building the Ministry's catalyse system changes in the way teacher professional development is designed, delivered, and monitored at the sector level. The new continuing professional development program was piloted to include 45% of supervisors, as they play a critical role in the education reform process. By 2023, all education leaders and supervisors will be trained. A series of thematic and specialist training programs were delivered to more than 75,000 teachers in inclusive education techniques and effective pedagogical and educational approaches for students with disabilities enrolled in inclusive schools. Preparations are underway to develop and deliver training targeting 100,000 teachers. A total of 72,000 teachers, school-based social workers, and school managers have received training in inclusive education techniques and effective educational and pedagogical approaches for learners with disabilities.

[6] https://www.sis.gov.eg/Story/160511/Egypt-jumps-19-positions-in-Global-Knowledge-Index-2021/?lang=en-us

Box 1. Integration of Information and Communication Technology in the Education Process is ongoing.

Digital transformation of the education system is a core plank of Education 2.0. Efforts have been made to ensure greater use and integration of technology in the education process. The Ministry of Education and Technical Education has successfully established a digital infrastructure in more than 2,500 secondary schools, coupled with the equipping and furnishing of more than 11,000 classrooms. The proportion of general secondary schools that have been refurbished and supplied with technology stands at 100%. These schools have been supplied with interactive screens and smart whiteboards, various technological tools and equipment, high-speed internet, and integrated digital services. In addition, 100% of general secondary education students received tablets to facilitate their access to different sources of information and knowledge platforms, while ensuring that the students experience the joy of learning. Digital transformation of education in order to enable the introduction of distance learning forms with an aim to recover time lost during the periods of disruption of education in schools and universities due to the outbreak of the coronavirus pandemic, thus applying measures intended to mitigate the adverse impact of the pandemic on the education sector, including the introduction of an online electronic examination system that helps schools and universities have secure and automated exams; the creation of an electronic learning library, Egyptian Knowledge Bank (EKB); and the development of an online platform to facilitate communication between the students and their teaching staff.

Despite recent progress, investment is needed to improve learning outcomes and links with the labour market by targeting the quality and relevance of learning and teaching. The Learning Poverty report estimates that 70 percent of students are not able to read and understand an age-appropriate text at age 10 (World Bank 2019). Based on the TIMSS scoring scale, Egypt ranks in the bottom decile of countries for students reaching the low international benchmark for achievement, despite noteworthy improvement since 2015. Nearly one in two students reach the low international benchmark in Mathematics and Science, and about a quarter reach the intermediate level.

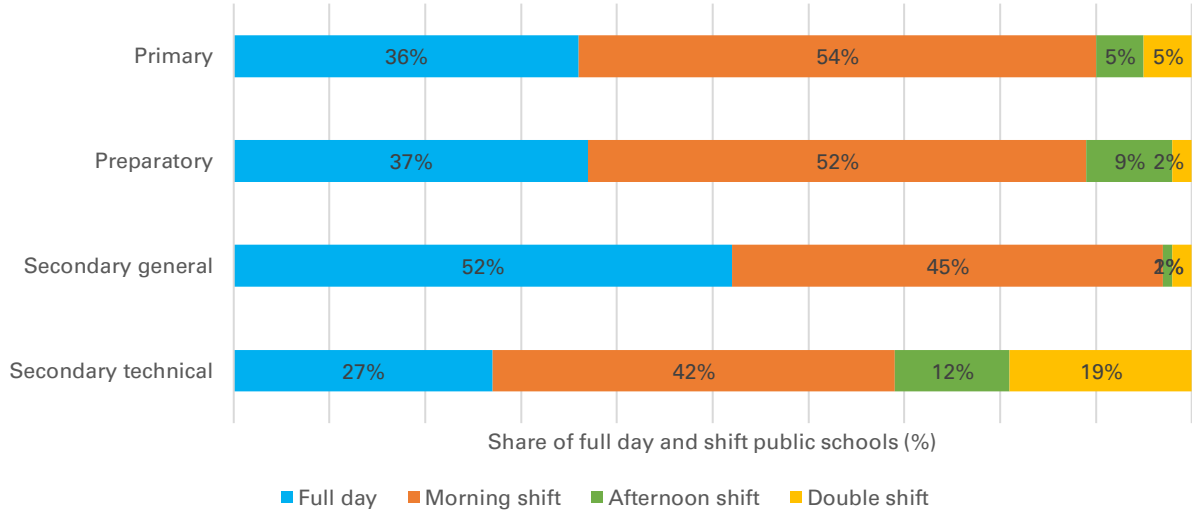
Teachers report that the main constraints to teaching and learning are st u d e n t s ' lack of interest and classroom disruption. Many factors may influence this, including student hunger and fatigue, frequent teacher absenteeism that disrupt curricular progress, unengaging teaching practices, corporal punishment or violence in schools, domestic violence, and large class sizes (UNICEF OOSC Egypt 2014, UNICEF 2015; IIEP 2018). The vast majority of grade 4 teachers (85%) and grade 8 teachers (77%) report that student absence is a major constraint to instruction (PIRLS, 2016; TIMSS, 2019).

1.8.3 Student Learning Performance and Experience

Overcrowded classrooms and schools operating shifts jeopardize the quality of education provision.

Many schools at different education levels operate shifts (See figure 9) which reduce students' instructional days as schools compared to full-day schools, thereby reducing learning opportunities and instructional time for students in shift schools. Currently, just over half of public general secondary schools run a full-day schedule (52%), while only 27% of technical secondary schools do. . This translates into a loss of instructional time of at least one hour per day for students in schools that operate shifts, roughly equivalent to 190 fewer hours annually (or 40% of a full-day schedule), which constitutes a major reduction in learning opportunities. This situation is related to the lack of schools and classrooms infrastructure that are below what is required and necessitates additional financial and operational investment in education.

Figure 11. Shares of public schools operating full day and shifts 2020/21



Source: Calculations based on EMIS data.

The intended annual teaching hours for each education level are already at the lower end in international comparison.

The intended annual teaching hours for Egypt is 612 for assistant teachers/teachers and 459 for expert teachers at the primary level compared to the OECD average of 772 hours. No data exists on how teachers use their time in the classroom or how many productive teaching/learning hours they offer to their students. This constitutes a major gap to understanding the effectiveness of teaching practices and how much time is spent on task.

Figure 12. Intended annual teaching hours by education level and teacher seniority.

	Primary		Preparatory		General secondary	
	Assistant teacher/teachers	Expert teacher	Assistant teacher/teachers	Expert teacher	Assistant teacher/teachers	Expert teacher
Egypt: sessions taught per week	24	18	21	17	18	16
Egypt: hours taught per week	18	14	16	13	14	12
Egypt: annual teaching hours	612	459	536	434	459	408
OECD (average) [min and max]	772 (554 to1,176)		704 (475 to 1,254)		671 (456 to 1,254)	

Source: UNESCO-IEB 2011 (sessions); ESA team calculations. *Note:* There are six workdays per week.

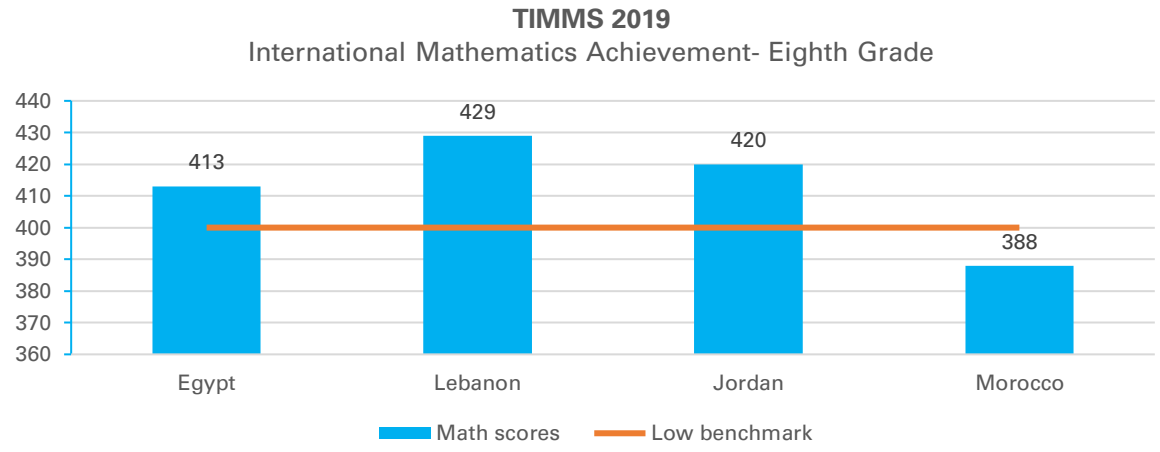
Note: Based on 34 school weeks per year, sessions length 45 minutes.

Most students in the public education system do not reach the expected levels of learning achievement.

Egypt ranked 49 out of 50 countries on the 2016 Progress in International Reading Study (PIRLS).[7] A majority of grade 4 students (69%) did not even reach the low benchmark for reading on PIRLS and 19% only reached the low benchmark, whilst no one reached the advanced benchmark, severely limiting their ability to learn other subjects. Also, in the 2019 Trends in International Mathematics and Science Study (TIMSS) Egypt ranked 34th among 39 countries, on maths and 37th on science.[8] Students below the low benchmark have not acquired the foundational skills to read to learn other subjects, presenting one of the biggest challenges in the education system.

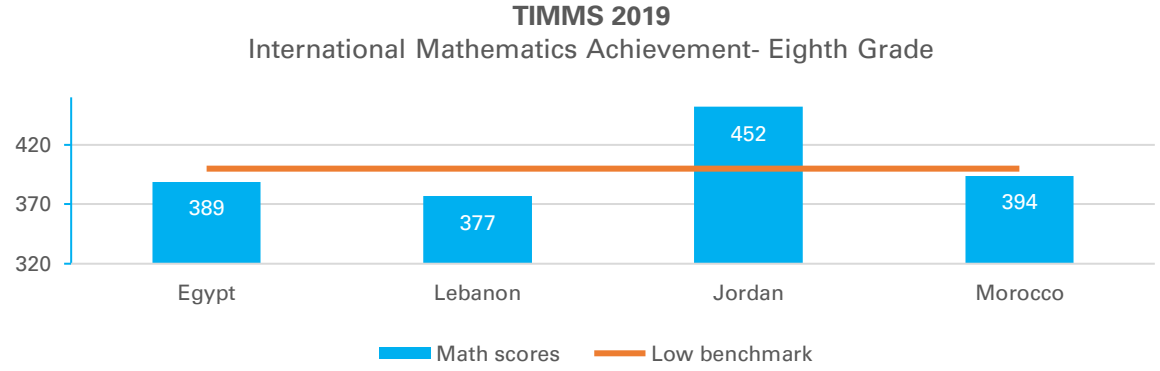
[7] The Progress in International Reading Literacy Study (PIRLS) is an international assessment and research project designed to measure reading achievement at the fourth-grade level, as well as school and teacher practices related to instruction in 70 participating countries. See also 'TIMMS' below.
[8] Launched in 1995, the Trends in International Mathematics and Science Study (TIMSS) is an international assessment system which monitors trends in mathematics and science achievement every four years, at the fourth and eighth grades in 70 countries.

Figure 13. Grade 8 students by TIMSS mathematics achievement comparison, 2019 (%)



Source: TIMSS 2019 data.

Figure 14. Grade 8 students by TIMSS science achievement comparison, 2019 (%)



Source: TIMSS 2019 data.

Egypt's challenges in learning achievement foundational learning during the early years of children. Attending high-quality, developmentally appropriate kindergarten programmes is strongly tied to more advanced school readiness, strong social and emotional skills, physical health and development, and the development of positive approaches to learning. For most students, entry into the system begins at the primary level, which limits robust foundational learning. Similarly, teachers report that students lacking prerequisite knowledge and skills to prepare them for schooling is one of the significant impediments to teaching and hinders effective instruction. 95% of teachers at the preparatory level cite this challenge, which strongly suggests that primary school does not adequately prepare students for their subsequent preparatory studies. Successful reform at the kindergarten and primary levels will likely complement the reform currently underway in national assessments and secondary education by effectively improving learning quality and outcomes in the early grades.

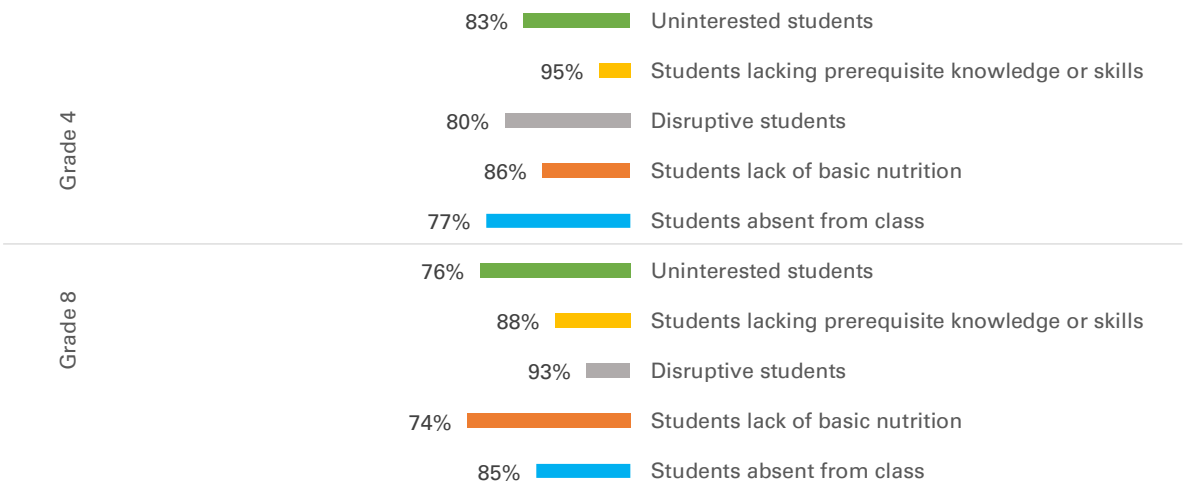
Private tutoring disrupts social equity and increases learning costs for households.

Private tutoring is prevalent, and the educa
stakes exams (grade 9 and grade 12) is the major driver. In primary, preparatory, and general secondary education, most students receive private tutoring from their regular schoolteacher. In 2018, 81% of students in public general secondary schools received private tutoring, 64% of those in preparatory education, 56% of those in primary education, and 28% of those attending public technical secondary schools. High costs of tutoring and private education to prepare for high-stakes exams re-enforce the poverty-marginalization/disability cycle whereby those who are most marginalized are further disadvantaged in access to additional learning. This exacerbates their already reduced chances of making progress through the education system, leading to low-income work and continued poverty.

Student disruption, nutrition and interest impeded the effectiveness of school instruction.

The reasons affecting schools' instructional capacity to
identified by PIRLS and TIMMS are multiple, with disruptive students identified as a prime cause at grade 4 level, and student lack of prerequisite knowledge or skills at grade 8 level, highlighting the importance of prioritizing foundational learning in the early years to ensure a solid basis for academic success later on. Lack of basic nutrition is also cited as a significant factor (74% at grade 4 level; 86% at grade 8 level), indicating that school meals may have a key role to play in improving learning outcomes. Student 'lack of interest' need for improved pedagogy and more relevant content in order to sustain student attendance and motivation.

Figure 15. Main constraints to school's capacity to provide instruction.



Source: Weighted estimates based on PIRLS 2016 and TIMSS 2019 data.

1.8.4 Teacher Recruitment, Pedagogies, Curriculum and Teacher Capacity

Quality of instruction is one of the main determinants of learning experiences and outcomes, influenced by both teachers and school leadership. Therefore, a major element of Education 2.0 is the transformation of professional development for teachers, school leaders and supervisors to increase motivation and professionalism. Since May 2020, MoETE has been working with the support of the USAID-funded Teach for Tomorrow project and the World Bank to develop a Comprehensive Professional Development (CPD) framework for teachers. The final framework will contain professional standards for teachers, initial training, induction and in-service training. Currently, the project is active in six governorates but the standards, when final, will be applied nationwide. The project currently works on in-service training to improve teaching practices through blended learning (80% virtual, 20% face-to-face) and on teacher licensure. For the latter, the goal is that only teachers who meet the new standards will be licensed, and only those who are licensed will be recruited.

Planned reforms to increase motivation, professionalism and performance include:

- Development of a Comprehensive Professional Development (CPD) for school leaders and supervisors.
- Establishment of a teacher reward and promotion system based on performance.

The education sector employs just under 1 million teachers, of whom more than 40 percent are at the primary level. Non-teaching staff, which includes school management, supervisors and maintenance crews, add a further 500 thousand employees to the system. Since the civil servant hiring freeze MoETE is essentially only able to hire contract teachers. Teacher hiring is not keeping pace with enrolment growth, and the scarcity of teachers in some specializations and their inadequate distribution—especially in scientific subjects—diminish the quality of learning.

In addition, there are disparities in the distribution of schools and training centres according to geographical and industrial requirements. Decrease in the number of teachers relative to the number of students and the absence of distribution standards, as the educational system suffers from deficiencies in teachers among different governorates according to specialization, affects the quality and equity of education. One of the main factors constraining instruction is a shortage of teachers with required specializations according to head teachers (33% at the primary level and 27-30% at the preparatory level).

Main constraints faced by teachers on the job include not having enough time to support struggling students or to cover the curriculum.

The majority of grade 8 maths and science teachers consider a lack of time to assist individual students (90%). Too much material to cover (82%) and large class sizes (74%) are the main constraints on the job. This may be related to an overloaded curriculum given the instructional hours, especially in schools that operate shifts.

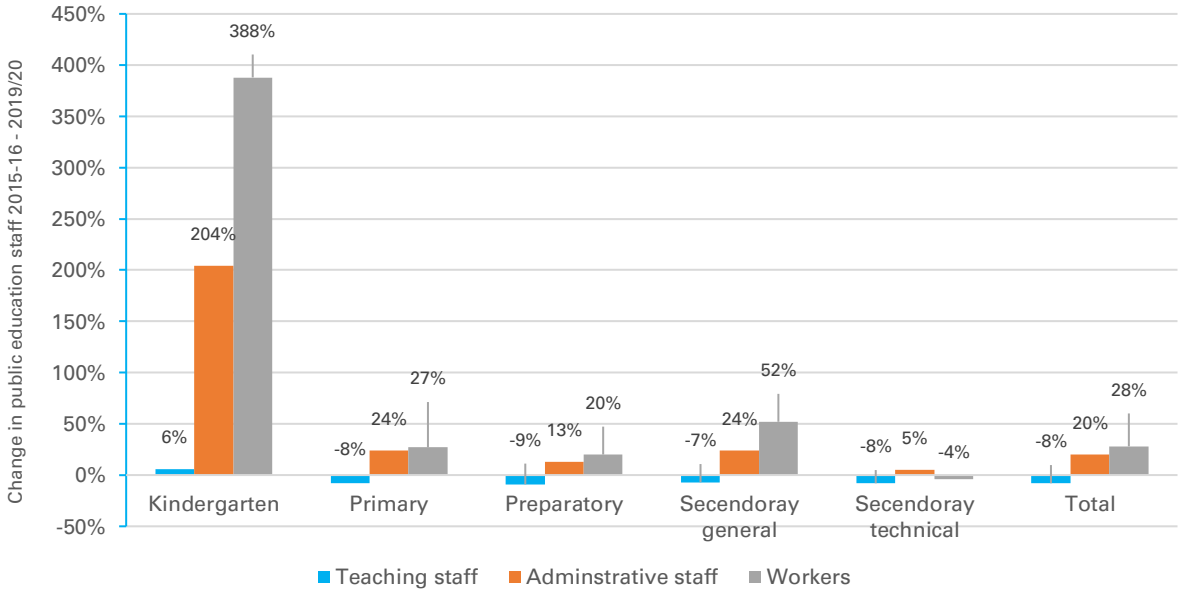
Despite the government efforts, in-service continuous professional development of teachers is yet to be fully integrated into the teacher development system.

Continuous and practical in-service training with follow-up is essential to help teachers improve their practices. However, the education sector analysis found that such opportunities are limited. This is currently not integrated into the teacher development system and trainings are conducted through projects. This can be a bottleneck in the major transformation process of the education system and is a key plank in *Education 2.0*.

The teaching to non-teaching staff ratio is alarming.

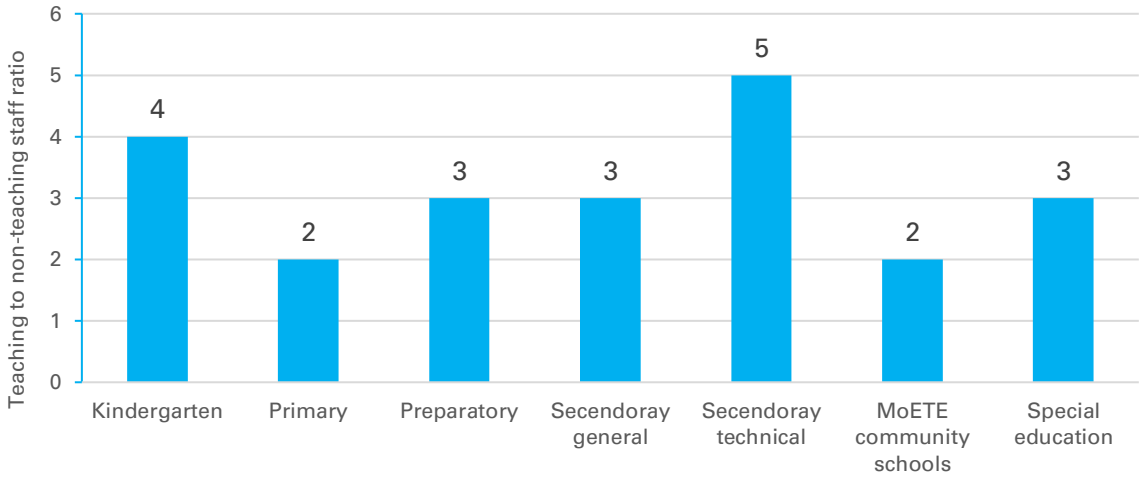
The number of non-teaching staff has risen while the number of teachers has declined. During the last five years, overall, the number of administrative staff increased by 20% and the number of workers by 28% whereas the number of teachers declined by 8%. Increased public spending on additional administrative staff and workers while teacher numbers are stagnating, and enrolment is a rising point to inefficiencies in the system.

Figure 16. Change in public education workforce by staff type 2015/16 - 2019/20



Source: Calculations based on EMIS data. *Note*: Includes civil servant teachers and contract teachers hired at the national level.

Figure 17. Public education workforce by staff category & teaching to non-teaching staff ratios 2019/20



Source: Calculations based on EMIS data. *Note*: Includes civil servant teachers and contract teachers hired at the national level

Teacher absence from school is a concern according to many head teachers.

Among primary school head teachers, 36% consider teacher absence a moderate or serious problem compared to 47% of head teachers at preparatory schools. Many head teachers also report problems with teachers arriving late and/or leaving early: 33% in primary schools and 48% in preparatory schools.

Limited capacity among teachers is hindering the use of ICT in schools.

While there have been significant improvements in ICT integration into the education system such as EKB, distribution of tablets, etc., the use of ICTs (Information and Communication Technology) in schools yet remains highly limited. The digital illiteracy of most teachers is one of the most important bottlenecks hindering the efficient integration of technology to facilitate the educational process and increase its competitiveness. The actual use of computers appears to be limited: 62% of grade 8 maths teachers and 47% of grade 8 science teachers never or rarely used a computer to support learning during their lessons. In 2019, only 36% of preparatory schools used an online learning management system to support learning while 67% provided access to digital books. Concerning students, among grade 8 students only 39% had access to computers during maths lessons and 58% during science lessons.

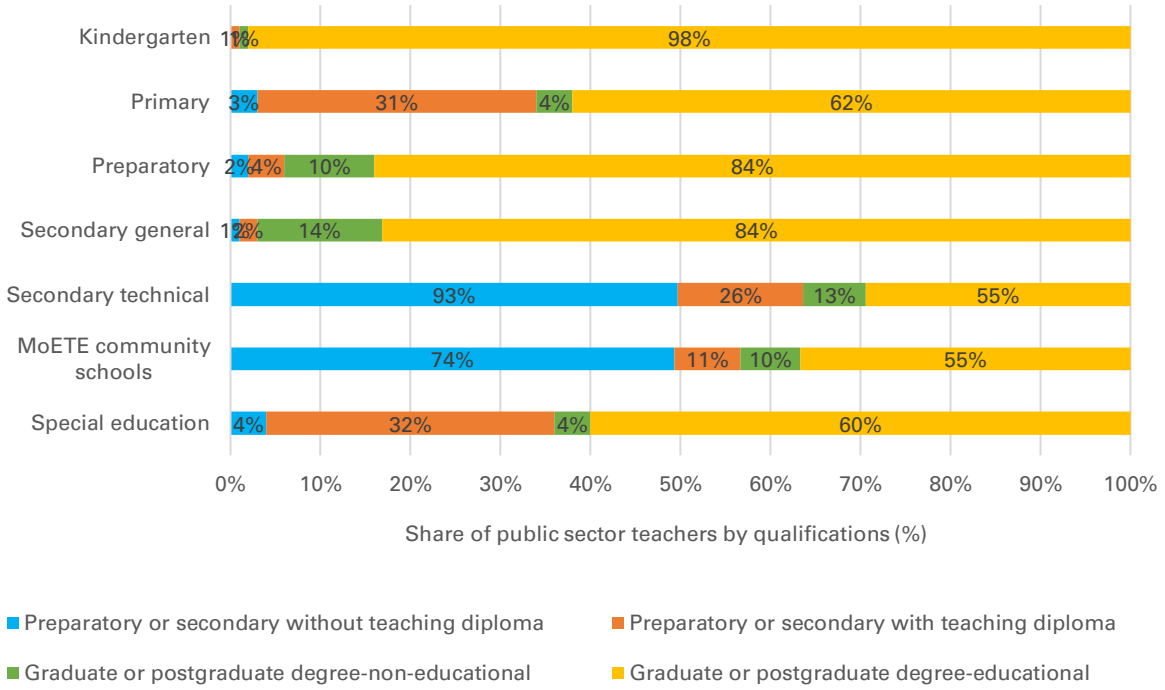
Many public sector teachers at each education level have a teaching diploma rather than an educational degree (MoETE, 2021).

Candidates to become teachers have two options. They can enter into one of the four faculties of education for a Bachelor of Education: education which teaches subjects such as Arabic, English, history, geography, maths and sciences; specific education to allow teachers to qualify in the activities branches to teach subjects such as music and media technology; kindergarten; and special

education that trains teachers to work with children with special needs. Alternatively, teachers can complete a non-educational university degree and then proceed to study for a one-year educational diploma. Those with degrees in disciplines other than education are able to commence teaching in school and take the teaching diploma part time, or they can choose to take it before they apply for teaching jobs. Due to the costs associated with the course, applicants usually find a teaching position first and then complete the educational diploma, meaning they will initially teach without having pedagogical training.

Kindergarten teachers are the most highly qualified: 98% have a university (graduate or post-graduate) educational qualification compared to 62% of primary school teachers amongst whom 31% instead have a teaching diploma (Figure 17). Among preparatory and secondary general teachers, 84% have a university educational qualification while 4% and 2% respectively have a preparatory or secondary certificate combined with a teaching diploma. However, there are also groups of teachers that do not have any educational qualification. This group is largest for MoETE community schools (34%) where students are likely to require the most academic support, followed by technical secondary (19%), general secondary (15%), preparatory (12%) and primary (7%). Whilst technical education teachers may be employed with a technical diploma, the large majority in agricultural, commercial and hospitality technical schools are university graduates. This would suggest that they have had little or no technical education, let alone technical workplace-based experience which will influence the relevance and quality of the instruction they provide.

Figure 18. Public sector teachers by qualification and education level 2020/2021



Source: Calculations based on EMIS data. *Note*: Includes civil servant teachers and contract teachers hired at national level

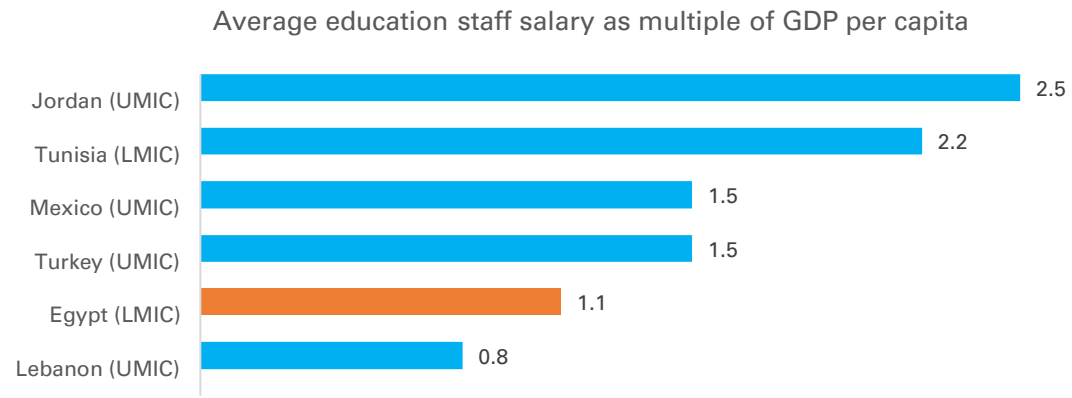
Except for the secondary level, a majority of public sector teachers are female.

The shares of female teachers are extremely high for kindergarten (100%) and MoETE community schools (97%), and high for primary (62%) and special education schools (61%) (MoETE, 2021). The female share declines gradually for the higher levels to 54% at preparatory, 49% at technical secondary and 43% at general secondary levels. This pattern is largely mirrored for head teachers except for at primary level where 39% of head teachers are females, special education schools 41% and secondary technical schools 33%. At technical secondary level, females represent a majority of teachers in the commercial (61%) and hospitality (60%) schools whereas for agricultural and industrial schools the majority are male (60% and 54% respectively).

The average teacher salary in Egypt is low in international comparison which negatively affects teachers' job satisfactio

The average teacher salary as a multiple of GDP per capita for Egypt is estimated at 1.1. This is substantially lower than other countries in the region, such as Jordan, where the average teacher wage is 2.5 times the GDP per capita, Tunisia (2.2), and Mexico (1.5) and Turkey (1. 5).

Figure 19. International comparison of teacher salaries as a multiple of GDP per capita



Source: MoETE 2020 (Egypt), OECD 2015 (Mexico, Turkey), World Bank 2017 (Lebanon), World Bank 2016 (Jordan), World Bank 2020 (Tunisia).

Lastly, there are major data gaps for teacher management and development. For example, essential data on teachers' subject knowledge, observed teaching practices, absenteeism, productive teaching/learning hours, teacher development needs assessment, and teachers' work environment is currently not collected. The lack of essential data on these issues severely limits the scope for evidence-based planning, identifying teacher development needs to target in-service training and designing programmes to raise teacher performance.

1.8.5 Learning Assessment

As part of the comprehensive assessment reform, the National Centre for Examinations and Educational Evaluation (NCEEE) has been restructured and staff has received training to strengthen exam construction. A national computer-based item bank has been created and item writers have been trained on new ways to develop tests in line with the new curriculum. Tests in eight subjects for grades 10 and 11 were developed by MoETE, with financial support from the World Bank, using the item test bank. They include a combination of multiple choice and open-ended questions. These computer-based tests were then administered nationally to more than 1.2 million students at their homes in April-May 2020. Tests will also be developed for grade 12. The computer-based tests are expected to be administered to grades 10,11 and 12 students in 2023.

Heavy reliance on summative assessment and high-stake public examinations strongly affects teaching and learning practices.

Since no regular, standardized national learning assessment existed until 2021, the education system had to rely on exam results to monitor learning achievement. The large discrepancy between the final grade 9 exam results (99% of candidates pass) and the international learning assessment TIMSS results (less than 30% of grade 8 students reach even the intermediate benchmarks) suggests that the standards of the two are very different. However, in December 2021, to monitor early grade learning MoETE introduced a sample-based national

learning assessment for grade 4 students, the first ever of its kind, financed by the World Bank under the Supporting Egypt Education Reform Project. The development of the assessment framework began in 2020 and the first assessment round was conducted in December 2021 and repeated in April 2022.

1.8.6 External Efficiency/Relevance

The transition from education to work is weak, resulting in high unemployment and under-employment among the youth, especially women.

Young people in Egypt face considerable barriers when making the transitions from school to work. Structural difficulties within the economy, including the contraction of professional jobs, contribute to high levels of youth unemployment and precarious employment (ILO, 2019). In 2018, nearly 60% of young individuals aged 15 to 29 were not enrolled in any type of education, employment, or training (NEET), with women making up the majority with a rate of 59% compared to a rate of 19% for young men (4.9 million females and 1.6 million males). With approximately 700,000 labour market entrants each year, the economy needs create hundreds of thousands of new jobs annually. However, job growth is only evident in trade and sales sectors (ILO, 2018). Further, cuts in public sector spending have contributed to the loss of high-quality jobs, with the share of professional and technical jobs contracting. Given the predominance of low-skilled, informal, and precarious jobs in the Egyptian labour market, there are limits to the extent to which the education sector can match opportunities within the current labour market.

Young people with a basic or no education have the lowest unemployment rates (7-8%) and young people with a post-secondary education who are in the labour force have the highest rates of unemployment (28%).

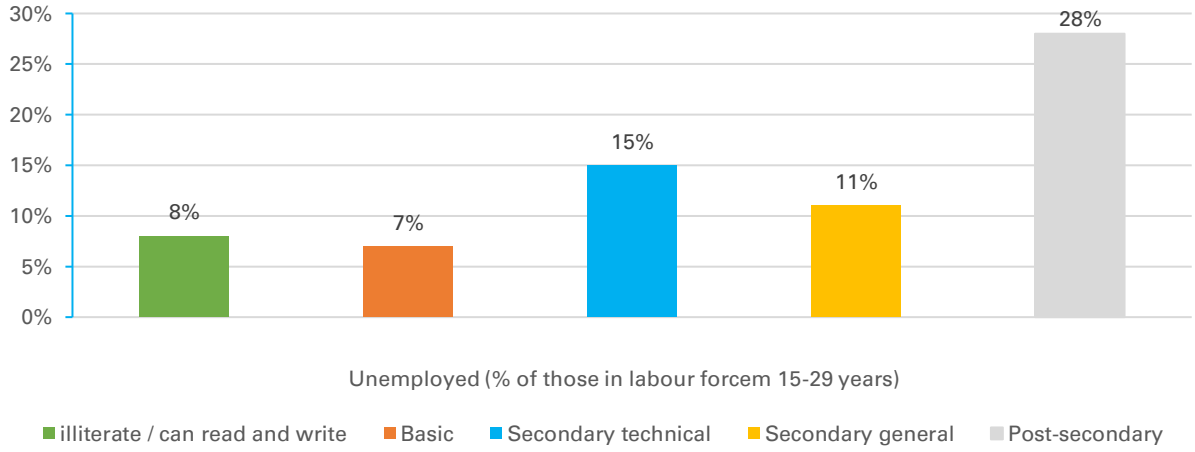
Completion of a secondary technical education does not appear to confer any advantage over having very little or no education. Among those with a secondary technical certificate, 52% are in a skilled profession compared to 61% of those with a basic or no education while 42% are in low or unskilled professions compared to 36% of their less educated peers. Challenges within the labour market, and within the education system, are reflected in the mismatch between educational attainment and occupation. For young people with a post-secondary qualification that have accepted a job, 48% are in a managerial, professional or technical post whilst 45% are in skilled worker positions for which they may be overqualified. Graduates of secondary technical education are not well represented in occupations that a technical education is intended to prepare them for.

Participation of young people in the labour force is similar by location and by region but there are some disparities in unemployment rates. Unemployment rates are higher for young people in urban areas (19%) than for their peers in rural areas (14%) and are higher in Lower Egypt (16%) compared to Upper Egypt

(14%). After completing school, female labour force participation is extremely low at 14% compared to 54% for young males, and for young females who want to work, unemployment rates are high. When women do go out to work, they are largely confined to limited occupations and sectors. Further, women often work in lower-paid and lower-quality positions (World Bank, 2018). For example, in 2017, women's share of employment in positions was estimated at manager just over 6%. Combined with prevailing norms of the role of women within the household, females may become under increasing pressures to drop out of the labour market, especially when they fail to achieve a work-life balance.

Transitions into work are primarily mediated by informal social networks, making connections more important than skills. Young people without the social networks that provide access to good jobs are therefore less likely to be able to access professional opportunities than their peers, even if they have the same qualification from the same institution.

Figure 20. Unemployment by educational attainment 2018



Source: Weighted estimates based on ELMP 2018.

1.9 Equity and Inclusion

The concept of equity in education is consistent with the non-discrimination principle which is embedded in the international legal frameworks supporting education which Egypt has committed to. Article 26 of the Universal Declaration of Human Rights (UN, 1948), Article 13 of the UN Covenant on Economic, Social and Cultural Rights (1966), and Article 28 of the Convention on the Rights of the Child (UN, 1989), the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW, UN, 1979) and the Convention on the Rights of Persons with Disabilities (UN, 2008) all enshrine the right to free and compulsory primary and progressively secondary and higher levels of education without discrimination. The non-discrimination and equality of educational opportunities principles, articulated in t

Discrimination in Education (1960), which Egypt acceded to in 1962, ensure that these rights are applicable to all children.

In accordance with the international legal frameworks and guiding documents, Egypt has mobilized commendable efforts to ensure equity and inclusion in the education system and underlined its commitment to promote inclusion and foster equity in the national development plan. The new education reform plan, *Education 2.0*. The Sustainable Development Strategy, Egypt *Vision 2030*, in its second strategic objective 'integration', stresses the need to 'provide social protection for the neediest populations, at the forefront of which are the people with disabilities'. *Vision 2030* has also articulated, Egypt set of goals and mechanisms that aim to ensure the accessibility to adequate accommodations and adaptations in an enabling environment that enhance their inclusion in the different levels of education. Also, inclusion of children with disabilities in public education system is a priority under *Education 2.0*. Early achievements include a nationwide campaign for inclusion in 2018 "Differently Abled "to challenge the negative stereotypes associated with students with disabilities, as well as a campaign to include these students in mainstream and special education schools.

Establishment of an integrated social protection system and increased and improved access to quality and competitive education. The *Takaful and Karama* conditional and unconditional cash transfer programmes are aimed at promoting social inclusion through the integration of the most vulnerable populations and neediest households, along with the realiz education rights. Delivery of financial assistance and social subsidies to students of basic education who are unable to meet education fees and linking cash and in-species incentives to the enrolment of children from poor households and for students with disabilities are existing and critical to provide basic education for all social classes.

Access to inclusive quality education for students with disabilities has been increased and the number of students with disabilities who are integrated into inclusive schools has constantly grown to 108,224 students accommodated in 19,005 schools nationwide as of the academic year 2020/ 2021, compared to 17,229 students in the academic year 2016/ 2017. Ministerial decree No. (252) of 2017 mandates all schools to provide access to inclusive education to enable the enrolment of children with disabilities in schools. The MoE T E 's subject matter experts worked closely with the Centre for Curriculum and Instructional Materials Development (CCIMD) to develop special education curricula encompassing specially designed instruction as well as educational and related services for students identifying as having a disability. Mainstream curricula have been adapted to meet the needs of children with disabilities.

Despite the praiseworthy initiatives and implemented policies by the education stakeholders to ensure equity and inclusion in the education system, there remain critically important challenges to be addressed, as outlined in the following subsections.

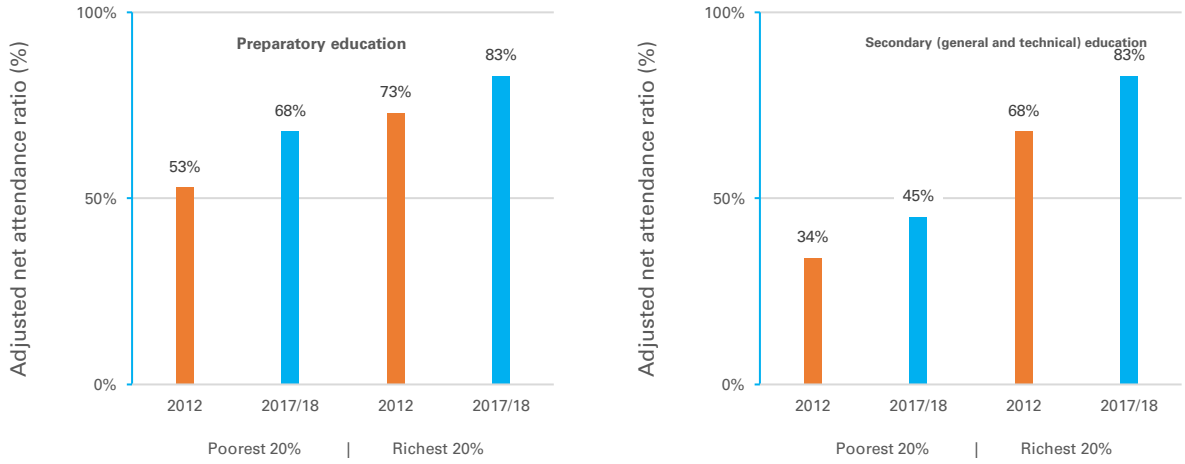
1.9.1 Disparities Linked to Socioeconomic Background

There are large learning disparities between poorer and richer students.

As depicted in the previous sections, access to kindergartens is limited to the few who can afford attending programmes at a for-fee private provider or are able to secure one of the few public spaces available. In addition to the financial barriers to entry, parental knowledge on the impact of Early Childhood Education (ECE) on foundational and lifelong learning subdues demand. Since attending kindergarten confers a real advantage, with students who do so being twice as likely to reach the minimum standard for literacy at grade 4 level, divergent trajectories between advantaged and disadvantaged children emerge during the early childhood period and intensify over time. The available evidence suggests that there are large disparities in Egypt in terms of how well-prepared children are to learn when they start school. Young children in rural areas are much less likely to attend kindergarten than their urban peers, as are children from poorer families compared to those from richer families. These disparities in how well students from different groups are equipped to succeed at the start of their schooling career would be a main reason to expand kindergarten access.

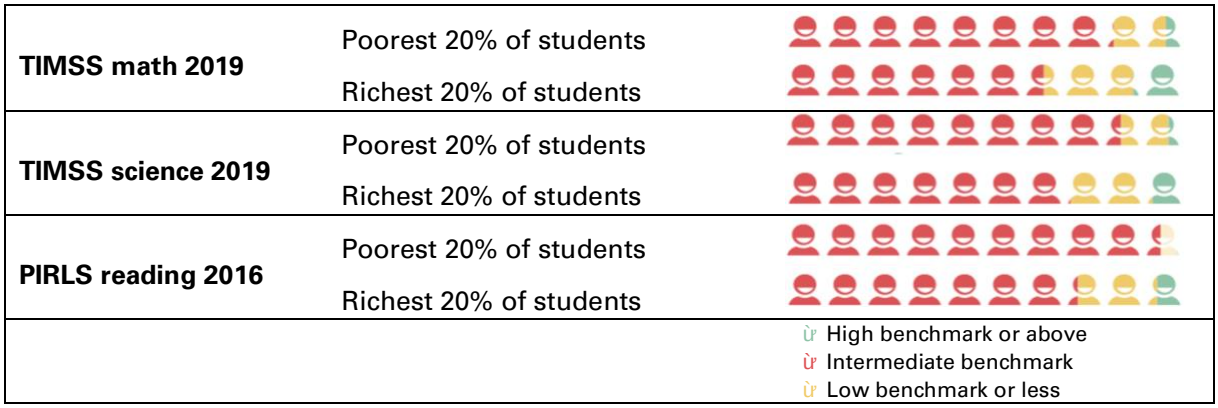
Children from the poorest households have lower enrolment rates than those from the richest households in preparatory level (68% compared to 83%) and secondary education (45% and 83% respectively) (MoETE, 2021). At the primary level, the main reasons for girls dropping out of school are poverty (33%) and poor performance/no interest in continuing (33%). Those from the poorest households are also much more likely to have completed secondary technical education than those from the richest households (38% compared to 22%), which reflects the selection process for secondary education through the grade 9 exam, and the perceived lower status of technical education. Individuals who are among the poorest 20% of households are five times as likely to have less than a primary education than those from the richest 20% of households (26% and 5%).

Figure 21. Preparatory and secondary adjusted net attendance rate (ANAR) for poorest and richest children (all providers) 2012 and 2017



Source: Calculations based on EMIS and UN population data; weighted estimates based on HIECS 2012, 2017/18 data. *Note*: ANAR = enrolment of the official age group for a given level of education either at that level or the levels above.

Figure 22. Grade 8 math's and science performance by background 2019 (%)



Source: Weighted estimates based on PIRLS 2016 and TIMSS 2019 data.

Students from the richest households are more likely to be able to afford tutoring and private education, which increases their chances to enrol in general secondary education. The largest disparity by far is for youth from the poorest 20% of households, among whom 36% are out of school while only 7% of those from the richest households are.

Household poverty and long commuting time to school cause education inequities.

Students being hungry and tired also limits their ability to learn. A large group of students arrive at school hungry every or almost every day, around 40% both of grade 4 and grade 8 students (MoETE, 2021). Many grade 4 and grade 8 teachers report that students' lack of basic

to their learning (74% and 86% respectively) (MoETE, 2021). Tiredness is also quite common, about 17% of grade 4 students and 27% of grade 8 students are frequently or always tired upon their arrival at school (MoETE, 2021). To help address the widespread problem of hunger among school-age children, the Government with the support of the World Food Programme, operates a National School Meals programme that covers up to 12 million school children annually (WFP, 2018). Despite of the existing programme, many children arrive hungry at school.

While the NER for primary education is high, student attrition in Egypt represents a critical problem, as it indicates the inability of a school to retain students until they complete an education cycle or mandatory education.

This has a long-term negative impact on both the individual and society. It was estimated that in 2017/18 7% of the 6-17-year-olds were out of school. This translates into 1.5 million out-of-school children (MoETE, 2021). The out-of-school rate was lower for children of primary and preparatory school age (4%) than for secondary school-aged youth (15%). Reasons for the notably lower transition rate to secondary level will depend on some combination of factors, including not being able to afford to continue; early marriage (for girls) or child labour (particularly for boys); and under-supply of secondary education in some areas. In Egypt, the out of school indicator has a close relationship with another nationally important indication; namely child labour. Despite Egypt made moderate advancement in efforts to eliminate the worst forms of child labour, child labour remains as a challenging phenomenon and poses a major threat to full enjoyment of right to education for the young generation. According to the latest ILO/ Central Agency for Public Mobilization and Statistics (CAPMAS) National Child Labour Survey (2018) indicates that 1.8 million children are working children and 1.6 million among 1.8 million children engaged in hazardous or unlawful forms of work.

Figure 23. Trend in estimated number and share of out-of-school children by age group

	Age group	2012	2015	2017/18
Estimated share of OOSC	6-14 years	7%	6%	4%
	15-17 years	19%	17%	15%
Estimated number of OOSC	6-14 years	1,040,000	1,040,000	680,000
	15-17 years	940,000	840,000	790,000

Source: Calculations based on OAMDI 2014, 2017, 2020, and UN Populations data. *Note:* The estimates are obtained by applying the estimated share of out-of-school children for each age group from HIECS to the corresponding population in that age group from the UN Population Division.

Since most children in Egypt access primary school, the group who never attended school is very small and those who are out-of-school are essentially youth who have dropped out. A total of 150,000 drop out of school in one year, including 28,000 dropouts from primary education and 121,000 dropouts from

preparatory education. Many children still drop out before completing preparatory education. The likelihood of accessing the preparatory level was 96% and of completion 89% while the access to and completion of secondary education were 86% and 76% respectively. Also, relatively large shares of students enrolled in preparatory education are overage, driven mostly by grade repetition.

Several different groups of youth are more likely to be out-of-school in the age group 15-17 years. About 18% of females are out of school compared to 13% of males, and 18% of those living in rural areas compared to 12% in urban areas. There are also disparities across the four regions. Youth in Upper Egypt are most likely to be out of school (21%) followed in turn by those living in frontier governorates (17%), urban governorates (15%) and Lower Egypt (11%). Further, youth with a disability are on average twice as likely to be out-of-school as those with no disability (30% and 15% respectively). However, the largest disparity by far is for youth from the poorest 20% of households among whom 36% are out of school while only 7% of those from the richest households are.

While Egypt is signatory to the New York Declaration for Refugees and Migrants, non-Egyptian student access to public education is currently limited to a small number of nationalities, and informal educa accredited by the MoETE.

Public education is available only to Sudanese, South Sudanese, Yemeni and Syrian migrants on an equal footing with Egyptians, and the government currently is in the process of mainstreaming other non-Egyptian nationalities as well. Meanwhile, non-Egyptian students from other nationalities depend on informal education institutions, due to the lack of access to public education. Most students from these groups attend non-Egyptian community schools, which are outside the formal education system and deliver certificates that are not accredited by the MoETE (UNHCR Egypt, 2022). These community schools offer the national curricula from their countries of origin.

1.9.2 Gender-related disparities

Female students also face disadvantages in accessing and completing education, due to cultural norms.

On the surface, there is almost no gender gap in education enrolment in Egypt, with a primary education Gender Parity Index (GPI) of 1.01, a preparatory GPI of 0.99and a secondary GPI of 0.98 in 2021((MoETE, 2021). However, this may be masking the barriers faced by girls. When girls drop out at the secondary school level, it is mainly due to marriage (33% amongst those who drop out at the preparatory level and 53% amongst those who drop-out at the secondary level) (MoETE, 2021). Although national legislation sets the minimum age of marriage at 18 years, there is no legislation to criminalize child marriage, and early marriage is one of the main reasons girls drop-out from school. In 2017, early

marriage was more than three times as common for girls in rural areas compared to urban areas, 11% of ever-married girls between the age of 15-19 were married before the legal age of 18. The longer females stay in school, the less likely they are to marry early. In 2017/18, a woman who completed primary or preparatory schooling was almost three times less likely to have married before age 16 compared to a woman who was illiterate or could only read and write.

Child marriage negatively impacts girls' h prospects, with increased risks of complications in childbirth and domestic violence, as well as worse health and education outcomes for their children, making it a cost for society as well as for the individual girls themselves. Social norms which negatively view married women taking paid work also lead to low economic participation of women, a loss of untapped human capital potential and a further drag on national development.

Figure 24. Reasons for drop-out by education level and gender 2017/18

		Reported reasons for dropping out of school (15-29 years, %)				
		Poverty	Poor performance/ no interest	Working	Marriage	Other
Female	Primary	33%	33%	2%	7%	25%
	Preparatory	16%	26%	1%	33%	25%
	Secondary general	22%	12%	4%	53%	9%
Male	Primary	26%	47%	17%	0%	10%
	Preparatory	27%	38%	22%	0%	13%
	Secondary general	9%	37%	35%	0%	19%

Source: Weighted logit estimates based on HIECS 2017/18 data.

Note: 1) Estimates for secondary general level are indicative because of small sub-sample sizes. 2) Green=10-19.9%, Yellow=20-29.9%, Red=30% or higher. 3) Other includes chores, customs, disability, and death in the family.

Female students are overrepresented in general and underrepresented in technical secondary schools, performing on average better than male ones.

Within technical schools, females are over-represented in commercial programmes (58% of students) and very under-represented in agricultural programmes (14% of students). Furthermore, within programmes, females are concentrated in specific, gender-stereotypical occupational areas.

According to TIMSS 2019 data, there is a modest difference in gender with females, on average, being more likely to be able to read some words than males when starting primary school (73% and 67% respectively). Female students perform better on maths and science than male students at grade 8 level. Also, 29% of females in grade 8 reached the intermediate benchmark or higher for maths compared to 24% of males. For science the corresponding shares were

26% for female and 20% for male students. The difference in the shares of females and males reaching at least the intermediate benchmark was similar in 2007 for both maths and science. Girls' higher school performance, however, is not yet translating into higher economic participation prospects or political empowerment, representing a pool of untapped human potential.

1.9.3 Geographical Disparities

There are disparities in service provision based on location, with rural locations being usually under-served.

In Egypt, school access can be limited in certain regions and among specific populations. For example, in rural areas, such as Upper Egypt, families live in small, rural hamlets which are generally located far from central village primary schools. Parents, as a result, are often reluctant to allow their daughters to walk long distances to attend local village schools. Moreover, there is currently an undersupply of public secondary education in rural areas compared to urban areas. For example, 54% of general secondary, 56% of technical commercial, 67% of technical agricultural, 74% of technical industrial, and 89% of technical hospitality schools are in urban areas.

Young persons living in rural areas are almost twice as likely to not complete primary education.

Children in rural areas are almost twice as likely to not complete primary education than their peers in urban areas (15% and 8% respectively) (MoETE, 2021). In 2017, the GER for secondary education in rural and urban areas are 33% and 127%, respectively (MoETE, 2021). This strongly suggests that access to secondary education is heavily centred in urban areas, which may create inequities between children in urban and rural areas. Lower demand for secondary education is noted in rural areas, mainly due to higher poverty rates and social norms related to girls and women (MoETE, 2021). Poor girls, closely followed by poor boys, in rural areas are the most disadvantaged in terms of education access and completion.

Regional disparities continue to exist.

While at the primary school level there are few disparities based on geographical locations, students in Upper Egypt are less likely than those in Lower Egypt to complete preparatory and secondary education. The likelihood of completing preparatory education is 86% for students in the Frontier and Upper Egypt region compared to 92% in the Urban and Lower Egypt regions. Youth in Upper Egypt are most likely to be out of school (21%) followed in turn by those living in frontier governorates (17%), urban governorates (15%), and Lower Egypt (11%). Average class sizes are notably higher in some governorates indicating the need for targeted measures.

1.9.4 Children with Disabilities

Despite the progress made, the majority of children with disabilities remain unenrolled in school. Among youth, the groups most likely to be out-of-school are those with disabilities.

The 2017 Population Census indicated that 5% of children aged 5-17 years (1.3 million) have a disability (MoETE, 2021). The disability prevalence is largely similar for boys and girls as well as for children in rural and urban locations. Over the past year, participation in education for children with disabilities increased significantly, especially in inclusive settings. However, the majority of children and youth with disabilities are out of school of out-of-school children. Only around 12% of those in the age group 5-17 who have a disability are currently in school. An estimated 1.15 million children and youth with disabilities in the age group 5-17 are out of school compared to an estimated total of around 1.5 million out-of-school children. Data from UNESCO Institute of Statistics found that among the studied countries, Egypt showed the highest gap between 15 to 29-year-olds who have ever attended school for those with a disability (43%) against those without a disability (89%) (UIS, 2018). There is also a 28-percentage point gap in literacy rates for persons 15 years and older with a disability (38%) and those without a disability (66%), indicating that children with disabilities have lower access to basic education or have lower learning outcomes (MoETE, 2021). Youth with a disability are on average twice as likely to be out-of-school as those with no disability (30% and 15% respectively).

Unconducive learning environments prevent the inclusion of learners with disabilities in the education system.

Although there is limited data available on accessible infrastructure in schools, it has been reported that 900 resource rooms for children with disabilities are located within mainstream schools against a total of 48,426 primary, preparatory, and secondary schools in the country. In addition, the main challenges for children with disabilities are the perception and attitudes of teachers, the absence of regular in-service training to address the needs of students with disabilities, and limited incorporation of subjects concerning disability and inclusion in pre-service teacher training and the community towards inclusion. Due to a lack of knowledge and training of key stakeholders, the classroom can turn into an off-putting environment where the child's needs are protected. This can lead in some cases to the segregation of children with disability within the classroom. In regard to students with disabilities, the current education system does not offer flexible learning pathways and adapted assessments, and this becomes increasingly disadvantageous as students' progress through into secondary. There is little evidence of adaptations to assessment procedures to ensure the equitable assessment of learning.

Reliable data, especially on children with disabilities is limited, which poses a barrier to the efficient and effective delivery of services.

There is a lack of reliable data on children with disabilities, their educational situation, available approaches and services, the barriers they encounter in learning and participation, and their learning progress. This makes planning and programming of education for children with disabilities challenging.

1.10 Governance, System Management and Finance

Institutional development

MoETE is highly centralized and responsible for education policy making, curriculum development and content, provision of learning resources, hiring of staff for district-level Education Departments, and teacher reallocation, transfers, and training.

Limited school autonomy and the aforementioned historical approach to budgeting contribute to the deteriorating environment in public schools. Principals often suffer from slow responses to their maintenance requests as well as a lack of funds on the central level. Large-scale maintenance is the responsibility of the General Authority for Education Buildings (GAEB). Schools have limited autonomy as they receive financial allocations by line item which prevents principals from making allocation decisions based on needs.

Education 2.0, however, envisions a delivery system where the central MoETE has a strategic leadership role, and the wider delivery system, from sub-national officials to key agencies are responsible for the day-to-day implementation. To support the pre-existing education system and enhance effectiveness within the system, MoETE is establishing new agencies to drive quality improvements in education system management and quality assurance. New standards required for institutional accreditation will create significant demands on existing institutions and so the MoETE is also establishing a unit inside the Ministry.

Annual budgets are strongly influenced by actual spending over the previous three years and thus result in historical allocations that are primarily determined by staff numbers in directorates. This leaves the financing of the sector highly susceptible to inefficiency and inequity, as the number of students, learning outcomes and the advancement of specific education strategies are weakly factored into how much financing schools ultimately receive. The process excludes defined learning and school input metrics for allocating funds.

As reforming the sector-wide governance, the national education system is severely challenged by the necessity to acco age population and combined with an urgent need to raise the quality of education services. Increasing investment and creating an appropriate level of fiscal space to fund additional resource requirements for pre-university education is a necessity and the expected pressing demand generated by additional waves of the school-aged population. To meet this dual challenge

more efficient use of existing resources will not suffice, it will also be necessary to raise additional financing for the sector and simultaneously enhance the effectiveness of system management & governance.

Challenges of coordinating, monitoring, and directing activities compromise the education system's effectiveness.

The unavailability of a comprehensive system for data collection and inadequacies in evaluation, monitoring, and lack of integrated results-based monitoring & assessment within the educational sector obstructs effective sector-wide governance and responding to the needs of the education sector. The lack of detailed databases for the specific needs of the education sector affects adversely the decision-making processes and monitoring of learning outcomes which also obstructs the education system's effectiveness despite the presence of several departments for follow-up and assessment.

Reallocation of resources to support salaries and wages rather than services and commodities negatively affects the delivery of interventions aimed at improving the quality of education.

Out of the public spending on pre-university education, 84% of spending was allocated to recurrent costs in 2020/21, while the remaining 16% was allocated to development projects. Salaries for education staff (89%) continue to be the main component of recurrent spending on pre-university education although this is a decline from 93% in 2016/17. Such a large share of recurrent spending goes to salaries means that spending on materials and supplies is likely to be inadequate.

Low public investment in education impedes the expansion of the system and results in poor quality outcomes.

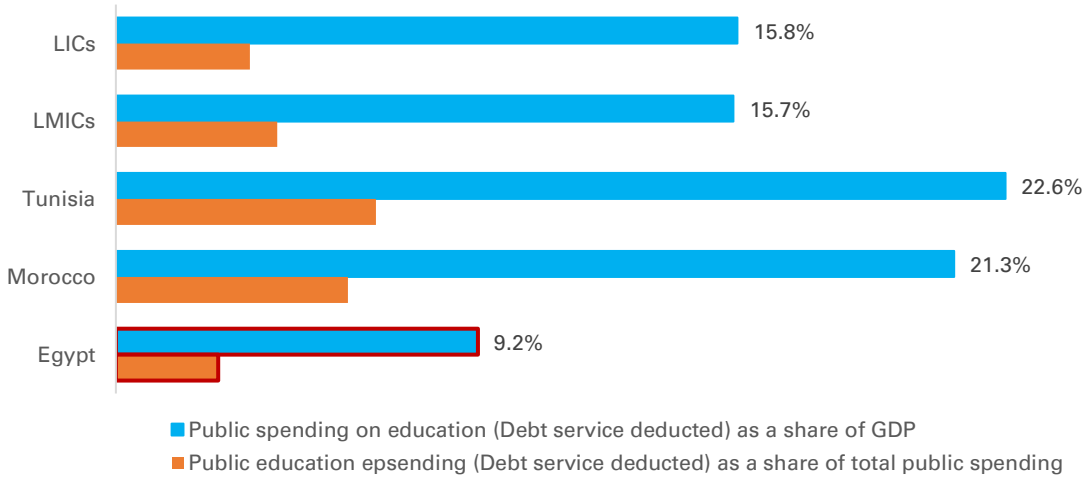
The budget continues to report a high deficit of 7% of GDP, primarily due to a shortfall in revenues. These developments have affected the level and structure of public spending on education which resulted in a decline as a share of GDP expenditure. Spending on education at all levels has significantly dropped, as a share of total public expenditure (debt service deducted), from 10.7% in 2016/17 to 9.2% in 2020/2021 (MoETE, 2021). This level of spending is considered low compared to the average spending reported in lower-middle income countries averaging 4.3 percent of GDP over the period 2010/11-2018/19. Under the Framework for Action for the implementation of Sustainable Development Goal 4 (FFA), the recommendation is to allocate 4-6% of GDP and at least 15-20% of the national budget to education. The current relatively low level of spending on education in Egypt is therefore considered insufficient to achieve the SDGs. 25

Egypt spends less on education than the average for lower-middle-income countries.

Over the period 2016/17 to 2020/21, after adjusting for inflation (real terms), budget allocations for pre-university education declined by 11%, despite the steady increase in enrolment over the same period (MoETE, 2021). Public

spending on pre-university education after adjusting for inflation is lower than five years ago despite large increases in enrolment. Moreover, when the functional budget is distributed, as a percentage of GDP, spending on the whole education sector, including higher education, was 2.6% of GDP in 2020/21. Comparing the share of education spending (pre-university and higher education) in GDP and in total public spending on the whole education sector, Egypt (2.6% and 9.2% respectively) spends much less than the averages for lower-middle-income countries (4.1% and 15.7%), Morocco (5.9% and 21.3%) and Tunisia (6.6% and 22.6%) (MoETE, 2021; World Bank 2021).

Figure 26. Public spending on education as a share of GDP and of total public spending in Egypt (pre-university functional) and global benchmarks

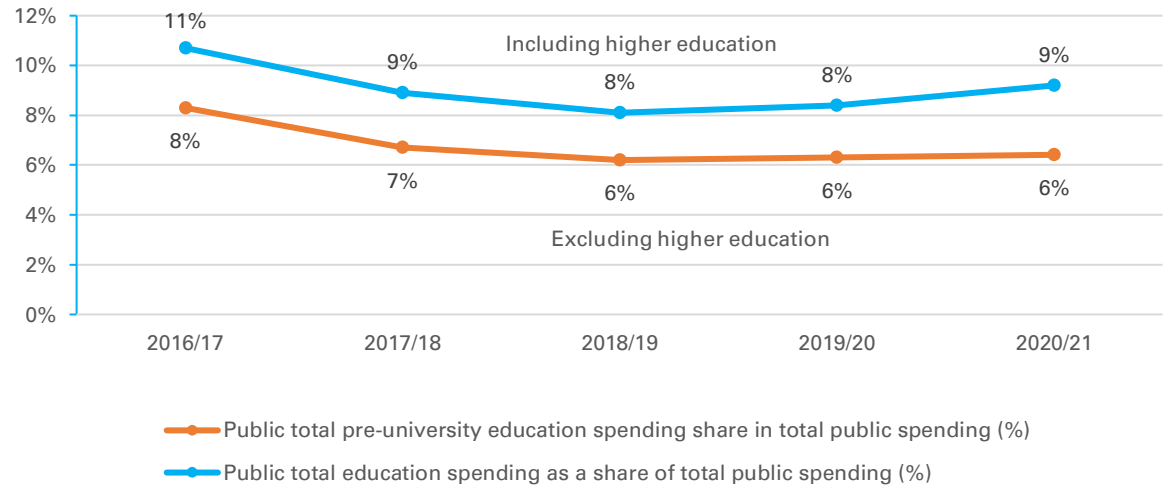


Source: IMF, 2016; World Bank, 2021; MoETE 2021.

The share of pre-university education in the total education budget has declined significantly compared to that of higher education.

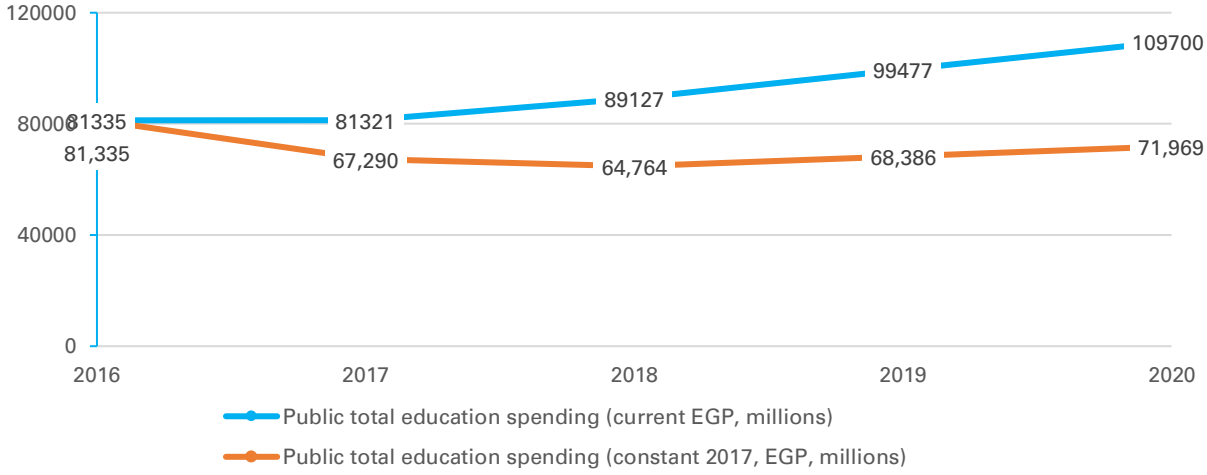
The total government budget allocation for education (all levels including higher education) reached EGP158 billion in 2020/21 (MoF, 2021). 70% of this spending went to pre-university education in 2020/21, however, this was significantly less than its share of 78% in 2016/17. This suggests that pre-university education is losing priority in terms of public spending compared to higher education.

Figure 27. Trend in budget allocations for education as share of total public spending



Source: MoF Analytical financial statement of the state budget laws for fiscal years 2016/17, 2017/18, 2018/19, 2019/20, and 2020/21; World Economic Outlook, April 2021.

Figure 28. Trend in budget allocations for pre-university education 2016/17-2020/21



Source: MoF Analytical financial statement of the state budget laws for the fiscal years 2016/17, 2017/18, 2018/19, 2019/20, and 2020/21.

The budget of pre-university education may need to be allocated more equitably across subsectors.

Primary and preparatory education levels attracted 44% percent and 25%, respectively, of public funds in 2019/20, followed by technical secondary education (13%) and general secondary education (12%), meaning a combined total of 25% for secondary education. Public spending on kindergarten only accounted for 4%, and on MoETE community schools for 1% and special education schools for another 1%. Between 2016/17 and 2017/18 overall nominal actual spending on pre-university education remained stable but increased substantially for kindergarten (125%) and MoETE community schools (186%) whereas all other levels except secondary hospitality schools and special

education schools experienced declines in spending. Since then, overall nominal actual spending has increased annually. In 2018/19, general secondary education saw the largest increase at 88% followed by preparatory education (13%) and primary education (7%), and in 2019/20 technical secondary schools and primary schools experienced the largest increases at 17% and 13% respectively.

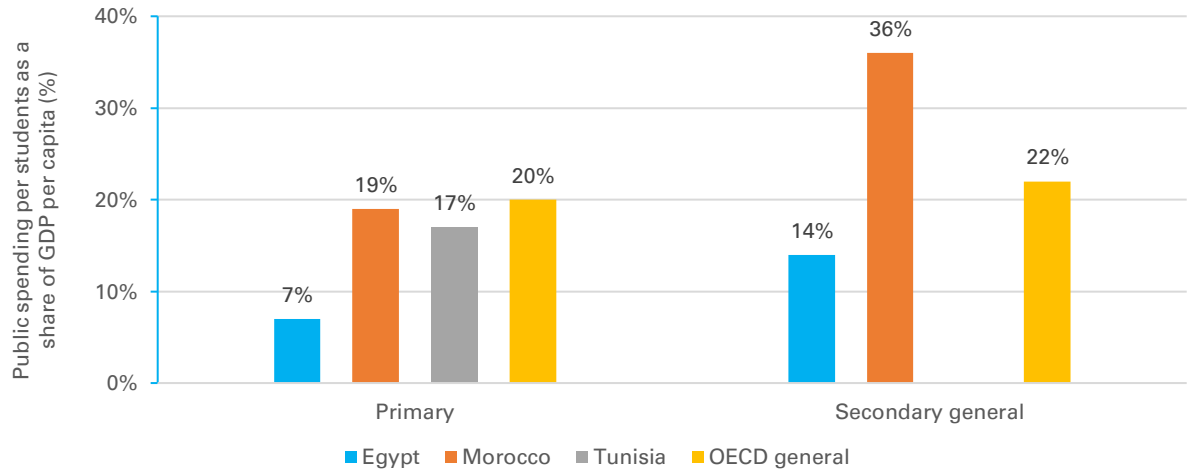
Figure 29. Trend in public spending by education level

	2016/2017	2017/2018	2018/2019	2019/2020	Memorandum item
	Public total education spending (Nominal 2018 EGP, millions)				
Kindergarten	2,999	6,734	3,422	4,224	
Primary	35,943	35,982	38,602	43,613	
Preparatory	21,171	19,687	22,191	24,457	
Secondary general	7,811	5,978	11,230	12,252	
Secondary technical agricultural	1,163	717	1,188	1,271	
Secondary technical commercial	3,072	2,866	3,167	3,409	
Secondary technical hospitality	176	200	201	235	
Secondary technical industrial	6,999	5,223	7,294	7,887	
MoETE community schools	877	2,508	933	1,035	
Special education	818	985	880	992	
Total	**81,028**	**80,879**	**89,107**	**99,374**	
	Public total education spending (Nominal 2018 EGP, millions)				**Public enrolment** 2019/20 (%)
Kindergarten	4%	8%	4%	4%	5%
Primary	44%	44%	44%	44%	55%
Preparatory	26%	24%	25%	25%	23%
Secondary general	10%	7%	13%	12%	8%
Secondary technical agricultural	1%	1%	1%	1%	1%
Secondary technical commercial	4%	4%	4%	3%	3%
Secondary technical hospitality	0.2%	0.2%	0.2%	0.2%	0.1%
Secondary technical industrial	9%	6%	8%	8%	4%
MoETE community schools	1.1%	3.1%	1%	1%	0.6%
Special education	1%	1.2%	1%	1%	0.2%
Total	**100%**	**100%**	**100%**	**100%**	**100%**

Per student spending on education has decreased and pushed households to spend significant amounts on children's education.

Low financial allocations to the education sector in terms of functional budget compared to international benchmarks, adversely affect the delivery of interventions aimed at improving the quality of education. At the primary level, the actual annual public spending per student corresponds to 7% of GDP per capita in Egypt, this is notably lower compared to Tunisia (17%), Morocco (19%), and the OECD average (20%). For secondary general education, Egypt spends 14% of GDP per capita, which is much less than the average for OECD countries (22%) and Morocco (36%).

Figure 30. Comparison of average spending per student in Egypt and comparators



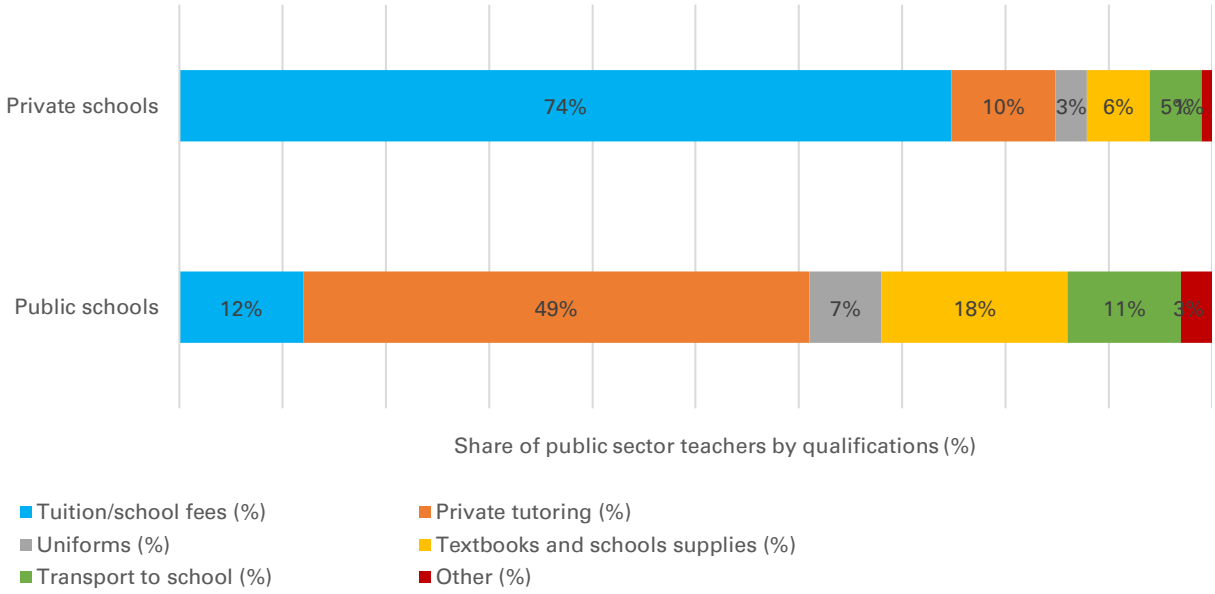
Source: MoETE (based on actuals); World Bank Database (comparators).

Relatively low public spending on education in Egypt means that households have to contribute more: Egyptian households contribute around 35% of total education spending compared to an average of 31% for other lower-middle income countries and an average of 21% for upper-middle-income countries.

The largest share of households' spending o tutoring.

On average 38% of household spending on education is for private tutoring (OAMDI, 2020). But the picture changes when disaggregating spending by education provider. Among households with children in public schools, private tutoring accounts for a staggering 49% of total education spending compared to only 10% for those with children in private schools (OAMDI, 2020). The other main items for households with publicly schooled children are textbooks and school supplies (18%), tuition/school fees (12%), transport to school (11%) and uniforms (7%). For households with private schooled children the largest spending item by far is tuition/school fees which accounts for 74% of their total education spending on average.

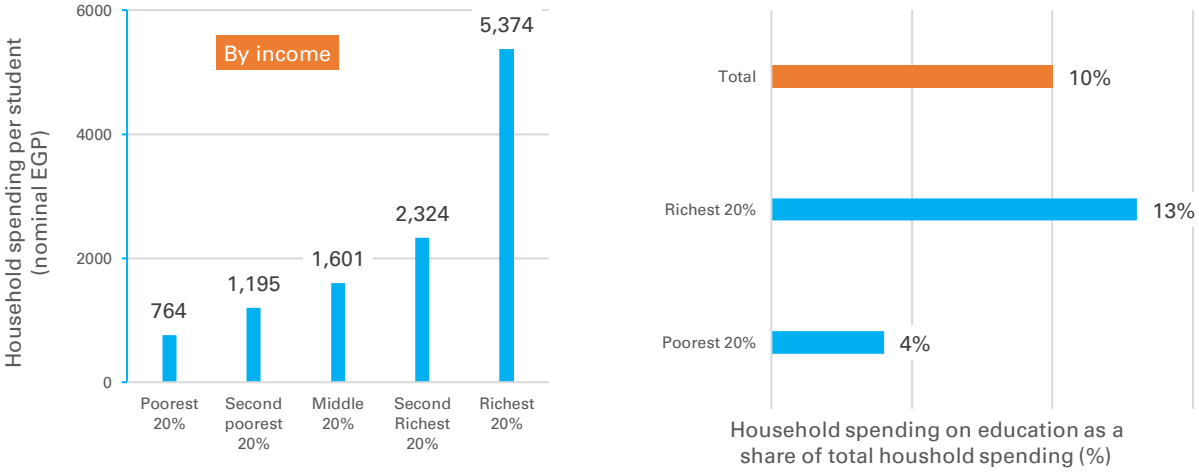
Figure 31. Share of each item in total household education spending by provider 2017/18



Source: Weighted estimates based on HIECS 2017/18 data.

The richest 20% of households spend seven times more per student than the poorest 20% of households (EGP5,400 and EGP760 respectively). The richest households also allocate a larger share of their total spending (13%) to education than the poorest households (4%).

Figure 32. Average household spending per student and share of education spending in total household spending 2017/18



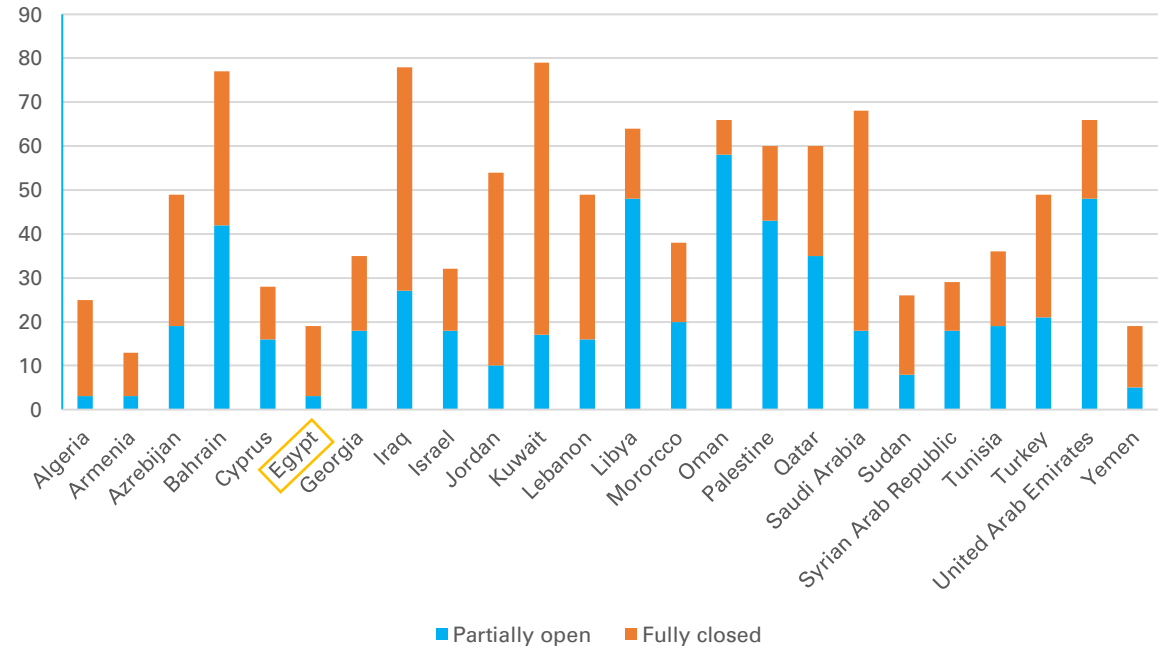
Source: Weighted estimates based on HIECS 2017/18 data.

1.11 Covid-19 and Education

The period following the COVID-19 pandemic school closures since its outbreak in early 2020 presented the pre-university education sector with significant challenges. Following the initial closure of schools, MoETE introduced a series of measures to enable education to continue during the shutdown. Students, their families, educationalists, and education administrators all were forced to adapt how they study and work in response to the education, health, social and economic challenges posed by the pandemic. Schools were able to return to relative normality after the end of the first wave of the pandemic, but a second wave had once again forced schools to close by the end of April 2021.

All schools across Egypt were closed from 15 March 2020. Between March 2020 and March 2022, Egypt schools were closed for 16 weeks and partially closed for three weeks. Unlike many countries in the region where the school closures continued well into 2021, schools in Egypt have been fully open since 13 March 2021. Egyptian schools were closed for fewer weeks compared to other countries in the region (see Figure below).

Figure 33. Weeks of COVID-19 related school closures, Western Asia and Northern Africa



Source: UNESCO map on school closures (https://en.unesco.org/covid19/educationresponse) and UIS, March 2022 (http://data.uis.unesco.org)

Egypt was able to rapidly respond to the challenges caused by the pandemic thanks to the effort to transform the education system since 2018 under the flagship of *Education 2.0*. The foundation of the digital transformation of Egyptian education was already ongoing and the pandemic accelerated the process. Only four days after the complete closure of all schools, the MoETE

announced on 19 March 2020 that the existing Egyptian Knowledge Bank (EKB) would be transformed into a new study portal to provide all K-12 students with online lessons. In the first few weeks following the school closures on March 15, 2020, approximately 11.5 million students, 1.2 million teachers, and 750,000 parents subscribed to Edmodo (MoETE, 2020). Prior to the pandemic, the EKB was used mainly for upper secondary students and higher education students and researchers. In a concise time, the MoETE was able to equip the EKB with lessons in the K-9 curriculum. To ensure access, the Ministry of Communications and Information Technologies provided students with free data SIM cards. Following the initial closure of schools, MoETE moved quickly, introducing a series of measures to enable education to continue during the shutdown and minimize learning losses.

MoETE also moved quickly to introduce a new approach to student assessment. The 2020/21 school year witnessed the introduction of a multi-subjects one-page examination for grades 4-9 students. For grades 10-11, students undertook computer-based tests from home, using tablets made available under the ongoing *Education 2.0* reforms. In April 2020, the government announced that the high-stakes Thanawiya Amma school leaving exam would proceed in the paper-based format as planned in mid-June, albeit with strict social distancing measures. For grade 12 only, schools were temporarily re-opened for students to take the exams in July 2020.

Additionally, UNICEF supported the development of school guidelines for COVID-19 infection prevention and control. Hygiene kits, textbooks, colouring books and stationery were distributed to vulnerable groups. Other measures, such as promoting girls' participation and p the expected negative impact of the pande participation in education, were also put in place (UNICEF, 2020).

Nevertheless, according to the Education Sector Analysis (2021), most families report that school closures have impacted t common effects are lowered knowledge and children forgetting what they previously learned. Among families with children enrolled in KG1 to grade 12 in 2020/21, most (75%) report that school closu education. For families with children in KG1 to grade 3 and families with children in grades 4-9, the most commonly perceived impact of school closures is 'lowered education and knowledge' reported b for families with children in grades 10-12 this was the second most common reason (22%) after 'children forgetting what the ready for the new school year (26%). Most students were not able to benefit from remote learning opportunities other than educational TV channels and would also be unable to access learning materials online (MoETE, 2021). Moreover, the pandemic made clear there is a big divide i advantage of remote learning opportunities due both to a lack of hardware,

software, and internet as well as differences in the ability to support their children's remote learning, further exacerba
These effects are examined in detail in chapter 4.

1.12 Greening Education in Egypt

Egypt hosted COP27 in November 2022, highlighting the increasing risk of climate change and demonstrating the importance that the country has been attaching to this issue. Egypt has been coping with the repercussions of climate change, which affect everyone, including students. Climate change consequences, such as mounting strain on Egypt's crucial water supply, represent a greater threat to the country's long-term prosperity, according to the Egypt, *Country Climate and Development Report* (CCDR) (World Bank, 2022). Given Egypt's severe environmental problems, including air pollution, water scarcity, and waste management issues, it is indeed essential to incorporate the elements of greening education into the education system, such as making schools green, safer and climate-proof, ensure that the curriculum contributes to raisinge student awareness and skills to support the development of sustainable solutions to these problems.

The potential benefits of greening education in Egypt are significant. Firstly, the world is undergoing green transition and as the global green economy grows, there will be an increasing demand for skilled workers in renewable energy, sustainable agriculture, and environmental management. Therefore education and training in green skills can help create job opportunities and boost economic growth in the long term. Secondly, green skills can improve health outcomes by promoting healthier lifestyles and reducing exposure to environmental pollutants. Thirdly, greening education can raise awareness of the importance of preserving the environment and encourage behaviour change that promotes sustainable living. Furthermore, learners are better able to comprehend the effects of climate change and become more ecologically conscientious. Students who learn about environmental issues are more likely to develop a sense of responsibility towards the environment and become active participants in the community. To support the transition to a greener, more climate-resilient economy, the Egyptian government recently unveiled the *National Climate Change Strategy 2050*, which also specifies clear objectives for the education sector, such as the Ministry of Education integrating climate change issues and raising awareness of their effects into school education programs, among others.

National Education Policy Directions and Priorities

This chapter is divided into three sections and outlines the underpinnings of the ESP 2023-2027 in light of the priorities and policy directions of the Egyptian education system. First, it reviews the existing legal, policy and planning frameworks for pre-university education. Then, it details the rationale, purpose, and main objectives of the ESP, which are summarized in the ESP Theory of Change. It then presents sector-wide policy priorities and anticipated outcomes within four areas: access and participation, quality of teaching and learning, equity and inclusion, and governance and management. After describing the transversal priority of digital transformation and innovation, the chapter ends by illustrating the relationship between ESP priority areas and strategic objectives of the Ministry and nation of Egypt.

1.13 Legal, policy and planning frameworks for pre-university education

1.13.1 Legal provision of the right to education

Article 9 of the Constitution of 2014 declares that the State shall ensure equal opportunities for all citizens without discrimination. It further guarantees the right to education for all citizens and provides for the compulsory and free nature of education (Article 19). While the Education Law (Law no. 139 of 1981) specifies that education is compulsory for a period of nine years starting from the age of six (Articles 4 and 15), the Constitution extends the period of compulsory education until the end of the secondary stage or its equivalent, which consists of three years, bringing the total number of compulsory school years to twelve. Complementary to this, the Education Law enshrines that pre-university education should be free, as further reflected in the Child Act in its Article 54, which states that "Free education in public".

At the same time, however, there is legal inconsistency with the Child Act of 2008, which sets the minimum age of employment at 15 years of age (Article 64, Child Act, Law No. 126). Discrepancies between the legal age of starting work and the end of compulsory education could lead to children dropping out of school to work, an issue which needs to be further explored.

Additionally, the Constitution stipulates that the State is mandated to supervise education to ensure that all public and private schools and institutes abide by its educational policies (Article 19). It also foresees the development of a comprehensive plan to eradicate alphabetical and digital illiteracy among citizens of all ages (Article 25).

With regard to the financing of education, the Constitution crucially commits the State to allocate a percentage of government spending to pre-university

education, amounting to at least 4% of the gross domestic product (GDP), which is to gradually increase to comply with international standards (Article 19). Meeting this commitment, however, has been challenging in practice, as further detailed in Chapter 5.

1.13.2 National development blueprint: 'Egypt Vision 2030'

The *Sustainable Development Strategy* (2016) represents Egypt's important shift-economic development, which sets an ambitious pathway to future national prosperity. It serves as the national development agenda and an expression of the government's commitment to the United Nations' *2030 Agenda for Sustainable Development,* as well as to the African Union's *Agenda 2063: The Africa We Want*. Together with economic development and national competitiveness, human capital development constitutes a core component of the vision, comprising three specific priority areas: health, education and social protection services.

The education component is predicated on a key set of reforms aimed at improving learning outcomes and workplace skills of graduates from the reformed education system. In turn, these reforms are expected to lead to increased economic productivity and competitiveness in global markets, supporting sustained economic growth and social development in Egypt.

Egypt's Vision 2030 defines its overarching

> "A high-quality education and training system should be available to all, without discrimination, within an efficient, just, sustainable, and flexible institutional framework. It should provide the necessary skills to students and trainees to think creatively and empower them technically and technologically. It should contribute to the development of a proud, creative, responsible, and competitive citizen who accepts diversity and differences, is proud of his/her country' and is able to compete with regional and interna

While access to primary and secondary education has improved, and the gender gap and illiteracy have decreased, the evolving policy framework recognizes that more work is needed to improve the quality and outcomes of education in order for Egyptian young people to embody this vision of an Egyptian citizen.

1.13.3 Education policy and strategy development in the past decade

The development of the ESP is firmly anchored within the cou sectoral policy frameworks, building on *Education 1.0* and *Education 2.0* and guided by Egypt's Strategy. Over the past few decades, various 2030 national reform strategies and programmes have attempted to improve Egy education system, especially by expanding access to quality basic and secondary education. While Egypt has accomplished near-universal basic education, the equitability and quality of education haves remained a critical challenge. Recent education policy recognizes that in order to effectively tackle the widening

disparities in education and declining learning outcomes, bolder and more comprehensive actions are needed in order to modernize the education system and to drastically improve education quality.

To this end, MoETE developed the *Strategic Plan for Pre-University Education Reform 2014-30*, building on achievements and lessons learned from implementation of the previous National *Education Strategic Plan (2007-2012)*. The 2014-2030 Strategic Plan underscores the M ensuring that every child equally receives a quality education in accordance with international standards, which eventually will allow every child to contribute effectively to the social and economic development of the country and to compete regionally and globally. The Strategic Plan listed four strategic policies to guide the reform process, around which the ESP is aligned. These are: accommodating all children from age 5 to 18 in school (which relates to increased access, participation, equity and inclusion); adopting international curricula of high quality in maths, science, language, and geography (which relates to quality of learning outcome); instilling in students the value of continuous learning (in pursuit of lifelong learning); and enabling students to effectively use technology to access knowledge (which relates to digital transformation and innovation).

In addition to the strategic plan for pre-university education reform, MoETE announced in 2017 a full education sector transformation agenda that puts students at the heart of the learning process. With a vision to ensure quality and relevant education for all Egyptian children and youth, the ministry introduced two parallel streams of reform: firstly, to make incremental, targeted improvements to the current system (*Education 1.0*), and, more ambitiously, to completely modernize Egypt's education system through bold interventions (*Education 2.0*, as further detailed below).

The centrepiece of the overall reform programme, as articulated in the *National Project to Reformulate the Egyptian Education System,* endorsed by the Cabinet of Ministers and announced by the MoETE in August 2017, is to use modern technology for teaching and learning, assessment, and collecting data. Examples of these include:

i. "The Egyptian Knowledge Bank," an online educational, research, and cultural resources for a wide array of users in Egypt; and
ii. "Teachers Programme," designed to effect change changes in teacher behaviours in the classroom.

The ESP acknowledges the significance of these initiatives and builds further on their results achieved to date. The ESP also integrates the lessons learned during the COVID-19 pandemic, when the moves MoETE had already initiated towards integrating technologies in education ensured learning continuity across the nation during school closures and lockdowns.

1.13.4 Education 2.0

Launched in 2018, *Education 2.0* represents an ambitious series of reforms and initiatives, which are fully aligned with the rights, as well as the strategic directions outlined in "Egypt's 2030 Vision" and SDG 4 for education. It aims to boost the implementation of *Education 1.0* and re-imagine the education system, fundamentally transforming kindergarten to Grade 12. In order to tackle the persistent structural barriers to quality education, the Ministry acknowledges that a radical overhaul of the entire system is needed, rather than a piecemeal approach that results in purely cosmetic changes.

The vision of *Education 2.0* is "to provide access to education for all; to create a relevant and quality system aligned with international standards; and to develop passionate and enthusiastic pupils and teachers who learn, think, and innovate." The transformational potential of technology is also highlighted as the key to accelerating better access to education, higher quality of teaching and learning, and improved sector governance. Integration of technology and innovation is thus a centrepiece of the reforms, with the ambition for every pupil and every school to be provided with internet connectivity. Under *Education 2.0*'s macro-scale transformation agenda, MoETE endeavours to substantially increase student enrolments while radically improving the quality of learning outcomes at all levels of education, paying particular attention to the inclusion of disadvantaged children and youth, including children with disabilities.

Set to be fully implemented by 2030, *Education 2.0* strives to enact drastic changes not only in educational outcomes, but also in the way education is conducted and culturally viewed in society. The reforms seek to replace the country's traditional exam-driven memorization with one that promotes student-centred teaching and competency-based learning for life, alongside mastery of technology. The aim is to ensure that learners acquire the 21st-century skills and competencies necessary to create a society that learns, thinks, and innovates. To accomplish this, curriculum content, learning methods and modalities, and assessment practices will be updated to better respond to the challenges of the 21st century and labour market needs. From kindergarten to primary, secondary, and TVET schools, the introduction of learner-centred tools and teaching techniques across the education system will encourage higher-order capabilities, supported by the integrated use of technology in learning, teaching, assessment, monitoring, and sector-wide governance.

More specifically, *Education 2.0* consists of four main components as the follows:

1. **A great start for every child (KG 1, KG2, Gr 1)** by increasing access and quality, and improving teaching practices in kindergartens and pre-school education levels where children will gain essential literacy and numeracy skills, and eventually, be equipped with necessary skills for their school readiness.

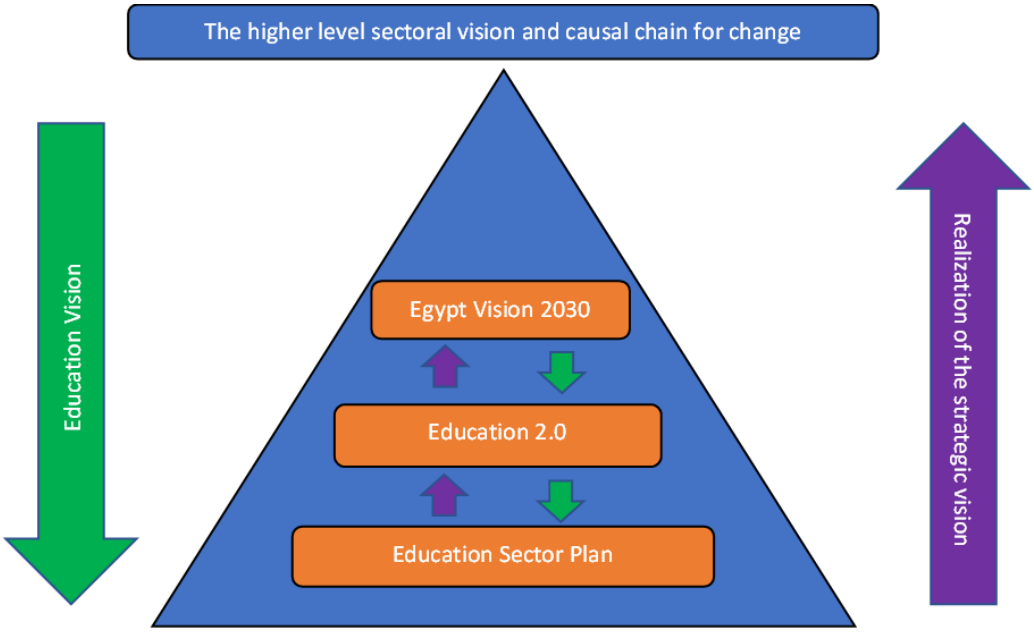
2. **Develop young people's skills, behaviours and character to enable them to perform well in the 21st-century world** by radically upgrading the use of ICT for education, reforming the curriculum for general education, upskilling and motivating teachers, improving school leadership and making learning assessment appropriate and fair.
3. **Make technical secondary education a viable path to employment** through increased relevance of programmes, greater engagement with employers, improving quality assurance, curriculum, supporting teachers and institutions, particularly the establishm (ATS) and oversight mechanisms.
4. **Achieve equity and inclusion in education** by providing specialist support for children with special needs (CWSN), reducing school drop-out and increasing school attendance for disadvantaged children through enabling inclusion in mainstream schools and improving education quality in specialist schools; conducting nationwide campaigns for inclusion; training of education professionals; es support satellite schools; and overhauling the curriculum for children with disabilities.

The third component, or reforming TVET education, has been identified as a critical and urgent policy priority, as half of all Egyptian students at the secondary level attend technical education and a considerable proportion of TVET students lacks relevant skills that are essential for the labour market. In response, a new TVET vision or *Technical Education 2.0* has been designed, with three key transformation pillars that the ministry is currently implementing, which have also informed development of the ESP.

Although the MoETE assumes the key strategic leadership role in the effective implementation of all components of *Education 2.0* and *Technical Education 2.0*, all key government agencies including local officials are responsible for the day-to-day adaptation and application of policy changes. Civil society and the private sector also have an influential role to engage in innovative multi-stakeholder partnerships that respond to education needs.

In sum, *Education 2.0* aims to ground all learners in the foundational basis of literacy and numeracy, to cultivate curiosity and a lifelong love of learning, to support foundational learning and skills development over memorization and rote learning, and to improve links with the labour market in the digital era. Such aims are grounded in an overarching goal to increase access and participation in public education, improve the quality and inclusiveness of provision, and integrate and upgrade the use of ICT in Egyptian classrooms. Diagram 1 illustrates how *Education 2.0* aims to contribute to the overall strategic goals of Egypt Vision 2030 by leveraging the new Education Sector Plan 2023-2027.

Diagram 1. The Relationship Between Vision 2030, Education 2.0 and the Education Sector Plan.



1.14 Education Sector Plan (ESP) 2023-2027: rationale and main objectives

1.14.1 The Purpose of the ESP

With the development and implementation of the ESP, the MoETE is fast-tracking the improvement of *Education 1.0* and operationalization of *Education 2.0/TVET 2.0.* Set to begin in the 2023/24 school year, the ESP provides a practical five-year roadmap to tackling the persistent challenges identified in the ESA through specific targets, strategic priorities, policy imperatives, and a clear vision for reform. The ESP aims to address the reform pillars from a system-wide perspective and in each sub-sector, such as:

the expansion of the appointment of new teachers while ensuring equitable distribution of teachers, especially in certain specializations and regions and establishing frameworks for continuous professional development for teachers and school leaders.
the efficiency and effectiveness of the education system, considering the resource constraints, governance, the management and accountability of the system are crucial for its success.
consolidating policy reforms and strategic priorities for all pre-university sub-sectors into one comprehensive, coherent sector-wide plan.

The soundness and relevance of the ESP stems from ensuring strong linkages between the policy priorities and strategies in response to the main issues and challenges identified in the education sector analysis (ESA), summarized in Chapter 2. To this end, a high-level Theory of Change (ToC) has been developed

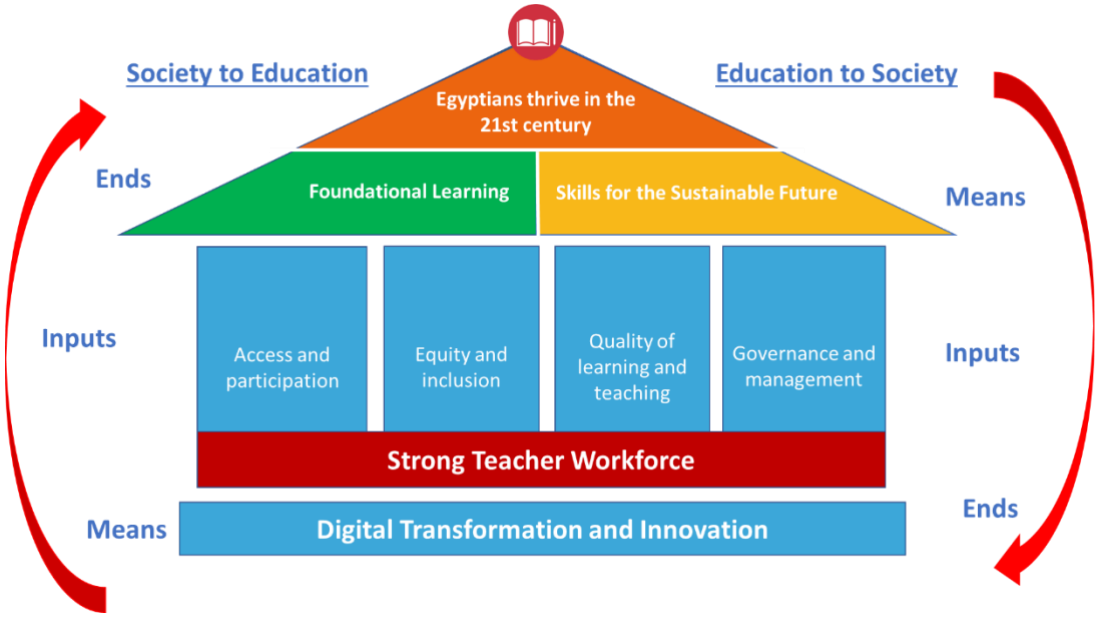
in consultation with education authorities and development partners. This ToC visualizes the causal chain required to achieve the ESP vision and illustrates how positive outcomes in education drive socio-economic development and vice versa, as presented in the following section.

1.14.2 ESP Theory of Change (ToC)

The vision of the ESP is to provide all Egyptians access to good quality education and training opportunities to thrive in the 21st century as individuals and as a nation, by promoting quality education for all, especially prioritizing foundational learning and acquisition of skills for the future. The challenges addressed by the ESP, as well as policy priorities to realize its vision, are structured around four major policy areas: access and participation; equity and inclusion; quality of learning and teaching; and governance and management of the system, in line with the focus of MoETE's mediate reforms and key policies outlined above. A strong teacher workforce and digital transformation and innovation are key enabling and cross-cutting thematic priorities.

Diagram 2 below represents the high-level theory of change that shapes the logic of ESP policy and thematic priorities and associated strategic programmes.

Diagram 2. Theory of Change of Education Sector Plan.



The foundation of the schoolhouse or *means* is to highlight what Egypt is planning to leverage for its economic and social development: digital transformation and innovations. In its Vision 2030, the Egyptian Government posited the digital transformation of individuals and governments as a main means of boosting the development of all socio-economic fields as well as the ultimate areas to development for the improvement of the economic growth and well-being of the whole population. The foundational means to improving the education system is first and foremost through expanding and strengthening education workforce in order to increase access to and participation in education,

improve the quality of teaching and learning, ensure equity and inclusion in education, and build solid governance and management systems.

According to the left-side flow, the diagram shows the four main *inputs*, or priority areas, that MoETE will leverage in order to achieve the twin objectives (or *ends*) of education development (universal quality education, with focus on foundational learning, and skills for decent life, work and sustainable future) which will allow to achieve the eventual goal for all Egyptians to thrive in the 21st century. The ToC proposes that if education workforce is further capacitated, strengthened, and if digital transformation and innovation are leveraged, and if access and participation are expanded, quality of learning and teaching are improved, equity and inclusion are ensured, and governance and management including financing are strengthened, then learning outcomes will be enhanced. This means that all learners will be equipped with foundational learning at the primary level and the knowledge and skills needed for a decent life and sustainable future at the secondary level. Across all policy priorities, strengthening teacher workforce (e.g., recruitment, deployment, continuous professional development, status and working conditions), and harnessing digital transformation and innovation are integral to achieving the ESP goals.

On the right side of the diagram, where *means* and *ends* switch, the diagram illustrates how improved education outcomes can further capacitate education workforce and also spur innovation and digital transformation in Egyptian society and economy, through the four main channels of delivery, such as: access and participation, quality of learning and teaching, equity and inclusion, and governance and management. MoETE used this framework to structure the challenges highlighted in the ESA as well as appropriate strategies and interventions to address these challenges through participatory consultation process, which will ultimately lead to the achievement of the goals laid out in the ToC.

The way the ToC was used to outline the main challenges and relevant policy priorities is summarized below:

> To address the specified challenges, a variety of policies and priorities have been determined. The interventions and inputs for change have been selected in terms of access and participation; equity and inclusion; quality of learning and teaching; and governance and management, paying particular attention to strengthening teacher workforce and leveraging investments in digital transformation and innovation, which are expected to catalyse a series of results that contribute to achieving wider outcomes and intended impacts.
>
> The ToC was not intended to provide the list of all interventions that the MoETE will support but highlights the fundamental logic that change is dynamic and non-linear. Thus, this reflects on the change pathways from outputs to outcomes that are highly dependent on a combination of

mutually reinforcing and sometimes overlapping activities categorized as levers of change and contributions from partners.

The ToC is based on the assumption that adequate resources, political will, and stakeholder support —including the support of development partners—are available for the sector to function effectively and are sufficient (see table below). The risks associated with ESP implementation, including these assumptions are analysed in Chapter 6. For the detailed ToC, see the Annex.

Box 3. Underlying Assumptions of the ToC

Continued political commitment to the education sector;
Effective community engagement in education to promote a culture of learning and social accountability;
Achieving efficiency gains in the system which are elaborated in the financing framework;
Successful implementation of the reform agenda, with specific reference to teachers, to ensure that issues related to recruitment and deployment, professional standards, working conditions, and accountability are appropriately addressed.

1.15 Policy areas and expected outcomes

This section outlines the policy priorities and strategies for the pre-university education and training sector in the next five years.

As previously mentioned, these sector-wide policy priorities were identified in light of: the legal provisions on the right to education as enshrined in the National Constitution and related legal instruments; careful review of the education and training-specific aims of Egypt Vision 2030 and in alignment with the overall directions of the Education 2.0 (including Technical Education 2.0) reform agenda; and in response to the body of evidence detailed in the ESA.

At the level of education and training sector that is under the purview of the Ministry of Education and Technical Education, four policy areas have been identified in the pursuit of Education 2.0 goals, in convergence with the ESA findings and in alignment with the ToC framing: (1) access and participation; (2) quality of learning and teaching; (3) equity and inclusion; and (4) governance and management, with teachers as a cross-cutting thematic priority. Strengthening teacher workforce is critically important and it is integrated across the four priority areas, as is ICT transformation.

In recognition of the twin transitions (digital and green) that the society is undergoing and their potential leverages in education, the ESP articulates transversal actions for digital transformation and greening education. For the latter, UNESCO's Greening Education Partnership has been resourced to develop and mainstream several operational programmes across education levels and policy pillars, such as incorporating climate education into pre-service and in-service teacher training, issuing green school accreditation, climate and

environment responsive curriculum development, community involvement by incorporating climate education into life-long learning, and engaging all stakeholders, including the private sector, in greening education initiatives.

The policies and interventions outlined in this section are aimed to be the systemic building blocks upon which MoETE engages to ignite systemic changes in pursuit of Egypt Vision 2030 and *Education 2.0* vision.

1.15.1 Policy area 1: Access and participation

Improve participation rates across all levels of education by addressing both supply side and demand side challenges that hinder access to and participation in education.

Building and refurbishing schools: On the supply side, MoETE will continue establishing schools where most needed in order to improve physical availability of school infrastructure and creating safe and climate-proof schools. Community education and non-formal education will be expanded to provide additional learning spaces and opportunities, especially in frontier Governorates.

Teacher recruitment and deployment: The shortage of teachers, identified as one of the key challenges across education levels and across the nation, will be addressed by ensuring that government plan to recruit 150,000 teachers over the next five years is met in priority. In the first years of implementation, the priority will be given to the lower levels of education, disadvantaged areas and STEM subject areas, in line with Education 2.0 directions.

Raising awareness on importance of education: On the demand side, the MoETE will continue raising awareness among community members to make education a priority. Education in the early years of children will be a particular focus of awareness efforts. This also includes reframing the image of technical education as a positive career choice, especially for girls.

Reducing financial barriers to education: The MoETE will continue its effort to reduce financial and social barriers to education by appropriate means such as financial support, school fees exemption, provision of uniforms, and school meals, while prioritizing the most in need (also covered in Policy Priorities 2 and 4 below).

1.15.2 Policy area 2: Quality of learning and teaching

Equip all learners with solid foundational learning and the necessary skills, competencies, and values that allow them to learn to learn, think creatively and responsibly, and thrive in the 21st century. This includes nurturing global competence with a specific focus on the Egyptian citizenship and water security.

Curriculum and assessment reform: MoETE will continue shifting from rote-learning to competency-based education by rolling out the curriculum, pedagogy and assessment reforms under the framework of *Education 2.0* and its

supplement *Technical Education 2.0*. Teaching and learning materials, as well as learning assessments, will be upgraded according to the reformed curricula.

Teachers' pre-service and in-service training: Continuous professional development for teachers, school leaders, and administration professionals will be strengthened. Pre-service teacher training will be better aligned with *Education 2.0* and *Technical Education 2.0* in the pursuit of improved learning experience and outcomes, especially foundational learning, and through enhanced coordination with the Ministry of Higher Education.

Improving learning environments: The learning environment will be improved by reducing class size and the number of double-shift classes and by transforming teaching practices while leveraging advanced technologies and promoting innovation.

Greening education: To strengthen the education sector's resilience to climate change and its contribution to environmental sustainability and green transition, MoETE will incorporate climate education into pre-service and in-service teacher training, issue green school accreditation, develop climate and environment responsive curriculum, and integrate development and community involvement by incorporating climate education into life-long learning.

1.15.3 Policy area 3: Equity and inclusion

Strengthen policy and practice to eliminate discrimination in and barriers to education to ensure that all children, especially those most disadvantaged, are included and benefit from quality and inclusive education.

The ESP will address the several and often inter-connected dimensions of exclusion as below.

Geographical disparity: The ESP will prioritize its investment in the neediest areas such as rural areas, especially in frontier Governorates and Upper Egypt to improve access to and quality of education by opening additional schools and deploying teachers more equitably. This will be done in partnership with communities and the private sector, including for early childhood education.

Students with special needs: Under the ESP, the roll-out of the inclusive curriculum will be ensured, while providing inclusive school infrastructure and learning environment. Awareness campaigns and capacity development programmes will also be rolled out for integration of students with special needs in mainstream schools.

Income disparity: The ESP will put in place key policy actions to reduce the financial and social barriers to education so that children and youths from low-income families are able to attend and remain in schools. Understanding that wide-spread private tutoring is negatively affecting access to education and learning of students from low-income families, the issues related to private tutoring will be addressed from equity, quality, and management perspectives.

Gender: The MoETE is committed to continuing to empower girls and women through education in order to achieve gender equality in all areas by 2030 as stated in Egypt's Vision 2030. This will inc frontier Governorates/Upper Egypt and encouraging girls to study STEM subjects. It also includes improving school infrastructure to provide healthy, inclusive and gender-sensitive learning environment, as well as community learning centres to reduce youth and adult illiteracy rates. At the same time, the ESP will also address the risks boys are facing, especially in urban areas.

1.15.4 Policy area 4: Governance and management

Enhance the transparency, agility, resilience, financial and environmental sustainability, efficiency, and effectiveness of the system.

Egypt is fully aware of the critical importance of improving governance and management of the education sector. The COVID-19 pandemic was another call for creating a more agile and resilient education sector. Some areas of critical importance are listed below.

Teacher management: A comprehensive teacher policy (which comprises teacher recruitment, deployment, career development, working conditions, reward and remuneration, standards and accountability) will be developed and implemented. A digital teacher career management system will be developed as a platform for continuous teacher professional development and its learning management system. The platform will also learning through model lesson streaming and video conferencing. The system will also be integrated into the HR management system.

Financing: MoETE will continue its effort to advocate for and secure sufficient financial allocation to pre-university education keeping in line with the commitment made in #19 of the Constitution (4% of GDP). At the same time, equity and efficiency of public financing will be improved by: (1) expanding roles and responsibilities of school and governorate levels in planning and management of public resources of education; (2) modernizing funding mechanisms; (3) improving use of financial data for planning and management; and (4) enhancing planning and budgeting functions at the Ministry. Transitioning the education budget process towards formula-based funding will be pursued to determine which education functions would lead to overall efficiency gains.

Data and evidence: During the ESP period, MoETE will further strengthen its education data management systems, with a vision to establish an integrated data management system connecting existing systems. The use of data for evidence-based decision making will be promoted and supported at all levels of education administration.

Decentralization of main education functions: In order to enhance efficiency, relevance and agility of education sector management, MoETE will ensure progressive decentralization of functions with planning, management and financial authority through institutional strengthening at all levels, including piloting appropriate models for decentralized planning and management. Gradual decentralization and devolution of tasks will bring decision-making closer to beneficiaries and ensure governance operating with greater accountability, coordination and a holistic view of the system. Strengthening and empowering school leadership will be a top priority in this endeavour.

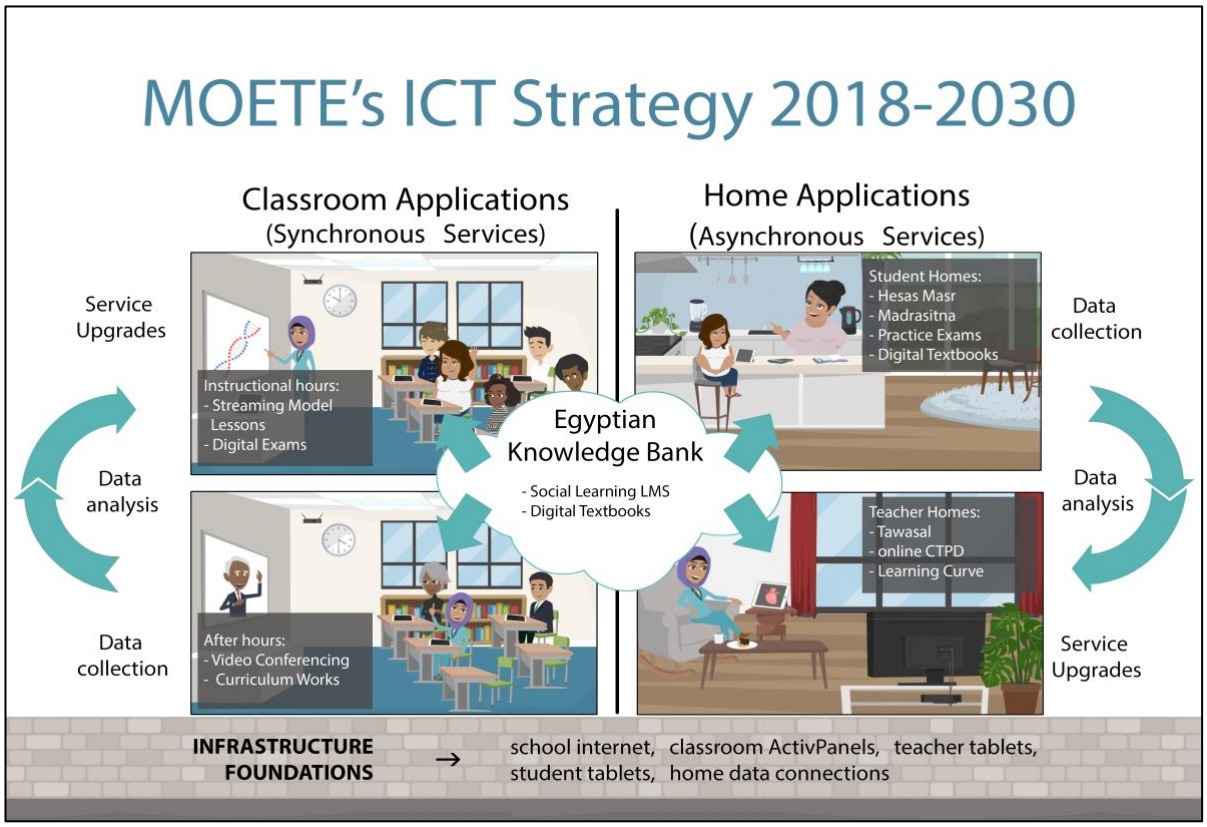
Partnerships: Collaboration and coordination with development partners, private sector, civil society organizations as well as communities to be enhanced to improve access to and quality of education. This will be done through making favourable policy environment for partners' of the key stakeholders about the importance of investing in education.

1.16 Digital transformation and innovation

Digital transformation and innovation will be the driving force behind the realization of the priorities. Over the ESP period, the number of students is expected to grow by 29.3% for kindergartens, 1.7% for primary, 14.3% for preparatory, and 48.6% for secondary (general and technical). Combined with the financial constraints already faced by the e will not work to realize the vision of the ESP. It is therefore critically important that the education sector is transformed through digital technology and innovation. For instance, a bold approach may be taken to reduce the class size and to improve learning process by introducing hybrid/blended learning. Technologies, including TV and radio-mediated education programmes, have the potential to deliver learning to those who are most difficult to reach out. Costs of teaching/learning materials may be optimized through using digital platforms.

During the ESP period, MoETE will strengthen digital infrastructure by expanding school and home connectivity, modernizing school and classroom equipment, and providing devices to schools, teachers and students. An enabling ecosystem for digital learning space will be created with the Egyptian Knowledge Bank at the core as shown in the below diagram. The roll-out of the electronic assessments will continue, with the priority given to providing technology equipment and programs to support the electronic assessment of the G10 students.

Diagram 3. MoETE's ICT Strategy, 2018-2030



Source: ICT Strategy: Building the Future of Education in Egypt (Draft)

Education sector management will also be improved with the integration of digital technologies. Digital infrastructures at the school, directorate, and ministry levels will be enhanced. An integrated and secure data management system will be developed, connecting Learning Management System (LMS), Education Management Information System (EMIS), financing, and human resource (HR) data for more seamless, timely, and evidence-based decision-making at all administrative levels of education from central to classroom levels.

Capacity development and effective change management will be key to successful implementation of digital transformation. Under the ESP, investment will be made in assessing and developing necessary capacities among teachers, administrators and policymakers to fully leverage technologies and the data generated through digitalization for improved decision-making at all levels. Necessary awareness-raising strategies will also be developed and implemented to ensure buy-in of the key stakeholders including teachers and parents.

1.17 Relationship between ESP priority areas and other strategic programmes

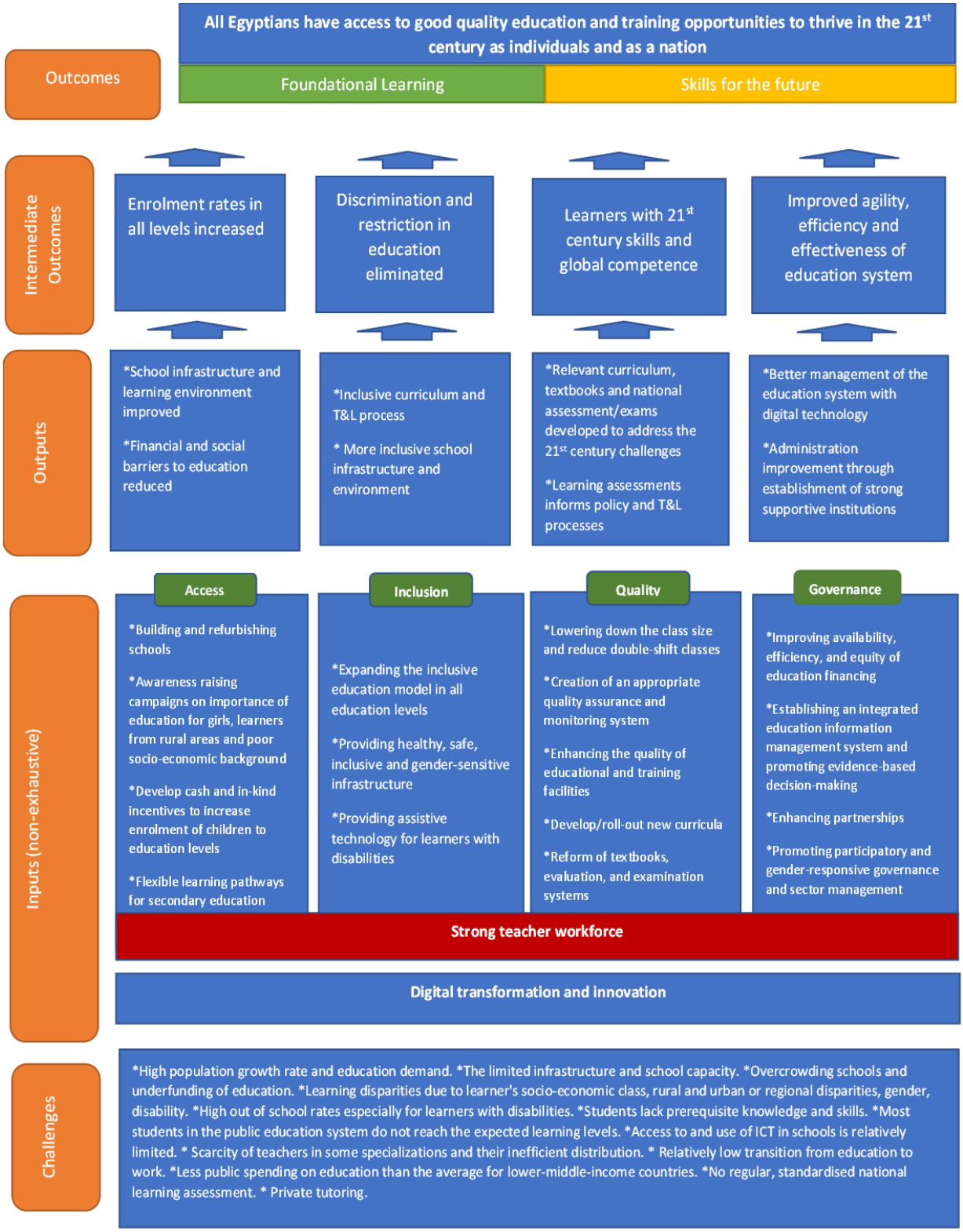
Deploying and implementing ESP Policy Priorities requires strong coordination and collaboration in the design, implementation, monitoring and evaluation. Coordination and collaboration are critical with other ministries, including those in charge of education and training, as well as with other domestic stakeholders and development partners. Policy priorities have been designed to be in full alignment with the Strategic Objectives and Programmes of the Government of Egypt (Egypt's Vision 2030), Strategic Plan of the Ministry of Education and Technical Education, yet their efficient and effective implementation requires further intersectoral and vertical collaboration and joined-up actions. The table below demonstrates the relationship of priorities across these strategic documents.

Table 3. Alignment of ESP policy priorities

Government's strategic objectives	Government's main programmes	MoETE's Main Programmes	ESP Policy Priorities				
			Access and participation	Equity and inclusion	Quality of learning and teaching	Governance and management	Digital transformation and innovation
Building the Egyptian Citizen Protection of the National Security and Maintenance of Egypt's Foreign Policy	Affirmation of Science Identity	Universal Access to Education, equally without Discrimination	x	x			
		Reform of the Pre-University Education System	x	x	x	x	x
		Reform of the Technical Education System	x	x	x	x	x
		Reform of the Applied Technical Education System	x	x	x	x	x
		The Enhanced Role of Evidence-Based Research to Improve the Business Environment			x	x	x
		Enhancement of the Competitiveness of the Education Systems and their Outputs			x	x	x
		Improved Quality of the Research and Technology Landscape			x		
		Promotion of a Culture of Science and Innovation			x	x	x

	Reinforcement of the National Cultural Identity	Prevention of Addition and Drug and Substance Abuse Control			x		
		Development of Industrial Training			x		
	National Stability and Security	Reinforcement of the values of citizenship, responsiveness and responsibility and development of political awareness among the new generation of youth and children			x		
	The Water Security	The Emergency Plan for Rationalisation and Management of Water			x		
		Sensitisation on Issues of Water Security			x		

Diagram 4. Detailed Theory of Change



ESP Strategic and Operational Programmes

The strategic framework for the ESP flows from the vision, underpinned by the goals for achieving the vision, and structured into strategic programmes for achieving the expected outcomes in each sub-sector.

To operationalize the strategic vision, the four ESP policy areas — access and participation; quality of learning and teaching; equity and inclusion; and governance and management — are integrated across seven components, namely: (1) pre-primary education, (2) basic education, (3) secondary education, (4) community education sub-sectors, (5) adult literacy programmes, (6) sector-wide governance and management and (7) digital transformation and innovation reforms.

The chapter is divided into seven sections, one for each component above. The sections follow the same outline, beginning with an overview of the current context, then a description of the challenges organized within the four ESP priorities, followed by expected ESP outcomes for the programme, and ending with a matrix showing the relationship between policy priorities, objectives and operational programmes. Each programme contributes to the fulfilment of the overarching goal and sub-goals of the ESP, and by extension, of *Education 2.0* and Egypt's *Vision 2030*.

The final section of this chapter details the sector-wide transformation component, including reform plans concerning sector-wide governance and management, and digital transformation and innovation.

1.18 Component 1: Pre-primary Education

The Government recognizes kindergarten education as a crucial foundation stage for school preparedness, character formation and child development, and lifelong learning. The government sees investments in early childhood as providing a good return on public investment in addition to improving the life chances of children.

Attending quality kindergarten programmes is associated with higher school preparedness and foundational skills, better learning outcomes, and completion, as well as improved equity outcomes, especially among the most disadvantaged groups. Increased access to early childhood care and education in Egypt would also create job opportunities for teachers and teaching assistants and reduce the burden of childcare for women who would like to find work outside the home. Investing in early childhood education is therefore one of the best investments governments can make to help break intergenerational cycles of poverty and social inequity. Accordingly, under *Education 2.0*, increasing access to kindergarten is a key main priority.

MoETE has identified priorities for strengthening early childhood education (ECE) services, such as increasing access to quality, equitable and inclusive education, improving the quality of pre-schools in accordance with standards, and strengthening the capacity of ECE subsector management in a subsector plan for kindergarten education. Under each of the policy areas, a set of strategic programmes are planned to achieve the expected outcomes related to kindergarten education by 2027.

1.18.1 Current Subsector Situation and Challenges

Structure and framework of the sub-sector

The early childhood care and education (ECCE) system in Egypt is composed of two types of service provision, with a division of institutional responsibility. MoETE manages formal education for children from the age of 4, including kindergarten for children aged 4 and 5 prior to entry in grade 1. On the other hand, service provision of nurseries for young children before they enter pre-school (ages 0-3) is overseen by the Ministry of Social Solidarity (MoSS). MoETE and MoSS have therefore worked together to create coherence between the educational components of nurseries and kindergartens to aid transition between the two and to support greater levels of school readiness.

While MoETE is the institutional anchor for early childhood education/kindergarten, many NGOs and community development associations (CDAs) throughout Egypt also run 'hosting classes' for children aged f supervised by MoSS. MoETE and MoSS have signed a memorandum of understanding (MoU) according to which MoETE provides technical support to licensed "hosting classes" for the curriculum supervision. Clear guidelines and processes for NGOs and CDAs to apply for licensure were laid out in a ministerial decree and many hosting classes have been licensed.

In 2021, the two ministries developed a standardized nursery-level curriculum to increase coherence between nursery and kindergarten. This nursery-level curriculum has been rolled out in public nurseries, and together with the new play-based kindergarten curriculum developed under Education 2.0, be supported by a quality assurance (QA) monitoring framework which is under development. There is a protocol between the MoETE and the MoSS to allow access to nurseries from the age of 2:4 years as a stage of preparation for kindergartens and a database of spaces that are suitable for that purpose has already been established.

The multi-ministerial National Council for Childhood and Motherhood (NCCM) is currently the overarching body overseeing all of early childhood development (ECD) activities, which is led by the Ministry of Health and Population (MoHP). While

the NCCM is tasked with coordinating ECD activities across ministries; in reality, coordination is weak, the sector is fragmented, and services and messaging to families are inconsistent.

Early childhood care and education are strong policy frameworks. Support for early childhood development, care, and education services are included in several key national documents and international frameworks to which Egypt has committed itself. These include overarching national documents such as the Egyptian Constitution, Article 80, which states that every child has a right to a free early childhood education. While the support is clearly outlined across Egypt's policy landsc draft ECD Strategy has been developed, which clarifies strategic priorities to enable a holistic approach to early childhood development and allow activities to be coordinated across different agencies.

Table 4. Overview of cross-sectoral commitment to early childhood development and education

<table>
<tr><th>Coordinating agency</th><th>Implementing agency</th><th>Pregnancy</th><th>Age 0</th><th>Age 1</th><th>Age 2</th><th>Age 3</th><th>Age 4</th><th>Age 5</th><th>Age 6</th></tr>
<tr><td rowspan="5">National Council for Childhood and Motherhood</td><td rowspan="2">Ministry of Education and Technical Education</td><td rowspan="2"></td><td rowspan="2"></td><td rowspan="2"></td><td rowspan="2"></td><td rowspan="2"></td><td colspan="3">Public kindergartens</td></tr>
<tr><td colspan="3">Private kindergartens</td></tr>
<tr><td rowspan="2">Ministry of Social Solidarity</td><td></td><td colspan="4">Public nurseries</td><td colspan="3" rowspan="2">Children aged 4-5 attending nurseries</td></tr>
<tr><td></td><td colspan="4">Private nurseries</td></tr>
<tr><td rowspan="2">Ministry of Health and population</td><td colspan="7">Preventative healthcare and vaccination program</td></tr>
<tr><td></td><td colspan="6">School feeding programs</td></tr>
</table>

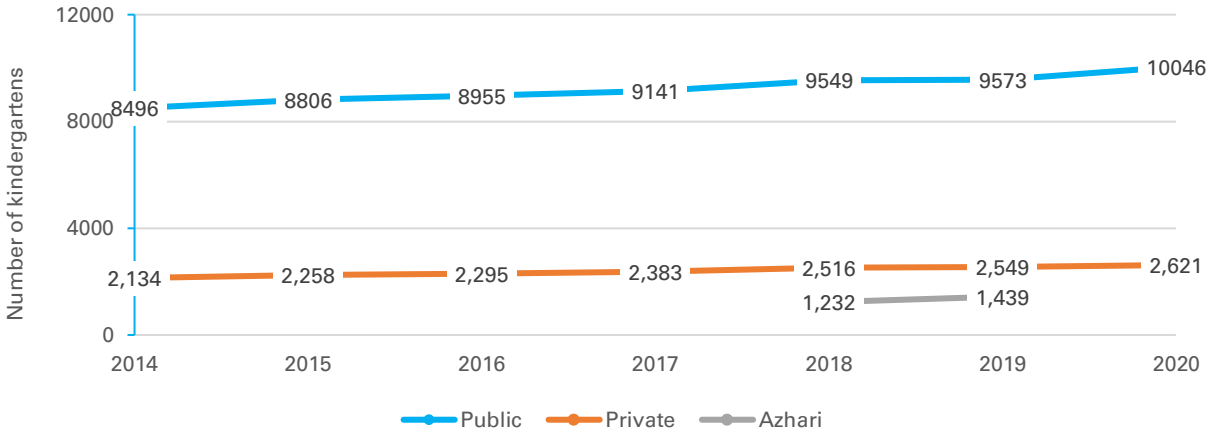
Source: MoETE, 2021

Kindergarten education consists of KG1 and KG2 and is for children aged four and five years. Kindergartens in public and private schools are regulated by the General Department for Kindergarten (GDKG) of MoETE while Azhari kindergartens are regulated by Al-Azhar Al-Shareef. This level is not compulsory, nor is it a prerequisite to enrol in primary education. It is not free, and fees differ between kindergartens. Fees also differ for a given provider depending on the educational model used. The only difference in curriculum between public and Azhari kindergartens is that in the latter Quran recitation is an additional subject.

Kindergartens are formal programmes with the comprehensive development and prepare them for enrolment in primary-level education (Child Law No. 126, 2008). In 2019/20, there were a total of 13,561 kindergartens in Egypt enrolling 1.57 million children. Despite the under-provision

of services, the number of kindergartens is increasing relatively slowly. The number of public kindergartens increased from 8,500 in 2014/15 to just over 10,000 in 2020/21 equivalent to an average of 220 new kindergartens per year. The number of private kindergartens also increased from 2,134 to 2,621 over the same period.

Figure 34. Overview of different kindergartens by providers



Source: EMIS (for public and private), CAPMAS 2019/20, 2020/21 (for Azhari).

MoETE is the main provider in terms of the number of kindergartens (70%), but the private sector (19%), including NGOs and faith-based organizations, and Azhari education (11%) also play an important role (see Table below). Public, private and Azhari kindergartens are on average of roughly similar size, ranging from 112 to 128 students but private kindergartens have on average four classes compared to three classes for public and 2.5 for Azhari kindergartens. Public kindergartens are more frequently located in rural areas (66%) whereas private provision is heavily concentrated in urban areas (84%).

Table 5. Number of kindergartens, enrolment, and average school size by provider 2019/20

	Number (percentage) of schools	Rural schools (%)	Number (percentage) of students	Average school size	Average number of classes per school
Public	9,573 (70%)	66%	1,076,641 (68%)	112	2.9
Private	2,549 (19%)	16%	326,849 (21%)	128	4
Azhari	1,439 (11%)	-	165,981 (11%)	115	2.5
Total/average	**13,561 (100%)**	**-**	**1,569,471 (100%)**	**119**	**3.5**

Source: EMIS, CAMPAS 2020/21. *Note:* The share of rural schools is based on 2020/21 data.

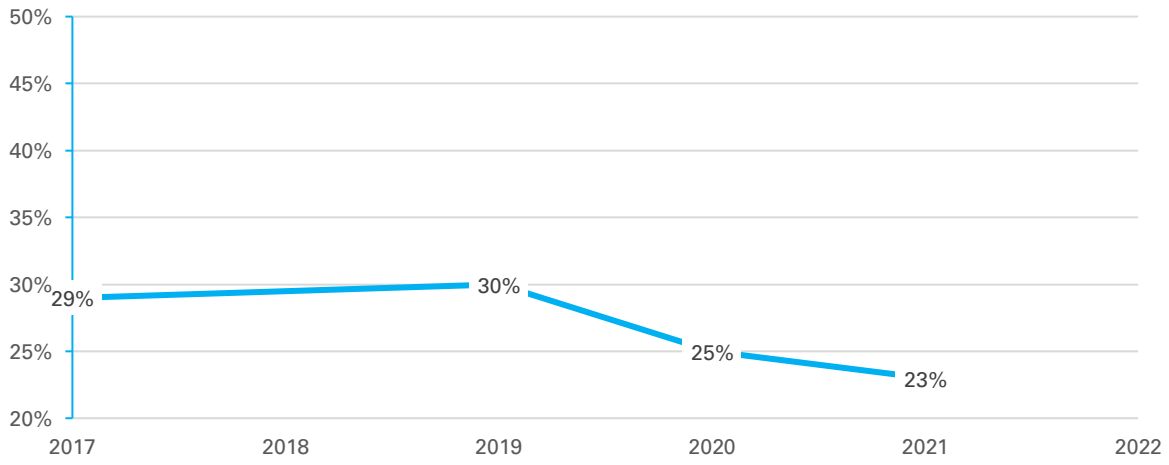
Access and participation

Since 2017, MoETE's commitment to early child
Education 2.0, under which one of the seven keys is to give every child the best possible start to their schooling career by increasing access to and enhancing the

quality of early childhood education. In 2017/18, the kindergarten sector saw a large hike in public financing at the time of the roll-out of a new kindergarten curriculum. Total enrolment in kindergarten (all providers) rose from almost 1.18 million in 2013/14, the most recent year for which data for all providers was available, to 1.57 million in 2019/20. This increase of around 392,000 students compares to an increase of 1.3 million children in the kindergarten-aged population over the same period, indicating yet an immense gap in coverage. Enrolment in kindergarten continued to increase at a low pace until the COVID-19 pandemic struck and remains low.

Despite the increasing investment in early childhood education, the education system is far from the capacity needed to accommodate the kindergarten-aged population and increase the quality of existing facilities. The gross enrolment ratio (GER), including public, private, and Azhari provision, remains at only 22.9% which indicates either a supply issue, with the education system severely under-capacitated to accommodate the kindergarten-aged population. The gross enrolment rate ratio (GER) for kindergartens actually declined by five percentage points in 2020/2021, likely related to the onset of the COVID-19 pandemic.

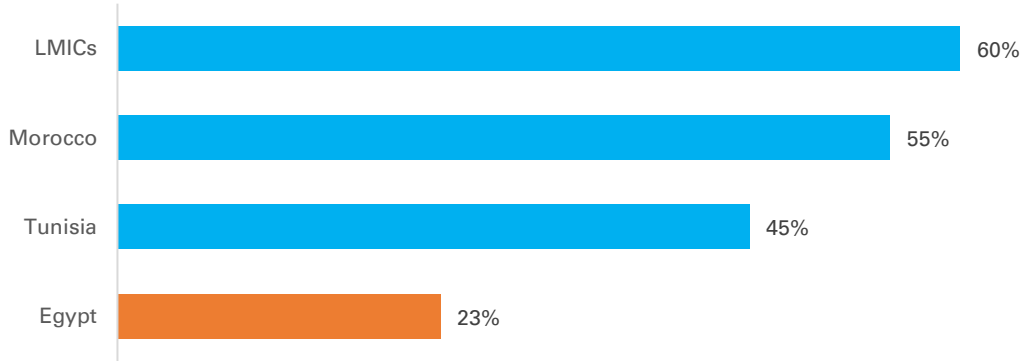
Figure 35. Kindergarten, Gross enrolment ratios (all providers, %)



Source: MoETE, 2022

In terms of participation in kindergarten rates, Egypt is far below the average for lower-middle-income countries and some of its neighbours. Egypt has notably lower kindergarten enrolment than the lower-middle-income country average of 60%, which is lower than Tunisia (45%) and Morocco (55%).

Figure 36. International comparison of GERs for kindergarten

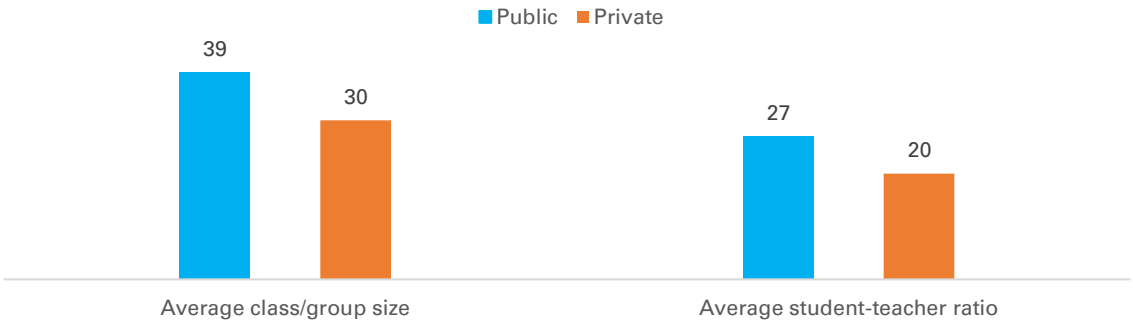


Source: MoETE 2022; World Bank Open Data 2019 (comparators).

Quality of learning and teaching

In public kindergartens, pupil-teacher ratios are high and group sizes are large which raises concerns about the quality of services. On average, there are 39 pupils per group in public kindergartens. The average pupil-teacher ratio is 27:1 in public schools compared to 20:1 in private schools, which compares unfavourably to the EU-23 average of 15:1, and OECD average of 16:1 (OECD, 2019). As small groups and low pupil-teacher ratios are associated with higher quality services and better outcomes for children, reducing the pupil-teacher ratio is a key quality issue for the ESP.

Figure 37. Group size and student-teacher ratio, 2019/20



Source: Calculations based on EMIS data

Almost all public kindergarten teachers have an educational degree:98% university degree, 1% non-educational degree and less than 1% preparatory or secondary qualification with a teaching diploma.

National-level data to assess young children's school preparedness are collected. To understand whether services reach their intended objective of raising children's school preparedness, early skills assessment at the beginning of the primary level.

Equity and inclusion

Despite increased investments in kindergarten participation over the past decade, kindergarten education continues to be characterized by inequitable access, particularly based on income level, geographic area, and disability, which limits opportunities to gain school readiness for certain groups of children (MoETE, 2021). Whereas gender parity has been achieved, children in rural areas (GER of 19%) are much less likely to attend kindergarten compared to children in urban areas (GER of 44%) in 2017 (MoETE, 2021). Many women stay at home to care for the children because of cultural norms, or because the cost of childcare outweighs the financial benefit of them working (World Bank, 2018).

Children from the poorest families have lower participation rates in pre-primary education. Only 16% of children from the poorest 20% of households attend kindergarten compared to 65% of children from the richest 20% of households (MoETE, 2021).

Moreover, the limited available evidence suggests there are large disparities in how well-prepared children are to learn when they start school. Most Egyptian parents seem to be heavily interested in their childr school, with 67% reporting that their children could do literacy tasks very or moderately well when beginning primary school (PIRLS, 2016). There is a modest difference in gender with females, on average, being more likely to be able to read some words than males when starting primary school (73% and 67% respectively) (PIRLS, 2016). But there are large disparities between the richest and the poorest households, and a smaller difference between children in urban and rural areas. Less than five in ten of children from the poorest 20% of households could read some words when starting school compared to almost all children from the richest 20% of households (PIRLS, 2016). Among rural children, less than seven in ten could read some words while eight in ten of their urban peers could do so (PIRLS, 2016). The situation is largely similar when it comes to being able to write some words when beginning primary schools. These disparities in how well students from different groups are equipped to succeed at the start of their schooling career would be a main reason to expand kindergarten access. There are large disparities in kindergarten participation among the four regions and between governorates. Participation is much lower in Upper Egypt (GER of 21%) and Lower Egypt (24%) than in the urban governorates (36%) and the frontier governorates (35%) (MoETE, 2021). Going down to the governorate level reveals that there are large differences within the regions. For example, some frontier governorates show relatively high average GERs (New Valley 43%, South Sinai 61%) while others are at the low end of the range (Red Sea 18% and North Sinai 19%) (MoETE, 2021).

The unavailability of disability-disaggregated statistics has been observed during the ESA and ESP processes. Household surveys and censuses that collect reliable, comparable data on disability among children and their access to education are essential to understand inequities and structural bottlenecks in access between children with disabilities and those without.

Governance and management

Improving the quality of kindergarten services is a priority and under Education 2.0, for that target, MoETE developed quality standards and a quality assurance monitoring framework for kindergartens. The ministry has approved the quality assurance framework, and baseline data collection for the project has been conducted while the incentives and sanctions to improve compliance are being developed.

Furthermore, comprehensive, and regular data on the quality of kindergarten services are also not collected. The lack of preparedness, structural and process quality factors and eventually precludes monitoring of quality and also limits the analysis of the subsector which all hinder effective design, planning and overall quality assurance of kindergarten programmes.

The pre-primary subsector is also challenged by the lack of an official ECD strategy. The draft National ECD Strategic Plan, yet to be approved, promotes the establishment of an inter-ministerial ECD Committee to provide coordination at the national level, supported by a Joint Monitoring Framework. This high-level Committee would include both MoETE and MoSS, who will also have reporting responsibilities at the sub-national level.

Several initiatives are underway with joint backing and participation of multiple ministry officials. Key stakeholder ministries include MoETE, MoSS, the Ministry of Culture (MoC), and MoHP. There is currently a lack of effective and formal coordination at the national or sub-national level for ECD. The result is a fragmented and disorganized sector that, while enjoying high-level support, lacks the resources to carry out many of its initiatives without external funds. Clear policies, strategies, and costed implementation plans that delegate roles and responsibilities, support coordination across sectors, and have the political backing and leadership to secure financial and human resources are essential to strengthen the sector.

This ESP plan proposes to reform the kindergarten education subsector by responding to the aforementioned sub-sectoral challenges in order to deliver the expected outcomes listed below. The proposed operational programmes areas are crucial to achieving the policy priorities and expected outcomes.

1.18.2 Expected Outcomes and Programmes for Pre-Primary Education

Expanded supply and accessibility of pre-primary schools, classrooms, and improved physical condition of pre-primary educational institutions with specific attention to children with disabilities.

Increased availability of a sufficient number and equitable deployment of adequately trained teachers in kindergarten classrooms

Improved learning environments that are inclusive, safe, age-appropriate, and child-friendly

Timely enrolment and school readiness for all children

Improved implementation, monitoring, and evaluation capacity with effective coordination

Involvement of communities, parents and NGOs with relevant capabilities for cooperation with other ministries and coordination of non-state providers

Strengthened capacity of ECE subsector management to implement ECD policy.

Increased and more efficient funding.

Table 6. Projection of students, teachers, and classrooms, Pre-primary education, 2022-2027

	2022	2023	2024	2025	2026	2027
Enrolment						
School-aged population	5,262,656	5,212,504	5,104,968	4,938,432	4,693,872	4,364,256
GER (%)	26,5	30,3	34	37,7	41,5	45,2
Number of students enrolled	1,395,131	1,576,794	1,735,204	1,863,167	1,945,768	1,970,676
- Government schools	1,036,595	1,171,567	1,289,267	1,384,346	1,445,723	1,464,236
- Private schools	358,536	405,227	445,937	478,821	500,045	506,440
Government school teachers and classrooms						
Teachers required	48,980	56,606	63,731	70,047	74,923	77,764
- Teachers to recruit (gross)	9,979	9,096	8,823	8,229	6,977	5,089
Classrooms required	33,998	39,325	44,314	48,748	52,187	54,212
- Classrooms to build (gross)	7,062	6,722	6,168	5,172	3,760	2,409

Source: UNESCO simulation model (2022), estimation based on data from MOETE and CAPMAS.

Table 7. Policy Matrix 1: Pre-primary education, 2023-2027

Policy area	Objectives	Operational Programmes
1. Increasing access & participation.	**A.** Expand kindergarten provision, increase availability of adequate classroom facilities, and improve the physical condition of existing kindergarten educational centres (linked also to PP3A below)	**PP.1.A.1** Map supply and demand for ECE to determine access / expansion related construction needs including a risk analysis to identify which schools are located in areas at risk (natural or human-made disasters), and prioritise construction/renovation needs **PP.1.A.2** Construct new kindergarten educational institutions, based on mapping **PP.1.A.3** Renovate /repair /rehabilitate existing kindergartens based on mapping **PP.1.A.4** Prepare vacant premises/ spaces for expanding access to kindergarten education **PP.1.A.5** Increase the number of licensed foundations to provide pre-primary education through Public and Private Partnerships and incentive schemes **PP. 1.A.6** Establish/strengthen & implement strategies to engage non-government, community providers in KG expansion/ construction/ maintenance **PP.1.A.7** Develop, implement and monitor protocols and Teacher Code of Conduct for ensuring schools are safe spaces for learning **PP.1.A.8** Build networks and partnership with communities, authorities and donors and implement strategies to engage private sector and civil society actors in primary school expansion/ construction/ maintenance **PP.1.A.9** Establish more kindergartens in border areas and prioritize upper governorates and densely populated urban areas **PP.1.A.10** Develop/adopt a green school accreditation scheme
	B. Raise awareness to the importance of kindergarten education and promote participation in ECE.	**PP.1.B.1** Develop family awareness programmes about the importance of kindergarten schooling and initiate outreach/awareness/advocacy campaigns on the benefits of ECE
	C. Increase capacities of ECE provision and ensure availability of sufficient number	**PP.1.C.1** Appoint additional teachers
2. Enhancing quality and relevance of education.	**A.** Provide kindergarten children with an enhanced and age-appropriate, play-based	**PP.2.A.1** Roll-out the curriculum for ECE in response to 21st-century skills, including soft skills on the new curriculum and ensure play-based learning, inclusive education, gender and climate change responsive

	competency-based curriculum	pedagogy, and positive discipline aligned with the curriculum **PP.2.A.2** Make curricula and TLM resources available on the Egyptian Knowledge Bank **PP.2.A.3** Integrate climate education in curricula at the pre-primary education level
	B. Increase availability of adequate classroom facilities, relevant learning materials and educational technology resources	**PP.2.B.1** Provide access to sport and play facilities aimed at the development of early childhood skills among pre-school students **PP.2.B.2** Provision of child-friendly teaching-learning / play materials aligned with the curriculum **PP.2.B.3** Equip kindergartens with adequate, age-appropriate T&L infrastructure and interactive screens
	C. Raise the level of teacher qualifications and skills	**PP.2.C.1** Train kindergarten teachers according to the new curriculum and develop in-service training to increase preschool teacher and learning **PP.2.C.2** Train kindergarten teachers on including lessons/ activities related to prevention and protection against violence and abuse, in line with safe school protocols/teacher code of conduct **PP.2.C.3** Train kindergarten leaders and teachers on how to integrate early awareness on climate action into teaching and learning throughout the school
3. Ensuring equity and inclusion in the education sector.	**A.** Strengthen/adapt kindergarten facilities or learning materials that are child-friendly, disability and gender-sensitive, and provide safe, non-violent, inclusive, and effective learning environments for all (linked also to PP1A above)	**PP.3.A.1.** Expand the inclusive education model in kindergarten schools to ensure inclusive and gender-sensitive education, including for children with disabilities and special needs and adapt kindergarten premises to the needs of children with disabilities **PP.3.A.2** Develop educational materials and resources (in digital and paper formats) that attend to the needs of young children, including those with mental disabilities and in rural areas
	B. Improve access of disadvantaged children to ECE	**PP.3.B.1** Provide family subsidies conditional to children's enrolment targeted to disadvantaged families **PP.3.B.2** Expand alternative, innovative, flexible, low cost ECE programmes to enrol more children, especially from disadvantaged groups **PP.3.B.3** Construct kindergartens/kindergarten classrooms in rural areas
4. Strengthening governance and management.	**A.** Enhance the system-level assessment of kindergarten education quality.	**PP.4.A.1** Fully operationalize the quality assurance mechanism for kindergartens (established in accordance with the Ministerial Resolution No. 122)

	B. Consolidate all systemic reforms and strengthen the capacity of ECE subsector management to implement ECD	**PP.4.B.1** Adapt/disseminate ECD Final Strategy and Policy and dully operationalize the official coordination mechanisms for early childhood development **PP.4.B.2** Establish / Enhance collaboration / coordination/ convergence mechanisms between kindergartens and other services (health, social solidarity) and merge supervisory authorities competent for nursery schooling integration in one entity overseen by the Ministry of Education **PP.4.B.3** Fully operationalize the early childhood development policy in accordance with the Children's Act
	C. Strengthening kindergarten Education Management System (EMIS) and harmonizing with other education subsectors EMISs.	**PP.4.C.1** Improve EMIS integration of pre-primary education level **PP.4.C.2** Develop online application platforms to facilitate enrolment of children in kindergarten
	D. Ensure effective involvement of community participation and private sector with relevant capabilities	**PP.4.D.1** Increase the percentage of pre-primary institutions that build on community participation **PP.4.D.2** Based on quality systems, evaluate community engagement in creating pre-primary institutions. **PP.4.D.3** Establish regular dialogue with communities, private sector, MoETE, and other stakeholders to debate the expansion of pre-primary institutions and the quality of service

Table 8. Key Performance Indicators 1: Pre-primary education, 2023-2027

KPI List	2021/2022 Baseline	2027 Target	Source
K01: % of children in primary grade I who have completed one year of kindergarten education, by sex, region, and disability	30%	45.2%	EMIS
K02: GER in kindergarten (M/F)	22.8% GPI: 0.99	45.2% GPI: 1.00	EMIS
K03: Participation rate in organized learning (one year before the official primary entry age) (M/F)	26% (2021)	45.2%	EMIS
K04: Class size, public kindergarten	31	25	EMIS
K05: Pupil- Teacher Ratio	21.6	19	EMIS

1.19 Component 2: Basic Education

Primary and preparatory education together make up basic education. The education structure is the same regardless of the provider, whilst the model of schooling and curriculum may differ among providers. Basic education should provide all learners with the foundational skills and confidence to prepare themselves to make informed choices and choose between different learning streams at the secondary level.

The ESP's strategic goal for basic education participation in quality basic education'. In recent yea has improved significantly but there remain a number of key challenges to the subsector, as highlighted in the second chapter, and further elaborated this section.

1.19.1 Primary Education

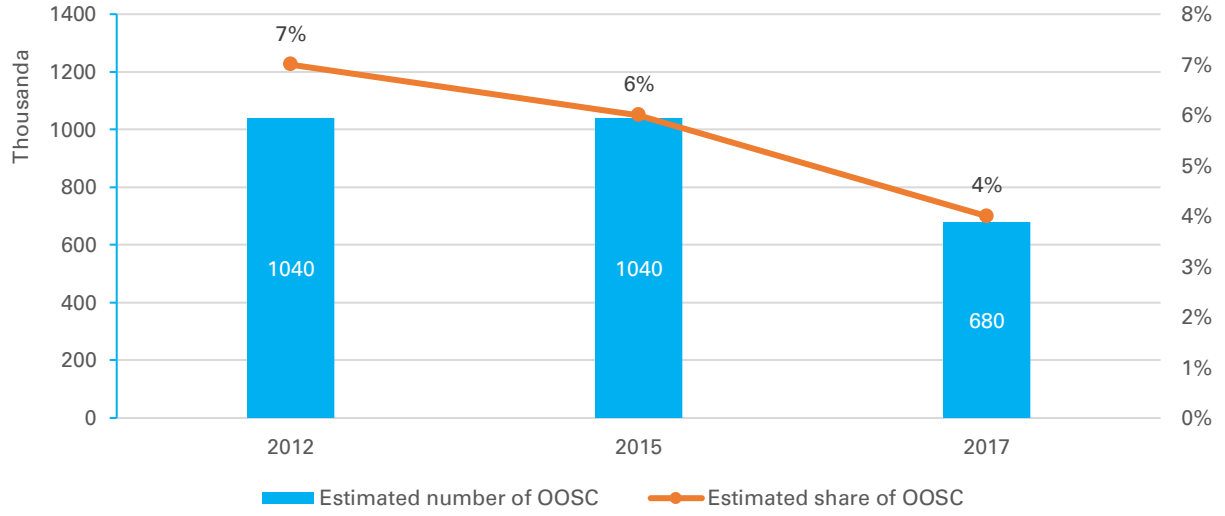
3.1.1.1 Current Subsector Situation and Challenges

Access and participation

Egypt has made tremendous strides in terms of access to primary education over the last decade, and enrolment has increased substantially at the primary level. Primary enrolment has risen from 10.8 million in 2011/12 to 13.7 million in 2021/22, a 27% increase. The gross enrolment ratio (GER) for primary education, currently at 107%, has remained largely unchanged over the last decade, and most children of primary school age are enrolled in primary education. Access to primary education is near universal, as the gross intake ratio is 98% and most students complete the cycle. In 2020/21, 85% of students were enrolled in public primary schools. Meanwhile, private providers account for 9% of primary enrolment while Azhari education accounts for 6%.

Primary and preparatory education are compulsory but in 2017/18, an estimated 680,000 (4%) of children in the age group 6-14 years was out of school, and most of them were in the older range of that group the share of out-of-school children of primary and preparatory school age (6-14 years) declined from about 7% in 2012 to 4% in 2017/18. Between 2021 and 2027, it is estimated that an additional 250 thousand students of primary school age will enter the education system.

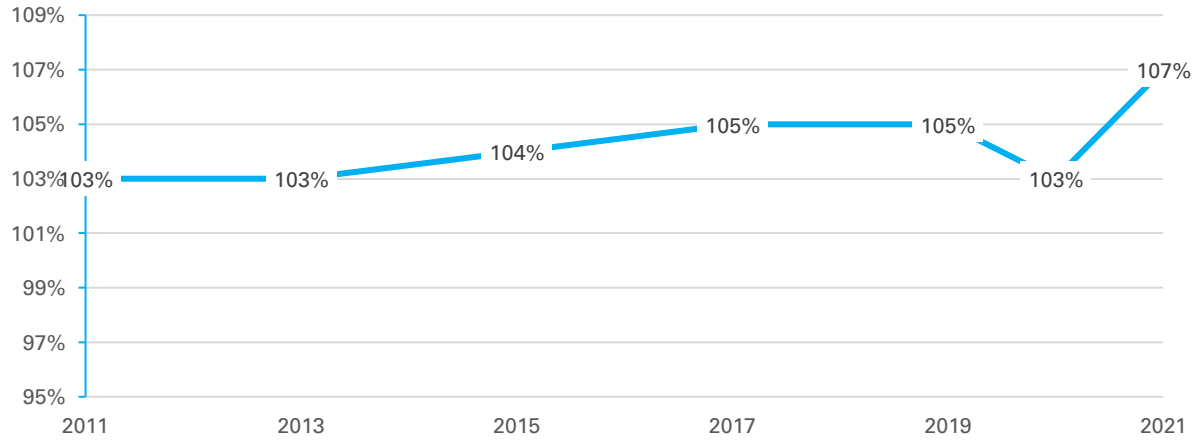
Figure 38. Estimated number and share of out-of-school children, 6-14 years old, 2017/18



Source: MoETE, 2021

Concerning the repetition rates, there is no repetition for grades 1-3 of primary education because of automatic promotion, and repetition rates are low for the upper grades of primary (0.8-1.2%). The transition from public primary to preparatory schools has increased since 2016/17 (96%) and most primary graduates now progress to the preparatory level (102%).[9]

Figure 39. Primary, Gross enrolment ratios (all providers, %)



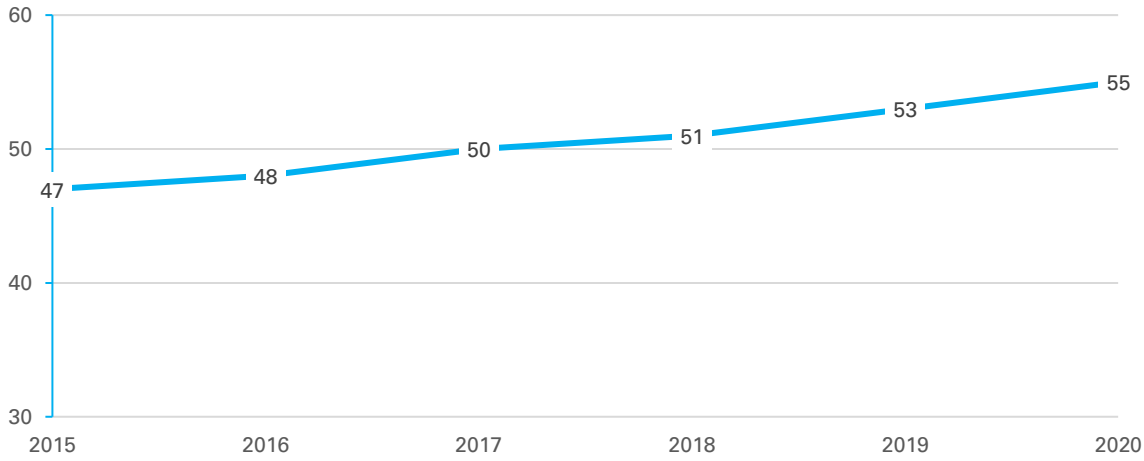
Source: MoETE, 2022

The high GER for primary education is achieved with large class sizes in most schools, which has implications for the quality of instruction. The current national

[9] The transition rate is above 100% because repetition which is somewhat under-reported in administrative data is used for the calculation of this indicator.

benchmark for class size is 36 (for all levels) per Ministerial Decree, and the Government's class size ratio of 30 to be reached by 2030 under Sustainable Development Goal 4. But currently, average class sizes are much larger in public primary schools, which is 55 in 2020/21 and the figure is noticeably high compared to the OECD class size average of 21. Among primary schools, 23% have class sizes above 60 and for a small group of primary (3%) schools the class size is even more than 80 students per class.

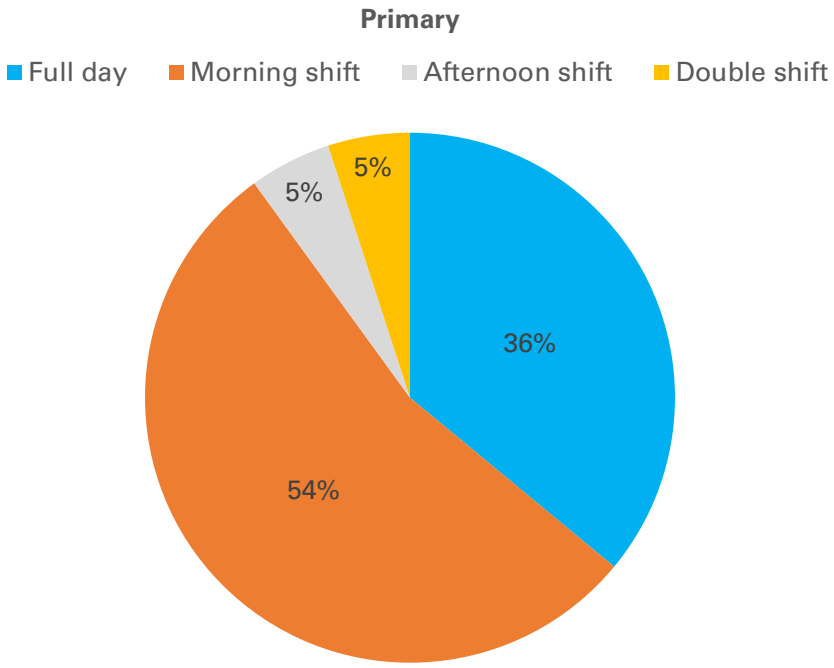
Figure 40. Trend in class sizes public primary education 2015/16-2020/21



Source: Calculations based on EMIS data.

Over the next five years, the strain on the system at the primary education level will increase due to growth in the school-age population. The school-age population is projected to grow by 3.9% for primary, between 2021 and 2027. To accommodate the additional students moving into each level will involve expanding school infrastructure physically and/or the use of hybrid learning models that blend in-person and online activities. Otherwise, class sizes and the use of shifts would need to increase even further to the detriment of the quality of education.

Figure 41. Shares of public primary schools operating full day and shifts 2020/21



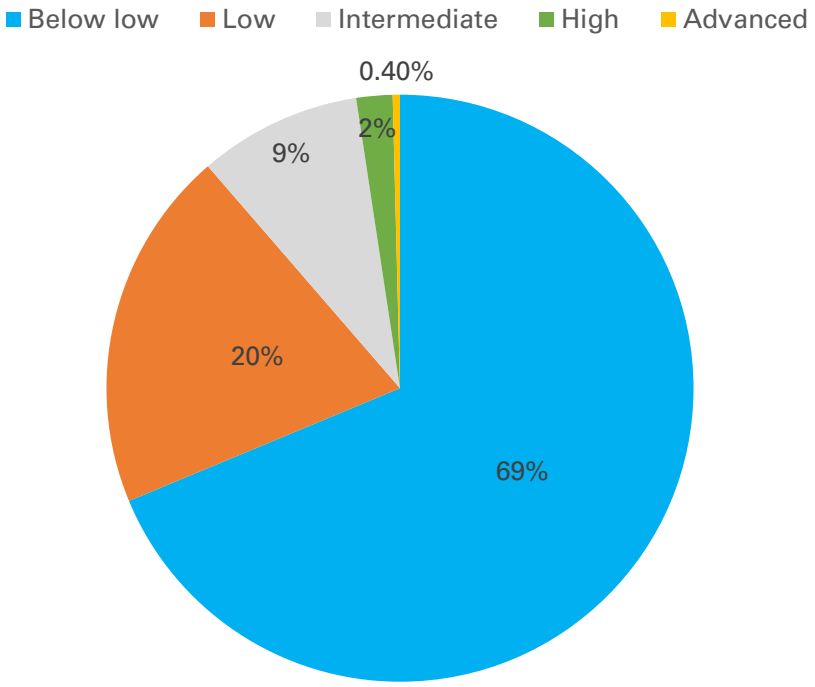
Source: Calculations based on EMIS data.

Quality of learning and teaching

The quality of primary education is a critical challenge according to international assessments. Egypt ranked 49 out of 50 countries on the 2016 PIRLS. The vast majority of grade 4 students have not achieved a basic level of reading skills, which limits their ability to learn other subjects. Overall, female students, on average, perform somewhat better than male ones. A majority of grade 4 students (69%) did not even reach the low benchmark[10] for reading on PIRLS and 19% only reached the low benchmark, whilst no one reached the advanced benchmark.

[10] Below the low reading benchmark means that when reading simpler literary texts students are not able to locate and retrieve explicitly stated information, actions or ideas; cannot make straightforward inferences about events and reasons for actions; and cannot even begin to interpret story events and central ideas. This means that students who are below the low benchmark have not acquired the foundational skills to read to learn other subjects, and this is one of the biggest challenges in the education system.

Figure 42. Grade 4 public school students by PIRLS reading benchmark 2016 (%)

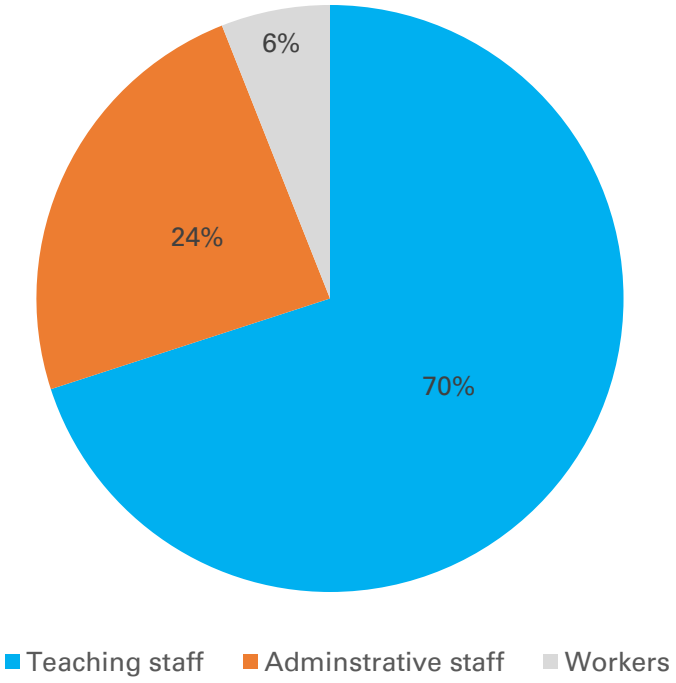


Source: Weighted estimates based on PIRLS 2016 data.

Nationally, the average student-teacher ratio in primary public schools is 32:1 for primary education in 2020/21 and around 19% of primary schools have fewer than 20 students per teacher. However, there are large disparities. About 26% of primary schools have student-teacher ratios above 40:1 and 7% above 60:1 (subject specialization starts in grade 4 which means these ratios are in practice even higher).

Furthermore, the ratio of teaching to non-teaching staff is the lowest for primary schools, at 2:1. Over the last five years, at the primary education level, the number of administrative staff increased by 24% while the number of workers rose by 27%, whereas the number of teaching staff decreased by 8%.

Figure 43. Public primary education workforce by category 2019/20



Source: Calculations based on EMIS data.

As mentioned in Chapter 2, the intended annual teaching hours for primary education level is at the lower end by international comparison. Fewer teaching hours translates into larger numbers of teachers required to provide a given number of instructional hours to students, or, equally undesirably, lower instructional time for students. With limited resources and budget constraints, this is costly and inefficient for the education system.

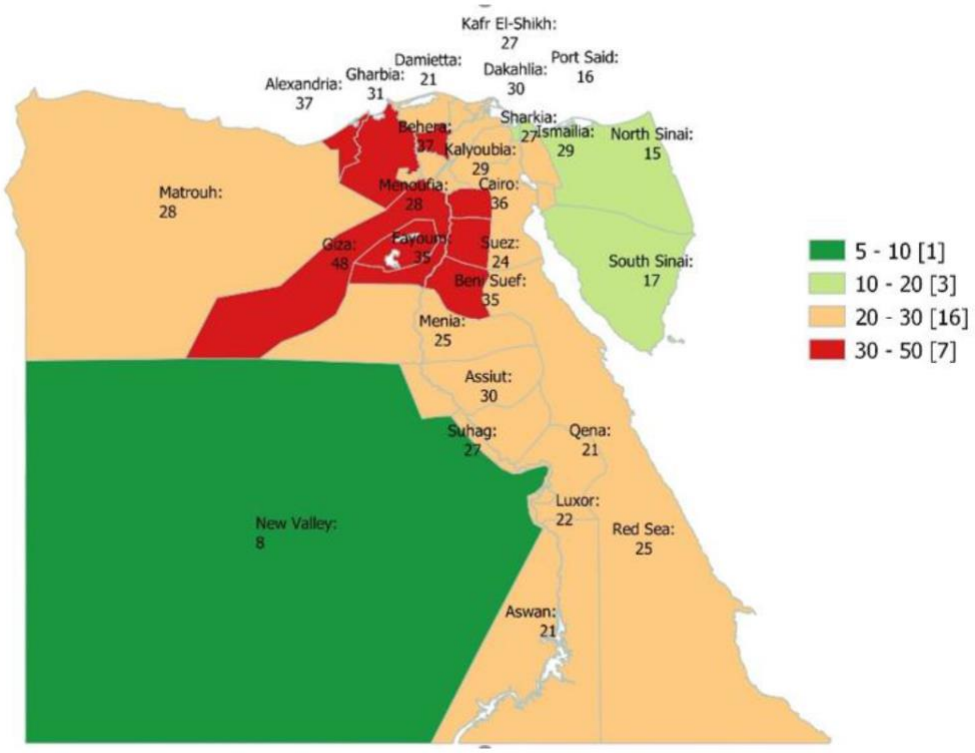
Teacher absence from school is another major concern in many primary public schools according to head teachers. As teachers are absent and/or arrive late or leave early, instructional time is reduced which will be detrimental to student learning. Furthermore, at the primary education level, there is a group of teachers with no educational qualifications. Only 62% of primary school teachers have a university educational qualification (graduate or post-graduate) amongst whom 31% have a teaching diploma which may seriously hamper the quality of education in primary education (MoETE, 2021).

Equity and inclusion

There are significant learning disparities between poorer and richer students. Among grade 4 students, less than one in ten from the poorest households demonstrated basic reading skills or better, compared to almost three in ten of students from the richest households in 2016 (PIRLS, 2016).

Moreover, there are significant disparities in student-teacher ratios across governorates. For primary education level, the five frontier governorates (Matrouh, New Valley, Red Sea, North Sinai, and South Sinai) have the lowest average student-teacher ratios. This is largely related to them being very sparsely populated and therefore having more (very) small schools, which by definition tend to have lower student-teacher ratios. For primary level, average student-teacher ratios are highest (red areas) in Upper Egypt and urban governorates.

Figure 44. Average student-teacher ratios for public primary schools by governorate 2019/20



Source: Calculations based on EMIS data. Note: Excludes contract teachers.

Children with disabilities are one of the most vulnerable groups from an education perspective, and improving education for this group is one of the main objectives under *Education 2.0*. While MoETE collects basic data on children with disabilities enrolled in special education schools and in public mainstream schools, there is an absence of data on the prevalence of disability in Egypt as well as data to allow for in-depth analysis of the education situation and learning outcomes of children with disabilities.

Students with disabilities account for a minuscule share of total enrolment in mainstream schools. In 2020/21, less than 1 percent of total enrolment in primary schools is made up of students with disabilities which necessitates tailored

inclusive strategies to better include the children with disabilities in the national education system.

This ESP plan proposes to reform the primary education subsector by responding to the aforementioned sub-sectoral challenges in order to the expected outcomes listed below. The proposed programmes in each policy areas are crucial to achieving ESP policy outcomes and objectives.

1.19.2 Expected Outcomes and Programmes for Primary Education

Equitable access to and successful completion of primary education for all, improving internal efficiency and addressing the causes of dropout, with particular attention to excluded and marginalized groups, to reduce disparities based on gender, disability, and geographical location.

Availability of sufficient schools and classrooms that are near enough to the population to meet the needs of universal primary education, meeting pupil-classroom ratio standards and reducing regional disparities.

Schools are safer, more inclusive, and child-friendly, encouraging timely enrolment, attendance and retention.

Availability and equitable deployment of sufficient number of teachers by grade, subject and stream, meeting pupil-teacher ratio standards

All existing and newly recruited teachers obtain the required qualifications and teachers receive regular support and in-service training, in priority areas in line with their needs and education system priorities.

Improved and equitable learning outcomes for primary education students with specific focus on foundational skills and learning

Relevant competency-based curricula are in place and textbooks and teacher guides are updated accordingly.

Roll out standardised assessment systems in place at Gr 4 Improved implementation, monitoring and evaluation capacity and strengthened subsector education management governance.

Table 9. Projection of students, teachers, and classrooms, Primary education, 2022-2027

	2022	2023	2024	2025	2026	2027
Enrolment						
School-aged population	14,757,256	14,907,880	14,993,912	14,976,848	14,839,288	14,577,512
GER (%)	96,8	97,2	97	97,5	98,1	99,7
Number of students enrolled	14,286,854	14,488,119	14,549,665	14,607,149	14,563,470	14,533,283
- Government schools	13,033,121	13,216,690	13,272,836	13,325,268	13,285,417	13,257,867
- Private schools	1,253,733	1,271,429	1,276,829	1,281,881	1,278,053	1,275,417
Government school teachers and classrooms						

Teachers required	400,987	420,696	437,617	455,667	471,833	489,751
- Teachers to recruit (gross)	40,651	31,739	29,541	31,179	29,836	32,073
Classrooms required	249,613	266,748	282,538	299,462	315,544	333,191
- Classrooms to build (gross)	29,761	28,416	29,550	28,707	30,273	24,618

Source: UNESCO simulation model (2022), estimation based on data from MOETE and CAPMAS.

Table 10. Policy Matrix 2: Primary education, 2023-2027

Policy areas	Objectives	Operational Programmes
1. Increasing access & participation.	**A.** Expand primary education provision, ensure availability of adequate classroom facilities, and improve the physical condition of primary schools (linked to PP3A below)	**PP.1.A.1** Map supply and demand for primary schools to determine access / expansion-related construction needs/rehabilitation/preparation needs including a risk analysis to identify which schools are located in areas at risk (natural or human-made disasters), and develop prioritised plan **PP.1.A.2** Construct new primary schools according to the plan **PP.1.A.3** Renovate /repair /rehabilitate existing targeted primary schools **PP.1.A.4** Prepare targeted vacant premises/ spaces for to be converted into primary schools **PP.1.A.5** Increase the number of licensed foundations to provide primary education through Public and Private Partnerships and incentive schemes **PP.1.A.6** Build networks and partnership with communities, authorities and donors and implement strategies to engage private sector and civil society actors in primary school expansion/ construction/ maintenance **PP.1.A.7** Establish more schools in border areas and prioritize upper governorates and densely populated urban areas **PP.1.A.8** Develop/adopt a green school accreditation scheme
	B. Raise awareness of the importance of primary education	**PP.1.B.1** Continue to develop and roll-out family awareness programmes in areas of low enrolment about the importance of primary schooling and initiate outreach/awareness/advocacy campaigns to on the benefits of education
	C. Increase number of teachers in primary classrooms	**PP.1.C.1** Appoint additional teachers on a par with the increased number of enrolments, keeping in line with the national pupil-teacher ratio standards **PP.1.C.2** Develop and implement a plan to attract best candidates for teaching profession and to motivate teachers
2. Enhancing quality and	**A.** Provide primary school learners with an enhanced and	**PP.2.A.1** Develop & distribute competency-based primary-school curriculums in electronic formats for

relevance of education.	competency-based curriculum	broadcast to primary education students and teachers, including a focus on 21st century skills, gender and climate change responsive pedagogy, STEM and digital literacy aligned with the curriculum **PP.2.A.2** Develop & distribute teaching and learning materials based on the new curriculum to support teaching **PP.2.A.3** Integrate climate education in school curricula at the primary education level
	B. Ensure availability of adequate classroom facilities, relevant learning materials, and educational technology resources	**PP.2.B.1** Equipping primary schools with ICT facilities and expand ICT infrastructure & access, and connect all classrooms, teachers, and students to the internet, the digital resources **PP.2.B.2** Produce educational resources, print and supply textbooks for primary education; promote electronic formats **PP.2.B.3** Upgrade educational laboratories of primary schools **PP.2.B.4** Complete and finalize development of interactive learning materials and curriculum resources for primary 5 & 6 across all disciplines for upload to the MoETE's web Knowledge Bank **PP.2.B.5** Develop foreign language development books at the advance level targeting public language schools, with focus on primary (5 - 6)
	C. Raise the level of teacher qualifications and skills	**PP.2.C.1** Design in-service training to increase primary teachers' capacity and train primary teachers according to the new curriculum **PP.2.C.2** Develop the teacher manual of information and communication technology for grades 5 & 6 of primary education **PP.2.C.3** Develop teacher manuals for physical and health education of primary 5 & 6 **PP.2.C.4** Train primary teachers on including lessons/ activities related to prevention and protection against violence and abuse, based on safe school protocols and Teachers' Code of Cond **PP.2.C.5** Integrate climate change mitigation and adaptation strategies into teachers' pr development training and train school leaders and teachers on how to integrate climate education into teaching and learning throughout the school **PP.2.C.6** Provide teachers with opportunities for ICT and skill development training pertinent to the blended learning modality
	D. Update the assessments & examinations	**PP.2.D.1** Develop, conduct trial and application of summative and formative assessment tools to disincentivize rote learning and private tutoring targeting grades (4-6)(see also PP.4.A.1 below)

		PP.2.D.2 Conduct national research studies, such as Early Grade Reading Assessment (EGRA) and Early Grade Mathematics Assessment (EGMA) for grade 4 students of primary education
3. Ensuring equity and inclusion in the education sector.	**A.** Strengthening/adapting primary school facilities or curricular materials that are child-friendly, disability and gender-sensitive, and provide safe, non-violent, inclusive, and effective learning environments for all (linked to PP1A above)	**PP.3.A.1** Expand the inclusive education model in primary schools to ensure inclusive education for all children, including those with disabilities and special needs. **PP.3.A.2** Adapt primary premises to the needs of children with disabilities, and availability of learning aid materials. **PP.3.A.3** Align curricular materials for students with auditory and visual disabilities in non-inclusive schools, according to with the disability curriculum framework, for (4 - 6) of primary education **PP.3.A.4** Develop the curriculum framework for students with mental disabilities targeting grades (4-6) of primary education **PP.3.A.5** Ensure safe, adequate, gender-sensitive, inclusive learning environment (e.g., separate latrines for boys & girls ; **PP.3.A.6** Procure & distribute learning aids for students with disabilities **PP.3.A.7** Develop teacher training, with hands-on experience during in-service training, to provide teachers with the necessary skills to accommodate students' diverse needs an behavioural support, lesson facilitation for diverse learners, and supporting critical thinking and social and collaborative skills **PP.3.A.8** Ensure teacher education on equity issues, gender, and inclusive education **PP.3.A.9** Train teachers and school staff how to prevent and respond to violence prevention, SRGBV and response practices and tools **PP.3.A.10** Conduct household mapping of school-aged children to identify the needs for education premises in disadvantaged locations, communities and building schools closer to the communities that are accessible and safe **PP.3.A.11** Develop a plan for bullying and harassment prevention in schools and create a code of conduct for teachers and anti-bullying strategies that establish clear consequences in case of violation and develop general constructive disciplinary interventions, Establishing clear violence reporting and response mechanisms **PP.3.A.12** Collect data to monitor the prevalence of school violence and bullying and create evidence-based initiatives

		PP.3.A.13 Ensure a safe and healthy school climate that prevents social and emotional violence, such as verbal abuse, harassment, and social exclusion **PP.3.A.14** Ensure that gender-friendly guidance and counselling are being implemented in schools **PP.3.A.15** Ensure adequate resource allocation and construct gender-responsive infrastructure **PP.3.A.16** Developing clear codes of conduct prohibiting SRGBV with enforced disciplinary procedures **PP.3.A.17** Monitor progress towards inclusion internally, through self-assessment, establish inclusion-related inspection standards **PP.3.A.18** Consultation of minority populations/disadvantaged communities/ in school infrastructure decision-making processes
	B. Improving access of disadvantaged children to primary schools	**PP.3.B.1** Provide family subsidies conditional to children's enrolment in pr establishing civil society partnerships **PP.3.B.2** Provide access to nutrition and feeding at primary schools by targeting household poverty and prioritizing poorest areas with a geographical focus such as Upper Egypt
4. Strengthening governance and management.	**A.** Enhance measures to assess education system performance	**PP.4.A.1** Develop a plan for the introduction and implementation of automatic promotion at the primary education level **PP.4.A.2** Develop strategies for radically decreasing private tutoring, improving teachers' regular attendance and increasing teaching hours on a par with international norms **PP.4.A.3** Participate in international research studies and assessments, including the 'T International Mathematics (TIMSS) and The Progress in International Reading Literacy Study (PIRLS) to assess the effectiveness and quality of the national education system in comparison to other countries
	B. Strengthening primary Education Management System (EMIS) and harmonizing with other education subsectors EMISs.	**PP.4.B.1** Develop online application platforms to facilitate enrolment of children in grade 1 of primary education **PP.4.B.1** Strengthen EMIS to further support teaching and learning integration

Table 11. Key Performance Indicators 2: Primary education, 2023-2027

KPI List	2021/2022	2027 Target	Source
K01: Gross intake rate to primary G1	98%	100%	EMIS
K02: GER in primary education (M/F) (also in terms of socio-economic background, disabilities, location and frontier governates)	107.3% GPI: 1.01	102% GPI: 1.00	EMIS
K03: NER in primary (also in terms of socio-economic background, disabilities, sex, location and region)	NER[11]	100%	EMIS
K04: Out-of-school rate, primary (M/F)	0.7% (2019)	0%	OOSC Reports or EMIS
K05: Transition rate from Primary to preparatory education	98.12%	99%	EMIS
K06: Proportion of children and young people (a) in grades 2/3; (b) at the end of primary; and (c) at the end of primary achieving at least a minimum proficiency level in (i) reading and (ii) mathematics, by sex.	Not available	100%	EMIS
K07: Gross intake ratio in Grade 6 (also in terms of socio-economic background, disabilities, sex, location and region)	99%	100%	EMIS
K08: Pupil–teacher ratio at primary level, public schools	34	26	EMIS
K09: % students at public schools who contribute financially to extracurricular activities.	20%	15%	EMIS
K10: Class size, public	49	37.8	EMIS

1.19.3 Preparatory Education

3.1.1.1 Current Subsector Situation and Challenges

Structure of the subsector

Preparatory education (grades 7-9) for children aged 12 to 14 years is the second level of basic education. There are three tracks: academic (general), vocational (technical) and sports (physical education), however, the numbers of vocational and sports schools are very small. Students who successfully pass the primary grade 6 final exam transit to general preparatory education, regardless of their score. Students who fail in any two grades in primary education transit to vocational preparatory education. Parents can also choose to enrol their children in vocational

[11] According to the Statistical Yearbook 2021-2022, the NER is 104.9. However, by definition, NER cannot be higher than 100%. It means that data collection/analysis is incorrect

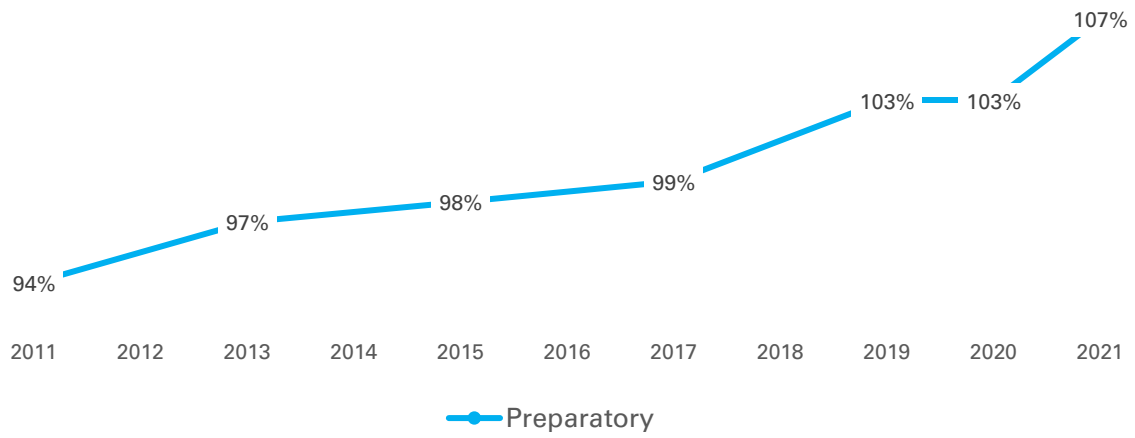
preparatory education even if they did not fail any grade in primary education. Almost all students at the preparatory level are in academic schools (5.4 million) with the small remainder enrolled in either a vocational (131,000) or sports (just over 6,000) school (MoETE, 2021). In 2020/21, 87% of preparatory students are enrolled in public (government) schools. Meanwhile, private providers account for 7% of preparatory enrolment while Azhari education accounts for 6% preparatory enrolment (MoETE, 2021).

Students transit from general preparatory to either general or technical secondary education based on their score in grade 9 final exam. As grade 9 final exams are administered at the governorate level, there is no national benchmark. The minimum score for a student to transit to general secondary education differs from one governorate to another and may also differ across years. Importantly, this means that students with the same knowledge and skills may pass or fail the exam simply based on which governorate they live in. Exams are different in Azhari schools, even for the very same subjects/curricula. The end of preparatory school exams is developed at the governorate level, and the results are reported from each governorate to the central Azhari Institutes Sector in Cairo and are all announced on the same day.

Access and participation

Over the last decade, preparatory enrolment has increased substantially. Enrolment in preparatory education has increased from 4.8 million to 5.8 million equivalent to a 21% increase and GER for preparatory level increased significantly by 13 percentage points to 107% between 2017/2018 and 2021/22 (MoETE, 2022). Additionally, completion has also improved from 88% to 99% for preparatory education. Moreover, repetition rate is relatively low for preparatory as it is between 0.6-1.1%. Concerning gender parity, in 2020/21, the gender parity index was 99% at preparatory.

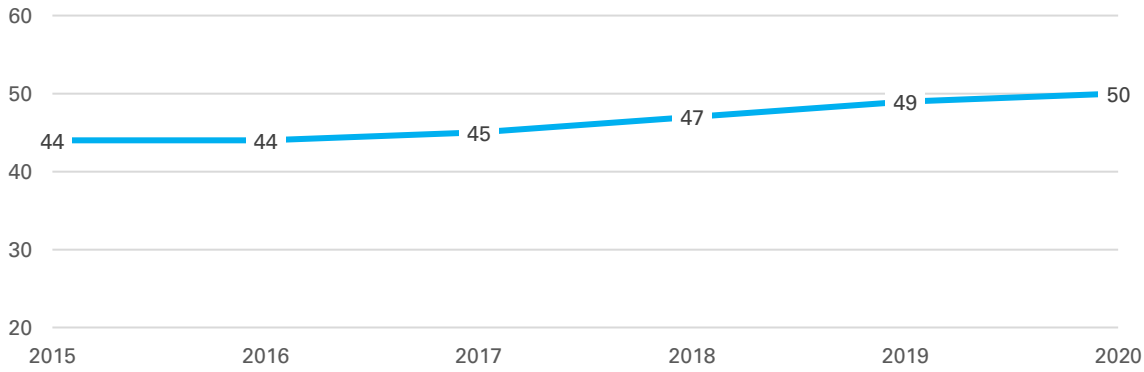
Figure 45. Preparatory, Gross enrolment rates (all providers, %)



Source: Calculations based on EMIS data.

The average class size is substantially large at the preparatory education level and rising steadily; which was approximately 50 in 2020/21, raising a serious question of the quality of education.

Figure 46. Trend in class sizes public preparatory education 2015/16-2020/21



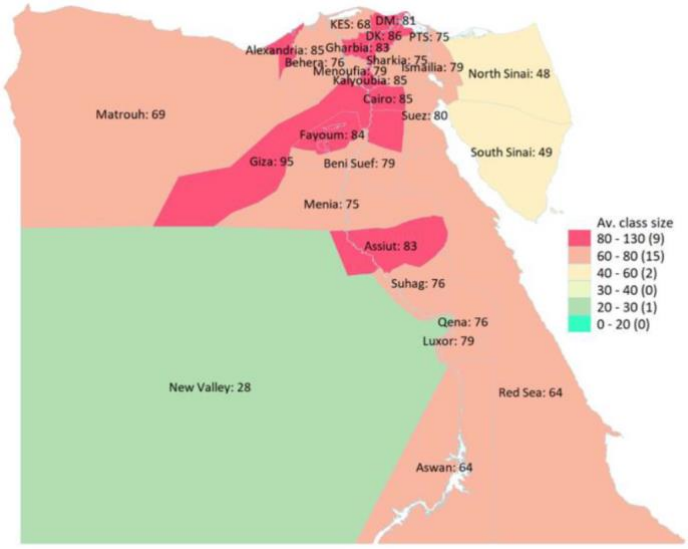
Source: Calculations based on EMIS data.

Within the next five years, the strain on the system at the preparatory level is expected to increase dramatically due to growth in the school-age population. The school-age population is projected to grow 31.1% for preparatory between 2021 and 2027.

The large class size is stringent for preparatory education as the average class size is still 60 or larger in most governorates, as seen in the graph below. Moreover, five governorates – Damietta, Fayoum, Gharbia, Giza, and Kalyoubia – have average class sizes above 80 for preparatory education level, implying a greater need for measures to reduce class sizes (MoETE, 2021). According to 39% of preparatory

school head teachers, shortages of instructional space/classrooms reduce their schools' capacity to provide instruction (TIMSS, 2019).

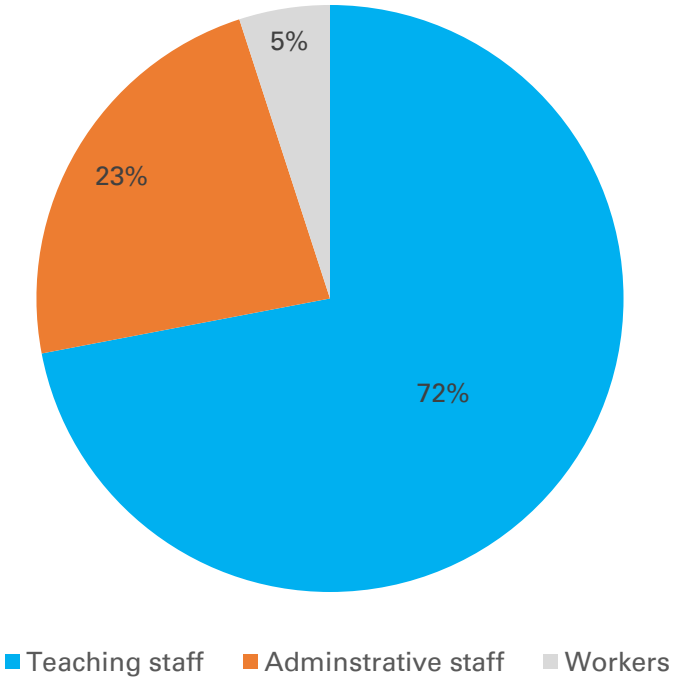
Figure 47. Average class size for public preparatory schools by governorate 2019/20



Source: Calculations based on EMIS data.

Another concern is the growing imbalance in the ratio of teaching to non-teaching staff in the public education workforce at preparatory level. From 2015 to 2020, the number of administrative staff increased by 13% at the preparatory level, and the number of workers (non-administrative, non-teaching) rose by 20%, while teaching staff numbers decreased by 9% (MoETE, 2021). This may reveal serious human resource allocation inefficiencies, with significant negative implications for learning quality.

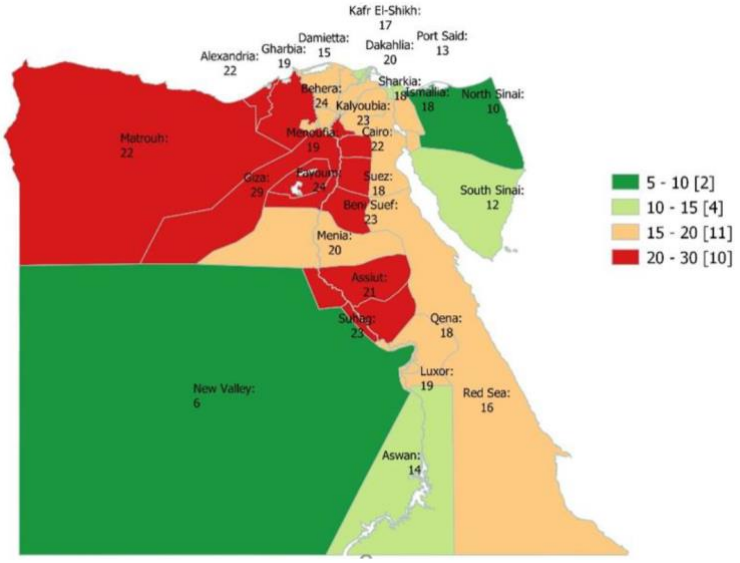
Figure 48. Public preparatory education workforce by category 2019/20



Source: Calculations based on EMIS data.

There are also large disparities in student-teacher ratios across governorates. At the preparatory level, average student-teacher ratios are highest (red areas) in Upper Egypt and urban governorates as shown below.

Figure 49. Average student-teacher ratios for public preparatory schools by governorate 2019/20

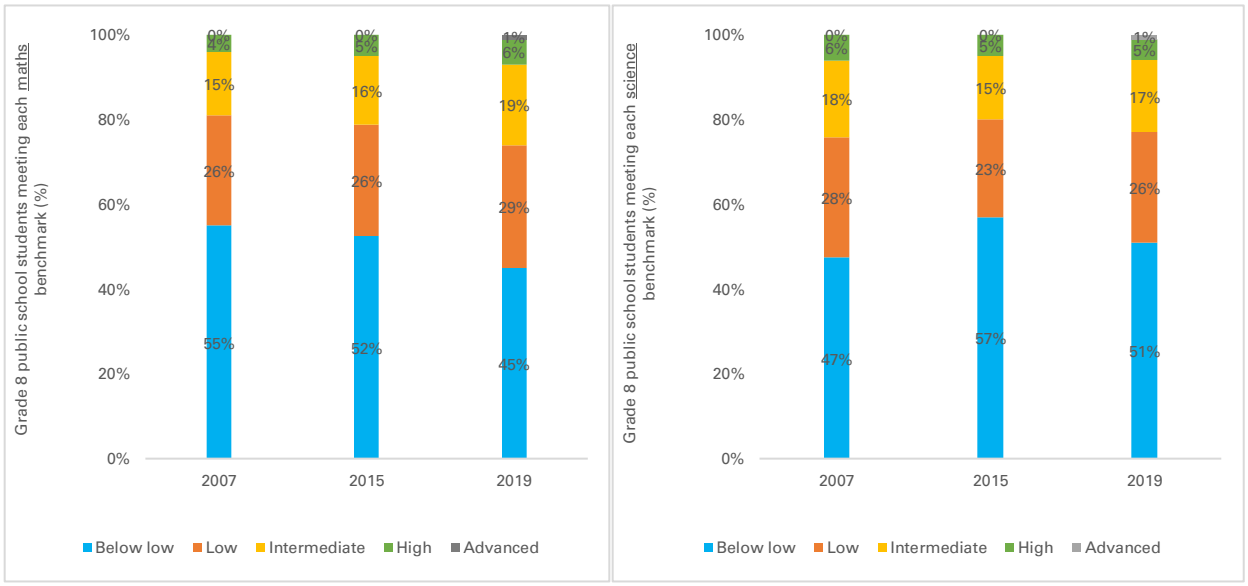


Source: Calculations based on EMIS data. Note: Excludes contract teachers.

Quality of learning and teaching

International assessments reveal the low level of learning in preparatory education. A great majority of Egyptian grade 8 students (74%) only have some basic knowledge of whole numbers and basic graphs, or even less. Similarly for science, the majority (77%) merely have a limited understanding of scientific concepts and knowledge of foundational science facts. However, there has been some improvement in maths performance since 2017. The share of students not even reaching the low benchmark has declined by ten percentage points to 45%. Meanwhile, the share of students reaching the low benchmark has increased by 3 percentage points to 29%, and the share meeting the intermediate benchmark has gone from 15% to 19%. For science, there is no clear trend since 2007. 95% of teachers also report that students have not acquired the requisite skills to successfully learn.

Figure 50. Grade 8 students by TIMSS maths and science benchmarks 2019 (%)



Source: Weighted estimates based on TIMSS 2007, 2015, 2019 data

Similar to primary education, the intended annual teaching hours for the preparatory education is also significantly low. With assistant teachers/teachers teaching more hours per week than expert te teaching duties being at the lower end of the range compared to the OECD average. Parallel to primary education level, teacher absence from school is also one of the major concerns in many preparatory public schools according to head teachers. Among preparatory school head teachers, 47% consider teacher absence is a moderate or serious problem. Also, 48% of preparatory head teachers state that there are problems with teachers arriving late and/or leaving early, indicating the shorter interaction and learning time.

Equity and Inclusion

In contrast to the primary level, where the likelihood of accessing and completing is largely similar for children in the four regions, students in the frontier governorates and Upper Egypt are less likely to complete preparatory. The likelihood of completing preparatory education is 86% for students in the Frontier and Upper Egypt region compared to 92% in the Urban and Lower Egypt regions, even though the majority of public preparatory (69%) schools are located in rural areas as largely reflecting the rural school-age population (MoETE, 2021).

Considering the intersectional gender aspects of learning inequities, among the poorest girls in rural areas, the likelihood of accessing preparatory education is 88%, and the likelihood of completion is only 74%, indicating a critical issue regarding the high drop-out rate (MoETE, 2021). At the post-primary level, most girls who drop out of school give marriage as the reason, which 33% at preparatory, which indicates social and cultural barriers for girls in completing their studies (MoETE, 2021).

Among children from the poorest 20% of households, the adjusted net attendance ratio (ANAR) for preparatory education increased by 15 percentage points between 2012 and 2017/18, in contrast to increases of ten percentage points for children from the richest 20% of households (OAMDI, 2020). However, children from poor socioeconomic backgrounds have noticeably lower percentages in access and participation indicators. Moreover, due to the shadow education or "private tutoring" system, they are at risk of being left behind in terms of learning achievements by children from relatively higher socioeconomic backgrounds.

Although gender parity in access and participation has been achieved at the preparatory level, gender differences in learning outcomes remain. Female students tend to perform better in maths and science than male students in grade 8. In 2019, 29% of females in grade 8 reached the intermediate benchmark or higher for maths compared to 24% of males (TIMSS, 2019). For science, the corresponding shares were 26% for female and 20% for male students (TIMSS, 2019). The difference in the shares of females and males reaching at least the intermediate benchmark was similar in 2007 for both maths and science.

This ESP plan proposes improving the preparatory education subsector by responding to the subsectoral challenges to ensure the expected outcomes listed below. The proposed programme are crucial to achieving policy outcomes and objectives.

1.19.4 Expected Outcomes and Programmes for Preparatory Level

Ensured equitable access to and successful completion of preparatory education for all students.
Address internal efficiency and the causes of dropout, with particular attention to excluded and marginalized groups,
Availability of sufficient schools and classrooms for the school age population
Meet student-classroom ratio standards.
Safer, more inclusive and child-friendly schools, encouraging timely enrolment, attendance and retention.
Relevant, updated competency-based curricula and textbooks and teacher guides rolled out.
Increased availability and equitable deployment of sufficient number of teachers by grade, subject and stream, respecting pupil-teacher ratio standards
All existing and newly recruited teachers have the required qualifications and teachers receive regular support and in-service training, in priority areas in line with their needs and education system priorities.
Improved and equitable learning outcomes
Disparities reduced based on gender, disability, and geographical location.
Improved implementation, monitoring and evaluation capacity and strengthened subsector education management governance.

Table 12. Projection of students, teachers, and classrooms, Preparatory education, 2022-2027

	2022	2023	2024	2025	2026	2027
Enrolment						
School-aged population	6,092,346	6,273,051	6,549,386	6,866,306	7,240,189	7,677,458
GER (%)	99,3	99,7	100,2	97,6	95,3	90,1
Number of students enrolled	6,048,190	6,253,327	6,563,238	6,704,298	6,897,848	6,913,970
- Government schools	5,626,774	5,817,658	6,105,980	6,237,232	6,417,257	6,432,261
- Private schools	421,416	435,669	457,258	467,066	480,590	481,709
Government school teachers and classrooms						
Teachers required	236,846	250,888	269,944	282,860	298,730	307,573
- Teachers to recruit (gross)	20,582	21,147	26,583	21,014	24,356	17,805
Classrooms required	117,794	127,357	139,806	149,404	160,858	168,782
- Classrooms to build (gross)	15,522	18,408	15,556	17,413	13,883	17,891

Source: UNESCO simulation model (2022), estimation based on data from MOETE and CAPMAS.

Table 13. Policy Matrix 3: Preparatory education, 2023-2027

Policy area	Objectives	Operational Programmes
1. Increasing access & participation.	**A.** Expand preparatory education provision, ensure availability of adequate classroom facilities and improve physical condition of preparatory schools (Links also to PP3A below)	**PP.1.A.1** Improve school mapping to better determine access / expansion-related construction/rehab/preparation needs/priorities including a risk analysis to identify which schools are located in areas at risk (natural or human-made disasters) and develop a prioritised, targeted plan **PP.1.A.2** Construct new preparatory educational institutions in targeted areas and keeping in line with the national standards for pupil-classroom ratios **PP.1.A.3** Renovate /repair /rehabilitate existing preparatory schools **PP.1.A.4** Prepare vacant premises/ spaces for expanding access to preparatory education **PP.1.A.5** Increase the number of licensed foundations to provide preparatory education through public and private partnerships and incentive schemes **PP.1.A.6** Strengthen & implement strategies to engage private sector in preparatory school expansion/ construction/ maintenance **PP.1.A.7** Establish more schools in border areas and prioritize upper governorates and densely populated urban areas **PP.1.A.8** Develop/adopt a green school accreditation scheme
	B. Raise awareness of the importance of preparatory education and promote participation in preparatory education.	**PP.1.B.1** Develop family awareness programmes about the importance of schooling and initiate outreach / awareness /advocacy campaigns to on the benefits of education **PP.1.B.2** Identify the reasons and factors of "out-of-s c h o o l " / n o attending children and improve their attendance of schools
	C. Increase the number of teachers	**PP.1.C.1** Appoint additional teachers and IT specialists in accordance with the pupil-teacher ratio standards
2. Enhancing quality and	**A.** Provide preparatory school learners with an enhanced and competency-based curriculum	**PP.2.A.1** Develop & distribute competency-based preparatory-school curriculums in electronic formats for

relevance of education.		broadcast to preparatory education students (G7-G9) including a focus on 21st century skills, gender and climate change responsive pedagogy, STEM and digital literacy aligned with the curriculum **PP.2.A.2** Develop & distribute teaching and learning materials based on the new curriculum to support teaching **PP.2.A.3** Integrate climate education in school curricula at the preparatory education level
	B. Availability of adequate classroom facilities, relevant learning materials, and educational technology resources	**PP.2.B.1** Introduce wider use of ICT for enhanced teaching-learning activities and equipping preparatory schools with ICT facilities and create an enabling technological environment for preparatory education **PP.2.B.2** Produce educational resources, print and supply textbooks for preparatory education; promote electronic formats **PP.2.B.3** Increase and upgrade educational laboratories of preparatory schools **PP.2.B.4** Develop foreign language development books at the advance level targeting public language schools, with focus on preparatory (7 & 8) **PP.2.B.5** Develop new curricular and educational materials for second foreign languages targeting grades 7 & 8 of preparatory education, based on the foreign language development framework, in conformity with Education 2.0 **PP.2.B.6** Complete and finalize development of interactive learning materials and curriculum resources for preparatory 7 & 8 across all disciplines for upl o a d t o t h e Mo E T I E g y p t ' s K n o w l e d g e B
	C. Raise the level of teacher qualifications and skills	**PP.2.C.1** Provide training for preparatory teachers to improve their professionalism, commitment and classroom pedagogies **PP.2.C.2** Train preparatory teachers on including lessons/ activities related to prevention and protection against violence and abuse

		PP.2.C.3 Design in-service training to increase preparatory capacity for teaching and learning and train preparatory teachers according to the new curriculum **PP.2.C.4** Integrating climate change mitigation and adaptation into teachers' professio training and train school leaders and teachers on how to integrate climate education into teaching and learning throughout the school **PP.2.C.5** Develop teacher manuals for physical and health education of preparatory 7 & 8 **PP.2.C.6** Develop the teacher manual of information and communication technology for grades 7 & 8 of preparatory education **PP.2.C.7** Provide teachers with opportunities for ICT and skill development training pertinent to the blended learning modality
	D. Update the assessments & examinations	**PP.2.D.1** Improve formative assessment practices as part of learning process supplement by high quality standardized educational assessment for system performance **PP.2.D.2** Develop and establish online platforms to facilitate delivery of grade 9 exams of preparatory education
3. Ensuring equity and inclusion in the education sector.	**A.** Strengthening/adapting preparatory school facilities and learning materials that are child-friendly, disability and gender-sensitive, and provide safe, non-violent, inclusive, and effective learning environments for all	**PP.3.A.1** Expand the inclusive education model in preparatory schools to ensure inclusive education for all children, including those with disabilities and special needs. **PP.3.A.2** Adapt of preparatory premises to the needs of all children, including those with disabilities, and ensure the availability of equipment **PP.3.A.3** Align curricular materials for students with auditory and visual disabilities in non-inclusive schools, with the disability curriculum framework, for grade 7 of preparatory education across all disciplines **PP.3.A.4** Develop the curriculum framework and educational materials for mental disabilities targeting grades (7-8) of preparatory education for students with mental disabilities

		PP.3.A.5 Ensure safe, adequate, gender-sensitive, inclusive learning environment (e.g., separate latrines for boys & girls etc) **PP.3.A.6** Procure & distribute learning aids for students with disabilities **PP.3.A.7** Develop teacher training, with hands-on experience during in-service training, to provide teachers with the necessary skills to accommodate students' diverse n styles, positive behavioural support, lesson facilitation for diverse learners, and supporting critical thinking and social and collaborative skills **PP.3.A.8** Ensure teacher education on equity issues, gender, and inclusive education **PP.3.A.9** Train teachers and school staff how to prevent and respond to violence prevention, SRGBV and response practices and tools **PP.3.A.10** Conduct household mapping of school-aged children to identify the needs for education premises in disadvantaged locations, underserved communities and building schools closer to the communities that are accessible and safe **PP.3.A.11** Develop a plan for bullying and harassment prevention in schools and create a code of conduct for teachers and anti-bullying strategies that establish clear consequences in case of violation and develop general constructive disciplinary interventions, establishing clear violence reporting and response mechanisms **PP.3.A.12** Collect data to monitor the prevalence of school violence and bullying and create evidence-based initiatives **PP.3.A.13** Ensure a safe and healthy school climate that prevents social and emotional violence, such as verbal abuse, harassment, and social exclusion **PP.3.A.14** Ensure that gender-friendly guidance and counselling are being implemented in schools

		PP.3.A.15 Ensure adequate resource allocation and construct gender-responsive infrastructure **PP.3.A.16** Developing clear codes of conduct prohibiting SRGBV with enforced disciplinary procedures **PP.3.A.17** Monitor progress towards inclusion internally, through self-assessment, establish inclusion-related inspection standards **PP.3.A.18** Consultation of minority populations/disadvantaged communities/ in school infrastructure decision-making processes
	B. Improving access of disadvantaged children to preparatory schools	**PP.3.B.1** Provide family subsidies conditional to child preparatory by targeting household poverty and prioritizing poorest areas with a geographical focus such as Upper Egypt **PP.3.B.2** Provide support to students with special needs and students from low-income families through establishing civil society partnerships
	C. Increase transition/participation/completion of preparatory education for the poorest girls in rural areas	**PP.3.C.1** Addressing social norms (e.g., through campaigns, girls' clubs, PTAs) and cost barriers (e.g., uniforms, school bags, CCTs)
4. Strengthening governance and management.	**A.** Enhance the system-level measures to improve preparatory education participation and quality.	**PP.4.A.1** Participate in international research studies, i in International Mathematics and Science Study (TIM Progress in International Reading Literacy Study (PIRLS) to assess the effectiveness and quality of the national education system in comparison to other countries **PP.4.A.2** Develop and implement measures to improve teacher effectiveness, motivation and regular attendance **PP.4.A.3** Strengthen EMIS for its further integration with Learning Management System (LMS)

Table 14. Key Performance Indicators 3: Preparatory education, 2023-2027

KPI List	2021/2022	2027 Target	Source
K01: Gross intake ratio to preparatory G7 (also disaggregated data in terms of socio-economic background, disabilities, sex, location and region)	96%	96%	EMIS
K02: GER in preparatory (M/F) (also disaggregated data in terms of socio-economic background, disabilities, sex, location and frontier governates)	104.1% GPI: 1.03	102% GPI: 1.00	EMIS
K03: NER in preparatory (also in terms of socio-economic background, disabilities, sex, location and region)	94.9%	98%	EMIS
K04: Transition rate from preparatory to secondary level	81.5% Secondary General 45% (F) 34% (M)	96% Secondary General 53% (F) 40% (M	EMIS
K05: Preparatory level completion rate	99%	99%	EMIS
K06: Proportion of G8 pupils with intermediate or above benchmarks in mathematics/science/reading in international assessments, public (M/F)	Math: 26% (2019) Science: 23% (2019)	Math: TBD (2023) Science: TBD (2023)	TIMSS
K07: Student–teacher ratio at preparatory level	24	21	EMIS
K08: Out-of-school rate, preparatory (M/F)	2.4% (2019)	0%	OOSC Reports
K09: Class size, public	44 students per class	38	EMIS

1.20 Component 3: Secondary Education

1.20.1 Current Subsector Situation and Challenges

Structure of the subsector

The secondary education system comprises two distinct secondary education (ages 15-17) level certificates, which are divided into three years of general secondary education and either three or five years of technical secondary education. The results of the end-of-cycle exams are used for selection into tracks at the next level of education: those who perform less well in grade 9 regional exams are placed on the secondary technical track. The grade 9 exam is a regional examination with each governorate setting and scoring its own exam. There are no tests conducted at the national level until the end of secondary education. The end of the secondary exam for general education is the 'Thanawiya Amma' admission into higher education. Previously, Thanawiya Amma was based on

combined grade 11 and grade 12 results but through Law 20 of 2013 it was changed to only depend on the grade 12 results.

University admissions are centralized, and students are allocated to courses based on their Thanawiya Amma exam scores. Graduates of technical schools may enter university but only with very high exam scores. As a result, almost all students in higher education will have transitioned into university from a secondary general school while most graduates from technical schools transition to work upon graduation unless they continue to one of the technical universities.

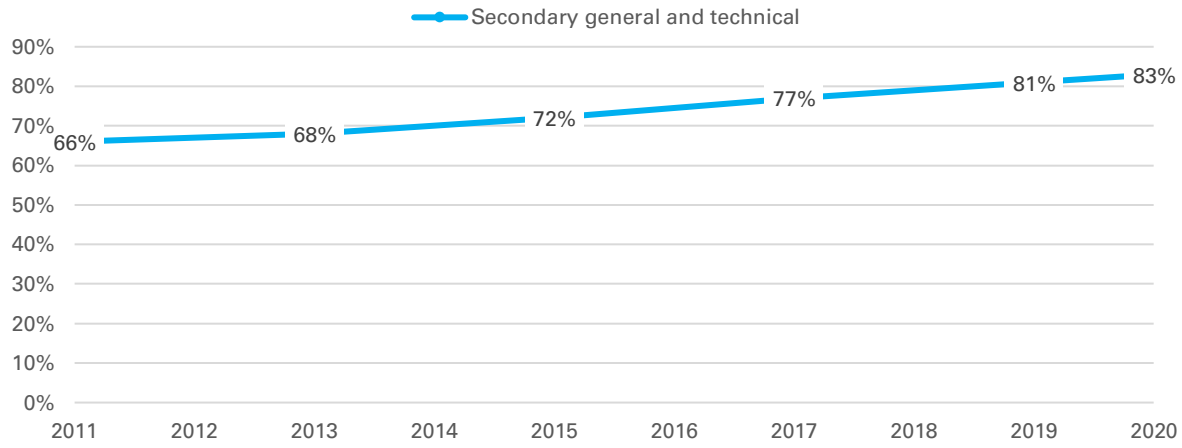
Access and Participation

Over the last decade, enrolment has grown substantially at secondary levels. Secondary education has experienced the largest increase in enrolment at 33%, from 3.3 million to 4.4 million, with roughly half of students enrolled in general schools (51%) and the other half in technical schools (49%) (MoETE, 2021). Between 2017/18 and 2020/21, access to secondary education (general and technical combined) increased by seven percentage points, respectively, to reach 83% GER (MoETE, 2021). The completion rate for the secondary school level has also improved from 69% to 77% for secondary education (MoETE, 2021). Meanwhile, the likelihood of access to and completion of secondary education were 86% and 76% respectively which indicates that a relatively large group of secondary students do not complete secondary education despite the recent progress (MoETE, 2021).

Despite Egypt having higher rates in GER at the secondary education level compared to lower-middle-income countries, the education system does not currently have the capacity to fully accommodate its secondary school-age population. Despite large class sizes and many schools operating in shifts, there is presently not enough capacity to enrol all children in the secondary school age population[12] or to reduce class sizes at the given level of enrolment.

[12] Assuming that most youth in this age group would attend secondary education if there were no barriers to do so.

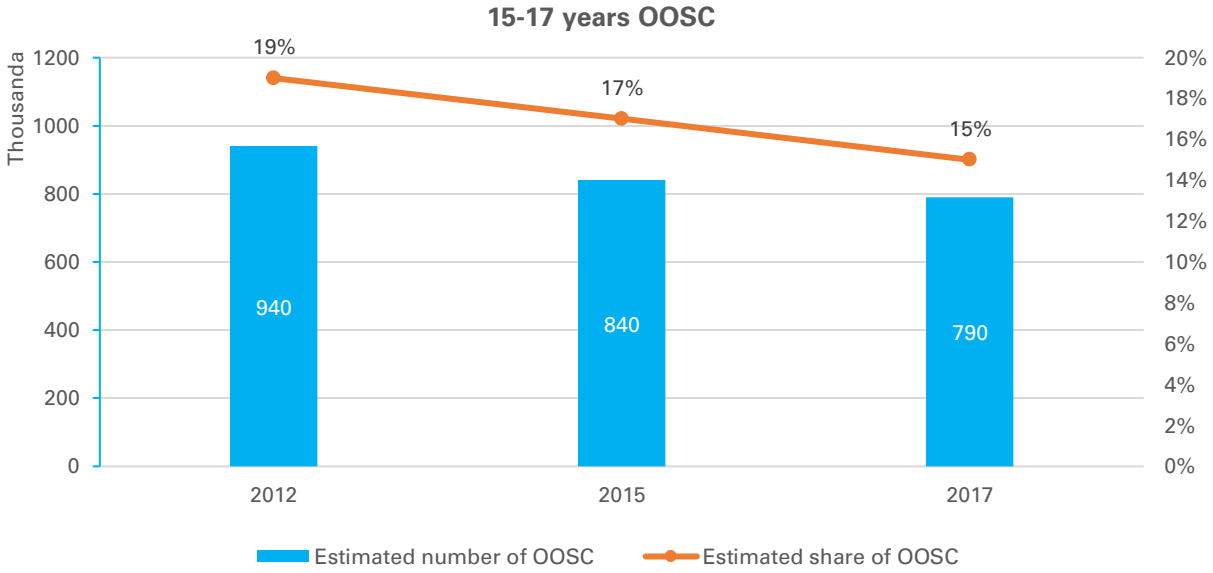
Figure 51. Secondary general and technical education, gross enrolment rates (all providers, %)



Source: Calculations based on EMIS data.

Regarding out-of-school course, recent trends are promising similar to basic education school age group, showing a plunge in both the overall numbers and shares of out-of-school children, with the share of out-of-school children of secondary school age children (15-17 years) from about 19% to 15% between 2012 and 2018 (OAMDI, 2014, 2017, 2020). The school-age (15-17) population for secondary education is projected to grow by 21.1% and is projected to increase 1.1 million between 2021 and 2027 and if 5-year technical education is considered between 2021 and 2027, the school age population for aged 15-19 is expected to increase 17.2%, 1.5 million. Such a dramatic increase in the school-age population at this level has the risk to jeopardize the recent progress achieved. Unless measures are taken to accommodate the growth in the school-age population, the number of out-of-school children may rise going forward, and the number of out-of-school children will rise by an estimated 25% for those aged 15-17 years (under the assumption that the out-of-school rate remains the same as in 2017/18) (MoETE, 2021).

Figure 52. Estimated number and share of out-of-school children, 15-17 years old, 2017/18



Source: Calculations based on EMIS data.

Equity and Inclusion

Several different groups of youth are more likely to be out of school in the age group 15-17 years, especially children from the poorest households and children with disabilities. On average, youth with a disability are twice as likely to be out of school as those with no disability, 30% and 15% respectively (OAMDI, 2020). However, the most significant disparity factor by far is socioeconomic background. For youth from the poorest 20% of households, 36% are out of school, while only 7% of those are from the wealthiest households (OAMDI, 2020). Besides socioeconomic background and disabilities, the disparities associated with gender, rural or urban divide, and regional distinctions have also been discernible. About 18% of females are out of school compared to 13% of males, and 18% of those living in rural areas compared to 12% in urban areas (OAMDI, 2020). There are also disparities across the four regions. Youth in Upper Egypt is most likely to be out of school (21%), followed in turn by those living in frontier governorates (17%), urban governorates (15%), and Lower Egypt (11%) (OAMDI, 2020).

Also, there are marked disparities in educational attainment by socioeconomic background and location at the secondary education level. Among children from the poorest household quintile, the adjusted net attendance ratio for secondary education increased by 11 percentage points between 2012 and 2017/18, similar to a 15 percentage points increase for children from the richest household quintile (OAMDI, 2020). Nevertheless, despite these gains, children from poorer households remain far behind their peers from richer households in participation in secondary

education (45% and 83%) (OAMDI, 2020). Also, those from the poorest households are much more likely to have completed secondary technical education than those from the wealthiest households (38% compared to 22%), reflecting the selection process for secondary education through the grade 9 exam and the perceived lower status of technical education (OAMDI, 2020). Additionally, for secondary education, the likelihood of completing is 68% and 73%, respectively, for the Frontier and Upper Egypt regions, compared to 82% for the Urban governorates and Lower Egypt (OAMDI, 2020).

Regarding the gender dimension of access and participation in secondary education, in 2020/21, the gender parity index was 98% (MoETE, 2021). Nevertheless, females are significantly less likely than boys to be enrolled in secondary technical education and much more likely to be enrolled in general secondary school. Although the schooling profiles largely coincide for female and male students for prior basic education level, access to secondary education is somewhat lower for females than males (82% compared to 85%), whereas completion is lower for males than females (77% compared to 76%) (MoETE, 2021). If the completion and drop-out rates are closely examined, one can observe the diverse gendered responses of boys and girls. 53% of girls who drop out of school give marriage as the reason whereas, for the boys, the main reasons are first poor performance/no interest in continuing education (37%) and second getting a job (35%) (OAMDI, 2019).

In contrast to basic education schools, which are located in rural areas and largely reflect the rural school-age population, public secondary schools are skewed towards urban areas where 54% of general secondary, 56% of technical commercial, 67% of technical agricultural, 74% of technical industrial and 89% of technical hospitality schools are located (MoETE, 2021). Further, the secondary (general and technical) gross enrolment ratio for rural areas in 2017 was only 33% compared to 127% for urban areas, which strongly suggests there is an under-supply of secondary education in rural areas, possibly combined with lower demand for it due to relatively higher poverty rates and social norms related to girls' education.

1.20.2 General Secondary Education

1.20.2.1 Current Subsector Situation and Challenges

Structure of the subsector

General secondary education, grades 10 to 12, is for students aged 15 to 17 who successfully complete general preparatory education.

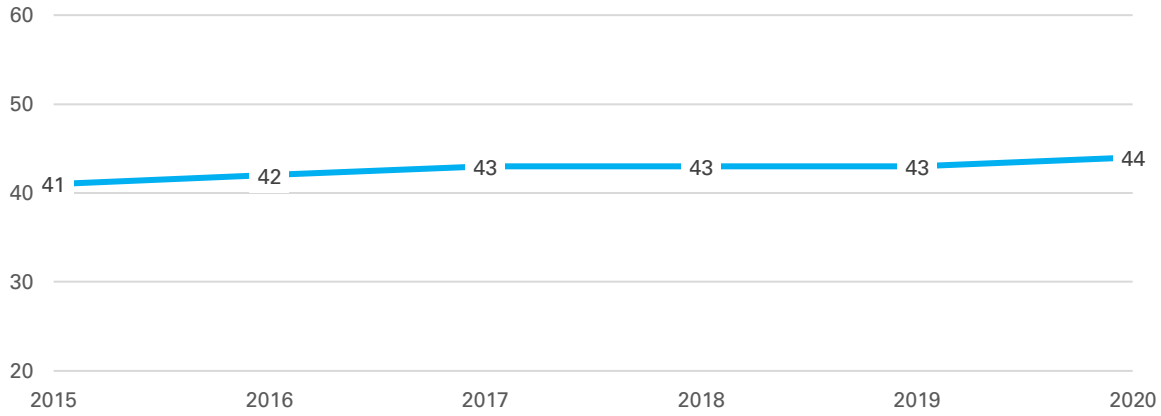
In public and private schools teaching the national curriculum and Azhari schools, there are two tracks within general secondary education, and students opt for one of two different streams in the general secondary track: humanities and science. Starting from grade 11, students can choose either the humanities or the science track regardless of their score in the grade 10 final exam score. Both streams require students to study Arabic, English, religion, and civic education. The humanities stream allows students to select subjects such as history, philosophy, psychology, and sociology. The science track provides biology, chemistry, maths, and physics subjects. In addition, there is a range of electives, such as additional foreign languages, social studies, or music.

Egypt is still considering the overarching structure of the curriculum itself, how students progress through it to effective exit points suited to their needs, and how the various strands, such as technical and general education, relate to each other. The taught curriculum at general secondary levels is the same in public and Azhari schools, except that, in the latter, Arabic language subjects are different and more varied and Sharia sciences are an additional subject. The curriculum for secondary general education is currently under review. MoETE is currently undertaking research to develop new curricula for grades 10-12 of secondary general education.

Upon completing general secondary education, students sit for the school leaving exam: Thanawiya Amma. Students' scores on the grade 12 final exam became the only factor determining whether they can enter higher education.

In 2020/21, a vast majority of students are enrolled in public (government) schools ranging from 70% for secondary general. The private sector and Azhari education contribute the largest to secondary general education (15% each). For the school year 2020/21, the average class size in secondary general public schools is 44, and compared to global standards, the current average class size is substantially high (MoETE, 2021).

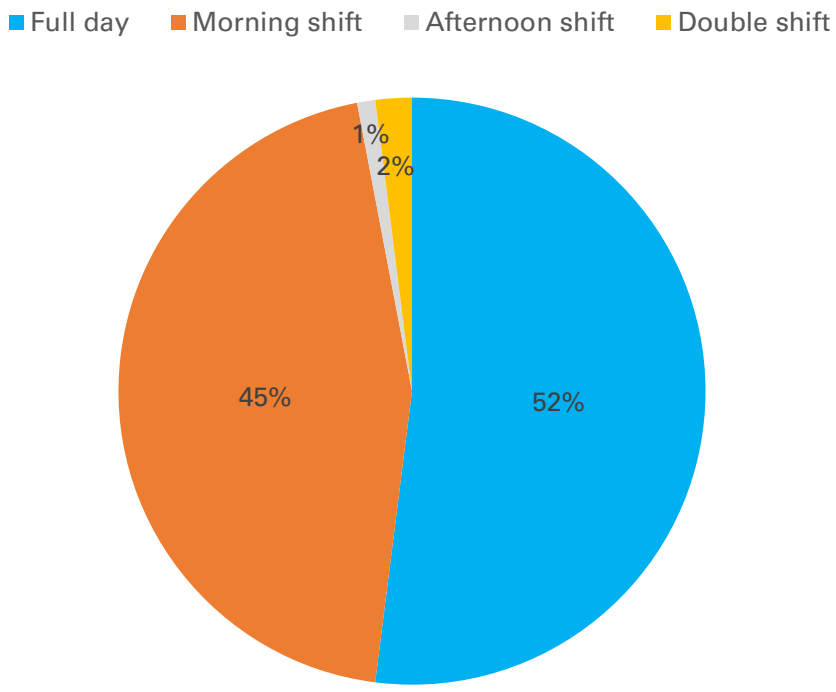
Figure 53. Trend in class sizes public secondary general education 2015/16-2020/21



Source: Calculations based on EMIS data.

Moreover, only 52% of secondary general public schools run a full-day schedule, indicating a considerable reduction in learning opportunities due to the loss of instructional hours (MoETE, 2021).

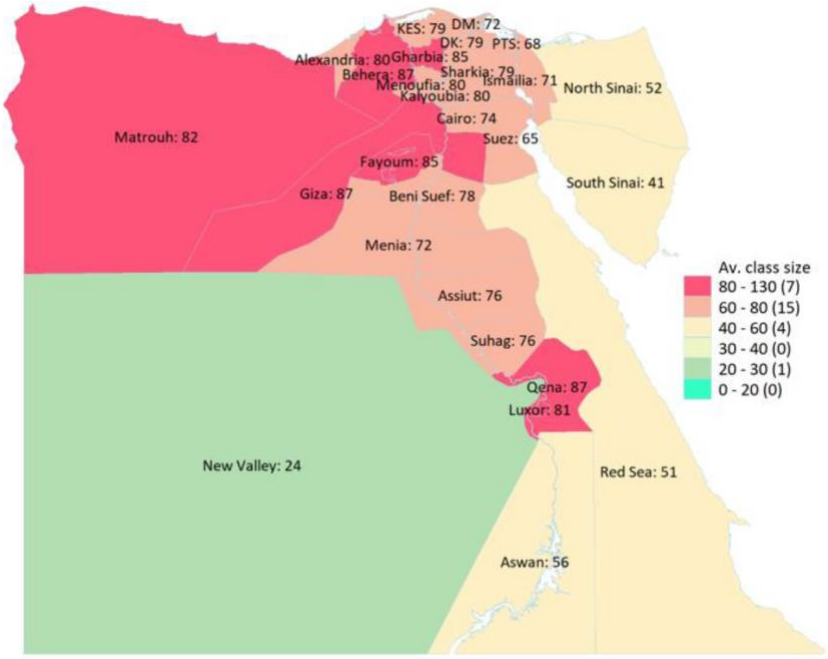
Figure 54. Shares of public general secondary schools operating full day and shifts 2020/21



Source: Calculations based on EMIS data.

Besides the modest rate of the full day learning at the general secondary level, the average class size for the education level is still 60 or higher in a large majority of governorates which necessitates urgent targeted measures. Moreover, despite large class sizes and many schools operating in shifts, there is presently not enough capacity to enrol the secondary school-age population (GER of 83%).

Figure 55. Disparities in public secondary general average class size across governorates 2020/21[13]



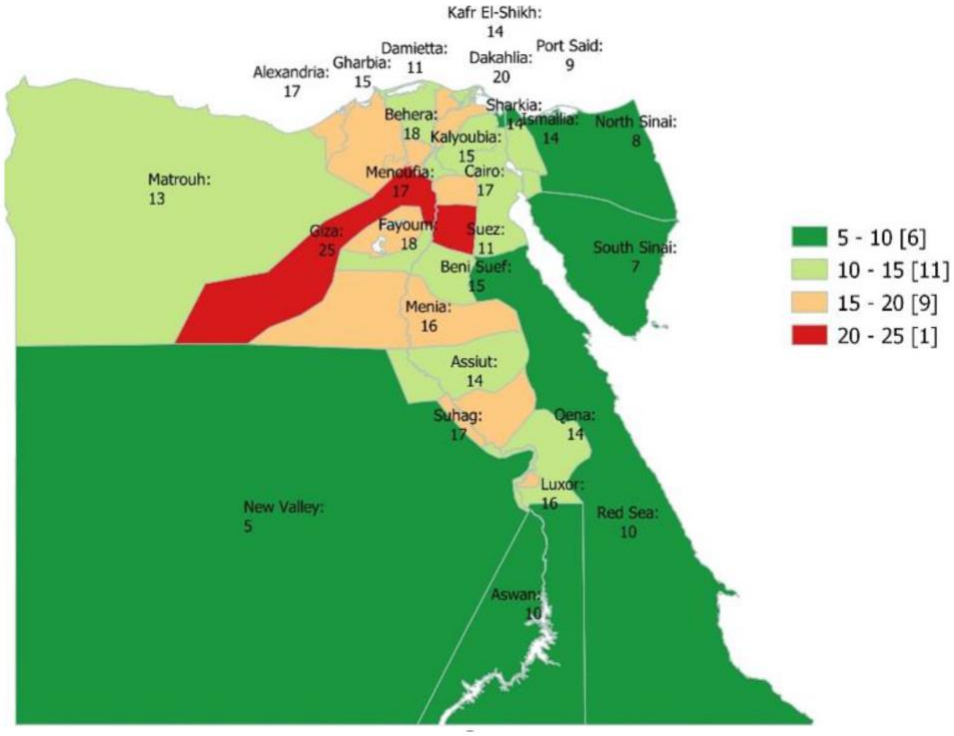
Source: Calculations based on EMIS data.

As all teachers are subject-specialists at the general secondary level, a lower student-teacher ratio matters substantially for the quality of learning. Although the average student-teacher ratio in 2020/21 for public schools is 17:1 for general secondary, there remain stark disparities in student-teacher ratios across general secondary public schools (MoETE, 2021). Around 69% of general secondary schools have fewer than 20 students per teacher, while for the general secondary level average student-teacher ratio is excessively high (red areas) in some governorates in lower Egypt (Assiut and Suhag) (MoETE, 2021). Among general secondary schools in Egypt, 31% have 20 or more students per teacher compared to the OECD average of 13:1, and the student-teacher ratio is above 40:1 in 3% of general

[13] The number of governorates in each class size bracket are shown in parenthesis in the legends. 2) Green indicates small class size and red indicates large class sizes.

secondary schools, which would make any effective teaching all but unattainable (OECD, 2019. MoETE, 2021).

Figure 56. Disparities in public secondary general average class size across governorates 2020/21

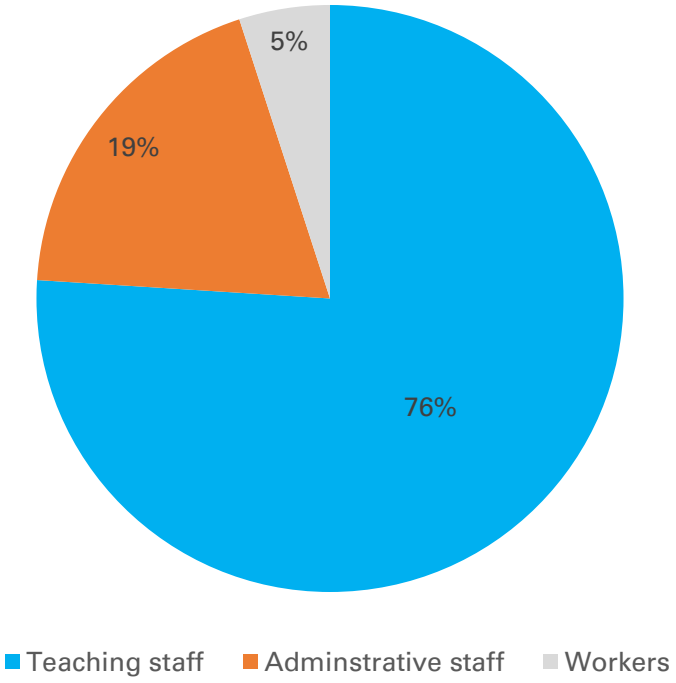


Source: Calculations based on EMIS data. Note: Excludes contract teachers.

Quality of learning and teaching

Concerning the teaching and non-teaching staff ratio, administrative staff increased by 24% at the general secondary level, while workers rose by 52% at the general secondary level, and in 2019/20, the teaching to non-teaching staff ratio was 3:1 for general secondary education (MoETE, 2021). Also, considering that the intended annual teaching hours for the general secondary education level stand at the lower end by international comparison, the teaching and non-teaching staff ratio would be considered slightly inefficient, bearing in mind the recent recruitment trends.

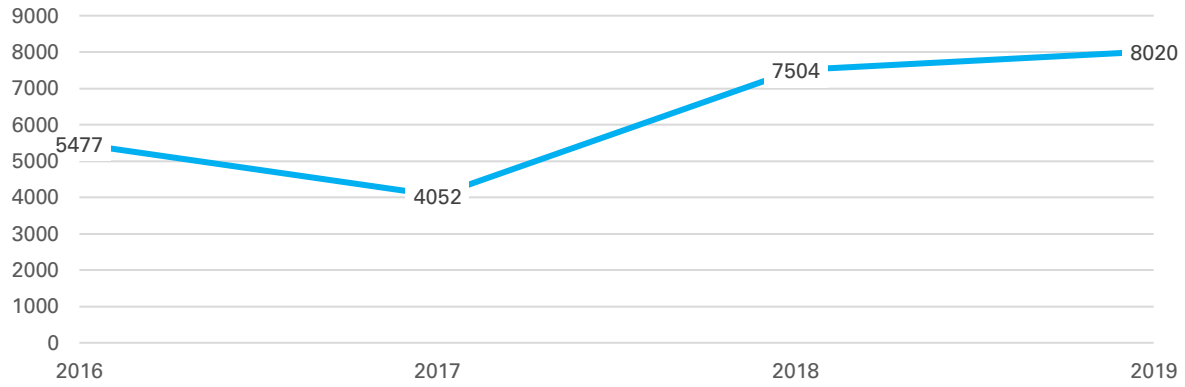
Figure 57. Public secondary general education workforce by category 2019/20



Source: Calculations based on EMIS data.

As the end-of-cycle exam in grade 12 determines whether a student transitions to higher education, the education system's high-stakes exams are a consequential driver of private tutoring and forming a high demand for private tutoring and eventually raising stringent equity and inclusion concerns. Also, considering the public general secondary schools are challenged with overcrowded classrooms and limited teacher and student interaction during the school day, the public demand for private tutoring has been extremely high. In 2018, 81% of students in public general secondary schools received private tutoring. The demand for private tutoring to pass the high-stakes exams exacerbates education disparities, as students from poorer households are less able to afford it, directly affecting their chances of continuing to higher education.

Figure 58. Public total education spending per student at secondary general education (nominal 2018 EGP)



Source: MoETE. Note: Based on actuals

This ESP plan proposes reforming the general secondary education subsector by responding to the subsectoral challenges to ensure the expected outcomes listed below. The proposed programmes are crucial to achieving policy outcomes and objectives.

1.20.2.2 Expected Outcomes and Programmes for General Secondary Education

Expanded access and participation with greater equity with an appropriate mix of subject specializations and availability of sufficient schools and classrooms to accommodate qualified graduates from basic education, especially in disadvantaged areas.

Improved completion rates for general secondary education

Internal efficiency is improved, and the causes of dropout addressed, with particular attention to excluded and marginalized groups.

Improved learning outcomes for general secondary education graduates

Relevant, updated and competency-based curricula and textbooks and teacher guides.

All existing and newly recruited teachers obtained the required qualifications and teachers receive in-service training and regular support, in priority areas in line with their needs and education system priorities.

Equitable access to and completion of general secondary education for all and reduced disparities based on socio-economic background, gender, disability and geographical location.

Technologies further harnessed to improve access to and quality of secondary education.

Strengthened school leadership, management and monitoring & evaluation at general secondary education level.

School quality assurance in general secondary education ensured.

Table 15. Projection of students, teachers, and classrooms, General secondary education, 2022-2027

	2022	2023	2024	2025	2026	2027
Enrolment						
School-aged population	5,504,874	5,626,438	5,818,744	6,056,339	6,318,042	6,586,826
GER (%)	39,6	41,2	42,8	43,8	44,4	45,7
Number of students enrolled	2,180,694	2,315,569	2,489,438	2,650,888	2,807,224	3,009,973
- Government schools	1,773,676	1,883,779	2,025,452	2,157,281	2,284,898	2,450,075
- Private schools	407,017	431,790	463,986	493,608	522,326	559,897
Government school teachers and classrooms						
Teachers required	92,392	95,607	100,916	106,274	119,068	135,510
- Teachers to recruit (gross)	6,961	5,987	8,177	8,385	15,982	20,014
Classrooms required	43,548	48,908	55,738	63,090	71,223	81,669
- Classrooms to build (gross)	7,573	9,044	9,565	10,346	12,660	6,058

Source: UNESCO simulation model (2022), estimation based on data from MOETE and CAPMAS.

Table 16. Policy Matrix 4: General secondary education, 2023-2027

Policy area	Objectives	Operational Programmes
1. Increasing access & participation.	**A.** Expand secondary education provision, ensure availability of adequate classroom facilities and improve physical condition of secondary schools	**PP.1.A.1** Develop robust school mapping to determine supply and demand mismatch, including a risk analysis to identify which schools are located in areas at risk (distance and natural or human-made disasters) and develop a prioritised, targeted plan **PP.1.A.2** Construction of new secondary educational institutions to meet social demand **PP.1.A.3** Renovate /repair /rehabilitate existing secondary schools **PP.1.A.4** Preparing vacant premises/ spaces for expanding access to secondary education **PP.1.A.5** Increase the number of licensed foundations to provide secondary education through Public and Private Partnerships and incentive schemes **PP.1.A.6** Strengthen & implement strategies to engage private sector in secondary school expansion/ construction/ maintenance **PP.1.A.7** Establish more schools in border areas and prioritize upper governorates and densely populated urban areas **PP.1.A.8** Develop/adopt a green school accreditation scheme

	B. Raise awareness to the importance of secondary education	**PP.1.B.1** Develop family awareness programmes about the importance of secondary schooling, initiate outreach/awareness/advocacy campaigns on the benefits of education **PP.1.B.2** Identify out-of-school children and improve their attendance of schools
	C. Increase capacities of secondary education provision and ensure availability of sufficient number of teachers in secondary classrooms	**PP.1.C.1** Appoint additional teachers to reduce class size and IT specialists and to meet high demand for quality secondary education
2. Enhancing quality and relevance of education.	**A.** Provide secondary school learners with an enhanced and competency-based curriculum	**PP.2.A.1** Develop & distribute a curriculum for secondary level in response to 21st-century skills, including digital literacy and soft skills and learning materials based on the new curriculum and ensure inclusive education, gender and climate change responsive pedagogy, and positive discipline aligned with the curriculum **PP.2.A.2** Develop and supply teaching materials to match the new curricula **PP.2.A.3** Integrate climate education in school curricula at the general secondary education level
	B. Availability of adequate classroom facilities, relevant learning materials, and educational technology resources	**PP.2.B.1** Introduce wider use of ICT for enhanced teaching-learning activities and equipping secondary schools with ICT facilities **PP.2.B.2** Upgrade educational laboratories of general secondary schools **PP.2.B.3** Supply, provide and maintain tablets for secondary education students
	C. Raise the level of teacher qualifications and skills	**PP.2.C.1** Design in-service training to increase secondary tea teaching and train secondary teachers according to the new curriculum **PP.2.C.2** Provide teachers with opportunities for ICT and skill development training pertinent to the blended learning modality **PP.2.C.3**. Develop teacher manuals for computer and information technology at secondary education **PP.2.C.4** Provide training on inclusive education training to teachers **PP.2.C.5** Train secondary teachers on including lessons/ activities related to

		prevention and protection against violence and abuse **PP.2.C.6** Integrating climate change mitigation and adaptat professional development training and train school leaders and teachers on how to integrate climate education into teaching and learning throughout the school
	D. Update the assessments & examinations	**PP.2.D.1** Revise the assessments to match the new curricula and improve formative assessment practices as part of learning process supplemented by high-quality standardized educational assessments for system performance **PP.2.D.2** Develop and establish online platforms to facilitate delivery of grade 10-12 exams of general secondary education **PP.2.D.3** Develop and update an electronic platform for the announcement of exam seat numbers and exam results for grade 10-12 students of general secondary education **PP.2.D.4** Develop question banks for secondary education, in collaboration with private sector and international organizations **PP.2.D.5** Assess the quality of online examinations of secondary education **PP.2.D.6** Reform the Thanawiya Amma exam with regard to Education 2.0 priorities **PP.2.D.7** Continue the engagement in international learning assessments
3. Ensuring equity and inclusion in the education sector.	**A.**Strengthening/adapting secondary school facilities that are child-friendly, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all	**PP.3.A.1** Expand the inclusive education model in secondary schools to ensure inclusive education for children with disabilities and special needs. **PP.3.A.2** Develop and implement gender-responsive measures to address adolescent girls óuts due to early marriage, **PP.3.A.3** Ensure provision of healthy, inclusive, gender sensitive learning environment **PP.3.A.4** Procure & distribute learning aids for students with disabilities **PP.3.A.5** Develop teacher training, with hands-on experience during in-service training, to provide teachers with the necessary skills to a diverse needs and learning styles, positive behavioural support, lesson facilitation for

		diverse learners, and supporting critical thinking and social and collaborative skills **PP.3.A.6** Ensure teacher education on equity issues, gender, and inclusive education **PP.3.A.7** Train teachers and school staff how to prevent and respond to violence prevention, SRGBV and response practices and tools **PP.3.A.8** Conduct household mapping of school-aged children to identify the needs for education premises in disadvantaged locations, underserved communities and building schools closer to the communities that are accessible and safe **PP.3.A.9** Develop a plan for bullying and harassment prevention in schools and create a code of conduct for teachers and anti-bullying strategies that establish clear consequences in case of violation and develop general constructive disciplinary interventions, establishing clear violence reporting and response mechanisms **PP.3.A.10** Collect data to monitor the prevalence of school violence and bullying and create evidence-based initiatives **PP.3.A.11** Ensure a safe and healthy school climate that prevents social and emotional violence, such as verbal abuse, harassment, and social exclusion **PP.3.A.12** Ensure that gender-friendly guidance and counselling are being implemented in schools **PP.3.A.13** Ensure adequate resource allocation and construct gender-responsive infrastructure **PP.3.A.14** Developing clear codes of conduct prohibiting SRGBV with enforced disciplinary procedures **PP.3.A.15** Monitor progress towards inclusion internally, through self-assessment, establish inclusion-related inspection standards **PP.3.A.16** Consultation of minority populations/disadvantaged communities/ in school infrastructure decision-making processes to reduce school distance in remote and underserved communities
	B. Improving access of disadvantaged children to secondary schools	**PP.4.B.1** Develop protocols for cooperation to provide financial support to low-income families in partnership with Ministry of Social Solidarity and prioritize poorest

		areas with a geographical focus such as Upper Egypt **PP.4.B.2** Provide access to nutrition and feeding at secondary schools **PP.4.B.3** Establish schools for girls, especially in border and rural areas **PP.4.B.4** Organize awareness campaign on the importance of female education and coordinate with MoSS to campaign against early marriage
4. Strengthening governance and management.	**A.** Strengthening secondary Education Management Information System (EMIS) and school management and leadership	**PP.4.A.1** Develop online application platforms to facilitate enrolment of children in grade 10 of general secondary education (formal) **PP.4.A.2** Further harness technologies to improve sector management and accountability and to support cost-effectiveness of education delivery and hybrid learning **PP.4.A.3** Improve school-based governance, leadership and management **PP.4.A.4** Develop strategies and programmes to gradually reduce private tutoring

Table 17. Key Performance Indicators 4: General secondary education, 2023-2027

KPI List	2021/2022	2027 Target	Source
K01: Gross intake ratio to G10 (also disaggregated data in terms of socio-economic background, disabilities, sex, location, and region)	35.8%	45.7%	EMIS
K02: GER in general secondary education (M/F) (also disaggregated data in terms of socio-economic background, disabilities, sex, location and frontier Governates)	36.9% GPI: 1.34	45.7% GPI: 1.37	EMIS
K03: Transition rate from secondary education to higher education level (also disaggregated data in terms of socio-economic background, disabilities, sex, location and region)	Not available	90%	EMIS
K04: Secondary education level completion rate (M/F)	34%	45%	EMIS
K05: Learning achievement in mathematics/science/reading in international assessments (PISA)	Not available	Reading: 360+ Mathematics: 370+ Science: 380+	PISA or EMIS*

K06: Student–teacher ratio at secondary education level	18.6	21	EMIS
K07: Class size, public	41 students per class	30	EMIS

1.20.3 Technical secondary education

1.20.3.1 Current Subsector Situation and Challenges

Structure of the subsector

Graduates of vocational preparatory education and those who do not achieve a particular score on the grade 9 final exam in general preparatory education transit to technical secondary education. There are two different technical secondary education programmes; the first one offers a three-year programme while the latter is an advanced five-year programme. After completing technical secondary education, graduates of technical secondary schools can join higher education, intermediate technical institutes for two years, or higher technical institutes for four years, depending on their final grade exam scores.

MoETE is the largest provider of technical secondary education and offers agricultural, commercial, hospitality, and industrial specializations, whereas there is also a small number of private technical secondary education schools offering commercial, hospitality, and industrial specializations. In 2020/21, a vast majority of students (90%) are enrolled in public technical secondary schools (MoETE, 2021). While there are no Azhari technical secondary schools, the private sector contributes the most to secondary technical education, as 10% of students are enrolled in private technical secondary education (MoETE, 2021). In keeping with international trends, most private secondary technical schools (60%) deliver training for occupations in the commercial sector, where the much lower unit costs make provision funded by student fees only more feasible (MoETE, 2021). The private sector accounts for 31% of all commercial schools and 22% of schools offering hospitality courses; in comparison, only 4% of agricultural and 9% of industrial schools are private (MoETE, 2021).

While enrolment in secondary technical education has increased notably over the past ten years, the share of students in each type of technical school has remained relatively constant. Most technical education students are enrolled in an industrial (47%) or commercial (38%) school (MoETE, 2021). Industrial school enrolment has increased by 162,000 students to 999,000 in the last ten years (MoETE, 2021). Over the same period, the number of students in commercial schools rose from about 621,000 to around 815,000, and for agricultural schools, it rose from nearly 170,000

to almost 248,000 (MoETE, 2021). Technical hospitality schools were introduced in 2015/16, and since then, enrolment has risen by about 12,000 to 70,000 in 2020/21 (MoETE, 2021).

Education 2.0 has four key objectives, and one of the main objectives is to make technical secondary education a viable path to employment through increased relevance of programmes and greater engagement with employers.

For that objective, MoETE has designed a framework and methodology for updating existing technical education curricula, and all technical education programmes are being replaced with competency-based programmes. MoETE is developing the new curricula in partnership with employers to ensure that learning programmes develop the competencies that employers seek, thereby increasing technical education's relevance to the modern labour market. Several development partners have aligned their support to curriculum reforms in technical education. For example, the Workforce Development programme has developed two new specialist courses in logistics and renewable energy, with support from USAID. Seventeen schools have been provided with new equipment required to run these courses, with additional funds for equipment being provided by the European Commission through the Technical Education Egypt project. The European Commission also supports curriculum reform in tourism and hospitality schools through the 'Future Shift' Programme-based Through curricula are now being delivered in 100 tech goal is to introduce competency-based training curricula in all schools by 2024. As part of the broader curriculum reforms for the technical education sector, the Government has announced its intention to introduce a preparation year to address inadequate literacy and numeracy skills among grade 9 graduates who enter secondary technical education.

In 2018, the Government approved the establishment of five new technical universities. This will not only increase the number of places available within the higher education sector but also help to change the image of technical education in society and will raise the status of technical secondary education.

Furthermore, MoETE is establishing new agencies to drive quality improvements in secondary technical education. A new independent body called the National Authority for Quality Assurance and Accreditation of Education (NAQQAE) will be responsible for the quality assurance of technical education schools. It will report directly to the President, providing independence from providers and creating a specialist body that can consider the quality of graduates required for the labour market. New standards required for institutional accreditation will create significant demands on existing institutions, and therefore the MoETE is also establishing a unit inside the Ministry, to be called the Centre for Enhancement of Quality

Assurance and Accreditation of Technical Education Programmes (CEQAT), which will provide developmental support to public technical schools to prepare their applications for accreditation from NAQQAE, and upgrade their infrastructure, resources, and teachers to meet the standards required. In addition, a new academy, called Technical Education Academy, will be responsible for training technical education teachers in areas central to the reforms, notably competency-based training curricula, teaching, assessment, and reporting.

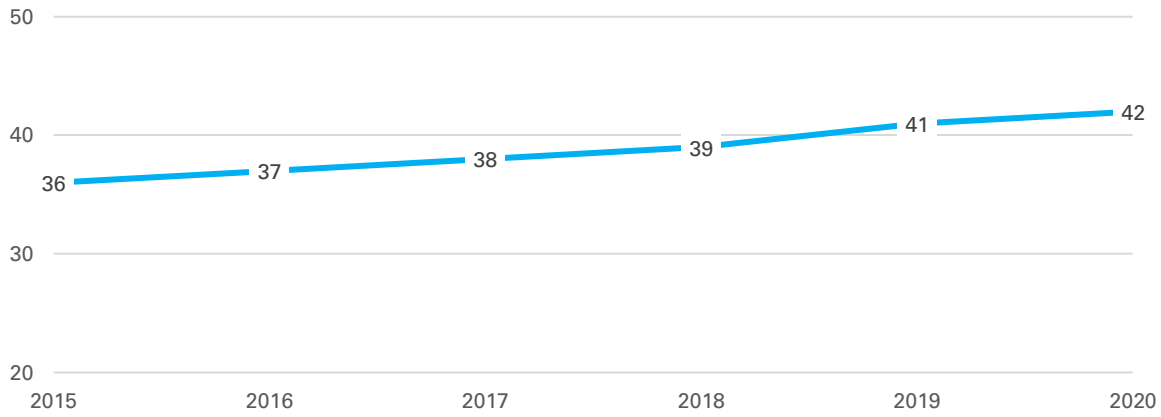
To strengthen links between all forms of technical and vocational education and training, on the one hand, and employers, on the other hand, the Government is establishing Sector Skills Councils (SSCs) with the support of the European Commission (Technical Education Project) and GIZ. These intermediary bodies will facilitate employer engagement in the sector. As part of their support to the skills sector, SSCs will provide valuable information about the kinds of technical training programmes that employers require and will design qualifications. Moreover, in 2017 the Government introduced a new type of technical secondary school, the Applied Technology School (ATS). These are established through a public-private partnership (PPP) with a leading employer to develop specialist skills and institutionalized expertise for a specific economic sector. Programmes have encouraged the implementation of a 'dual syst
form of a curriculum that combines periods of learning in school with periods of learning in the workplace. The private sector is responsible for the quality of provision and is required to form a partnership with an international awarding body so that graduates receive an internationally recognized qualification. To date, 19 have been established in a PPP arrangement, and MoETE aims to establish 66 Applied Technology Schools until the end of 2026. Currently, students attending the Applied Technology Schools do not pay fees, and they receive a stipend during their work placements, with financial support from the industry leader and development partners.

In addition, there is an urgent need to transition to a more sustainable and eco-friendly economy in order to address environmental challenges and climate change issues such as air and water pollution, biodiversity loss, and suboptimal waste management. TVET programmes that incorporate green skills and knowledge can play an essential role in preparing students for green jobs, promoting sustainable development, and supporting Egypt's efforts to mitigate the adverse effects of climate change. These programmes can help students acquire the knowledge and skills necessary to work in fields like renewable energy, sustainable agriculture, green building, and waste management. By developing TVET programmes that take the environment and green economy into account, Egypt will promote sustainable development, reduce its carbon footprint, and contribute to mitigating the negative effects of climate change while fostering economic growth.

Access and Participation

Despite commendable signs of progress in technical secondary education in recent years, there is currently insufficient capacity to accommodate the school-age population for secondary technical level similar to general secondary education. Although the current national benchmark for class size is 36 for secondary technical public schools, the average class size for technical secondary has been rising steadily, and for public schools, the average class size was 42 in 2020/2021 which is slightly higher than the national benchmark.

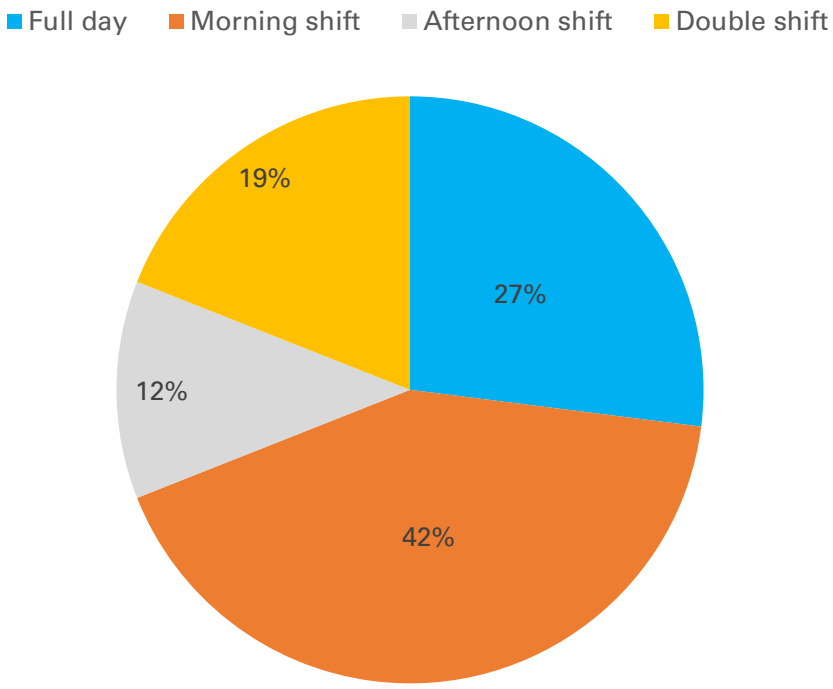
Figure 59. Trend in class sizes secondary technical education 2015/16-2020/21



Source: Calculations based on EMIS data.

Also, insufficient instructional space/classrooms reduce their s provide instruction. Only 27% of secondary technical public schools currently run a full-day schedule. This translates into a loss of instructional hours of at least one hour per day for students in schools that operate shifts and implies a substantial reduction in learning opportunities for this group of students.

Figure 60. Shares of public secondary technical schools operating full day and shifts 2020/21

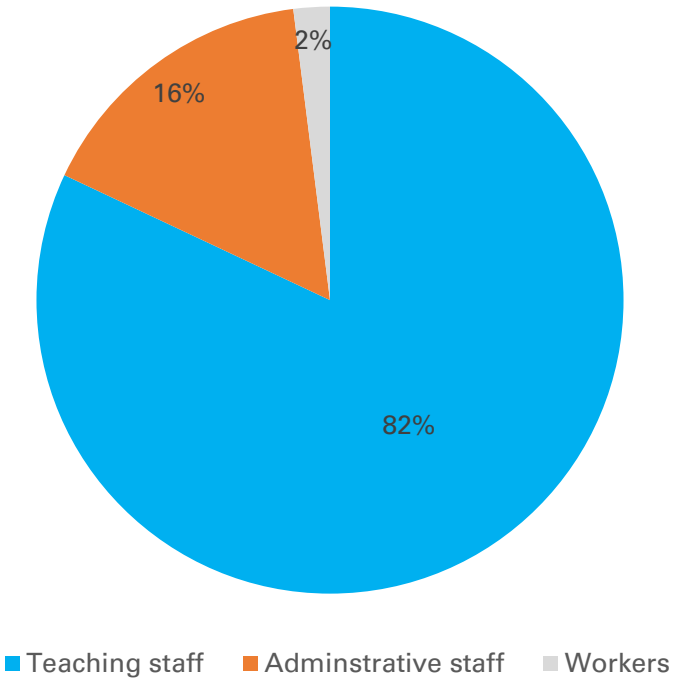


Source: Calculations based on EMIS data.

Quality of learning and teaching

Compared to other education subsectors, the number of administrative staff and workers have not increased noticeably as administrative staff numbers rose by 5%, whereas worker numbers declined by 4%. Despite the shares of administrative staff and workers being relatively higher at other education levels, teaching staff accounts for the large (82%) majority in technical secondary education (MoETE, 2021). Although the teaching staff and non-teaching staff ratio is promising, at the secondary technical education level, 19% of teachers do not have an educational degree or a teaching diploma, which raises concerns about teachers' qualifications.

Figure 61. Shares of public secondary technical schools operating full day and shifts 2020/21



Source: Calculations based on EMIS data.

Since secondary technical school students perform less well in the Thanawiya Amma exam, they potentially have learning gaps and simultaneously additional assistance. However, the technical education curricula are not designed, and teachers are not trained on how to implement a universal learning design so that learning activities take into account students' specific learning needs, which as a result necessitates tailored policy interventions to address learning gaps and additional needs for secondary technical students.

Challenges within the labour market and the education system are reflected in the mismatch between educational attainment and occupation. Graduates of secondary technical education are not well represented in occupations that technical education is intended to prepare them for. Among those with a secondary technical certificate, 52% are in a skilled profession compared to 61% of those with a basic or no education, while 42% are in low or unskilled professions compared to 36% of their less educated peers (OAMDI, 2019). Thus, completing a secondary technical education does not appear to confer any advantage over having had very little or no education and technical education system does not fully equip technical graduates with the knowledge and skills employers seek. Thus, Education 2.0 reforms aim to make technical education more relevant to the changing labour market.

Equity and Inclusion

Technical and vocational education and training can promote women's productive participation in the labour market, equipping them with the necessary skills to undertake the jobs of the future. However, as mentioned earlier, Egyptian female students are much more likely to be enrolled in general secondary education and much less likely to be enrolled in secondary technical education than male students. Even within technical schools, there are gendered attainment outcomes. Females are over-represented in commercial programmes (58% of students) and very under-represented in agricultural (14% of students) and industrial programmes (MoETE, 2021). Furthermore, within programmes, females are concentrated in specific occupational areas.

This ESP plan proposes reforming the technical secondary education subsector by responding to the subsectoral challenges to ensure the expected outcomes listed below. The proposed programmes are crucial to achieving policy outcomes and objectives.

1.20.3.2 Expected Outcomes and Programmes for Technical Secondary Education

Adequate and appropriate human resources for effective teaching and learning ensured.
Improved quality and relevance of technical education programmes so that they have a positive impact on social and economic development.
Improved image and social perception of technical education
The skills transmitted through technical education are more responsive to the dynamic needs of the labour market and society.
Competencies of teaching staff systematically improved and sustained.
Adequate and appropriate equipment and teaching and learning materials for training available.
Improved human skills mix for occupation fields for realization of Egypt Vision 2030
Performance and impact of technical education gauged against national and international commitments.
Graduates are provided with more opportunities for further education for effective integration into the labour market and developing new programmes in all sectors including green jobs, industry 4.0, modern agriculture jobs.
Commercial education is updated according to the needs of future jobs and specializations.
Enhanced technical education assessment and certification mechanisms.

Table 18. Projection of students, teachers, and classrooms, Technical secondary education, 2022-2027

	2022	2023	2024	2025	2026	2027
Enrolment						
School-aged population	9,063,000	9,231,000	9,486,000	9,805,000	10,161,000	10,532,000
GER (%)	25,7	27	28,2	29,1	29,7	30,7
Number of students enrolled	2,327,387	2,492,043	2,677,945	2,849,827	3,014,950	3,229,533
- Government schools	2,036,079	2,176,141	2,338,709	2,488,605	2,632,850	2,820,461
- Private schools	291,308	315,902	339,236	361,222	382,101	409,072
Government school teachers and classrooms						
Teachers required	131,588	129,919	130,673	130,785	138,921	149,473
- Teachers to recruit (gross)	1,829	2,279	4,651	4,032	12,060	14,720
Classrooms required	29,357	32,434	36,897	41,448	46,234	52,094
- Classrooms to build (gross)	8,571	9,627	9,601	9,778	11,484	6,921

Source: UNESCO simulation model (2022), estimation based on data from MOETE and CAPMAS.

Table 19. Policy Matrix 5: Technical secondary education, 2023-2027

Policy area	Objectives	Operational Programmes
1. Increasing access & participation.	**A.** Expand technical education (TE) school provision and improve physical condition of TE schools	**PP.1.A.1** Map supply and demand for technical education schools to determine infrastructure needs/priorities including a risk analysis to identify which schools are located in areas at risk (natural or human-made disasters) and develop a prioritised, targeted plan **PP.1.A.2** Construct of new technical education classrooms, in line with the needs and labour market requirements **PP.1.A.3** Renovate /repair /rehabilitate existing technical education schools **PP.1.A.4** Preparing vacant premises/ spaces for expanding access to technical education **PP.1.A.5** Conduct need and gap analysis of all technical education schools **PP.1.A.6** Establish applied technology schools and expand Applied Technology Schools to 66 by 2027 in partnership with large enterprises based on Egypt's economic development investment map **PP.1.A.7** Develop military technical schools (industrial, agricultural, commercial and hospitality schools & dual education schools) **PP.1.A.8** Establish/strengthen & implement strategies to engage dialogue with industries, private sector in technical education school expansion/ construction/ maintenance

		PP.1.A.9 Develop/adopt a green school accreditation scheme
	B. Transforming the image of technical education through changing social perception	**PP.1.B.1** Develop and start implementation of a national strategy and organize public information campaigns for improving the image and social perception of technical education sector **PP.1.B.2** Raise the profile of technical education by developing and disseminating modern and attractive branding for technical education and disseminating technical education success stories, provide uniforms and enhancing the identity of technical education students **PP.1.B.5** Strengthen the profile and relevance of technical education teachers and schools. **PP.1.B.6** Increase the proportion of students who enter into vocational training against the total student population in technical education to improve their training to work transition
	C. Increase capacities of TE education provision and ensure availability of sufficient number of teachers in TE classrooms	**PP.1.C.1** Appoint additional teachers with specific attention to specializations and needs
2. Enhancing quality and relevance of education.	**A.** Provide TE school learners with an enhanced and competency-based curriculum	**PP.2.A.1** Enhance the technical education curriculum based on National Qualification Framework in accordance with the new curriculum. **PP.2.A.2** Carry out a study on the adaptation of the technical education curriculum and labour market requirements **PP.2.A.3** Transfer all curricula into competency-based making graduates more competitive locally, regionally, and internationally. **PP.2.A.4** Integrate career guidance, entrepreneurship, and innovation in all new curricula **PP.2.A.5** Improve the relevance of technical education and labour market integration of graduates through conducting tracer studies **PP.2.A.6** Validate new curricula with private sector employers to meet market and industries needs **PP.2.A.7** Produce technical secondary-school curriculums in electronic formats for broadcast to secondary education students **PP.2.A.8** Develop context-appropriate learning programmes (agricultural education) **PP.2.A.9** Develop educational videos for the newly developed curriculums **PP.2.A.10** Integrate climate education in school curricula

	B. Ensure availability of adequate classroom facilities, relevant learning materials, and educational technology resources	**PP.2.B.1** Introduce wider use of ICT for enhanced teaching-learning activities and equip technical education schools with ICT facilities **PP.2.B.2** Enhance technical education courses offered through innovative online resources. **PP.2.B.3** Ensure provision of sufficient learning equipment, materials and environment and match the newly designed curricula **PP.2.B.4** Enhance /upgrade the teaching-learning materials/ resources at technical education schools. **PP.2.B.5** Digitize learning material and content **PP.2.B.6** Develop training toolkits for the technical education programmes **PP.2.B.7** Print and supply textbooks for technical secondary education **PP.2.B.8** Provide and supply equipment and learning materials for applied technology schools **PP.2.B.9** Upgrade educational laboratories of technical & STEM secondary schools
	C. Raise the level of teacher qualifications and skills	**PP.2.C.1** Design in-service training to increase technical education t e a c h e r s ' c a p a c i technical education teachers on lessons/ activities on competency-based education and in accordance with the new curricula **PP.2.C.2** Train technical school teachers in professional career counselling and guidance, innovation and entrepreneurship programmes, digital communication technologies, and how to use online platforms and digital and web-based distance learning **PP.2.C.3** Set initial education standards for technical teachers and instructors training and qualification standards for in-company tutors and instructors **PP.2.C.4** Enhance the on-site training component of technical education programmes **PP.2.C.5** Establish a qualification system for teachers including continuous development. **PP.2.C.6** Establish the Technical & Vocational Education Teachers Academy (TEA), and recruitment and capacity building for TEA staff **PP.2.C.7** Integrating climate change mitigation and a d a p t a t i o n i n t o t e a c h e r s ' training and train school leaders and teachers on how to integrate climate education into teaching and learning throughout the school
	D. Improving the learning assessment	**PP.2.D.1** Develop a new admission system for students of technical education **PP.2.D.2** Develop and establish online platforms to facilitate delivery of grade 12 & 14 exams of technical secondary education

		PP.2.D.3 Develop and update an electronic platform for the announcement of exam seat numbers and exam results for grade 12&14 students of technical secondary education
	E. Equip students with relevant skills for labour market requirements	**PP.2.E.1** Review existing specializations in all sectors for relevance to labour market needs **PP.2.E.2** Review and development of commercial technical education and introducing specializations that address future jobs **PP.2.E.3** Introduce new programmes in all sectors including green jobs, industry 4.0, modern agriculture jobs
3. Ensuring equity and inclusion in the education sector.	**A.** Strengthening/adapting TE school facilities that are child-friendly, disability and gender-sensitive, and provide safe, non-violent, inclusive, and effective learning environments for all	**PP.3.A.1** Expand the inclusive education model in technical education schools to ensure inclusive education for children with disabilities and special needs **PP.3.A.2** Develop and implement strategies to address gender-based stereotypes **PP.3.A.3** Adapt technical education premises to the needs of children with disabilities and ensure availability of equipment, learning materials, and aids **PP.3.A.4** Ensure teacher education on equity issues, gender, and inclusive education **PP.3.A.5** Train teachers and school staff how to prevent and respond to violence prevention, SRGBV and response practices and tools **PP.3.A.6** Conduct household mapping of school-aged children to identify the needs for education premises in disadvantaged locations, underserved communities and building schools closer to the communities that are accessible and safe **PP.3.A.7** Develop a plan for bullying and harassment prevention in schools and create a code of conduct for teachers and anti-bullying strategies that establish clear consequences in case of violation and develop general constructive disciplinary interventions, establishing clear violence reporting and response mechanisms **PP.3.A.8** Collect data to monitor the prevalence of school violence and bullying and create evidence-based initiatives **PP.3.A.9** Ensure a safe and healthy school climate that prevents social and emotional violence, such as verbal abuse, harassment, and social exclusion and develop clear codes of conduct prohibiting SRGBV with enforced disciplinary procedures **PP.3.A.10** Ensure that gender-friendly guidance and counselling are being implemented in schools **PP.3.A.11** Ensure adequate resource allocation and construct gender-responsive infrastructure

		PP.3.A.12 Encourage students to mingle with others from different backgrounds **PP.3.A.13** Monitor progress towards inclusion internally, through self-assessment, establish inclusion-related inspection standards
4. Strengthening governance and management.	**A.** Consolidate all systemic reforms and strengthen the capacity of subsector management to implement reform programme	**PP.4.A.1** Establish the Centre for the Enhancement of Quality assurance in Technical Education (CEQAT) unit to lead the transformation and to provide support for schools to apply for accreditation. **PP.4.A.2** Ensure internal restructuring of the technical education sector, and HR policies, review current legislation and propose new ones **PP.4.A.3** Improve quality control and assurance system **PP.4.A.4** Link the CoE with regional branches for TEA **PP.4.A.5** Ensure systematic integration of the private sector into the system of technical education **PP.4.A.6** Piloting CoE with various international partners **PP.4.A.7** Establish and operationalize a National Accreditation Body for technical education institutions and programmes- National Authority for Quality Assurance and Accreditation of Education (NAQQAE) **PP.4.A.8** Develop occupational skills standards in key economic sectors, including the establishment of sector skills Councils as well as occupational licensing **PP.4.A.9** Support NAQQAE in finalizing and piloting the National Qualifications Framework (NQF) **PP.4.A.10** Develop technical education financing models **PP.4.A.11** Enhance system coordination and leadership improvement to reduce fragmentation and development of comprehensive strategic framework for technical education and supporting legislations and policies **PP.4.A.12** Modify the Capital Project Regulations to enable utilization of Production Resources at technical education schools
	B. Improve management, implementation, monitoring, and evaluation capacity with effective coordination	**PP.4.B.1** Recruit and provide capacity building for CEQAT staff **PP.4.B.2** Ensure accreditation of most schools and programmes by NAQQAE by 2027. **PP.4.B.3** Maintain continuous development of a pool of internal verifiers and assessors **PP.4.B.4** Conduct M&E studies on the supply and demand sides to continually assess the relevance of programmes to labour market needs

		PP.4.B.5 Establish a national Labour Market Information System (LMIS) **PP.4.B.6** Issue eligibility certification for assumption of technical supervision positions **PP.4.B.9** Conduct a holistic and system wide assessment of the education process across all technical education schools (industrial, agricultural, commercial, tourism and hospitality) including applied technology schools based on the competency-based education system **PP.4.B.10** Assess the quality delivery of education processes and measures across the technical education schools at the beginning of the 1st and 2nd semesters **PP.4.B.11** Setting an authority/unit to be liable for collecting the data related to industry, schools, labour market, and submission of reports to decision-makers
	C. Strengthening TE Education Management System (EMIS) and harmonizing with other education subsectors EMISs.	**PP.4.C.1** Develop and launch a dynamic database/system of MoETE resources (Schools, equipment, teachers, experts) **PP.4.C.2** Develop online application platforms to facilitate enrolment of children in grade 10 of technical secondary education (formal)
	D. Ensure effective involvement of community participation and private sector with relevant capabilities	**PP.4.D.1** Increase the percentage of technical and vocational education institutions that build on community participation **PP.4.D.2** Assess community engagement in developing technical education and vocational training institutions, based on the quality systems **PP.4.D.3** Establish dialogue among Community, Private Sector, MOETE and related stakeholders to discuss about technical education regularly

Table 20. Key Performance Indicators 5: Technical secondary education, 2023-2027

KPI List	2021/2022	2027 Target	Source
K01: Gross Enrolment Ratio (GER) (M/F) Age cohort 15-17	24.4% GPI: 0.75	31% GPI: 0.76	EMIS
K02: Transition rates from preparatory education to TE	45%	55%	EMIS
K03: Completion rate (M/F)	Not available	90%	EMIS
K04: Percentages of technical education graduates by subject/type of qualification	40%	55%	EMIS

K05: Proportion of technical education graduates employed in the economy by each sector and by all sectors	45%	65%	Tracking Survey
K06: % Share of technical education students in total secondary (M/F)	52.1%	52.1%	EMIS
K07: % of women among students enrolled in technical education	42%	TBD	EMIS
K08: # of schools accredited	Not available	1200 by 2030	Accreditation Reports
K09: # of partnerships with the private sector enterprises	14	100 by 2030	EMIS

1.21 Component 4: Community Schools

1.21.1 Current Situation and Challenges

Community schools or one-class schools, in general, provide education for children who are over the age of primary school enrolment or have dropped out. These are public schools operating under the general education system. A flexible approach is used, which allows introduction of more than one level of curriculum content in the same classroom. Different forms of these schools have been developed to respond to the specific needs of a community.

Community Based Education (CBE) focuses on primary school education and targets children in the age group 9-14 years, with the understanding that children 6-8 can only be admitted if there is no nearby public school. The Community School is often embedded within the community and villages located more than two km from the nearest public primary school. CBE model offers small class sizes, flexible timings, and multi-grades learning modality. Teachers are locally recruited, and often two teachers are assigned to a class to enable better teaching and learning to multiple grades. New teachers undergo pre-service teacher training, continuous in-service teacher training and are intended to be supervised regularly. CBE curriculum follows MoETE standards, but it is organized to address the CBE multi-grade situation.

CBE has been operating since 1992, initially conceived as a partnership between MoETE and UNICEF, with the former providing technical supervision, textbooks, and a share (75%) of teachers' salaries, and financial support for ensuring quality. The schools have one or two classrooms providing education using a multiple-grade approach, with a special focus on ensuring equal access to girls, and they are established mainly in areas outside the

catchment of public mainstream schools, and implementation is through locally engaged NGOs and CSOs. CBE exists predominantly in remote rural areas (92% of community schools are located in rural areas in 2020/21), where children are relatively more likely to be out-of-school.

Currently, almost 5,000 community schools in the country accommodate just over 136,000 children, and enrolment has increased at a low pace since 2015/16 (MoETE, 2021). At the current level of enrolment, community schools reach a number of children roughly equivalent to 20% of the number of out-of-school children in the age group 6-14 years (MoETE, 2021). Class sizes are small, on average 28 students, and average student-teacher ratios are generous, currently averaging 18:1 (MoETE, 2021).

According to previous assessments, one of the successful characteristics of CBE was building the model based on an in-depth understanding of the entire education scene in Egypt with all its needs, long-term priorities, challenges and opportunities. The model is also credited as having a transformative effect with the overall education system. MoETE introduced and transitioned CBE principles such as those centred around school-centred management and participation and child centred active learning and authentic assessment approaches.

However, community schools have often struggled to secure adequate resources to operate effectively, making them reliant on external, non-government support (UNICEF, 2021). There have also been challenges with the deployment and retention of teachers in the face of the civil servant hiring freeze and issues around the payment of salaries.

In addition to financial constraints, which limit teacher deployment and retention, concerning the teachers' qualifications, the educational qualifications is worryingly high for MoETE community schools (34%), where students are likely to require the most academic support (MoETE, 2021). Moreover, similar to other education levels, the distribution of the education workforce across teaching and non-teaching staff is dramatically low, which accounts for approximately 3:2 (MoETE, 2021).

The CBE Roadmap currently under discussion within MoETE provides the opportunity to expand and improve the CBE model. The second phase of the technical support provided by UNICEF is now focused on supporting the alignment of the CBE curriculum and assessment with those being developed under Education 2.0 and establishing a framework for teacher competencies as well as for capacity building, including support on how CBE schools are supervised. Strengthening MoETE coordination mechanisms, through regular top-bottom and bottom-up update and information sharing on the existing needs and available resources, will

ensure better targeting and effectiveness of partnerships. Further, strengthening linkages with other government sectors, such as the Ministry of Social Solidarity (MoSS), Ministry of Youth and Sports (MoYS), Ministry of Communication and Information Technology (MCIT), etc. will ensure complementarity of public services provided to this vulnerable group of children leading to better long-term results.

Moreover, further development of the existing Monitoring and Evaluation (M&E) system, including data on out-of-school children and tracing community school students' completion, retention, and dropout needed. It was also noted that the existence of different M&E tools used by different partners, hinders the efforts to assess the progress of teachers, a package of standardized M&E tools should be the main source of conducting assessment-related interventions. On-going development of the package will be led by MoETE, with support from relevant development partners.

This ESP plan proposes reforming community-based education by responding to subpectoral challenges to ensure the expected outcomes listed below. The proposed programmes are crucial to achieving policy outcomes and objectives.

1.21.2 Expected Outcomes and Programmes for Community Education

Enhanced national capacity to deliver quality basic education for all, with a special focus on girls by means of developing effective scalable community schools, that contribute to community development.

Fewer out-of-school children through establishing accessible high quality, community based and girl-friendly basic education opportunities for rural deprived communities in the Upper Egypt Governorates of Assuit, Sohag, and Qena

Strengthened community school staff's ma capacities for scaling and sustaining a community based, girl friendly basic education model on the efforts of the local community.

OOSC are identified, directed to the most appropriate learning stream or to the 'mainstreaming programthereafter.' and monitore

OOSC backlog is gradually reduced through their fast-track reintegration into the formal school system.

Table 21. Projection of students, teachers, and classrooms, Community schools, 2022-2027

	2022	2023	2024	2025	2026	2027
Enrolment						
School-aged population	14,757,256	14,907,880	14,993,912	14,967,848	14,839,288	14,577,512
GER (%)	1	1	1	1	1	1
Number of students enrolled	148,663	150,803	152,572	153,298	152,827	151,094
- Community schools	148,663	150,803	152,272	153,298	152,827	151,094

Government school teachers and classrooms						
Teachers required	8,003	8,119	8,214	8,253	8,227	8,134
- Teachers to recruit (gross)	681	355	339	286	222	154
Classrooms required	5,210	5,287	5,351	5,378	5,363	5,305
- Classrooms to build (gross)	339	326	290	248	203	220

Source: UNESCO simulation model (2022), estimation based on data from MOETE and CAPMAS.

Table 22. Policy Matrix 6: Community schools, 2023-2027

Policy area	Objectives	Operational Programme
1. Increasing access & participation.	**A.** Expand community education provision, ensure availability of adequate classroom facilities, and improve the physical condition of community schools	**PP.1.A.1** Map supply and demand for community schools to determine access / expansion-related construction/rehab/preparation needs/priorities including a risk analysis to identify which schools are located in areas at risk (natural or human-made disasters) and develop a prioritised, targeted plan **PP.1.A.2** Construct of new community educational institutions **PP.1.A.3** Renovate /repair /rehabilitate existing community schools **PP.1.A.4** Add classrooms to existing schools and prepare vacant premises/ spaces for expanding access to community education **PP.1.A.5** Ensure the expansion, development, and maintenance of community schools through collaborations with non-government stakeholders, with a focus on border regions and upper governorates and heavily populated urban areas **PP.1.A.6** Develop/adopt a green school accreditation scheme
	B. Increase capacities of community education provision of sufficient number and equitable deployment of teachers	**PP.1.B.1** Appoint additional teachers
2. Enhancing quality and relevance of education.	**A.** Provide community school learners with an enhanced and competency-based curriculum	**PP.2.A.1** Develop the curriculum framework for community education, in line in conformity with Education 2.0 **PP.2.A.2** Develop curricular materials for grades (1-3) of community-based primary education **PP.2.A.3** Integrate climate education in school curricula

	B. Ensure availability of adequate classroom facilities, relevant learning materials, and educational technology resources	**PP.2.B.1** Print and supply textbooks for community education **PP.2.B.2** Equip community schools with ICT facilities and developing school ICT connectivity **PP.2.B.3** Equip schools with technical infrastructure and train teachers in the Upper Egypt Region
	C. Raise the level of teacher qualifications and skills	**PP.2.C.1** Design in-service training to increase community school teachers' capacity for according to the new curriculum **PP.2.C.2** Provide community education teachers with opportunities for ICT and skill development training pertinent to the blended learning modality **PP.2.C.3**. Provide training on inclusive education training to teachers **PP.2.C.4** Train secondary teachers on including lessons/ activities related to prevention and protection against violence and abuse **PP.2.C.5** Integrating climate change mitigation and adaptation into teachers' pr training
3. Ensuring equity and inclusion in the education sector.	**A.** Improving access of disadvantaged children to community schools	**PP.3.A.1** Provide access to nutrition and feeding in community schools **PP.3.A.2** Collaborate with the Ministry of Social Solidarity to provide financial support to students from low-income families and targeting household poverty and prioritizing poorest areas with a geographical focus such as Upper Egypt
4. Reforming the sector-wide governance and management.	**A.** Strengthen collaboration and partnerships between government and non-government providers	**PP.4.A.1** Ensure effective involvement of communities, NGOs and IOs with relevant capabilities in subsector policy designs and funding schemes **PP.4.A.2** Increase the percentage of community education institutions that build on community participation
	B. Strengthening secondary Education Management System (EMIS)	**PP.4.B.1** Develop data collection mechanism for a precise and comprehensive statistics of the actual numbers of dropouts and bet-tofesrc hiocbel n"t i/ fnyo attending children and improve their attendance of schools
	C. Consolidate all systemic reforms and strengthen the capacity	**PP.4.C.1** Develop a legal and policy framework to make community education a viable alternative to basic education and beyond

Table 23. Key Performance Indicators 6: Community schools, 2023-2027

KPI List	2021/2022	2027 Target	Source
K01: The % of out-of-school children of basic school age (also disaggregated data in terms of socio-economic background, disabilities, sex, location and region)	4% (2018)	0%	EMIS
K02: Total enrolment in community schools (also disaggregated data in terms of socio-economic background, disabilities, sex, location and region)	140,224	151,094	EMIS
K03: Class size, public	29 students per class	28,5	EMIS
K04: Student-teacher ratio	27.8	19	EMIS
K05: % of students who passed the G6 exam (M/F)	97.0%	100%	EMIS

1.22 Component 5: Adult Literacy Programmes

1.22.1 Current Situation and Challenges

Egypt has committed to eradicating illiteracy through advances in formal and non-formal education. From the early 1990s, legislation has been enacted to mobilize governmental and civil society initiatives by initiating the National Campaign for Adult Education and Literacy. The National Plan for Literacy targets 15- to 35-year-old illiterate adolescents and adults. The concept of literacy and adult education has become more diversified to include types of education other than basic literacy. The plan provides more explicit information in terms of goals, content, methodologies, teaching and learning skills, monitoring of progress and evaluation of results. Widening the adult education concept and going beyond acquiring the basic literacy skills in Egypt allows for promoting critical thinking, tolerance and acceptance of others. Acknowledging the current status of literacy and adult education in Egypt and the policies undertaken by the government or civil society to provide literacy education programmes, the General Authority for Adult Education (GAAE), affiliated to MoETE, was set-up by Law no. 8 of 1991 and established in 1992 to open literacy centres across the country. The GAAE is the only provider of officially recognized literacy certification.

According to statute number 31 of 2009, the GAAE defines an illiterate person as "any citizen between the ages of 15 and 35 who is not registered in any formal school and does not know how to read, write, or perform basic arithmetic." Nonetheless, they allow anyone who wishes to enroll in the literacy classes, even if they do not fall inside the intended age range.

The agency adopts annual implementation plans with defined aims and targets to enhance adult literacy in Egypt, with a particular emphasis on governorates with higher illiteracy rates. The duration of the literacy programmes ranges between three to six months, according to the educational level of the adult learner. Literacy classes offered by the Adult Education Authority are open to those aged 16 years and older who have not completed primary education or did not successfully complete a literacy programme before. A key objective of literacy classes is to offer successful completers the opportunity to continue their preparatory or secondary education.

The Adult Education Authority offers three types of literacy classes:

- Educational classes that run for between three to nine months depending on the level of learners.
- Refresher classes for those who can read and write but require a refresher programme, running for one month.
- Classes for people with disabilities, the duration of which is dependent on learners' needs, their literacy level and

The classes' delivery model is flexible, the afternoon to accommodate learners' hours, with a total of 12 hours per week but can be extended over four or five days. University students are encouraged to run literacy classes under supervision of the Adult Education Authority and may receive some training to do so.

In addition to its literacy centres, the GAAE supports any educational activities that take place within and outside of educational institutions for those who are not enrolled in formal education, who have previously dropped out of school, or who have never had the opportunity to receive formal schooling due to social, economic, or basic education system failures to retain students.

In collaboration with numerous partners, including UNESCO, the agency produced educational courses to supplement the basic literacy curriculum that is tailored to the actual needs of the learners. These courses include training for work, life skills, human rights education, and health education, which primarily targets female students. The GAAE devotes special consideration to students with disabilities; there are classes for the blind and visually impaired in Aswan and other governorates.

The GAAE promotes the concept of lifelong learning by bringing attention to the fact that getting a certificate of literacy is the first step toward pursuing additional education and becoming public servants. Every year, the authority releases a book titled *From Illiteracy to University* that details the academic achievements of former literacy programme participants who continued their education.

Egypt has increased its efforts to reduce illiteracy among illiterate individuals in recent years, and adult education and literacy have risen to the top of the agenda during the current economic situation as a means of increasing production, a potential solution to youth unemployment, and a tool for positive social transformation. To achieve this objective, the Public Authority for Adult Education introduced the *Adult Education Strategic Plan for 2014-2030*, which outlines the following overall goals:

1. Provide educational opportunities to adults aged 15 and older, with priority given to those in the age range (15-35) who did not enrol in basic education or who dropped out; to teach them to read and to equip them with fundamental life skills.
2. Provide opportunities for lifelong learning to people who are literate.

Despite the rigorous global vision and objectives, there are still many obstacles that impede the efforts, such as: the spread of poverty, the lack of awareness of the importance of female education, the spread of child labour at a young age, early marriage practices in rural areas, and other phenomena with various economic, social, and cultural dimensions that necessitate the integration and intensification of efforts in order to eliminate the causes of illiteracy.

In concrete terms, Egypt's adult literacy rate of 73% (UIS, 2022) is the lowest in North Africa, compared to Tunisia's 79%, Algeria's 81%, and Libya's 88%. Similar to other countries in the region, gender gap is substantial, with adult literacy for male is 78% while that for women is 67%. With near-universal access to basic education, illiteracy rates for younger population have decreased over the past decade, and although female illiteracy rates remain higher than those for men, the rate of decline has been faster for females for younger population. Based on recent data on literacy, among youths (15-24 years), the illiteracy rate declined from 11% for females and 9% for males in 2012 to 4% for both in 2017/18 and for young adult females (25-34 years) from 25% to 16% and for young adult males (25-34 years) from 15% to 9% (MoETE, 2021). Considering the improvements in literacy rates for both age groups, the illiteracy rate for both sexes has been reduced, but there remains a gender gap in the young adult group (25-34 years), whereas it has disappeared for the youth (15-24 years) (MoETE, 2021). There are also striking disparities in illiteracy among the four regions. Youth in Upper Egypt and the frontier governorates fare the worst, with an estimated 6% being illiterate compared to 3-4% in Lower Egypt and the urban governorates. This is linked to the higher out-of-school rates in the former two regions (MoETE, 2021).

This ESP plan proposes reforming the adult literacy programmes and non-formal education by responding to the subsectoral challenges to ensure the expected

outcomes listed below. The proposed program areas and key activities are crucial to achieving policy priorities and defined strategic objectives.

1.22.2 Expected Outcomes and Programmes for Adult Literacy Programmes

Reduction of illiteracy and gender gaps
Increase the number of adolescents, youth and adults who participate in adult and non-formal education.
Increased government funding and development partner support for adult and non-formal education, to increase centres and courses, in such a way as to reduce regional disparities.
Ensure more disaggregated and reliable data on levels of literacy and numeracy among youth and adults for better planning and management.
Ensured availability of a sufficient number of facilitators, respecting minimum standards, and their equitable deployment
Quality teaching and learning materials are available for all.
Improved quality of youth and adult education through training of teaching personnel

Table 24. Policy Matrix 7: Youth and adult literacy programmes, 2022-2027

Policy area	Objectives	Operational Programme
1. Increasing access & participation.	**A.** Expand literacy programmes, ensure availability of adequate centres, facilities and improve physical condition of literacy centres	**PP.1.A.1** Prepare vacant premises/ spaces for expanding access to literacy programmes **PP.1.A.2** Identifying and mapping the causes of illiteracy in Egypt
	B. Raise awareness to the importance of literacy and promote participation in literacy programmes	**PP.1.B.1** Organise media, public information and development-oriented campaigns and caravans to raise awareness on the importance of education and dangers of illiteracy **PP.1.B.2** Capitalise on media platforms to rally the general public and harness the public opinion to combat the issue of illiteracy **PP.1.B.3** Create opportunities for literacy graduates to pursue further education through the post-literacy programme
2. Enhancing quality and relevance of education.	**A.** Raise the level of education service provision and skills	**PP.2.A.1** Develop and build capacity of education service providers in adult literacy programmes **PP.2.A.2** Develop and build professional staff competency at the Adult Education Authority, based on quality standards of adult education

		PP.2.A.3 Provide literacy educators with opportunities for ICT and skill development training pertinent to the remote learning modality **PP.2.A.4**. Provide training on inclusive education training to teachers
	B. Conduct the assessments & examinations	**PP.2.B.1** Develop/deliver literacy examinations **PP.2.B.2** Issue certificates for literacy graduates
	C. Provide literacy programmes with an enhanced curriculum	**PP.2.C.1** Update and upgrade literacy curriculums and programmes
	D. Availability of adequate and relevant learning materials, and educational technology resources	**PP.2.D.1** Create and provide access to e-learning platforms **PP.2.D.2** Develop and release post-literacy booklets & leaflets c o mme n s u r a t e wi t h t level of literacy
3. Ensuring equity and inclusion in the education sector.	**A.** Improving access of disadvantaged learners to adult and literacy programmes	**PP.3.A.1** Provide quality education services targeting the neediest geographical locations (Upper Egypt), prioritizing young adults (25-34) and females **PP.3.A.2** Supporting the vocational training and micro-industry project in the targeted villages
4. Reforming the sector-wide governance and management.	**A.** Improved management, implementation, monitoring, and evaluation capacity with effective coordination	**PP.4.A.1** Provide field-based monitoring of literacy classrooms **PP.4.A.2** Fulfil the reform requirements of adult literacy based on evidence-focused and field research **PP.4.A.3** Acquiring accurate statistics and indications of the illiteracy **PP.4.A.4** Creating a shared database to specify and manage data between the Authority and the Ministry of Education, with the eventual aim of fully integrating non-formal education database into EMIS
	B. Ensure effective involvement of community participation, development institutions and civil society with relevant capabilities	**PP.4.B.1** Establishing an effective relationship between the government and civil society organization to combat illiteracy

Table 25. Key Performance Indicators 7: Youth and adult literacy programmes, 2023-2027

KPI List	2021/2022	2027 Target	Source
K01: Total number of adults lacking literacy skills	18.5 millions 60.5% (F) 39.5% (M)	TBD	EMIS
K02: % yearly growth in adult and non-formal education	10%	30%	EMIS
K03: Number of people by age range (adolescents/youth/adult) who have undertaken some form of non-formal education or literacy training within the last 12 months	Not available	TBD	EMIS
K04: Literacy rate, adult total (% of people ages 15 and above)	73% (Average) 79% (M) 67% (F) *UNESCO UIS	TBD	EMIS
K05: Literacy rate, youth total (% of people ages 15-24)	92% (Average) GPI (0.99) *UNESCO UIS	99%	EMIS

1.23 Component 6: Sector-wide Governance and Management

1.23.1 Current Situation and Challenges

As mentioned in the second chapter, pre-university education comes under MoETE and Al-Azhar Al-Shareef. MoETE is both the regulator and the largest provider of pre-university education; in addition to the tens of thousands of public schools it owns and directly manages, it also regulates and supervises private education. The public education system consists of four levels: the central MoETE in Cairo, governorate-level Education Directorates (mudirriya), district-level Education Departments (idara), and schools.

As it has been defined in the ToC, improvin resilience, gender-responsiveness, efficiency, and effectiveness is one of the foundational pillars and indicated as an overarching goal of the sector plan. Improving governance and management reform relates to the ways and means of realizing policy objectives and priorities mentioned in chapter 3 and realizing high-level targets defined within Education 2.0.

However, according to the Education Sector Analysis conducted in 2021, overall, there are challenges in the administration of the education system. One of the major issues is the high-level bureaucracy and centralization of the system, such that Central MoETE, governorates, districts, and schools must go through lengthy and bureaucratic procedures to obtain approval for allocations of funds, transfer of teachers, etc. This can prevent schools from implementing their development plans. Moreover, neither MoETE nor governorates can make any decisions regarding hiring education staff, including teachers, without a long cycle of approvals from Central Agency for Organisation and Administration (CAOA). Once decisions are made, the decisions may be inconsistent with needs due to governmental constraints. Due to sometimes conflicting authorities of different entities, schools may receive contradictory instructions, for example, for average student-classroom ratios. Owing to the lack of mechanisms for effective communication systems between management levels and top-down decision-making processes, there may occur mismatches between resources required to meet instructions of Ministerial Decrees and available school resources. Also, there are challenges regarding the effective involvement of parents in school management. Some BoTPTs are partially or completely inactive, and their ability to support school management differs according to the level of education and poverty of the community adjacent to the school.

The Directorate and Department structures largely mirror images of the central MoETE. The Education Directorate is headed by an Undersecretary, an employee of the MoETE who technically falls under and is supervised by central MoETE but also reports from an administrative perspective to the Governor. The Education Department is headed by a director who reports to the Undersecretary but is also supervised by the district's Local Council. MoETE, similar to the general government structure of Egypt, is highly centralized. However, Education 2.0 envisions a delivery system where the central MoETE and the Minister have a strategic leadership role, and sub-national entities and agencies such as the General Authority for Educational Buildings (GAEB), are responsible for the day-to-day implementation. The progressive decentralization plan of functions, management, and financial authority with institutional strengthening at all levels is specified in the chapter 6.

In many cases, education decision-makers operate based on incorrect or contradictory education data. This affects their ability to prioritize among activities and budget accurately. In addition, hundreds of ministerial decrees and memos are issued annually and sent to schools. In many cases, old ones are used without any reference to the updated ones, as there is no legal archive. This leads to schools frequently being unaware of updated rules and regulations and continuing to operate based on the old ones. Despite the presence of several departments for

follow-up and assessment, the management is challenged with the deficient evaluation, monitoring and incentives systems and lack of an integrated results-based monitoring and assessment framework. MoETE departments lack coordination and integration due to a deficient organizational structure and lack of the clarity of the obligations and responsibilities at different administrative levels.

Hence, as part of MoETE's strategies to sca
innovation (see section 4.7) and in accordance with governance and management reforms envisioned in the ESP (see section 4.6.2), the scope of traditional EMIS will be further expanded, moving beyond routine administrative tasks and student head counts to become an real-time, integrated, accessible and responsive EMIS that can inform education decision-making at all levels and foster accountability, thereby leading to education improvement. As such, the EMIS ecosystem will become an efficient digital tool to support both (i) day-to-day management at all levels and (ii) sector strategic planning and management, governance and accountability, and monitoring and evaluation. It will streamline and institutionalize the capture of data being generated by the various ESP components, to maximize its utility to shape meaningful administrative and instructional decisions, and to both inform and compel continuous system improvements across the education sector.

The EMIS ecosystem will be an integrated information system in so far as it: (i) integrates all relevant information on educational institutions, students and learning, human resources, buildings and equipment, and digital content, as well as on sector strategic management processes across various administrative levels, (ii) integrates all digital management and learning platforms into a single and interoperable EMIS ecosystem, (iii) links with the wider government digital ecosystem, including National Identification Systems for automatic verification of the identity of learners and human resources.

The integrated EMIS ecosystem will streamline data collection practices across the education system to prevent duplication of information across data systems. It will digitize and decentralize data entry operations to improve efficiency and data quality. The EMIS ecosystem will be accessible and responsive to users and accommodate their varying needs by providing useful information services to all stakeholders, including students, parents, educators, school leaders and sector managers, and the wider public, notably through tailored portals. Information services will be tailored to provide accurate, timely, and easy to interpret information; serving EMIS stakeholders, disaggregated at different levels (national, regional, district/supervision cluster, school, section, class, student-level) by gender, highlighting inequities and showing trends over time.

Effective governance is essential to achieve the outcomes envisaged in the Education Sector Plan. Different aspects of the critical area of governance, system

management, and planning are discussed in relevant parts of this document – chapters 2, 3, and 4 as well as this chapter - placing the issues in appropriate contexts.

This ESP plan proposes education sector governance and management reform to respond to the systemic challenges to ensure the expected outcomes listed below. The proposed programmes are crucial to achieving policy outcomes and objectives.

1.23.2 Expected Outcomes and Operational Programmes

- Teachers and school staff are well-supported and teacher management more efficient and effective to deliver on quality teaching and learning.
- New professional standards for teachers de and competencies are licensed, motivated teachers via improved recognition, merit-based promotion system and reward package.
- Clear and coherent framework of professional standards and indicators for teachers developed and online professional development training modules/ courses designed to develop specific teaching skills.
- Subnational education management bodies, including school leadership, are strengthened and empowered to be effectively responsible for the implementation of the sector plan.
- Gradual decentralization and devolution of tasks to bring decision-making closer to beneficiaries and governance operating with greater accountability, coordination and a holistic view of the system.
- An effective management and administration system is in place, including system-wide accountability and sustainable, equitable financing modalities.
- Capacities of national, regional and local officials are developed for system-wide planning and management; improved assessment; and innovation and research.
- Harmonized EMIS generates timely, reliable and accessible quality data, utilized across all education subsectors.
- Sufficient and timely disbursement of allocated budget and timely, effective procurement
- Education sector legislation, regulations and standards are modernized, aligned with national development strategies and harmonized.
- Increased efficiencies to make the most of the education budget to get more impact from the available resources and sustaining high frequency pulse surveys, as well as ways to integrate budgeting and financial data with learning and education data.
- Assessment framework of each standardized summative assessments needed in the new *Education 2.0* CPD System developed.
- Strengthened management of multiple, mutually accountable partnerships.

Table 26. Policy Matrix 8: Sector-wide governance and management, 2022-2027

Objectives	Operational Programme
A. Improve the management of the teacher work force while enhancing the status of the profession	**A.1** Strengthen capacity, capability, technical skills and leadership skills in the management structure and among personnel at all levels for collecting/ compiling information on teacher management and accountability indicators **A.2** Develop applications for automation of teacher placement and career advancement **A.3** Issue teacher eligibility certification for promotion and career advancement **A.4** Develop incentive schemes and align teacher salaries with the international practices (e.g. 1.5 as a multiple of GDP per capita) **A.5** Improve teacher status while developing rules and regulations for appraisal and promotion **A.6** Establish a database of teachers with specializations and develop an effective and equitable teacher deployment system at all levels **A.7** Design a supportive supervision mechanism and support teachers at all levels. **A.8** Monitor and evaluate the professional capacity of new and existing teachers **A.9** Integrate positive discipline into the teachers' in-service training **A.10** Improve instructional leadership of head teachers, curriculum leads, circuit supervisors, and district officers to support improved practices of teachers **A.11** Support teachers to improve classroom instructional time and activities effectively and enhance the instructional time-on-task and its effectiveness
B. Develop capacities at all levels of education administration to support systemic reforms	**B.1** Develop quality assurance mechanisms and processes to monitor teacher, student and school performance against standards **B.2** Develop sector-wide and sub-sector planning capacities, including crisis risk management framework and implementation and effective coordination among all sub-sectors **B.3** Establish appropriate mechanisms and processes for steering and supporting education policy and plan implementation **B.4** Enhance coordination and cooperation within and across education management bodies **B.5** Enhance gender responsiveness of the education sector by increasing women in leadership role **B.6** Digitize and automate administrative procedures to improve the agility, transparency and efficiency of sector management **B.7** Strengthen capacities for sector management, supervision, inspection and evaluation **B.8** Strengthen personnel management, establishing and applying performance standards **B.9** Establish / enhance collaboration/coordination/ convergence mechanisms between ministries

	B.10 Prepare and disseminate regulations/guidelines and standards for all levels **B.11** Strengthen regulatory framework to support inclusive education at all school levels and to regulate non-state actors' roles responsibilities in education
C. Ensuring participatory approach to education sector management	**C.1** Ensure progressive decentralization and devolution of planning, management and financial functions with institutional capacity strengthening at all levels, including piloting appropriate models for decentralized planning, crisis risk management for decentralized authorities, and microplanning **C.2** Monitor the decentralization functions and tasks and follow up on financial allocations for daily maintenance and school operation **C.3** Ensure and promote effective involvement of communities, parents, and NGOs with relevant capabilities and voices represented into policy deliberations
D. Ensuring evidence-based policy and decision making facilitated by an integrated education management information system and targeted research	**D.1** Develop an integrated education data management system to facilitate evidence-based decision making and implementation at all levels (including connecting the EKB's learni EMIS) and strengthen the dissemination and use of EMIS analysis **D.2** Conduct research, analysis and evaluation of the education sector and subsectors' perfo to inform education policy and practice **D.3** Strengthen collaboration with academic and research institutions with capabilities to support capacity development in education policy development, management, and monitoring and evaluation **D.4** Develop a GIS database system to inform and improve decision making and implementation **D.5** Strengthen capacities of education policymakers, school leaders and education administrators on evidence-based policy formulation and implementation **D.6** Strengthen evidence-based planning and implementation capacities at subnational levels, including school leadership
E. Enhancing partnership with the private sector, civil society organizations as well as communities to improve access to and quality of education	**E.1** Provide capacity development support to education officials and school management on partnership and collaboration with non-state actors, NGOs and international organisations. **E.2** Develop and apply a governance model that supports robust public-private partnerships to ensure education provision with quality and equity **E.3** Ensure a solid network with civil society organisations, relevant ministries, and government organisations, according to Law No. 8 of 1991 **E.4** Expand the public-private partnership (PPP) model to an additional number of schools **E.5** Develop a mechanism and incentives to increase engagement of the non-state partners, civil society organizations, and communities in the provision of quality education
F. Ensuring additional funding and resource mobilization to	**F.1** Increase budget allocation for education sector along with greater efficiency, effectiveness in the use of the budget and ensure financial sustainability of the sector management

achieve learning targets	**F.2** Establish efficient, equitable and transparent criteria for budget allocations and results-based financial management **F.3** Address the negative impact of debt services on education financing

Table 27. Key Performance Indicators 8: Sector-wide governance and management, 2023-2027

KPI List	2021/2022	2027 Target	Source
K01: % of planned outcome targets achieved in a timely manner with regard to: (CHAPTER 3-4).	Not available	TBD	JESR Reports
K02: Education expenditures (functional budget) as % of GDP	2.6%	2.6%	MoETE /MoF
K03: Education expenditures (functional budget) as % of total gov. (exp. after debt services)	6.6%	15%	MoETE /MoF
K04: % of female in head teacher positions (disaggregated data in Schools, Governate and MoETE levels)	96%, Kindergarten 39%, Primary 49%, Preparatory 33%, Technical secondary 49%, General secondary 93%, Community schools	TBD	MoETE
K05: % of female teachers (disaggregated data at all education levels)	100%, Kindergarten 62%, Primary 54%, Preparatory, 49%, Technical secondary 43%, General secondary 97%, Community schools	TBD	MoETE
K06: Comprehensive & integrated information management system	No	Yes	Activity Reports
K07: Joint Education Sector Review Report (yearly) is published on time with full analysis.	No	Yes	JESR Reports
K08: % of governorates with annual operational plans	100%	100% Not only activity	Activity Reports

		reports, but a complete operational plan including activities.	

1.24 Component 7: Digital Transformation and Innovation

1.24.1 Current Situation and Challenges

Catalysed by the COVID-19 pandemic, digital technology plays an increasingly important role in all aspects of education, from learning and teaching to administration and management. School closures precipitated new reliance on digital technologies for educational continuity, new methods of using technology as a pedagogical tool, and a new appreciation for its transformative potential. However, realizing the promise of digital transformation requires a deep understanding of the systems and factors that enable the effective use of digital technology to expand access and equity in education, combined with detailed knowledge of context. The pandemic laid bare the gaps and divide in digital connectivity, competencies, and high-quality content, but also of the underlying system and governance structure required to enable effective, responsible, sustained, and sustainable digital integration.

Given the dynamic complexity of digital technology, Egypt recognized the need for a comprehensive, longevous strategy for digital transformation in its education system. The government is undertaking a large-scale effort under 'Dig
expand ICT infrastructure and raise its quality across Egypt to ensure its accessibility, affordability, and usability. At the start of the major reform of the K-12 education system in 2018, MoETE embarked on a development process of a holistic ICT Strategy for the future of education in Egypt, which was completed in 2022. This strategy responded to the cross-cutting and critical emphasis on using ICT for education in Education 2.0 and Vision 2030. The strategy aims to integrate ICT into education to enhance learning, support teaching and teacher professional development, address diverse learning styles and inequities, and augment the overall performance of the educational ecosystem. Prior to the announcement of Education 2.0 and the move to digitalize education, the Egyptian president launched the Egyptian Knowledge Bank (EKB) initiative in 2014 and the EKB went live in 2017.

The digital transformation plan is built on a four-pronged ICT strategy, which includes: (1) infrastructure foundations, (2) learning spaces, (3) teacher career management, and (4) data systems. It aims to achieve the strategic objectives as follows:

Connect all high school classrooms, teachers, and students to the internet, the digital resources created by MoETE, and to equip them with tablets and digital whiteboards and extend similar services to lower-grade classrooms in due course.

Create an educational ecosystem with fully integrated digital components that support blended learning and the goals of the new education system, or Education 2.0 (EDU 2.0).

Develop ICT facilitated systems for Continuous Teacher Professional Development, which aims to streamline the process of in-service training, provide classrooms with model 2.0 teaching, empower teachers to manage their professional development, and ensure that all training aligns with the new education system.

Streamline and institutionalize the capture of data generated by the various strategy components, maximize its utility to shape meaningful administrative and instructional decisions, and inform and compel continuous system improvements across the education sector.

Efforts to address some of the specific bottlenecks concerning the digital transformation initiative, planned within the framework of Education 2.0 before COVID-19, were accelerated and expanded to mi t i education. Such recent transformative initiatives include the following:

Existing Educational TV channels broadcasting lessons by grade and subject on national television were made a requirement.

The online EKB that provides students from kindergarten to grade 12 with access to education materials, including the curricula, was accelerated and expanded in response to the COVID-19 pandemic, with approximately 980,000 teachers and 5.4 million students registered on the platform. The EKB grants all Egyptians access to a large amount of knowledge, cultural and scientific content for the basic, applied, technology, human, or management sciences. It also includes public cultural books that target children and are to be used through computers, smartphones and tablets around the country.

Virtual classrooms for kindergarten grades 1 and 2 and grade 1 of primary had already been created and swiftly expanded.

The entire educational content (textbooks, course work, instructions, virtual lessons etc.) for grades 4 to 12 is currently available and accessible to all citizens through the MoETE e-learning website.

Establishment of the online platform Edmodo, which enables students, teachers, and parents to communicate and access Microsoft Word, Excel, and PowerPoint.

Egyptian Education Platform, offering a direct link to the EKB as well as educational resources and guides for parents, students, and teachers, as shown in table X.

Table 28. Contents of the Egyptian Education Platform

Primary (grades 4 to 6) and preparatory level	Preparatory and general secondary level	General secondary level
Weekly schedule of lessons broadcast on satellite TV educational channels.		
Electronic library for all subjects, including PDF-formatted lessons from textbooks, videos, and other sources.		
"Edmodo" platform for communication among student, teachers, and parents; offers MS Word, Excel, and PowerPoint access.		
"Stream": platform to stream lessons that have		
	"Hesas Masr" pl online interactive lessons for grades 9 to 12[38]	
		Link to the Learning Management System (LMS)[39] includes interactive digital content linked to the curriculum.

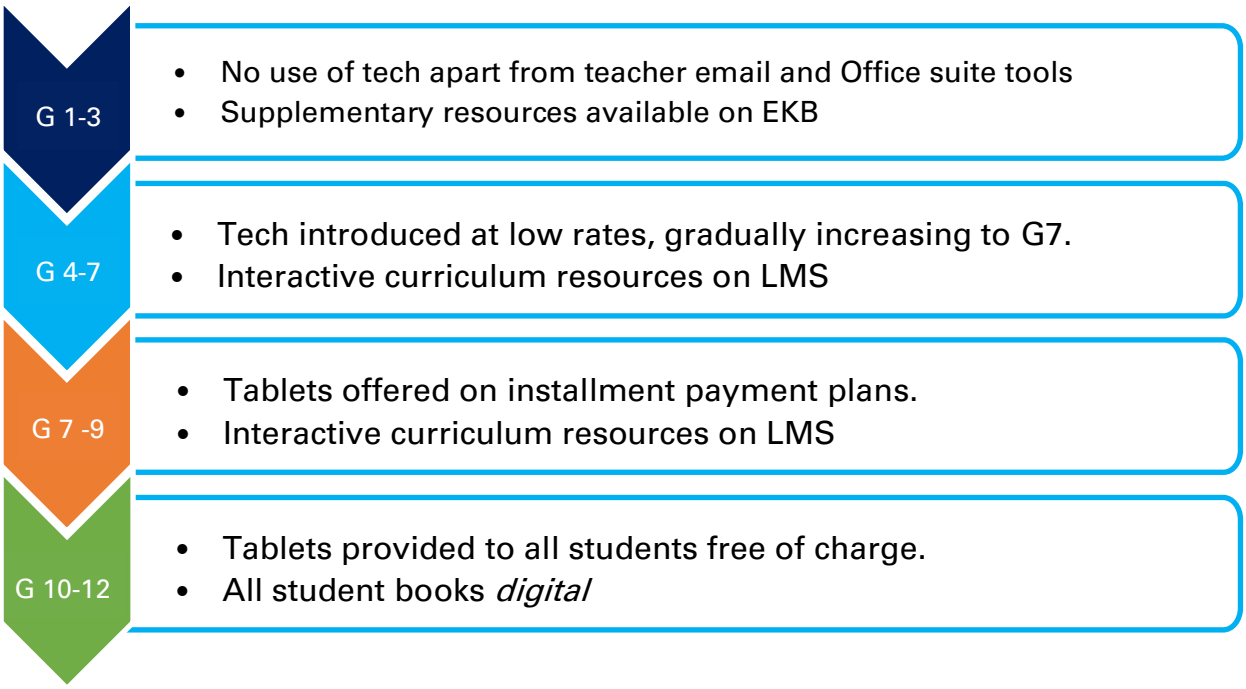
Source: MoETE, ESA Interviews, 2021

Such initiatives show the shift towards a deeper integration of hybrid and digital approaches in Egypt's education system, which puts *Education 2.0*, align ICT forward as a critical pillar and vehicle for education reform. The ICT strategy first targeted secondary schools (via the rollout of tablets, electronic exams, and digital textbooks) to immediately impact the critical Thanaweya Amma school leaving/university entrance exam and the related culture of learning at this education level. Thereafter, the strategy is to roll internet infrastructure out to the lower grades following a stepped approach to digital transformation. In future rollouts, the hardware details may differ across school levels as networking technologies mature and as the digital services for each level of schooling are finalized.

The new system is designed to transform the culture of learning and teaching through new curriculum frameworks, updated learning, and teaching methodologies, and a stepped approach to digital transformation (see Diagram 5.). Through a multi-pronged strategy that includes building an ecosystem with digital services, initiating educational television channels (Madrasitna 1, 2, and 3), and constantly updating interactive content while putting learning devices in the hands of students and teachers, the system aims to enhance learning while catering to students of different stages and learning preferences. As of 2021/2022, EDU 2.0 was rolled out through Grade 4 with the expectation that by 2030 it will be fully integrated through Grade 12.

Figure 62. ICT Strategy

Source: ICT Strategy MoETE (2022)

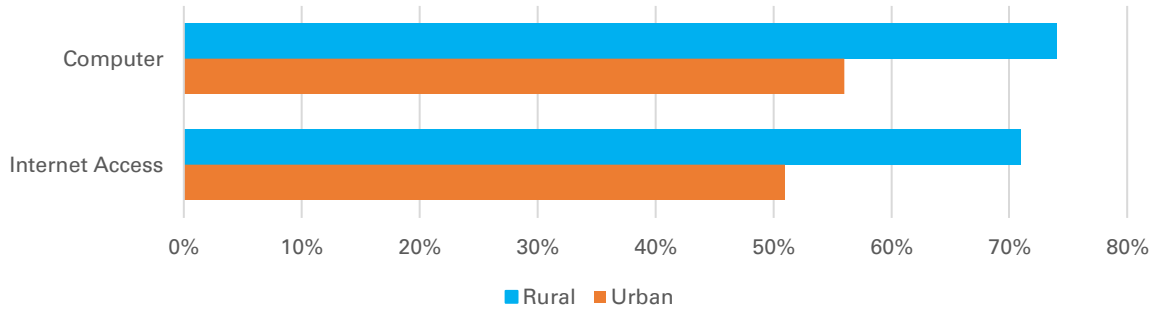


Multi-stakeholder partnerships and whole-of-government approaches have enabled progress in expanding access to digital connectivity and content to both schools and individuals. In coordination with internet service providers in Egypt, schools were provided high-speed internet connections. To safeguard against network and connectivity problems and minimize the need for download, each school has been provided with a server with the entire educational content and a local area network (LAN). As part of its plan to reform and digitalize the education system, teachers and supervisors were also provided with tablets with pre-loaded content. From the academic year 2018/2019- 2021/2022, approximately 2,500 secondary schools have been connected to the internet and the necessary hardware and software set has been rolled out to all 36,000 secondary school classrooms since 2018. While 1.8 million secondary school students received tablets, around 75,000 secondary school teachers received tablets as well. Furthermore, a new partnership with Microsoft was established to accelerate digital transformation in education and to ensure the continuity of learning across Egypt during COVID-19. This would see Microsoft provide Office 365 to all educators and students free of charge, alleviating software constraints.

Even though MoETE has achieved astonishing progress in a relatively short amount of time, access to and use of ICT in preparatory schools is relatively limited. In 2019, only 36% of preparatory schools used an online learning management system to support learning, while 67% provided access to digital books (TIMSS, 2019). Among

grade 8 students, only 39% had access to computers during maths lessons and 58% during science lessons (TIMSS, 2019). The actual use of these computers appears to be limited, with 62% of grade 8 maths teachers and 47% of grade 8 science teachers never or almost never using a computer to support learning during their lessons (TIMSS,2019). Moreover, the lack of internet connectivity at home remains a barrier to remote learning for large numbers of students and households. There are significant disparities in devices and internet access between rural and urban areas as well as between poorer and more affluent households. In 2019/20, while 74% of urban households owned a computer, only 56% of rural households did. Among urban households, 71% had internet access compared to only 51% of rural households (MoCIT, 2020).

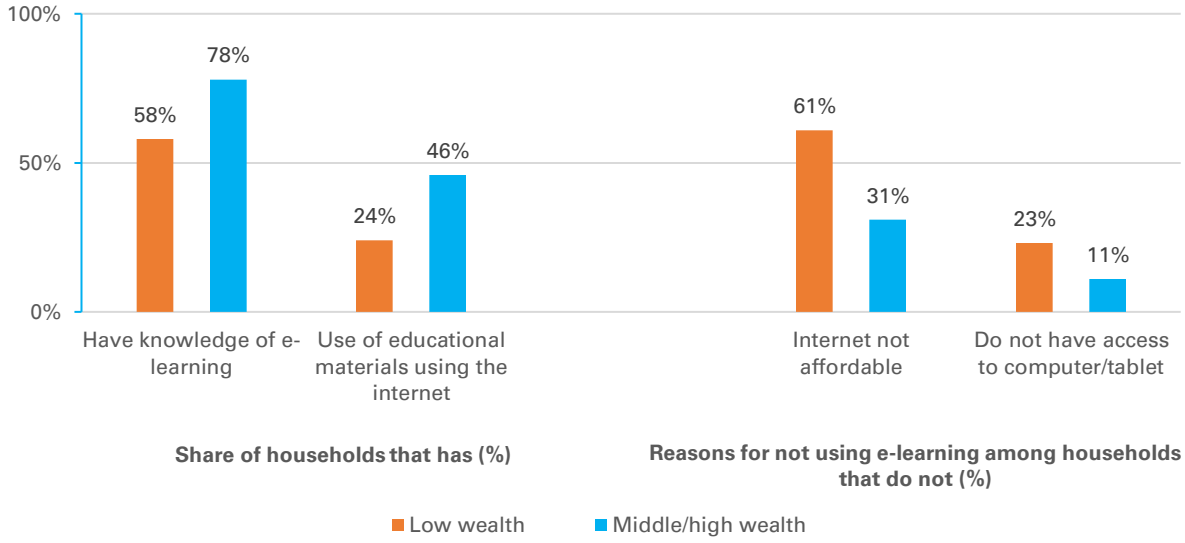
Figure 63. Household access to computers and internet by location 2019/20



Source: MoCIT 2020.

In addition to disparities in access to hardware and the internet, there are significant differences in knowledge and use of e-learning among households. In October 2020, an estimated 78% of middle and high-wealth households and around 60% of low-wealth households had some knowledge of e-learning, indicating the need to communicate more clearly the availability of remote and hybrid learning opportunities to students and their parents (RTM, 2020). The use of educational materials on the internet was only 46% for middle and high-wealth households and less at 24% for low-wealth households (RTM, 2020). During the 2020/21 school year, an estimated 39% of grades 4-9 students were not using any educational platforms or channels, indicating low uptake of available remote learning options (RTM, 2020).

Figure 64. E-learning knowledge and usage October 2020



Source: Weighted estimates based on RTM Round 3, December 2020 data.

Besides marked differences in knowledge and use of e-learning among households, the cost was one of the major reasons for the relatively low usage of e-learning and educational materials online. Around 61% of low-wealth and 31% of middle and high-wealth households found internet access unaffordable (Figure above). However, the Government has worked closely with telecom companies to ensure reduced communication charges when students access the EKB and to provide free internet access to relevant ministries' websites, courses, materials, and learning portals in response to the COVID-19 pandemic. Further, the Ministry of Communications and Information Technology assigned increased internet capacity to support the electronic examination system using tablets. However, the extent to which these efforts effectively increased access to remote learning opportunities is unknown.

1.24.2 Introduction of Hybrid Learning Modality to Grades 10-12

In the 2021/22 academic year, for example, the system had 25 million students across 55,000 schools. Classroom density reached 70-80 students in some areas, and out of 1,600,000 employed teachers, only 1 million were in the classrooms, with the remainder working in administration.

Technology can alleviate some of the short and long-term challenges that the education sector has been struggling with. Therefore, MoETE has launched several initiatives to address these gaps and support learning, updating its tools and technologies to provide 21st-century educational services. The integration of hybrid/blended learning approaches into the system was one such initiative with particular applicability for the secondary school level.

Although the model has not undergone extensive trial periods, initial results indicate its potential to alleviate the stress on the education system in responding to incremental population growth, high classroom density, and high infrastructure costs. For instance, the MoETE estimates that hybrid teaching can relieve at least 25% of teacher needs. In coordination with th teachers will be provided with necessary content, materials, and training, and classrooms will be fully equipped with the necessary digital infrastructure to enable the hybrid learning modality in secondary education level to be feasible. While much is known about teaching in the physical classroom and about teaching online, the particular circumstances of the hybrid educational space remain under-researched. As such, the MoETE is collecting data on this process to ensure that it is iteratively developed and evolved to meet shifting needs and conditions.

Continuing and scaling up the hybrid learning modality aims to ensure effective and efficient use of financial, material resources for the education sector, to increase the gross and net enrolment rates for the secondary level, and to free up more resources for the early grades.

This ESP plan proposes digital transformation and innovation which facilitate responding to the sector-wide challenges to ensure the expected outcomes listed below. The proposed programme areas and key activities are crucial to achieving policy priorities and defined strategic objectives.

1.24.3 Expected Outcomes and Programmes for Digital Transformation and Innovation

Educational ecosystem digitally transformed with fully integrated digital components that support blended learning.
All school classrooms, teachers, and students for grades 10-12 are connected to the internet and they are equipped with tablets and digital whiteboards.
Ensured quality and equitable ICT access and maximum reach.
The digital learning ecosystem revised and updated.
Enhanced learning experience and improved learning outcomes
Process of in-service training streamlined to provide classrooms with model 2.0 teaching.
Teachers empowered to manage their professional development and ICT training.
Institutionalized and formalized data collection to support and shape meaningful administrative and instructional decisions

Table 29. Policy Matrix 9: Digital transformation and innovation, 2023-2027

Objectives	Strategic Programme
A. Improve digital infrastructure and equip learners, teachers and classrooms with necessary learning materials	**A.1** Provide schools with high-speed internet and distribute it among classrooms via WIFI **A.2** Provide schools with equipment to run their network: server, air conditioning, UPS, and network hardware **A.3** Provide classrooms with interactive displays to connect to online resources, store digital materials, and stream live instruction **A.4** Provide teachers with resources to organize their instruction and classroom administrative tools **A.5** Provide students with digital equipment to study and take exams **A.6** Provide students with digital communication tools and internet access outside the classroom **A.7** Provide ongoing tech support to maintain the system **A.8** Hire IT specialists in each school **A.9** Conduct a thorough evaluation of the infrastructure initiatives **A.10** Establish technology skills development centres and provide access to the centres
B. Build a digital educational ecosystem with fully integrated digital components	**B.1** Update and maintain EKB and Learning Management System (LMS) to produce digital educational materials for EKB **B.2** Develop Interactive textbooks and educational materials **B.3** Introduce the platform Hesas Masr (Egypt Lessons) and develop learning materials for the platform **B.4** Provide digital exams in Grades 10-12 and build digital Assessment question bank **B.5** Provide TV lessons, revisions and exam preparation instructions **B.6** Raise public awareness about digital resources and ICT in education **B.7** Continuously review and revise the digital learning ecosystem
C. Develop and provide digital in-service training and professional development programmes for teachers	**C.1** Provide curated lessons from Egyptian teachers or other learning materials **C.2** Provide online training to teachers on EDU 2.0 **C.3** Provide digital in-service training on professional develop materials derived from new teacher standards **C.4** Provide a management system for LMS-delivered professional development services **C.5** Provide a planning and organizational system to scaffold the new curriculum objectives into classroom materials and instructional activities **C.6** Develop training programmes on effective use and integration of technology in education and train teaching staff
D. Streamline and institutionalize the capture of data, storage and evaluation	**D.1** Building a digital profile of each student and teacher **D.2** Creating a data lake **D.3** Develop digital dashboards for students, teachers and schools to inform students and parents **D.4** Building an intranet infrastructure **D.5** Track and store data on teacher's engagement

	D.6 Develop and update all electronic applications of business management on the databases at MoETE information units, and statistics units at the level of subnational education departments (mudirriyas) and local education administrations **D.7** Develop and improve EMIS data collection tools and guidelines **D.8** Capacity building of staff at various levels for collecting and compiling information on various indicators and analysing and producing reports on EMIS statistics **D.9** Coordinating with other sub-sectoral EMIS systems **D.10** Promote the development of assessment systems for tracking both pupils and school performance periodically

Table 30. Key Performance Indicators 9: : Digital transformation and innovation, 2023-2027

KPI List	Before 2021/2022	2027 Target	Source
K01: Share of schools with access to the Internet for teaching (disaggregated data in all education levels)	Primary: 71% Preparatory: 91% Secondary: NA	100% on all levels	EMIS
K02: Share of schools with access to computers for teaching (disaggregated data in all education levels)	Primary: 78% Preparatory: 95% Secondary: 91%	100% on all levels	EMIS
K03: % of administrators and policy makers trained on use of digital technologies (disaggregated data in Schools, Governate, Directorate and MoETE levels)	60%	100%	EMIS
K04: % of youth and adults with information and communications technology (ICT) skills, by type of skill	60%	100%	EMIS

Costing and Financing Considerations

Education policy priorities and strategies need to be costed taking demographic and economic realities and prospects into consideration to ensure they are realistic and achievable. This chapter presents 1) the costing and financial simulation modelling exercise that was carried out for the Education Sector Plan (ESP) in its first section; and 2) the cost projections and financing options for Egypt's university pre-university education sector.

1.25 Simulation modelling

This section 1) explains the rationale and critical importance of the costing and financial simulation as an essential component of the ESP, 2) presents the simulation model used for Egypt and this ESP, and 3) discusses policy options and scenarios developed to inform policy and strategy formulation.

1.25.1 Costing and financial simulation in education sector planning in Egypt

A credible ESP is built through an interactive process of policy dialogue and consultation in search for an optimum development scenario that reflects education system's needs and aimed to meet policy objectives. In this regard, a costing and financial simulation is a valuable methodology for evaluating the financial viability of different policy options for education sector development to inform policy dialogue and support decision-making on trade-offs.

Estimating the costs of the ESP 2023-2027 implementation requires taking into consideration several exogenous parameters that underpin the development of education, such as population growth, economic outlook, and government priorities for national development.

This also requires using reliable baseline data that represents the actual situation of the education system, but also testing various policy decisions and related parameters to assess their impact on the development of an education system, and particularly on financial feasibility. The simulation can thus contribute to the formulation of coherent national educational policies and strategies and robust education development plans.

This is especially crucial for the 2023-2027 ESP because of the increasingly complex environment in which the government education planning takes place:

1) The accelerating pace of change demands a focus on the need for flexibility and strategic planning;
2) The growing multiplicity of stakeholders heightens the need for consensus or compromise and a strong emphasis on results and outcomes;

3) And the public finance context is becoming more competitive, where opportunity costs, cost-benefit analysis and evidence-based expenditure are given greater importance.

Considering these challenges, the successful formulation and implementation of the ESP 2023–2027 requires a costing and financing simulation model[14], that is specifically designed for it, to:

1) Examine the dynamics of existing policy, governance and pedagogical organization and explore the policy implications of its planning orientations and to contribute to alignment of Egypt programmes, including Education 2.0;
2) Foster consensus-building with stakeholders, including development partners and donors, on its set priorities and objectives, and facilitating negotiation on policy and resources cooperation;
3) Support decision-making on an equitable and efficient resource distribution and promote transparency in the resource management;
4) Discuss alternative policy options, capitalizing on achievements, addressing past shortcomings by monitoring, and evaluating the performance of its pre-university educational system, therefore, improving accountability for the ESP.

1.25.2 Simulation model for Egypt ESP 2023-2027

Consequently, a simulation model is constructed to inform decision-makers and stakeholders of the human, physical and financial consequences of the policy choices defined in this ESP, such as the number of new teachers to recruit and the number of classrooms to build each year. The model is customized to the conditions of Egypt's education system. The baseline da from the following sources and five types of data:

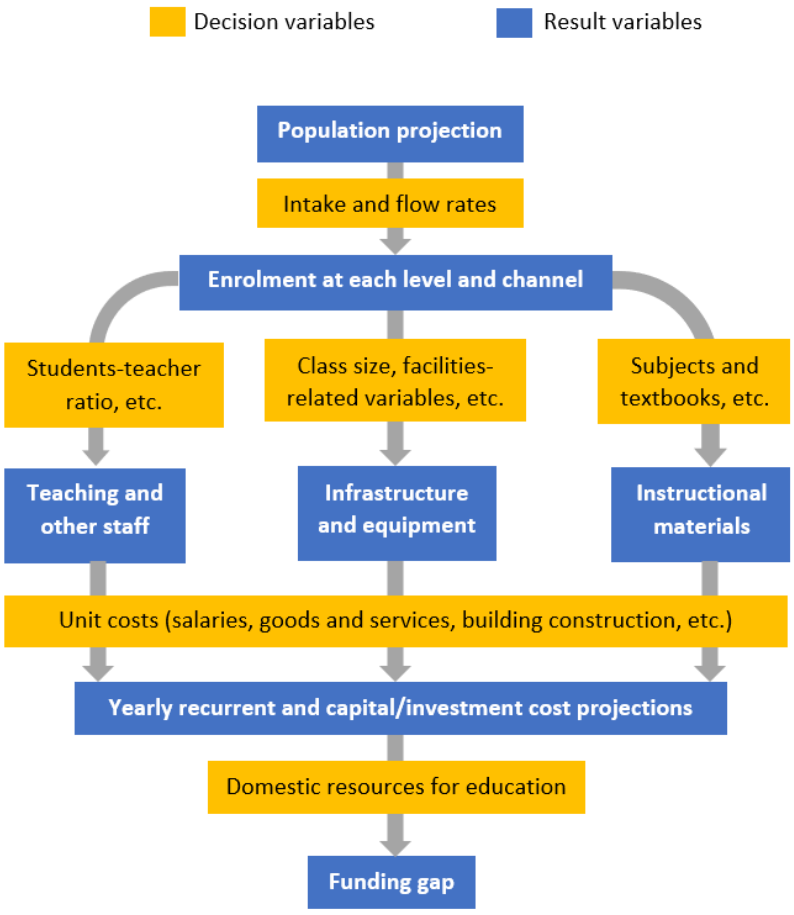
1) Egypt's population projections from Egypt Mobilization and Statistics (CAPMAS)[15], for determining the school-age population at each education level;
2) The macroeconomic and budgetary forecasts from the IMF and Egypt's MoF and MOETE (Ministry of Education and Technical Education), including Gross

[14] Note: a simulation model is a tool used to analyse, explore and project complex social and economic systems. It aims to simulate reality by estimating and assessing future circumstances based on changes in given variables. Simulation models take policy options, technical feasibilities, and financial constraints into account in order to project future resourcing and budgeting needs that would serve as a basis for policy dialogue and education sector plan development.
[15] Note: The medium scenario is adopted as the source population data. The GIR and GER generated by the model are adjusted to it and may differ from the official and ESA figures cited in the preceding chapters, which are sourced from the EMIS statistical yearbooks.

Domestic Product (GDP), GDP growth, inflation, as well as the public budget and the share of the public budget allocated to education;

3) The educational statistics from Egypt's EMIS statistical yearbooks, the numbers of students, teachers, classrooms, and schools, from which the various enrolment rates, flow rates, class sizes[16], student-teacher ratios and teacher-class ratio are computed;
4) The cost parameters from the MOETE planning department, including total costs and/or unit costs related to teacher salaries, instructional materials and equipment, educational facilities constructions and so on;
5) And the specific programme information from the MOETE, including the planned programmes specified in the implementation plan.

Figure 65. Logical sequence of simulation model flow



[16] Note: For simulation modelling purposes, the class size estimates presented in this chapter are adjusted based on the number of full-day, morning, evening, and double-shift classes from the EMIS statistical yearbooks. They may differ from those cited in the preceding chapters.

Given population data, and the current status and future objective of student enrolment, promotion and repetition rates, the model projects student populations across each sub-sector in the years up to 2027 and estimates future requirements in terms of the number of teaching and non-teaching personnel over time, as well as the needs for materials and equipment. Secondly, according to the number of students and the variables of pedagogical management, the model evaluates the number of classrooms to build or to rehabilitate, as well as other educational resources and materials needed for teaching and learning. After that, based on the cost parameters, the model quantifies the financial resources required for achieving a particular set of policy objectives.

The financial feasibility depends among others on the macro-economic capabilities and budgetary ramifications of the country. By comparing the estimated cost of the ESP with the projections of state resources and external funding available for education, funding gaps are identified. When the deficits prove to be too severe to overcome, policy options are revised with the aim of defining bankable and financially sustainable policy options within anticipated budget constraints. All this, without much compromising government's overall objec
international commitment in terms of access, educational quality and learning outcomes.

1.25.3 Development of policy alternatives and scenarios

The scenario building process allows policy makers, planners, and other education stakeholders to discuss, analyse and test the potential effects of various policy decisions on human, physical and financial resources and their feasibility and sustainability. This will result in developing various scenarios reflecting a combination of reasoned policy options in different areas of the education system and guiding the policy dialogue with the eventual aim of establishing a consensus, if not compromise, on the final set of policy objectives. To achieve this, efforts are made, including making policy and financing trade-offs within and across sub-sectors; re-prioritizing and rescaling policy targets; reviewing and adjusting strategies and programmes; identifying areas for gains in efficiency, including cost savings through re-examination of scale and unit costs. Financing gaps that need to be filled out through mobilizing external resources are gauged through advocating for shared objectives.

Once all the alternative policy options have been meticulously weighed, a set of agreed-upon options that gradually acquired a certain stability result in a "reference" scenario for the ESP. It is then
degree of data needed for strategy development and action programming, allowing

for the planning of both the programmes and resources, as well as providing key performance indicators later used for monitoring and evaluation – the model generates quantitative, disaggregated indicators related to the structure and functioning of the educational system, which facilitates effective monitoring and evaluation.

The "reference" scenario detailed in Section iterative and collaborative process between the government, development partners, and local stakeholders.

1.26 Cost projections and financing options

This section 1) outlines the macroeconomic and financing framework, 2) presents the forward estimates of the resource requirements, and 3) discusses the financing options to fill the funding gaps.

Four aspects need to be acknowledge descurce the or requirements and budgetary implications.

1) The figures obtained represent the government expenditure on public pre-university education, regardless of the government entity that disburses the funds. They neither include the expenditure on private education nor the household spending, while these costs could be substantial. The total investment in pre-university education may exceed the presented figures for public spending by a large margin.
2) The projected estimates are calculated solely at the national or systems level. Disaggregates at the more specific levels of governorate, division, and school or by groups of vulnerabilities are not provided.
3) Only the main cost drivers that have a substantial impact on cost and financing are included in the projections. Certain strategies and outcomes are not anticipated to affect the budget because they may be achieved within the initial budget by adjusting the existing pr They are not presented as separate cost drivers.
4) Aside from its recognized impact on GDP, the COVID-19 pandemi-and s mi d long-term effects on pre-university education were not considered in the projections because at the time of writing they remain mostly unclear.

5.2.1 Macroeconomic and expenditure framework

In view of the financial projections for education sector planning, a macroeconomic framework for the period through 2027 was prepared based on economic and financial data collected and compiled, especially drawing from the IMF's forecasts on Egypt's 2026 to 2027. The GDP per capita is then computed according

to the population data [17]. The table below presents the CAPMAS projected GDP and GDP per capita from 2022 to 2027.

Table 31. GDP and GDP per capita 2022-2027

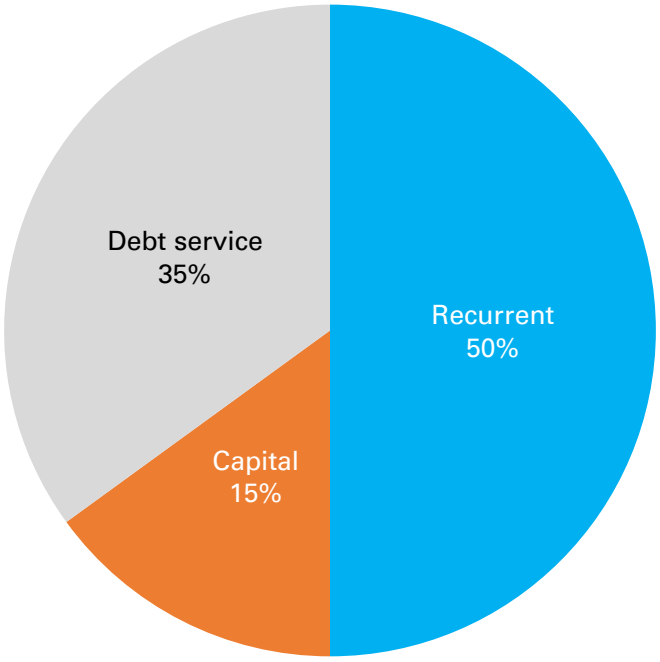
	2022	2023	2024	2025	2026	2027
GDP						
GDP at current prices (billion EGP)	7,741	9,136	10,395	11,787	13,360	15,147
GDP at 2021 prices (billion EGP)	7,101	7,412	7,796	8,231	8,707	9,217
Real GDP growth (%)	6.6	4.4	5.2	5.6	5.8	5.9
GDP deflator (%)	9.0	13.1	8.2	7.4	7.1	7.1
GDP per capita						
GDP per capita at current prices (EGP)	73,059	85,134	95,209	106,181	118,425	132,200
GDP per capita at 2021 prices (EGP)	67,013	69,065	71,401	74,146	77,183	80,440
GDP per capita growth rate at 2021 prices	4.1	3.1	3.4	3.8	4.1	4.2
GDP per capita index	1.04	1.07	1.11	1.15	1.20	1.25

Source: UNESCO simulation model (2022), estimation based on data from CAPMAS and IMF.

For financial simulation, the projection of government education expenditure is based on 2020/2021 budget structure: from 2023 to 2027, the constitutional budget will continue to represent 4% of GDP; when excluding all the debt service costs which constitute 35% of the constitutional budget, only about 2.6% of the GDP is the amount left for the MOETE to operationalise the ESP. The future distribution of the recurrent and the capital budgets is adaptable to the needs of the ESP; we assume that 50% of the constitutional budget is assigned to recurring costs and the remaining 15% to capital investment for the costing.

[17] GDP per capita serves as an index or reference for most cost drivers so that the results reflect changes in the economic situation, the prices of goods and services and the living costs for the workforce.

Figure 66. Distribution of constitutional budget for pre-university education, status quo scenario



Source: UNESCO simulation model (2022)

Table 32. Government pre-university education budget (projected), 2023-2027 (billion EGP)

	2023	2024	2025	2026	2027
Recurrent					
Current prices	182.7	207.9	235.7	267.2	302.9
2021 prices	148.2	155.9	164.6	174.1	184.3
Capital					
Current prices	54.8	62.4	70.7	80.2	90.9
2021 prices	44.5	46.8	49.4	52.2	55.3
Dept service					
Current prices	127.9	145.5	165	187	212.1
2021 prices	103.8	109.1	115.2	121.9	129
Total					
Current prices	365.5	415.8	471.5	534.4	605.9
2021 prices	296.5	311.8	329.2	348.3	368.7

Source: UNESCO simulation model (2022), estimation based on data from MOETE, MOF, CAPMAS, and IMF.

5.2.2 Forward estimates of sector development and resource requirements

Students, teachers, and classrooms are the three main components that define the resource needs in traditional teaching and learning environments. Through

integrating and upgrading ICT use in classrooms and at home, the secondary education subsector in Egypt has been going through a profound digital transformation that is at the centre of the sector-wide reform agenda. The transformation aims to serve as a catalyst for greater learner engagement in education, better learning outcomes, and improved ICT skills for all learners, first starting with secondary students during the COVID-19 pandemic and now rolling out to basic education from the school year 2022/23. Considering this novel development and the government's preferences, scenario are carefully designed for each sub-sector, which are listed in Annex 1.

Expansion of access to kindergarten education

The proportion of public kindergarten is relatively high with 74% of pupils enrolled in 2021/22. Expanding access to kindergarten is one of the government's priorities; and meeting the enrolment targets entails enrolling on average some 99 thousand more pupils in government schools each year bringing the total from 870 thousand in 2021 to 1.5 million in 2027.[18] As a result, the number of teachers/educators would increase from 40 thousand in 2021 to 78 thousand in 2027. The total number of teachers who will need to be appointed or contracted between 2022 and 2027, assuming an annual attrition rate of 3%, will be 48 thousand. While the current teacher training spending is quite modest, at 30 EGP per teacher, the large-scale hiring will intensify the demand for more and better training, therefore the expenditure on teacher training is anticipated to be doubled for the very least. With the goal of reducing class size from the present 31 students per class to 25 by 2030, the needed number of classrooms will also increase from 28 thousand in 2021 to 54 thousand in 2027. Taking the previous construction per year and the depreciation over a 20-year lifespan into account, this means that 29 thousand classrooms must be constructed or reconstructed before the start of the 2027/28 school year.

Digital- and learner-centred K12 education reform

The ongoing digital transformation is a bold approach taken to tackle the teacher recruitment challenge facing the education sector – the MOETE estimates that hybrid teaching can reduce at least 25% of teacher needs - while diversifying and optimizing the teaching and learning materials and spaces through shifting to hybrid learning using digital technologies. Meanwhile, the digital integration also necessitates investment in ICT infrastructure and devices to upgrade school and

[18] The World Bank's Egypt Public Expenditure Review 2022, which was conducted in parallel with the preparation of this ESP, considers the private sector crucial to universalizing access to kindergarten education and recommends the Egyptian government to develop a public-private partnerships (PPP) Modality for Private Sector Expansion and conduct a costing of universalizing access to KG through public and private provision. The present ESP takes notes of these considerations but is not able to incorporate them into the simulation modelling, as a PPP modality is yet to be developed at the time of writing.

classroom equipment, increase school and home connectivity, and provide teachers and students with devices and digital skills. The government, for instance, offers each teacher and student a 5 thousand EGP tablet[19]; every classroom is equipped with a smart whiteboard that costs 50 thousand EGP. On the teacher side, to improve their competences to teach digitally and using hybrid methods, an additional 210 EGP per in-service teacher will be needed on digital teaching training.[20] The fine balance of various hybrid learning modalities, operational efficiency gains and budgetary consequences are at the core of the digital- and learner-centred reform. Prior to this ESP, the MOETE began implementing the digital transformation for secondary education; it is in the process of assessing the feasibility of doing the same for primary and preparatory education starting in 2025 or in the following five-year plan, which inevitably depends on the amount of domestic resources and external aids that will be available for this ESP.

Basic education

Basic education encompasses both primary and preparatory education. With 13.7 million pupils enrolled in 2021, accounting for 54.6% of all pre-university students, primary education represents the single largest subsector. Despite a 308 thousand increase in enrolment compared to 2020, the statistics shows that GER decreased from 99.7% to 97.5% between the two baseline years due to a 615 thousand rise in the primary school-aged population, which will continue growing to peak at 15.0 million in 2024 before progressively declining to 14.6 million by 2027. According to the MOETE statistics, the intakes in first grade GIR (Gross Intake Ratio) fell from 97.7% in 2020 to 90.5% in 2021. Uncertainty over the cause of the enrolment decline in 2021 may be linked to the COVID-19 pandemic. The reference scenario assumes that the GIR returns to its previous level of 97.7% in 2022, before gradually rising to 100% in 2027.

The flow rates, which reflect system internal efficiency stand in 2021 at a level that is comparatively reasonable, with repetition rates below 2% and dropout rates below 1 percent, general certificate exam success rates above 98 percent, and transition rates (to preparatory level) above 97 percent. All flow rates are held constant, except for the transition rate, anticipating that all children who successfully complete primary school continue to preparatory schools. As a result, the number of students enrolled in primary schools is projected to peak at 14.6 million in 2025 before slowly falling to 14.5 million in 2027, with constantly 91% of

[19] These tablets replace printed textbooks and teacher guides in secondary schools, which are entirely digitalized and available for free downloads.
[20] Further cost saving on teacher wages while maintaining or even improving the quality of teaching could be possible through reaching learners by means of high-quality radio, TV and video programmes is considered by the MOETE, but this option is not used for the current simulation as this requires more consultation and consensus building with stakeholders.

them assumed to attend government schools.[21] The subsector-wide GER can be expected to reach 99.7% in 2027 and then finally 100% in 2028.

Reducing class densities and double-shift schedules are among t priorities. The number of students per class is assumed to decrease from 49 to the national standard of 35 by 2030, which translates into attaining 40 by 2027; the present 20% of double-shift and evening classes will be all converted into full-day or morning classes by 2027. These two measures will lead to greater demands for more teachers and classrooms, with the students-to-teacher ratio anticipated to steadily drop from the current 34 to 27 by 2027. All the other variables associated with schools, teachers, classes, and infrastructures are maintained constant in the reference scenario.

The preparatory education is the second cycle of basic education. Its simulation setup abides by the same assumptions as primary education. By 2027, the number of students per class will drop from 44 to 38, and the 22% of double-shift and evening programmes that were offered in 2021 would gradually all be replaced by full-day programmes. Entry into the secondary is determined by the promotion from the preparatory, ninth grade, to the secondary, tenth grade. The transition rates from preparatory to various programmes of secondary education are assumed to increase across board. All the other variables are held constant. Government preparatory school enrolment is anticipated to progressively rise from 5.4 million in 2021 to 6.4 million in 2027, if it continues representing 93% of pupils enrolled in preparatory schools. The government may thus need to construct 81 thousand new classrooms before 2027 and make 131 thousand teacher recruitments, before the end of 2027.

Secondary education

The GER at general secondary schools is projected to gradually increase from 36.9% in 2021 to 45.7% in 2027, with all flow rates assumed constant, thus, enrolments being mainly influenced by rising GER and transition rates at the lower levels of education (primary and preparatory). Over the course, there will be a one million increase in the number of students enrolled in general secondary schools, from 2 million in 2021 to 3 million in 2027, with 84% of them attending government schools. To accommodate this growing enrolment, the MOETE anticipates continuing hiring more teachers and building extra classrooms while aiming at, by

[21] In certain situations, such as immigration, students might enrol straight in grades other than the first grade. The population data points to a certain influx of people of school age, particularly at ages corresponding to the early grades of primary education, during the projected period. The reference scenario presumes that these children enrol in the grades that correspond to their ages. For instance, a 9-year-old who moved to Egypt in the summer of 2022 should be eligible to enrol in Grade 4 for the 2022/23 school year. On the other side, the number of school-age children leaving Egypt is also considered when calculating enrolment. The same holds true for preparatory and secondary education systems.

2027, gradually lowering class density to maximum 30 students per class and turning all double-shift and evening classes into full-day or morning classes.

More than half of secondary students enrol in technical education and a sizable portion of these students lack applicable skills that are vital for the labour market. The MOETE has developed a new TVET vision known as Technical Education 2.0, which includes technology and adaptability to the ICT Revolution as one of the main transformation pillars. As the GER in technical stream will gradually rise from 24.4% in 2021 to 30.7% in 2027 (normalized to the age 15-19 population), or from 39.6% to 48.3% for the 3-year programmes only (normalized to the age 15-17 population).

Continued alignment of community schools and special education schools

Community schools are primary schools operated and funded by UNICEF, community-based organisations, and civil society organisations, with the goal of hosting students who are not enrolled in, or have dropped out of, public or private schools. They only make up a tiny percentage of students, with the GER of 1.4% for girls and 0.6 percent. In an ideal situation, all children would attend regular schools, resulting in a GER of zero in community schools. Similarly, the children with disabilities should be integrated into regular schools. Nevertheless, special education schools run from KG1 to Grade 8, with an extremely low GER at 0.1% in 2021. The reference scenario holds constant all access-related variables and align all quality-related variables to regular schools in projecting the potential resource needs of these two types of schools.

All in all, 462 thousand new teachers must be hired between 2022 and 2027; 362 thousand new classroom constructions must be completed before 2027 for the entire public pre-tertiary education sector.

Table 33. Projected numbers of pre-tertiary students, teachers, and classrooms 2023-2027

	2022	2023	2024	2025	2026	2027
School-aged population						
Age 4-17	26,476,681	27,408,438	28,339,387	29,035,746	29,619,077	30,067,468
Age 4-19	35,175,258	35,624,435	36,134,266	36,586,586	36,934,349	37,151,226
Students enrolled						
Total enrollment	26,476,681	27,408,438	28,339,387	29,035,746	29,619,077	30,067,468
- Government schools	23,733,199	24,526,123	25,323,612	25,911,329	26,406,306	26,779,412
- Private schools	2,743,482	2,882,315	3,015,775	3,124,416	3,212,771	3,288,056
Government school teachers and classrooms						
Teachers required	926,175	966,424	1,012,472	1,052,248	1,105,923	1,158,050
- Teachers to recruit (gross)	78,675	68,034	75,041	70,150	85,242	85,305
Classrooms required	485,416	526,916	572,469	616,401	661,299	706,007
- Classrooms to build (gross)	70,088	73,812	72,067	72,984	73,427	64,859

Source: UNESCO simulation model (2022), estimation based on data from MOETE and CAPMAS.

Greening Education

Greening education in Egypt has been designated a national priority in order to align with global efforts to address climate change and environmental concerns, especially in the wake of COP 27 and the ongoing environmental transition. By incorporating climate change and sustainability education into the curriculum, providing teacher training, promoting sustainable practices and adapting school infrastructure, raising awareness and community engagement, and collaborating with key stakeholders, Egypt will contribute to global climate action and build a sustainable future. The proposed actions consist of the following strategic and operational policies:

Curriculum Development: Incorporating sustainability education into the curriculum, covering topics such as climate change, renewable energy, and sustainable development. This includes revising the existing curriculum or creating new courses that focus on sustainability.
Teacher Training: Providing training to teachers to equipping them with the knowledge and skills necessary to teach sustainability. This will be done through continuous professional development programs that cover topics such as climate and environmental education, and green technologies.
Green School Accreditation: Introducing a green school accreditation programme for schools to adopt green practices. This program will incentivize schools to adopt sustainable practices such as energy efficiency, waste reduction, and eco-friendly transportation.
Community Involvement: Establishing partnerships with NGOs and other community organizations to promote sustainability education and create awareness about climate change.

5.2.3 Funding requirements, gaps, and options

Eight common cost drivers are identified and used under the two main categories of expenditures for each subsector[22]:

1. Recurrent expenditures
1) Teacher and non-teaching staff salaries and allowances
2) Teacher training
3) Textbooks and other teaching and learning materials
4) School nutrition and feeding
5) Operational costs including office supplies, water, electricity, and internet
6) Digital devices and equipment

[22] Although certain items might appear to be absent from the list, one or several of the cost drivers used for resource projection implicitly account for those items' cost implications. For instance, curriculum development is not listed as a standalone cost driver, but its associated costs are included as part of the teaching and learning materials and/or as part of the wages of the people working at the curriculum development centre.

2. Capital expenditures
1) Construction of new classrooms and other facilities
2) Maintenance and rehabilitation of existing classrooms and other facilities
3) Digital infrastructure and investment[23]

Based on the unit cost information provided by the MOETE and by the development partners and documented in Annex 2, the total cost of the ESP is projected to be 1.2 trillion EGP, with a funding shortfall of 145 billion EGP, representing 12% of the total cost for the ESP period 2023 to 2027. 61.1% of the overall cost, or 745 billion EGP, will go towards personnel remuneration, while the cost of digital transformation will be 106 billion EGP, or 8.7% of the overall cost.

Table 34. Overall costs of the ESP 2023-2027 (million EGP, 2021 prices)

	2023	2024	2025	2026	2027	2023-2027
Recurrent						
Teacher salaries and allowances	89,863	101,902	113,788	128,665	144,994	579,211
Non-teaching staff salaries and allowances	29,182	31,181	33,139	35,202	37,264	165,967
Teacher training	112	120	128	141	157	657
Textbooks and learning materials	8,555	9,159	9,812	10,483	11,229	49,238
Nutrition and feeding	4,253	4,464	4,693	4,906	5,123	23,439
Operational costs	7,353	8,263	9,241	10,321	11,492	46,670
Digital devices and equipment	10,871	11,737	13,354	14,628	16,090	66,680
Sub-total (A)	**150,190**	**166,826**	**184,154**	**204,345**	**226,347**	**931,861**
Capital						
Construction	34,184	37,081	42,976	48,671	48,645	211,557
Maintenance and rehabilitation	6,957	7,193	7,469	7,775	8,103	37,498
Digital infrastructure and investment	7,300	7,600	7,700	8,400	8,400	39,400
Sub-total (B)	**48,442**	**51,874**	**58,145**	**64,846**	**65,148**	**288,454**
Total (A+B)	**198,631**	**218,700**	**242,298**	**269,191**	**291,495**	**1,220,315**

Source: UNESCO simulation model (2022), estimation based on data from MOETE, MOF, CAPMAS, and IMF.

Basic education will be the largest subsector in terms of cost, making up 62.2% of the total cost, with primary education at 40.1% and preparatory education at 22.1%. It is followed by secondary education with its two strand together accounting for 26.4% of the total.

[23] This cost driver applies to the pre-university education sector as a whole; it includes ICT infrastructure, hybrid teaching and learning materials and platforms, and EMIS and other data management systems.

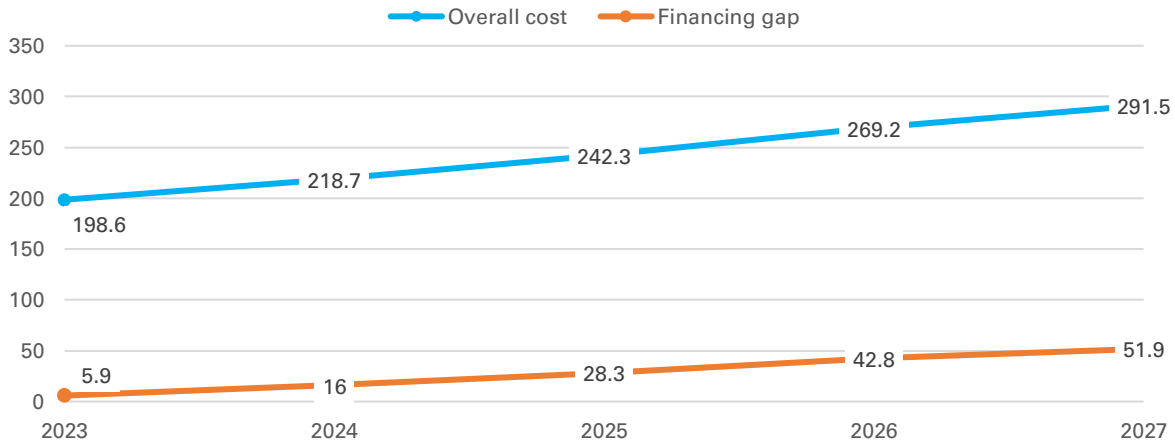
Table 35. Distribution of the ESP cost by sub-sector 20232-2027 (million EGP, 2021 prices)

	2023	2024	2025	2026	2027	2023-2027	Share
- Kindergarten	11,896	13,078	14,019	14,577	14,928	68,499	5.6%
- Primary education	74,796	85,395	96,917	110,825	121,368	489,302	40.1%
- Preparatory education	46,256	48,892	54,295	56,775	64,005	270,223	22.1%
- General secondary education	22,567	24,485	27,014	31,122	33,871	139,059	11.4%
- Technical secondary education	30,708	32,986	35,930	40,926	42,088	182,638	15.0%
- Community schools	1,617	1,698	1,778	1,852	1,963	8,909	0.7%
- Special education	1,476	1,553	1,624	1,693	1,853	8,199	0.7%
- Non-formal education/Literacy	2,000	3,000	3,000	3,000	3,000	14,000	1.1%
- Unspecific	7,315	7,612	7,720	8,420	8,420	39,487	3.2%
Total	**198,631**	**218,700**	**242,298**	**269,191**	**291,495**	**1,220,315**	**100.0%**

Source: UNESCO simulation model (2022), estimation based on data from MOETE, MOF, CAPMAS, and IMF.

On the annual account, it is predicted that the overall cost will steadily raise from 198.6 billion EGP in 2023 to 291.5 billion EGP in 2027. The deficit is anticipated to begin emerging in 2023 at 5.9 billion EGP before growing exponentially to 52 billion EGP in 2027.

Figure 67. Overall cost and financing gap of the ESP by year 2023-2027, (billion EGP, 2021 prices)



Source: UNESCO simulation model (2022), estimation based on data from MOETE, MOF, CAPMAS, and IMF.

Table 36. Financing gap of the ESP 2022-2027 (million EGP, 2021 prices)

	2023	2024	2025	2026	2027	2023-2027
- Recurrent (A)	1,952	10,914	19,531	30,202	42,015	104,614
- in percentage (%)	1.3	6.5	10.6	14.8	18.6	11.2
- Capital (B)	3,970	5,100	8,758	12,603	9,848	40,280
- in percentage (%)	8.2	9.8	15.1	19.4	15.1	14.0
- Total (A+B)	5,922	16,014	28,289	42,805	51,863	144,894
- in percentage (%)	3.0	7.3	11.7	15.9	17.8	11.9

Source: UNESCO simulation model (2022), estimation based on data from MOETE, MOF, CAPMAS, and IMF.

Annual forecasts also point to deficiencies in both recurrent expenditures and capital investment thought out the period. The cost and financing gap, which are detailed above, may serve as guidelines for financial planning. To make up for the funding deficits, there are two main financing options to consider:

1) The first option involves increasing government spending on pre-tertiary education to fill the funding gaps. To achieve this, the state needs to allocate a pre-university education budget that is no less than 3% of GDP every year after debt services.[24]This would require limiting the debt service expenses to 25% of the constitutional budgets or raising the constitutional budget to 4.5% of the GDP.

2) The second alternative is to mobilizing development partners and donors to contribute to the ESP budgeting through grants, loans, and projects[25].

[24] The household contribution to government education funding is not considered as a viable financing option. The government school fee contributes mostly to the expense for social security and insurance (+activity fee). It ranges from 80 to 250 EGP per student, averaging out at 150 EGP, and is exempted for approximately 20 percent of students from low-income households.
[25] The government budget and the funding gap are already modelled to include the grants and loans received from development partners and donors. Contrarily, development assistance provided through projects is not tracked.

ESP Implementation, Monitoring, Evaluation, Accountability and Learning (MEAL) Framework

The ESP will be presented to and endorsed to the extent possible by the Prime Minister, the relevant central and line Ministries (Ministry of Finance, Ministry of Planning and Economic Development, Ministry of Higher Education and Scientific Research, Ministry of Social Solidarity, Ministry of Manpower, Ministry of Information) and the Parliament to ensure the highest level of leadership and political support to the plan and sustainability of its implementation.

This chapter outlines the ESP management and monitoring and evaluation frameworks, provides an overview of the ESP operational plan, as well as a risk analysis and key elements of the ESP communication strategy.

1.27 ESP management framework

The ESP management framework consists of three layers, the political, technical and operational levels, operating both vertically from national to school level, and also horizontally, coordinating across other ministries and with development partners.

At the political level, the Minister of Education and Technical Education, supported by the Deputy Ministers, is the key decision-maker in charge of: (1) approving ESP programmes and activities for implementation; (2) leading inter-ministerial coordination for education under the overall national development strategies of Egypt; and (3) mobilizing domestic and external resources for education. Three bodies, under the overall leadership of the Minister, make up the oversight function.

Leading the oversight, the **ESP Steering Committee** will be established under the Minister and will be led by the Deputy Minister for Technological Development with support from the Heads of the MoETE departments as well as representatives of central and line Ministries as members. The Steering Committee will oversee ESP implementation and is primarily responsible for planning, monitoring and directing of the ESP activities. The Steering Committee will also ensure inter-ministerial coordination. The Steering Committee is the body that bridges political and technical aspects of the ESP implementation, ensuring that the senior leaders of the government are receiving technically robust recommendations for addressing any bottlenecks and/or course corrections, based on the evidence.

Two additional, advisory groups will work closely to support the Steering Committee. One is **the ESP Partnership & Advocacy Group**, led by the MoETE (Director of International Relations) with participation of representatives of

international organizations, local NGOs, and private sector partners. This group could be considered as an extension of the Local Education Group (LEG). This group will be responsible for mobilizing the support of stakeholders, including development partners, for ESP implementation (including establishment of community schools and TVET schools supported by partners) and providing feedback and recommendations from development partners on the ESP implementation to the Steering Committee. The group will also be responsible for supporting in developing and implementing an ESP communication and advocacy plan in collaboration with partners (see below section on the Communication Strategy).

Another group is **the ESP Financing Group** led by the Head of the MoETE Public Finance Sector. The group will monitor the financial situation of the ESP implementation, recommend prioritized actions for funding to the Steering Committee, and develop justifications to mobilize financial resources for the ESP implementation.

Under the Steering Committee, the ESP **Technical Committee** will be established as an operational arm for the implementation of the ESP while ensuring technical robustness. The Technical Committee will be led by the representative of the Deputy Minister of the Technological Development (or the head of department dealing with education planning) with the focal points of the MoETE departments that are in charge of the ESP activities as members. The ESP Technical Committee will ensure day-to-day vertical communication to and from the sub-national administrative levels for smooth implementation of the ESP activities. The Technical Committee members will regularly share the status and plans for ESP implementation and ensure coordination across the MoETE departments, including Education Directorates. The Technical Committee is also responsible for operationalizing the monitoring and evaluation framework (see below section 6.2) by providing relevant technical inputs and logistical support to the monitoring and evaluation activities and preparing reports endorsement.

The Education Directorate will plan, implement and monitor the ESP implementation at the Governorate level. The roles include: (1) providing technical guidance on implementing the ESP activities; (2) facilitating sharing of information between schools; (3) conducting monitoring and evaluation at the local level; (4) liaising with the partners; (5) ensuring supp and (6) monitoring and reporting to the MoETE on programme implementation. It will also be in charge of communication and advocacy of the ESP activities vis-à-vis the local stakeholders as well as the general public.

Schools are on the front line of the ESP implementation and management. Led by the School Principal, the school will develop the ESP implementation plan and ensure that necessary resources are integrated in school activity plan and budget. The school will also keep records of the ESP activities conducted and participate in the monitoring and evaluation exercises. The school will also inform the parents and local stakeholders about the progress towards the ESP targets at the school level through school report cards and liaise with the local partners to mobilize additional resources where applicable.

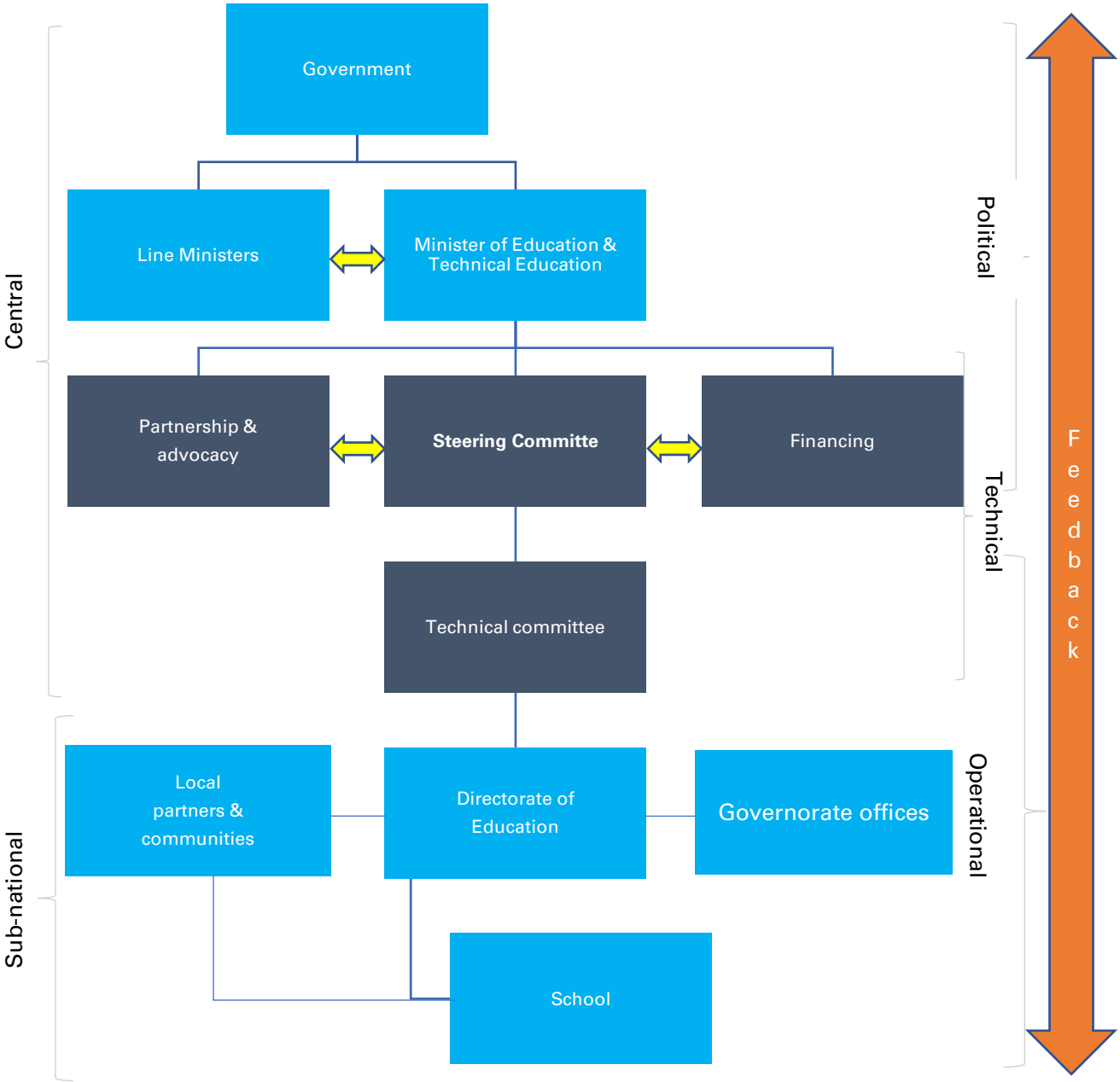
It should be noted that this management mechanism is not designed to be top-down and unidirectional. Instead, there will be meaningful and effective feedback loop shall be established across all levels to ensure participatory implementation and monitoring of the ESP activities, including through use of EMIS, as part of the shift towards a more decentralized and participatory education sector governance and management system (See Chapter 4).

Table 37: ESP management committees and groups at the central level

Committee	Suggested members	Tasks	Frequency of meeting
Steering Committee	MoETE Deputy Minister (Lead), under the Minister's guidance Heads of Sectors Heads of Committees Representatives of line Ministries	Oversee ESP implementation, monitoring, and evaluation. Ensure inter-ministerial coordination. Facilitate communication internally and communicate progress to the minister. Find options for challenges. Set the time plan for ESP phases. Obtain necessary approvals and decrees from Minister in case needed	Monthly
Partnerships and advocacy	MoETE International Relations (Lead) International Organizations Local NGOs Private Sector	Contribute to the implementation of ESP in a coordinated manner. Contribute to Community Schools Establishment Contribute to Vocational & Technical Schools Promote cost-effective, cost-efficient interventions. Generate and disseminate evidence	Monthly

Financing	Head of Public Finance Sector (Lead) Head of Partnerships & Advocacy	Secure ESP Funding Mobilize additional funding through PPP and innovative financing. Set priorities of needed funding Negotiate on behalf of MoETE with Public and International Funding	Annual with JESR
Technical Committee	Representative of the MoETE Deputy Minister (Lead) MoETE department focal points Directorat Directors	Standardize operations, implementation, and M&E Ensure smooth operationalization of the ESP implementation. Guide ESP implementation in directorates Present governorates needs and priorities Conduct monitoring and evaluation	Monthly (hybrid meeting with governorate directors)

Figure 68. ESP management structure



1.28 Monitoring, evaluation, and learning (MEL) framework

Monitoring and evaluation (M&E) is a critical step in ESP implementation. A well-managed M&E framework will enable the MoETE to document the activities, collect evidence on the progress made, and support timely decision-making on the course of implementation. It also plays a key role in ensuring accountability for results, both from the government side in delivering quality education services to parents and taxpayers, and from the development partner side in delivering on their

commitments to support the government in ESP implementation. The M&E of the ESP consists of three components as outlined below.

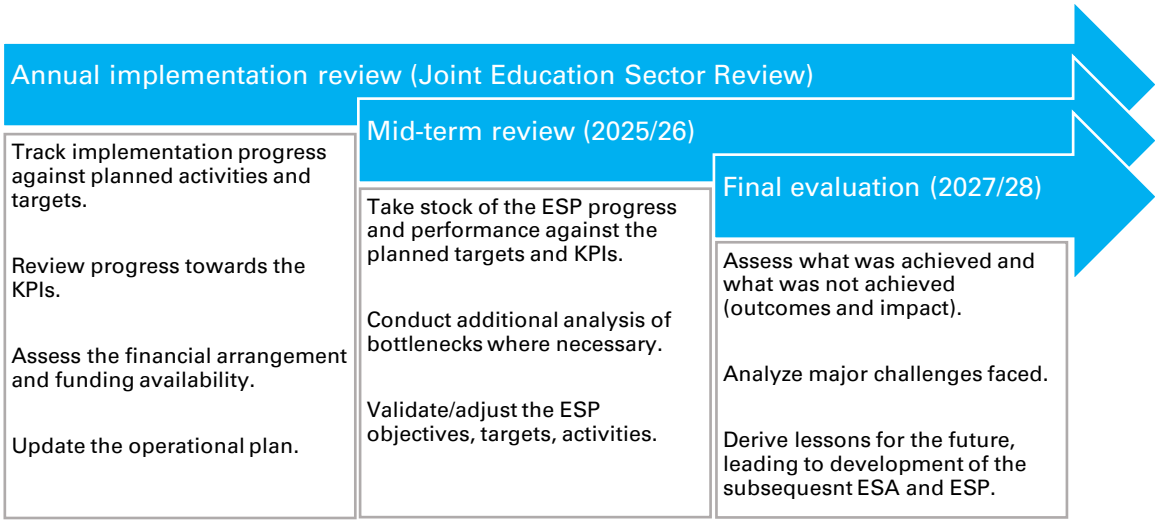
An **Annual Implementation Report (AIR)**, produced during the final quarter of the school year by the Technical Committee and endorsed by the Steering Committee, will review the activities implemented in the year and their outputs against the annual operational plan. The AIR will provide the overall feedback on the status of ESP implementation and identify the efficiency and effectiveness of the activities. It will be directly informed by data from Student Information System and EMIS, as well as other relevant evidence generated through the year, such as through research studies, survey data, project reports, and so on. The financial and budgetary situation will also be reviewed, and the AIR results will inform priorities for the preparation of the annual operation plan and budget for the subsequent year. Bottlenecks in implementation and areas for course correction will also be identified in the AIR, and measures to address these incorporated into the annual operation plan.

AIRs will be reviewed and validated through **Joint Education Sector Reviews (JESRs)**, a Ministry-led collaborative exercise for policy dialogue between the MoETE at national and sub-national level, and education development partners (led by the ESP Technical Committee and with support from the ESP Partnership and Advocacy group). The JESR will engage diverse stakeholders including relevant ministries, such as finance, planning, social solidarity, international cooperation, and higher education, as well as Ministry of Manpower (including Unit of Gender Quality and Women's Economic Empowerment), ed implementing partners, civil society organizations, universities and research organizations, and private sector partners. The JESR will also act as a platform for stakeholder consultations, better coordination and harmonization of efforts, as well as accountability for results.

A **Mid-term review (MTR)** will take place in the 2025/26 school year, at the half-way point of the ESP period. It will take stock of ESP implementation progress and performance to date against the planned targets and objectives, especially the KPIs. During the MTR, additional research can be conducted to support the review, and plans made for additional analytical work needed to address knowledge gaps. MTR will provide the MoETE with evidence to validate the continuing relevance of the ESP activities for the second half of the ESP implementation and make any necessary adjustments to the activities, indicators, and targets.

A **Final evaluation** will be conducted in the 2027/28 school year. It will evaluate the ESP implementation in its entirety and assess what was achieved and what was not achieved, and why. It will focus on documenting and analysing the outcomes and the impacts of the ESP, deriving key lessons learned, as well as enabling and

inhibiting factors, and any evidence gaps. The results of the final evaluation will feed into an updated Education Sector Analysis, which together will inform the MoETE to determine which strategies to continue/scale up, strategies to discontinue, and new strategies to undertake for the next cycle of the subsequent ESP.



Learning is the key element of the MEAL framework. During the ESP period, MoETE will enhance the availability of evidence. In addition to the additional data collected and analysed with the enhanced education management information system articulated in Chapter 4, a series of research will be conducted to address the knowledge and evidence gap in partnership with academia, NGOs, and research institutes. The research agenda includes a study on out-of-school children and youth, situation analysis of education of children with disabilities, and the effectiveness and equity of use of ICT in education. The details of the research plan will be developed under the ESP Partnership and Advocacy group.

The capacity of using data and evidence will also be enhanced during the ESP period (see section 4.6.2.). In line with the shift towards a more participatory and decentralized education sector governance and management system, the capacity development needs for evidence-based decision-making will be identified at all levels of administration.

1.29 Operational plan for expenditure by policy area

The projected costs to achieving the five sector-wide education policy areas that have been established in the pursuit of Education 2.0 goals, in convergence with the ESA results, and in accordance with ToC framework, are summarized in the table below, in a macro view. The detailed breakdown by sub-sector is provided in Annex 4.

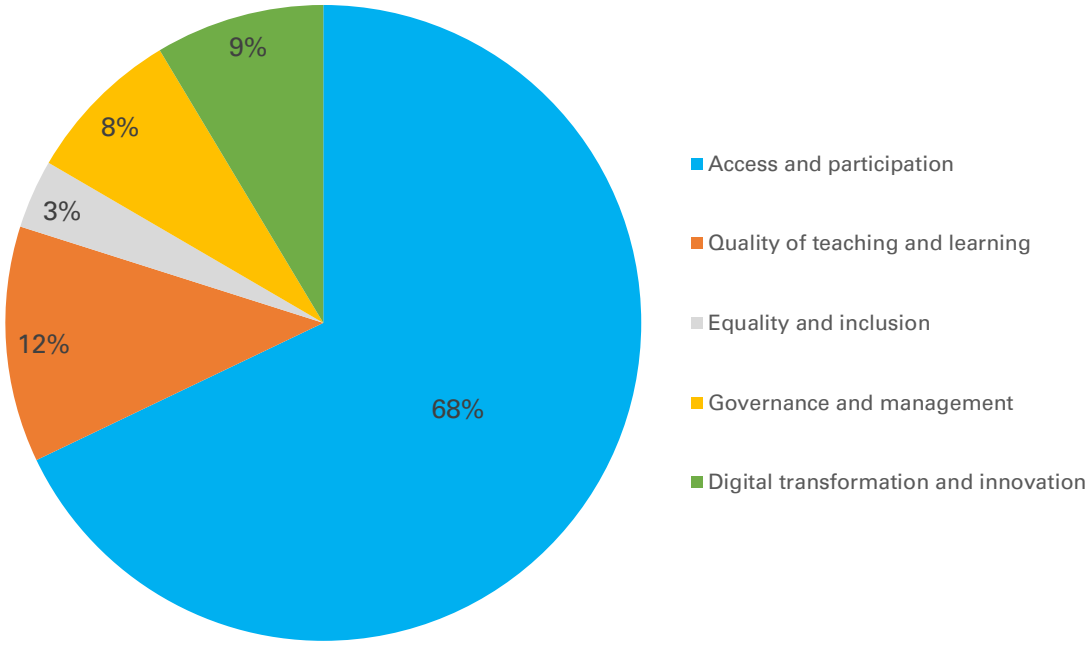
Table 38. Distribution of expenditure by priority pillar 2022-2027

	2022	2023	2024	2025	2026	2027	Total
- Access and participation	116,536	133,372	147,767	166,067	187,152	203,848	954,743
- Quality of teaching and learning	22,786	24,689	26,835	29,079	31,479	34,037	168,905
- Equality and inclusion	7,418	7,735	8,080	8,420	8,795	9,307	49,755
- Governance and management	16,380	17,261	18,277	19,276	20,335	21,409	112,938
- Digital transformation and innovation	14,312	18,171	19,337	21,054	23,028	24,490	120,391
Total	**177,432**	**201,228**	**220,297**	**243,896**	**270,788**	**293,092**	**1,406,733**

Source: UNESCO simulation model (2022), estimation based on data from MOETE, MOF, CAPMAS, and IMF.

As may be expected given the millions of children for whom the pre-university education systems must provide educational participation' pillar dominates, accounting for 67.9% of the expenditure, followed by the 'Quality of teaching and learning' pillar at 12.0%. Meanwhile, the remaining pillars receive negligible amounts (8.6%) devoted to 'Digital transformation and innovation', which demonstrate the government's commitment to modernizing the system and equipping its students and teachers with the digital skills they will need to fully participate in society in the coming years.

Figure 69.Distribution of expenditure by priority pillar 2022-2027 (%)



Source: UNESCO simulation model (2022), estimation based on data from MOETE, MOF, CAPMAS, and IMF

1.30 Risk analysis

Even when a plan is developed based on through analyses and robust projections, it is not possible to avoid all risks that are often external, unforeseeable, and beyond the control of the MoETE. The below matrix presents the major risks in realizing the vision of the ESP, their likelihood, potential adverse impact, and mitigation strategies, categorised by general risks, secondary education, secondary technical education, community education, and inclusive education.

Table 39. Risk matrix

Sector / Sub sector	Risk	Risk Level (H/M/L)	Potential Adverse Impact	Risk Management Strategy / Mitigation	Responsibility
General	Lack of political support	M	Education Reform policies may cease, or the priorities may be shifted.	Issue binding laws and decrees. Obtain approvals and endorsements from highest political leaderships.	Political Leadership Parliament Public representation

General	Insufficient funding whether from domestic or international resources	H	Reform policies may be under-implemented or not implemented.	Expedite financial reform steps towards efficient use of funds Diversify funds sources Enhance partnerships with international organizations and private sector	MoETE MOF INGOs
General	Devaluation of currency and instability of economics (e.g., inflation)	H	The allocated funds may not be enough after the government approvals	Involve economic experts in planning and diversity sources of funds and support Agree on the priority actions during the planning process	MoETE MoF MoPED
General	Lack of public support	M	Effectiveness of the policy interventions will be undermined if parents and the public are not supportive. It may also create a political voice against the reform.	Organize advocacy campaigns for the education reform Regularly communicate the purposes and progress of the reform Engage public stakeholders in planning Continue to conduct pulse survey and feedback cycle Create a functional	MoETE Media Education Experts

				grievance system	
General	Teachers resistance to reform	M	Teachers are the reform implementation channels so if are not supportive will communicate this adversely to the children and their parents	Engage teachers in decision-making Create an enabling environment for teachers to innovate and perform Provide CPD support to teachers	MoETE
General	Competition over the appointment of teacher quota (150,000 over five years)	M	The needed teachers in various specialization are higher than the planned.	Perform weighted analysis to the needs and conduct an action plan that fulfils the urgent need as per the ESP priorities	MoETE
General	Severe Climate change impact that may cause natural disasters in some governorates and remote areas. Pandemics may be a potential threat as well	M	Studies could stop completely and hinder the education and learning process	Continue expanding the use of digital education platform Train education administrators and teachers on crisis management Disaster preparedness plans drawn up from school to central levels	MoETE
General	Rapid changes in technologies and demanded skills	M	Teaching methods may be obsolete as soon as	Interact with International education arena and	MoETE International Organizations

			teachers are trained	continue updating teacher training programs Continue to build on the CPD framework currently under development	
Secondary	Inability to change the assessments system that will continue the private tutoring phenomena.	H	Access to higher education will remain unequitable due to substantial costs of private tutoring Undermines the importance of schools as students rely on tutoring	Diversify alternatives for higher education opportunities Conduct a thorough analysis of private tutoring in view of integrating supplementary learning into MoETE's and policies	MoETE
Secondary Technical Education	Industrial revolution faster than the capabilities of the technical education reform	H	Graduates of technical education may not be able to comply with the labour market needs	Involve industry as much as possible in curricula development, update, and teaching	MoETE
Community Education	Increased demand for community education due to economic difficulties exceeding the supply capacities	M	The most marginalized learners are at risk of being denied their right to education	Involve International Organizations and local NGOs for addressing the need while MoETE provides education supervision and mentorship	MoETE MoSS UN INGOs NGOs

1.31 Communication strategy

The ESP is an overarching strategic document for the MoETE for the next five years and acts as the blueprint for implementing Education 2.0. In order to ensure the highest level of support from the key stakeholders throughout the plan period, it is critically important to effectively and regularly communicate the purposes of the ESP and the progress towards realizing the ESP vision with the stakeholders. The matrix below presents the types of communication and advocacy that are needed for which groups of stakeholders, together with the expected outcomes of the strategy, and possible tools/platforms for communication.

Based on the matrix below, a Communication and Advocacy Plan (CAP) shall be developed in the first years of the ESP implementation by the ESP Partnership and Advocacy Group. The CAP will cover both internal communication (i.e., within government) and external (with development partners) to ensure a coordinated approach to ESP implementation. In order to ensure smooth implementation at the sub-national levels, vertical communication across administrative levels shall be ensured. Information and communication materials about the ESP, summarizing the expected changes and the government's com
all Directorates of Education and down to school level.

A series of advocacy campaigns will be organized throughout the plan period, but particularly immediately following the national and regional launches of the ESP. Public slogans and informational materials for the ESP will be disseminated to carry the ESP's vision, priorities, strategies, a
throughout society. The ESP will be presented at relevant public events as well.

More targeted communication will be needed to mobilize specific support from various target groups. For instance, there will be information materials for media personnel (both traditional and social media) so that the ESP is appropriately covered by media. Parents and communities shall also receive regular information on the ESP implementation through school report cards.

Table 40. Communication Strategy Plan

Advocacy / Promotion/ communication	Target Groups	Expected outcomes	Tools/platforms
Inter-sectoral communication	Cabinet, Parliament, Ministries of Finance, Planning, Higher Education, Social Solidarity etc	Highest level of policy support throughout the plan period Increased level of coordination across Ministries	Briefings Reports Meetings

Horizontal intra-sectoral communication	Various Departments of the MoETE, Government Organizations under the MoETE, international organizations, associations, NGOs, and INGOs (national level)	Increased level of coordination among various departments and organizations under the MoETE Increased level of coordination between the MoETE and development partners	Meetings Seminars Reports
Vertical communication	Education Directorates, school principals, teachers, local NGOs, and partners	Increased level of understanding of the aims and objectives of the ESP Increased sense of shared responsibility for implementing the ESP Innovation and contribution for implementing the ESP	Meetings Workshops Progress reports Information materials Guidelines
Advocacy campaigns for the general public	General public, Interest groups and Individuals (e.g., religious and youth leaders)	Increased awareness of the ESP concepts and objectives among the general public. Increased public support to the education reform agenda stated in the ESP. Bottom-up political support to the ESP implementation	National and sub-national ESP launches Public events Ministry online platforms Communication materials (print & digital) Media coverage (e.g., news, TV shows, talk shows, celebrities) Social media (influencers, bloggers, YouTubers)

Support mobilization	Media Parents/PTAs Communities Local private sector partners	Fair and accurate media coverage on education reform Increased levels of support	Media briefings School-level meetings Communication materials (print & online) Reports

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Annexes

Annex 1: Reference scenario

The reference scenario contains the below 11 sets of assumptions and targets:

Education expenditure

1) Throughout 2027, the constitutional budget will continue to be 4% of the GDP, with 55.2% being recurrent expenditure, 10.1% capital investment, and 34.7% debt service expense.

Teacher development

2) All teachers' remuneration (including salaries and allowances) will rise from 1.2–1.3% of GDP per capita in 2021 to 1.5% in 2027.
3) The average annual teacher training expenditure will climb from 30 EGP per teacher in service to 270 EGP in 2022 before being held constant until 2027, except for kindergarten teachers, whose training costs will increase to 60 EGP.
4) The use of hybrid teaching and learning will result in a gradual reduction of 25% in the number of Grade 10-12 teachers per class by 2025.

Digital transformation

5) For Grade 10-12, hybrid teaching and learning will continue to be implemented: all the new students and teachers will receive a tablet for free; all the new classrooms will be equipped with a digital board.

Access and flow rates

6) 25% of 4-year-old children and 65% of 5-year-old children will be enrolled in kindergarten by 2027.
7) All 6-year-old children will attend Grade 1 by 2027. This translates to increasing the GIR to 100% by 2027.
8) All students who passed primary-level general certificate exam will continue their education in preparatory schools by 2027. This means raising the transition rate to match the Grade 6 success rate, which was 99% for girls and 98% for boys in 2021 and held constant.
9) Likewise, all students who succeeded preparatory-level general certificate exam will pursue their studies in secondary schools. The transition rate must be increased to meet the Grade 9 success rate, which stood at 96% for both girls and boys and is assumed to be stable.

Class settings

10) The number of students per class in kindergarten, primary schools, and preparatory schools will be reduced to, respectively, 25, 32, and 35 students per class by 2030. This translates into reaching 27 in kindergarten; and 38 in both primary and preparatory schools and 38 by 2027; in all secondary schools, there will be maximum 30 students per class by 2027.

11) All the double shift and evening shift classes will be abolished and converted into full-day classes by 2027.

Table 41. Reference scenario parameters

	Baseline	Target	Timeline
1) Constitutional budget			
As % of GDP	4.0	-	-
Distribution (%)			-
Recurrent	55.2	-	-
Capital	10.1	-	-
Debt service	34.7	-	-
2) Teacher salaries and allowance (% of GDP per capita)			
KG/pre-primary	1.2	1.5	2027
Primary	1.2	1.5	2027
Preparatory	1.2	1.5	2027
Secondary General	1.3	1.5	2027
Secondary Industrial	1.3	1.5	2027
Secondary Agricultural	1.4	1.5	2027
Secondary Commercial	1.3	1.5	2027
Secondary Hotel	1.3	1.5	2027
Community schools	1.2	1.5	2027
Special education	1.2	1.5	2027
3) Annual teacher training expenditure (EGP)			
Kindergarten	30	60	2022
Primary	30	60	2022
Preparatory	30	60	2022
Secondary General	30	270	2022
Secondary Technical	30	270	2022
Community schools	30	60	2022
Special education	30	60	2022
3) Classes-to-teacher ratio			
Kindergarten	0.7	-	-
Primary	0.7	-	-
Preparatory	0.5	-	-
Secondary General	0.5	-	-
Secondary Industrial	0.4	-	-
Secondary Agricultural	0.6	-	-
Secondary Commercial	0.7	-	-
Secondary Hotel	0.5	-	-
Community schools	0.7	-	-
Special education	0.5	-	-
5) Digital teaching and learning			

	Baseline	Target	Timeline
6) GER in KG1 and KG2			
4 years old girls	20%	25%	2027
4 years old boys	20%	25%	2027
5 years old girls	26%	65%	2027
5 years old boys	26%	65%	2027
7) GIR in Grade 1			
6 years old girls	98%	100%	2027
6 years old boys	97%	100%	2027
8) Transition rate from Grade 6 to Grade 7			
Girls	99%	99%	2027
Boys	98%	98%	2027
9) Transition rate from Grade 9 to Grade 10			
Girls			
Secondary General	45%	53%	2027
Secondary Industrial	14%	16%	2027
Secondary Agricultural	1%	2%	2027
Secondary Commercial	20%	24%	2027
Secondary Hotel	1%	1%	2027
Total	81%	25	2027
Boys			
Secondary General	34%	25	2027
Secondary Industrial	24%	25	2027
Secondary Agricultural	9%	10	2027
Secondary Commercial	13%	25	2027
Secondary Hotel	2%	25	2027
10) Students-to-class ratio			
Kindergarten	31.0	25	2030
Primary	49.4	32	2030
Preparatory	44.3	35	2030
Secondary General	41.0	30	2027
Secondary Industrial	26.0	-	-
Secondary Agricultural	37.7	30	2027
Secondary Commercial	29.1	-	-
Secondary Hotel	29.7	-	-
Community schools	28.5	-	-
Special education	9.1	-	-
11) Double-shift and evening classes			

Kindergarten	0%	-	-
Primary	0%	-	-
Preparatory	0%	-	-
Secondary General	100%	-	-
Secondary Industrial	100%	-	-
Secondary Agricultural	100%	-	-
Secondary Commercial	100%	-	-
Secondary Hotel	100%	-	-
Community schools	0%	-	-
Special education	0%	-	-

Kindergarten	1%	0%	2027
Primary	20%	0%	2027
Preparatory	22%	0%	2027
Secondary General	9%	0%	2027
Secondary Technical	59%	0%	2027
Community schools	0%	0%	2027
Special education	1%	0%	2027

Source: UNESCO simulation model (2022), estimation based on data from MOETE, MOF, CAPMAS, and IMF.

Annex 2: Unit costs

The MOETE and the development partners were consulted for gathering the unit cost data on salaries for teachers and non-teaching staff as well as other sector-wide expenditures on teaching and learning materials, equipment, and infrastructure.

Table 42. Staff salaries and allowances, 2021, EGP

	Salaries and allowances	As a % of GDP per capita
Kindergarten		
Teacher	74,772	1.22
Non-teaching staff	109,441	1.79
Primary		
Teacher	74,939	1.22
Non-teaching staff	59,862	0.98
Community schools		
Teacher	73,466	1.20
Non-teaching staff	76,390	1.25
Preparatory		
Teacher	76,324	1.25
Non-teaching staff	52,250	0.85
Secondary General		
Teacher	79,267	1.29
Non-teaching staff	54,007	0.88
Secondary Technical		
Teacher		
- Industrial	79,932	1.30
- Agricultural	83,642	1.37
- Commercial	81,989	1.34
- Hotel	79,765	1.30
Non-teaching staff		
- Industrial	60,641	0.99

- Agricultural	60,985	1
- Commercial	50,350	0.82
- Hotel	66,550	1.09
Secondary General		
Teacher	74,010	1.21
Non-teaching staff	44,715	0.73

Source: UNESCO simulation model (2022), estimation based on data from MOETE and CAPMAS.

Table 43. Unit costs, 2021, 2021 prices

	Unit	Unit cost (EGP)	Note
Staff allowance			
Remote/Frontier allowance	Staff beneficiary	7,820	Per year; 20% beneficiaries
Teacher training			
Teacher training	In-service teacher	30	Per year
Teacher and learning materials			
Printed textbooks	Teacher/student	150 - 380	Per grade/year
Tablets	Teacher/student	5,000	
Technical tools and materials	Classroom	27,000 - 30,000	For technical secondary only
Infrastructure			
Construction	Classroom	600,000	Lifespan: 20 years
Rehabilitation	Classroom	274,000 - 327,000	
Digital whiteboard	Classroom	50,000	Lifespan: 10 years
Nutrition and feeding			
Nutrition and feeding	Student beneficiary	267	Per year
Operational costs			
Office supply	Classroom	1,000	Per month
Water, electricity, and internet	Classroom	693	Per year

Source: UNESCO simulation model (2022), estimation based on data from MOETE and CAPMAS.

Annex 3: Recurrent and capital expenditures by year and by subsector

Table 44. Recurrent and capital expenditures by year, Kindergarten, million EGP, 2021 prices

	2023	2024	2025	2026	2027
Recurrent					
Teacher salaries and allowances	5,078	6,167	7,331	8,489	9,535
Non-teaching staff salaries and allowances	968	1,101	1,228	1,335	1,409
Teacher training	4	4	5	5	6
Textbooks and learning materials	254	289	322	350	370
Nutrition and feeding	319	363	404	440	464
Operational costs	536	624	713	794	860
Digital devices and equipment	0	0	0	0	0
Sub-total (A)	**7,158**	**8,548**	**10,004**	**11,413**	**12,644**
Capital					
Construction	4,329	4,106	3,576	2,706	1,807
Maintenance and rehabilitation	410	424	440	458	478
Digital infrastructure and investment	0	0	0	0	0
Sub-total (B)	**4,738**	**4,530**	**4,016**	**3,164**	**2,284**
Total (A+B)	**11,896**	**13,078**	**14,019**	**14,577**	**14,928**

Source: UNESCO simulation model (2022), estimation based on data from MOETE, MOF, CAPMAS, and IMF.

Table 45. Recurrent and capital expenditures by year, Primary, million EGP, 2021 prices

	2023	2024	2025	2026	2027
Recurrent					
Teacher salaries and allowances	38,344	43,360	49,249	55,719	63,229
Non-teaching staff salaries and allowances	13,917	14,449	15,064	15,634	16,260
Teacher training	27	30	33	35	39
Textbooks and learning materials	5,425	5,634	5,875	6,100	6,346
Nutrition and feeding	3,586	3,723	3,881	4,028	4,189
Operational costs	3,486	3,848	4,273	4,732	5,262
Digital devices and equipment	0	0	0	0	0
Sub-total (A)	**64,786**	**71,044**	**78,376**	**86,248**	**95,325**
Capital					
Construction	6,673	10,901	14,959	20,848	22,156
Maintenance and rehabilitation	3,337	3,450	3,582	3,729	3,886
Digital infrastructure and investment	0	0	0	0	0
Sub-total (B)	**10,010**	**14,351**	**18,542**	**24,577**	**26,043**
Total (A+B)	**74,796**	**85,395**	**96,917**	**110,825**	**121,368**

Source: UNESCO simulation model (2022), estimation based on data from MOETE, MOF, CAPMAS, and IMF.

Table 46. Recurrent and capital expenditures by year, Preparatory, million EGP, 2021 prices

	2023	2024	2025	2026	2027
Recurrent					
Teacher salaries and allowances	22,098	25,178	28,029	31,489	34,492
Non-teaching staff salaries and allowances	7,846	8,514	9,031	9,672	10,104
Teacher training	16	17	18	20	21
Textbooks and learning materials	944	1,025	1,087	1,164	1,217
Nutrition and feeding	167	181	192	206	215
Operational costs	1,735	1,969	2,185	2,449	2,678
Digital devices and equipment	0	0	0	0	0
Sub-total (A)	**32,806**	**36,885**	**40,543**	**45,000**	**48,727**
Capital					
Construction	11,853	10,356	12,038	9,991	13,418
Maintenance and rehabilitation	1,597	1,651	1,714	1,784	1,860
Digital infrastructure and investment	0	0	0	0	0
Sub-total (B)	**13,450**	**12,007**	**13,752**	**11,775**	**15,278**
Total (A+B)	**46,256**	**48,892**	**54,295**	**56,775**	**64,005**

Source: UNESCO simulation model (2022), estimation based on data from MOETE, MOF, CAPMAS, and IMF.

Table 47. Recurrent and capital expenditures by year, General Secondary, million EGP, 2021 prices

	2023	2024	2025	2026	2027
Recurrent					
Teacher salaries and allowances	8,504	9,356	10,285	12,018	14,234
Non-teaching staff salaries and allowances	2,807	3,120	3,451	3,805	4,252
Teacher training	27	28	30	34	39
Textbooks and learning materials	0	0	0	0	0
Nutrition and feeding	58	64	71	78	87
Operational costs	638	733	839	958	1,110
Digital devices and equipment	5,112	5,524	6,297	6,899	7,677
Sub-total (A)	**17,144**	**18,826**	**20,973**	**23,793**	**27,399**
Capital					
Construction	4,772	4,987	5,342	6,601	5,714
Maintenance and rehabilitation	651	673	699	727	758
Digital infrastructure and investment	0	0	0	0	0
Sub-total (B)	**5,423**	**5,660**	**6,040**	**7,329**	**6,472**
Total (A+B)	**22,567**	**24,485**	**27,014**	**31,122**	**33,871**

Source: UNESCO simulation model (2022), estimation based on data from MOETE, MOF, CAPMAS, and IMF.

Table 48. Recurrent and capital expenditures by year, Technical Secondary, million EGP, 2021 prices

	2023	2024	2025	2026	2027
Recurrent					
Teacher salaries and allowances	12,218	13,085	13,994	15,909	18,328
Non-teaching staff salaries and allowances	2,946	3,271	3,612	3,977	4,439
Teacher training	38	39	41	45	50
Textbooks and learning materials	1,843	2,122	2,427	2,765	3,191
Nutrition and feeding	67	74	82	90	101
Operational costs	818	934	1,079	1,230	1,421
Digital devices and equipment	5,759	6,214	7,056	7,228	8,413
Sub-total (A)	**23,689**	**25,747**	**28,291**	**31,745**	**35,943**
Capital					
Construction	6,199	6,392	6,760	8,265	5,191
Maintenance and rehabilitation	820	847	860	916	955
Digital infrastructure and investment	0	0	0	0	0
Sub-total (B)	**7,019**	**7,239**	**7,640**	**9,181**	**6,145**
Total (A+B)	**30,708**	**32,986**	**35,930**	**40,926**	**42,088**

Source: UNESCO simulation model (2022), estimation based on data from MOETE, MOF, CAPMAS, and IMF.

Table 49. Recurrent and capital expenditures by year, Community schools, million EGP, 2021 prices

	2023	2024	2025	2026	2027
Recurrent					
Teacher salaries and allowances	721	789	860	930	997
Non-teaching staff salaries and allowances	435	455	457	493	508
Teacher training	1	1	1	1	1
Textbooks and learning materials	62	65	68	70	73
Nutrition and feeding	44	46	48	50	51
Operational costs	72	75	79	82	84
Digital devices and equipment	0	0	0	0	0
Sub-total (A)	**1,335**	**1,431**	**1,530**	**1,625**	**1,714**
Capital					
Construction	210	193	171	146	165
Maintenance and rehabilitation	72	75	78	81	84
Digital infrastructure and investment	0	0	0	0	0
Sub-total (B)	**282**	**267**	**249**	**227**	**249**
Total (A+B)	**1,617**	**1,689**	**1,778**	**1,852**	**1,963**

Source: UNESCO simulation model (2022), estimation based on data from MOETE, MOF, CAPMAS, and IMF.

Table 50. Recurrent and capital expenditures by year, Special education, million EGP, 2021 prices

	2023	2024	2025	2026	2027
Recurrent					
Teacher salaries and allowances	900	967	1,039	1,111	1,180
Non-teaching staff salaries and allowances	262	269	278	285	291
Teacher training	1	1	1	1	1
Textbooks and learning materials	12	12	13	13	13
Nutrition and feeding	13	14	14	14	15
Operational costs	69	71	73	75	77
Digital devices and equipment	0	0	0	0	0
Sub-total (A)	**1,257**	**1,334**	**1,417**	**1,499**	**1,567**
Capital					
Construction	148	146	131	115	194
Maintenance and rehabilitation	71	73	76	79	83
Digital infrastructure and investment	0	0	0	0	0
Sub-total (B)	**219**	**219**	**207**	**195**	**277**
Total (A+B)	**1,476**	**1,553**	**1,624**	**1,693**	**1,853**

Source: UNESCO simulation model (2022), estimation based on data from MOETE, MOF, CAPMAS, and IMF.

Table 51. Expenditures by year, non-formal education/Literacy, million EGP, 2021 prices

	2023	2024	2025	2026	2027
Reserve	2,000	3,000	3,000	3,000	3,000

Source: UNESCO simulation model (2022), estimation based on data from MOETE, MOF, CAPMAS, and IMF.

Table 52. Expenditures by year, Unspecific, million EGP, 2021 prices

	2023	2024	2025	2026	2027
- Digital infrastructure and investment	7,300	7,600	7,700	8,400	8,400
- Reserve*	15	12	20	20	20
Total	**9,614**	**9,911**	**10,019**	**10,719**	**10,719**

* Including greening education, curriculum development and other sector-wide activities.

Source: UNESCO simulation model (2022), estimation based on data from MOETE, MOF, CAPMAS, and IMF.

Annex 4: Expenditure plan by priority area and by sub-sector

Table 53. Expenditure plan by policy area, Primary, million EGP, 2021 prices

Policy area	Outcomes	Expenditure plan				
		2023	2024	2025	2026	2027
Increasing access & participation	A. Expand kindergarten provision, increase availability of adequate classroom facilities, and improve the physical condition of existing kindergarten educational centres	10,221	11,155	11,856	12,203	12,398
	B. Raise awareness to the importance of kindergarten education and promote participation in ECE.					
	C. Increase capacities of ECE provision and ensure availability of sufficient number					
Enhancing quality and relevance of education	A. Provide kindergarten children with an enhanced and age-appropriate, play-based competency-based curriculum	1,270	1,459	1,643	1,805	1,926
	B. Increase availability of adequate classroom facilities, relevant learning materials and educational technology resources					
	C. Raise the level of teacher qualifications and skills					
Ensuring equity and inclusion in the education sector	A. Strengthen/adapt kindergarten facilities or learning materials that are child-friendly, disability and gender-sensitive, and provide safe, non-violent, inclusive, and effective learning environments for all	109	126	144	159	172
	B. Improve access of disadvantaged children to ECE					
Strengthening governance and management	A. Enhance the system-level assessment of kindergarten education quality.	297	338	377	410	432
	B. Consolidate all systemic reforms and strengthen the capacity of ECE subsector management to implement ECD					
	C. Strengthen kindergarten Education Management and Information System (EMIS) and harmonize with other education subsectors EMISs.					

Source: UNESCO simulation model (2022), estimation based on data from MOETE, MOF, CAPMAS, and IMF.

Table 54. Expenditure plan by policy area, Primary, million EGP, 2021 prices

Policy area	Outcomes	Expenditure plan				
		2023	2024	2025	2026	2027
Increasing access & participation	A. Expand primary education provision, ensure availability of adequate classroom facilities, and improve the physical condition of primary schools	53,296	62,809	73,068	85,730	94,874
	B. Raise awareness of the importance of primary education					
	C. Increase number of teachers in primary classrooms					
Enhancing quality and relevance of education	A. Provide primary school learners with an enhanced and competency-based curriculum	12,891	13,616	14,459	15,308	16,266
	B. Ensure availability of adequate classroom facilities, relevant learning materials, and educational technology resources					
	C. Raise the level of teacher qualifications and skills					
	D. Update the assessments & examinations					
Ensuring equity and inclusion in the education sector	A. Strengthen/adapt primary school facilities or curricular materials that are child-friendly, disability and gender-sensitive, and provide safe, non-violent, inclusive, and effective learning environments for all	1,071	1,145	1,231	1,320	1,422
	B. Improve access of disadvantaged children to primary schools					
Strengthening governance and	A. Enhance measures to assess education system performance	7,538	7,826	8,159	8,468	8,806
	B. Strengthen primary Education Management and Information System (EMIS) and harmonize with other education subsectors EMISs.					

Source: UNESCO simulation model (2022), estimation based on data from MOETE, MOF, CAPMAS, and IMF.

Table 55. Expenditure plan by policy area, Preparatory, million EGP, 2021 prices

Policy area	Outcomes	Expenditure plan				
		2023	2024	2025	2026	2027
Increasing access & participation	A.Expand preparatory education provision, ensure availability of adequate classroom facilities and improve physical condition of preparatory schools	36,270	37,970	42,613	44,155	50,700
	B. Raise awareness of the importance of preparatory education and promote participation in preparatory education.					
	C. Increase the number of teachers					
Enhancing quality and relevance of education	A. Provide preparatory school learners with an enhanced and competency-based curriculum	5,343	5,879	6,328	6,880	7,301
	B. Availability of adequate classroom facilities, relevant learning materials, and educational technology resources					
	C. Raise the level of teacher qualifications and skills					
	D. Update the assessments & examinations					
Ensuring equity and inclusion in the education sector	A. Strengthen/adapt preparatory school facilities and learning materials that are child-friendly, disability and gender-sensitive, and provide safe, non-violent, inclusive, and effective learning environments for all	636	695	742	801	844
	B. Improve access of disadvantaged children to preparatory schools					
	C. Increase transition/participation/completion of preparatory education for the poorest girls in rural areas					
Strengthening governance and management	A.Enhance the system-level measures to improve preparatory education participation and quality.	4,007	4,348	4,612	4,939	5,160

Source: UNESCO simulation model (2022), estimation based on data from MOETE, MOF, CAPMAS, and IMF.

Table 56. Expenditure plan by policy area, General secondary, million EGP, 2021 prices

Policy area	Outcomes	Expenditure plan				
		2023	2024	2025	2026	2027
Increasing access & participation	A. Expand secondary education provision, ensure availability of adequate classroom facilities and improve physical condition of secondary schools	14,160	15,284	16,630	19,679	21,073
	B. Raise awareness to the importance of secondary education					
	C. Increase capacities of secondary education provision and ensure availability of sufficient number of teachers in secondary classrooms					
Enhancing quality and relevance of education	A. Provide secondary school learners with an enhanced and competency-based curriculum	1,693	1,904	2,131	2,382	2,700
	B. Availability of adequate classroom facilities, relevant learning materials, and educational technology resources					
	C. Raise the level of teacher qualifications and skills					
	D. Update the assessments & examinations					
Ensuring equity and inclusion in the education sector	A. Strengthen/adapt secondary school facilities that are child-friendly, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all	233	251	271	305	347
	B. Improve access of disadvantaged children to secondary schools					
Strengthening governance and management	A.Strengthen secondary Education Management Information System (EMIS) and school management and leadership	1,370	1,523	1,684	1,857	2,075

Source: UNESCO simulation model (2022), estimation based on data from MOETE, MOF, CAPMAS, and IMF.

Table 57. Expenditure plan by policy area, technical secondary, million EGP, 2021 prices

Policy area	Outcomes	Expenditure plan				
		2023	2024	2025	2026	2027
Increasing access & participation	A. Expand technical education (TE) school provision and improve physical condition of TE schools	19,425	20,550	21,900	25,384	24,803
	B. Transforming the image of technical education through changing social perception					
	C. Increase capacities of TE education provision and ensure availability of sufficient number of teachers in TE classrooms					
Enhancing quality and relevance of education	A. Provide TE school learners with an enhanced and competency-based curriculum	3,477	3,966	4,497	5,085	5,825
	B. Ensure availability of adequate classroom facilities, relevant learning materials, and educational technology resources					
	C. Raise the level of teacher qualifications and skills					
	D. Improve the learning assessment					
	E. Equip students with relevant skills for labour market requirements					
Ensuring equity and inclusion in the education sector	A.Strengthen/adapt TE school facilities that are child-friendly, disability and gender-sensitive, and provide safe, non-violent, inclusive, and effective learning environments for all	296	313	331	365	409
Strengthening governance and management	A. Consolidate all systemic reforms and strengthen the capacity of subsector management to implement reform programme	1,751	1,944	2,146	2,363	2,637
	B. Improve management, implementation, monitoring, and evaluation capacity with effective coordination					
	C. Strengthen TE Education Management and Information System (EMIS) and harmonize with other education subsectors EMISs.					
	D. Ensure effective involvement of community participation and private sector with relevant capabilities					

Source: UNESCO simulation model (2022), estimation based on data from MOETE, MOF, CAPMAS, and IMF.

Table 58. Expenditure plan by policy area, Community schools, million EGP, 2021 prices

Policy area	Outcomes	Expenditure plan				
		2023	2024	2025	2026	2027
Increasing access & participation	A. Expand community education provision, ensure availability of adequate classroom facilities, and improve the physical condition of community schools	1,617	1,698	1,778	1,852	1,963
	B. Increase capacities of community education provision of sufficient number and equitable deployment of teachers					
Enhancing quality and relevance of	A. Provide community school learners with an enhanced and competency-based curriculum					
	B. Ensure availability of adequate classroom facilities, relevant learning materials, and educational technology resources					
education Ensuring equity and inclusion in the education sector	A.Improve access of disadvantaged children to community schools					
Strengthening governance and management	A. Strengthen collaboration and partnerships between government and non-government providers					
	B. Strengthen community school Education Management and Information System (EMIS)					
	C. Consolidate all systemic reforms and strengthen the capacity					

Source: UNESCO simulation model (2022), estimation based on data from MOETE, MOF, CAPMAS, and IMF.

Table 59. Expenditure plan, Digital Transformation and Innovation, million EGP, 2021 prices

Outcomes	Expenditure plan				
	2023	2024	2025	2026	2027
A. Improve digital infrastructure and equip learners, teachers, and classrooms with necessary learning materials	18,171	19,337	21,054	23,028	24,490
B. Build a digital educational ecosystem with fully integrated digital components					
C. Develop and provide digital in-service training and professional development programmes for teachers					
D. Streamline and institutionalize the capture of data, storage, and evaluation					

Source: UNESCO simulation model (2022), estimation based on data from MOETE, MOF, CAPMAS, and IMF.