Document of

The World Bank

FOR OFFICIAL USE ONLY

Report No: PAD2644

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED LOAN

IN THE AMOUNT OF US$500 MILLION
TO THE
ARAB REPUBLIC OF EGYPT
FOR A

SUPPORTING EGYPT EDUCATION REFORM PROJECT
March 23, 2018

Education Global Practice
Middle East And North Africa Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective March 23, 2018)

Currency Unit = EGP

EGP 17.615 =   US$1

US$ 1.45 =   SDR 1

FISCAL YEAR
July 1 – June 30

Regional Vice President:	Hafez M. H. Ghanem
Country Director:	Asad Alam
Senior Global Practice Director:	Jaime Saavedra Chanduvi
Practice Manager:	Safaa El Tayeb El-Kogali
Task Team Leader(s):	Juan Manuel Moreno Olmedilla, Amira Kazem

ABBREVIATIONS

AY	Academic year
CAGR	Compound Annual Growth Rate
CAPMAS	Central Agency for Public Mobilization and Statistics
CCIMD	Center for Curriculum and Instructional Development (MOETE)
CIE	Cambridge International Education
CLA	Community Learning Ambassadors
COP	Community of Practice
CPD	Continuous Professional Development
CSO	Civil Society Organization
DA	Designated Account
DLI	Disbursement-Linked Indicators
DLR	Disbursement-Linked Results
DP	Development Partner
ECD	Early Childhood Development
ECE	Early Childhood Education
EEP	Eligible Expenditure Programs
EGRA	Early Grade Reading Assessment
EKB	Egyptian Knowledge Bank
EL&S	Education Leaders and Supervisors
ELMPS	Egypt - Labor Market Panel Survey
EMIS	Education Management Information System
ETE	Education Technology Entity
EU	European Union
FMIS	Financial Management Information System
FOE	Faculty of Education
GAEB	General Authority for Educational Buildings
GiZ	Deutsche Gesellschaft für Internationale Zusammenarbeit, GmbH (German Society for International Cooperation)
GOE	Government of Egypt
GPA	Grade point average
GRM	Grievance redress mechanism
GRS	Grievance redress service
HDI	Human Development Index
HIECS	Household Income, Expenditure, and Consumption Survey
ICR	Implementation Completion and Results report
ICT	Information, and Communication Technology
IFR	Interim Financial Reports
ILO	International Labour Organization
INDC	Intended Nationally Determined Contributions
IPF	Investment project financing
IRR	Internal rate of return
JICA	Japan International Cooperation Agency
KfW	Kreditanstalt für Wiederaufbau (German Development Bank)
KG	Kindergarten
LMS	Learning Management System

M&E	Monitoring and Evaluation
MDB	Multilateral Development Bank
MIIC	Ministry of Investment and International Cooperation
MOETE	Ministry of Education and Technical Education
MOF	Ministry of Finance
MOP	Ministry of Planning
NCEEE	National Center for Examinations and Educational Evaluation
NPV	Net present value
NTTP	National Teacher Training Program
OECD	Organization of Economic Co-operation and Development
PCU	Project Coordination Unit
PD	Professional Development
PDO	Project Development Objective
PEA	Political economy analysis
PIRLS	Progress in International Reading Literacy Study
POM	Project Operations Manual
PTA	Parent-teacher association
QA	Quality Assurance
RBF	Results-based funding
RF	Results Framework
SABER	System Approach for Better Education Results
SC	Steering Committee
SCPTE	Supreme Council for Pre-Tertiary Education
SEER	Supporting Egypt Education Reform Project
TF	Teachers First
TIMSS	Trends in International Mathematics and Science Study
TOR	Terms of Reference
TPB	Teacher Professional Behavior
TTL	Task Team Leader
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework for Convention on Climate Change
UNICEF	United Nations International Children's Emergency Fund
USAID	United States Agency for International Development
TVET	Technical, Vocational Education and Training
WB	World Bank
WDI	World Development Indicators

BASIC INFORMATION

Is this a regionally tagged project?	Country(ies)	Financing Instrument
No		Investment Project Financing

[ ] Situations of Urgent Need of Assistance or Capacity Constraints

[ ] Financial Intermediaries

[ ] Series of Projects

Approval Date	Closing Date	Environmental Assessment Category
13-Apr-2018	01-Sep-2023	C - Not Required

Bank/IFC Collaboration	
No	

Proposed Development Objective(s)

The project development objective (PDO) is to improve teaching and learning conditions in public schools.

Components

Component Name	Cost (US$, millions)
Component 1: Improved Early Childhood Education	100.00
Component 2: Effective Teachers and Education Leaders	100.00
Component 3: Comprehensive Assessment Reform for Improved Student Learning	120.00
Component 4: Enhancing Education Service Delivery through Connected Systems	160.00
Component 5: Project Management, Communication, and Monitoring and Evaluation	20.00

Organizations

Borrower :   Ministry of Investment and International Cooperation

Implementing Agency :   Ministry of Education and Technical Education

PROJECT FINANCING DATA (US$, Millions)

[✓] Counterpart Funding	[✓] IBRD	[ ] IDA Credit	[ ] IDA Grant	[ ] Trust Funds	[ ] Parallel Financing

Total Project Cost:	Total Financing:	Financing Gap:
2,000.00	2,000.00	0.00
	Of Which Bank Financing (IBRD/IDA):	
	500.00	

Financing (in US$, millions)

Financing Source	Amount
Borrower	1,500.00
International Bank for Reconstruction and Development	500.00
Total	**2,000.00**

Expected Disbursements (in US$, millions)

Fiscal Year	2018	2019	2020	2021	2022	2023	2024
Annual	0.00	80.00	110.00	100.00	80.00	80.00	50.00
Cumulative	0.00	80.00	190.00	290.00	370.00	450.00	500.00

INSTITUTIONAL DATA

Practice Area (Lead)

Education

Contributing Practice Areas

Climate Change and Disaster Screening

This operation has been screened for short and long-term climate change and disaster risks

Gender Tag

Does the project plan to undertake any of the following?

a. Analysis to identify Project-relevant gaps between males and females, especially in light of country gaps identified through SCD and CPF

Yes

b. Specific action(s) to address the gender gaps identified in (a) and/or to improve women or men's empowerment

Yes

c. Include Indicators in results framework to monitor outcomes from actions identified in (b)

Yes

SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)

Risk Category	Rating
1. Political and Governance	● High
2. Macroeconomic	● Substantial
3. Sector Strategies and Policies	● High
4. Technical Design of Project or Program	● Substantial
5. Institutional Capacity for Implementation and Sustainability	● Substantial
6. Fiduciary	● High

7. Environment and Social	● Low
8. Stakeholders	● Substantial
9. Other	
10. Overall	● High

COMPLIANCE

Policy

Does the project depart from the CPF in content or in other significant respects?

[ ] Yes   [✔] No

Does the project require any waivers of Bank policies?

[ ] Yes   [✔] No

Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment OP/BP 4.01		✓
Natural Habitats OP/BP 4.04		✓
Forests OP/BP 4.36		✓
Pest Management OP 4.09		✓
Physical Cultural Resources OP/BP 4.11		✓
Indigenous Peoples OP/BP 4.10		✓
Involuntary Resettlement OP/BP 4.12		✓
Safety of Dams OP/BP 4.37		✓
Projects on International Waterways OP/BP 7.50		✓
Projects in Disputed Areas OP/BP 7.60		✓

Legal Covenants

Sections and Description
Implementing entities as per Section I, Paragraph A.2.(b) of Schedule 2 of the Loan Agreement

Sections and Description

Appointment of the Independent Verification Agent (s) (IVA) as per Section I, Paragraph C.1.(a) of Schedule 2 of the Loan Agreement

Sections and Description
The Borrower, through MOETE, shall establish prior to the commencement of Project implementation, and thereafter maintain throughout such implementation, a Project Steering Committee with terms of reference, composition and resources acceptable to the Bank. To this end, the PSC shall be chaired by a MOETE representative and include representatives of Ministry of Investment and International Cooperation, Ministry of Finance, and Ministry of Communication and Information Technology, and of such other ministries as shall be set out in the POM.

Sections and Description
The Borrower, through MOETE, shall establish prior to Project implementation, and thereafter maintain throughout such implementation, a Project Coordination Unit, with adequate staff, with terms and reference acceptable to the Bank. To this end, the Project Coordination Unit shall be responsible for the technical oversight and implementation of the Project to ensure that the Project meets all of its objectives, including: (i) the overall management, coordination, reporting, monitoring, and evaluation of Project implementation; (ii) fiduciary aspects of implementation, including financial management and procurement; (iii) providing technical support to the Project Steering Committee; and (iv) hiring and interfacing with the Verification Agent.

Sections and Description
The Borrower, through MOETE, shall ensure that the Project is carried out in accordance with the Project Operations Manual containing detailed arrangements and procedures for: (a) the composition and roles and responsibilities of the PSC; (b) institutional coordination and day-to-day execution of the Project as well as the roles and obligations of the Implementing Agencies; (c) monitoring, evaluation, reporting and communication; (d) eligibility criteria, detailed rules and procedures for identification, registration and selection of selected schools and public places, (e) administration, financial management, procurement and accounting; (f) the Verification Protocol and the appointment of a Verification Agent; and (g) such other administrative, technical and organizational arrangements and procedures as shall be required for purposes of implementation of the Project.

Conditions

Type	Description
Disbursement	For any DLR under Category (2), unless the Borrower, through MOETE, has furnished all required verification documents and information acceptable to the Bank showing the achievement of said DLR, as measured by the Disbursement Calculation Formula. Such verification documents and information shall include verification reports from the Verification Agent, based on reports prepared by the

	Project Coordination Unit and other implementing entities as appropriate, certifying the achievement of the DLRs in accordance with the Verification Protocol.

PROJECT TEAM

Bank Staff

Name	Role	Specialization	Unit
Juan Manuel Moreno Olmedilla	Team Leader(ADM Responsible)		GED05
Amira Mohamed Ibrahim Kazem	Team Leader		GED05
Basheer Ahmad Fahem Sadeq Jaber	Procurement Specialist(ADM Responsible)		GGOPM
Mohamed Yahia Ahmed Said Abd El Karim	Financial Management Specialist		GGOMN
Alia Amr Mohamed Elkadi	Team Member	Social Safeguards	GSU05
Amal Nabil Faltas Bastorous	Team Member		GSU05
Andrea C. Guedes	Peer Reviewer		LCC2C
Andrianirina Michel Eric Ranjeva	Team Member		WFACS
Emma Paulette Etori	Team Member		GED05
Ernesto P. Cuadra	Team Member		GED05
Frank Anthony Fariello	Counsel		LEGAM
Harsha Aturupane	Peer Reviewer		GED06
Helen Z. Shahriari	Social Safeguards Specialist	Social Safeguards	GSU05
Jamal Abdulla Abdulaziz	Team Member		GGOPM
Juan Baron	Peer Reviewer		GED06
Maissa Gaber Ramadan Abdalla	Team Member		MNAEC
Mariam Nusrat Adil	Team Member		GED05
Mariam Sherif Raouf Shaf Ghaly	Team Member		MNCEG

Michael Trucano	Team Member		GEDGE
Mohammad Farouk Ibrahim Kandeel	Environmental Safeguards Specialist	Environment Safeguard	GEN05
Mohammed Thabet M Audah	Team Member		GED05
Samira Nikaein Towfighian	Team Member		GED05
Shahram Paksima	Team Member		GED05
Vincent M. Greaney	Team Member		GED05
Wael Ahmed Elshabrawy	Team Member		GGOMN

Extended Team

Name	Title	Organization	Location

EGYPT, ARAB REPUBLIC OF
SUPPORTING EGYPT EDUCATION REFORM PROJECT

CONTENTS

I. STRATEGIC CONTEXT

A. Country Context

1. **Egypt has embarked on a series of bold economic reforms.** Egypt is a lower middle-income country with an estimated population of 96 million and a gross domestic product (GDP) per capita of US$2,048. The major economic reform was the liberalization of the exchange rate in November 2016, to address the severe shortages in foreign currency. The liberalization was facilitated by important fiscal consolidation measures, notably the introduction of the VAT law in September 2016, two rounds of increases in fuel prices; increases in electricity tariffs by an average of 40 percent in July 2017; and the containment of the public-sector wage bill. These measures were in addition to the passage of critical pieces of legislation necessary to strengthen the business climate, attract investments, and promote growth, including the adoption of an industrial licensing law and a new investment law. In fiscal year 2017, despite the fiscal consolidation efforts, economic growth has reached 4.2 percent, in line with the 4.3 percent the year before. Provided growth-friendly policies and reforms continue to be implemented, medium-term growth prospects are favorable. Downside risks include slower implementation of reforms, which would undermine fiscal sustainability and private investment.

2. **Although the economy is recovering and macroeconomic imbalances are narrowing, social conditions remain challenging.** According to the 2015 Household Survey (latest available),[1] an average of 27.8 percent of the country's population was considered poor. However, at the same time, rural Upper Egypt poverty rates reached almost 60.0 percent. At end-FY17, unemployment was 12 percent, a decrease from its previous rate of 12.5 percent in FY16. Also at the end-FY17, the youth unemployment rate was 25.7 percent. In response, the government is strengthening social safety nets through expanding the cash transfer schemes and increasing social pensions and food subsidy allocations. Egypt has made significant strides in human development in the areas of child mortality, life expectancy, primary and secondary school enrollment, and literacy rates. Nevertheless, challenges persist in large inequalities in access to, and quality of, basic social services. This inequality is evident in access to pre-school services: the rate of 59.6 percent in lower Egypt is more than double that of 27.0 percent in frontier governorates. Regarding income inequality, access to preprimary education is 50.0 percent among the highest wealth quintile compared to 33.6 percent among the lowest.

3. **Promoting human development is one of the pillars of the Egypt Vision 2030.** Egypt Vision 2030 was developed in 2015 as a national participatory effort coordinated by the Ministry of Planning and Administrative Reform. The vision provides a roadmap to strengthen inclusive development and maximize competitive advantages to achieve the Egyptians' aspirations for dignified and prosperous lives. The three pillars of Vision 2030 are: (a) *economic dimension*: economic development, energy, knowledge, innovation and scientific research, transparency and efficient government institutions; (b) *social dimension:* social justice, health, education and training, and culture; and (c) *environment dimension:* environmental and urban development. Egypt Vision 2030 underscores that, in the coming 12 years, education must contribute significantly to Egypt's social transformation. The vision articulates three specific objectives to develop human potential: (a) improve the quality of the education system in alignment with international systems; (b) expand access to education for all; and (c) improve system competitiveness and learning

---

[1] Conducted by the Central Agency for Public Mobilization and Statistics (CAPMAS). Data based on total population estimate of 89 million.

outcomes across regions and different population groups. The education and training system will be student-centered, encourage critical thinking and aim to produce highly technically competent graduates/trainees. The system "… will build the character and unleash its potential for a proud citizen [who] is innovative, tolerant of diversity, proud of his/her history, and capable of competing regionally and globally." (*Egypt Vision 2030, Education and Training Pillar under the Social Dimension*).

B. Sectoral and Institutional Context

4.   **Egypt has the largest education system in the Middle East and North Africa Region (MENA) with 20 million students in pre-tertiary education**. Pre-tertiary education comprises: (a) noncompulsory Kindergarten (KG): KG 1–2; (b) compulsory basic education: grades 1–9; and (c) compulsory secondary education: grades 10–12. Education services are offered by more than 46,000 public schools and 7,000 private schools. The number of public school teachers is approaching one million, and they predominantly hold an open-ended employment status and are considered civil servants.

5.   **Education is a top priority for the Government of Egypt (GOE)**. The 2014 Constitution commits to the expansion and quality of pre-tertiary education—general education and technical and vocational education (TVE)—in line with international standards. The Constitution mandates a minimum public expenditure on education of 4 percent of GDP; confirms the commitment to teachers' professional development and rights; and underscores the goal of eradicating alphabetical and digital illiteracy. The Ministry of Education and Technical Education's (MOETE) commits to bring learning back to the classroom through ambitious reforms aimed to tackle Egypt's learning challenges.

6.   **Egypt's total spending on pre-tertiary education grew at a compound annual growth rate (CAGR) of 15 percent from 2008/09 to 2015/16**. Total expenditures, which include spending by the Central Ministry, education directorates and the various education agencies in Egypt, more than doubled from EGP29 billion in the 2008/2009 school year to over EGP 68 billion in 2015/2016, with an allocated 2017/2018 budget of EGP 80 billion (US$4.6 billion). Average expenditure per student ranges from EGP 3,641 for KG to EGP 6,340 in secondary education (US$210 and US$350 respectively). Most spending for pre-tertiary education is allocated to salaries—94 percent over the last six years and purchases of goods and services—approximately 5 percent. Capital expenditure rarely features in MOETE's budget allocations, reaching only 1.4 percent in the 2015/2016 school year. However, some capital spending takes place via the General Authority for Educational Buildings (GAEB), which has an EGP 2 billion budget for nonfinancial assets.

7.   **Egypt's education system faces three significant challenges.** They are (a) limited access to quality KG, especially in disadvantaged areas; (b) poor quality pre-tertiary teaching, whose predominant practice is rote learning; and (c) the high-stakes school-leaving examination, *Thanawiya Amma*,[2] which drives the whole system and reinforces irrelevant rote learning and growing education inequality via rampant private tutoring.

8.   **Compared to other lower middle-income countries, access to education in Egypt is high.** Egypt has achieved close to universal access to primary education (99 percent net enrollment rate) (UNESCO

---

[2] Thanawiya Amma is the school-leaving examination at the end of secondary education in grade 12 and the access path to tertiary education

2016). The net enrollment rates for lower and upper secondary education are 94 percent and 77 percent, respectively. There is gender parity at primary and nearly so at secondary levels. Moreover, the dropout rate is low at both the primary stage (0.8 percent) and the lower secondary (4.9 percent).[3]

9.   **In contrast, access to early childhood education (ECE) is far from universal, contributing to poor school readiness, particularly for children from poorer and disadvantaged backgrounds**. Enrollment in preprimary education remains low at 31 percent[4]—one of the lowest among MENA countries. Inequality in access is prevalent. Because KG enrollment is strongly associated with family income,[5] most children from the two bottom income quintiles are estimated to be deprived of the benefits of an early childhood education. Far from leveling the playing field for all children, this enrollment structure is likely to widen the school readiness gap across socioeconomic lines in the first years of primary school.

10.   **In addition to the considerable shortages in access, key challenges to the quality of KG services remain.** Limited specialized in-service training opportunities and pedagogical support constrain KG teachers' ability to structure learning around age-appropriate and play-based activities that stimulate child development and early socioemotional skills. These limited resources, coupled with an inefficient KG quality assurance system that neither monitors progress nor incentivizes continuous quality improvements, likely will curtail ECE's potential contribution to children's school readiness.

11.   **In basic education, students in Egypt are neither learning nor acquiring employability skills.** The system is not delivering the necessary learning outcomes, skills, and competencies for additional education and transition to the job market. One in five students in grade 3 cannot read a single word from a reading passage and enter grade 4 as functionally illiterate (USAID 2013). Thus, it is not surprising that only 50 percent of youth (not limited to students) who have attained five years of schooling can read or write, and just under 67 percent can do basic mathematics (addition or subtraction).[6] Grade repetition rates are high, at approximately 5.8 percent for primary students and 11.2 percent for secondary students. Egypt's results on the 2015 Trends in International Mathematics and Science Study (TIMSS) show that only 47 percent of grade 8 students reached the "low" international benchmark of performance in mathematics, compared to the international average of 84 percent (the figures for grade 8 science were 42 percent and 84 percent, respectively). More recently, Egypt's results on the 2016 Progress in International Reading Literacy Study (PIRLS) show an average reading score of 330 for grade 4 students, below the "low" international benchmark.

12.   **Despite improvements in teacher qualifications, outdated teaching practices continue to promote rote learning.** Limited opportunities exist for systematic professional development oriented to change these teaching practices and behaviors. Existing in-service teacher training programs often are: (a) of poor quality, (b) ill-timed to when teachers need the training and support, and (c) usually one-off trainings unconnected to teachers' specific needs, or focused on isolated subject-matter content. The share of teachers with post-graduate degrees increased from 20.0 percent in 2000/2001 to 39.4 percent

---

[3] Primary stage comprises grades 1–6; preparatory stage comprises grades 7–9.
[4] MOETE data for the 2016–2017 academic year.
[5] Children from the highest wealth quintile are five times more likely to attend ECE than their peers in the lowest income quintile (El-Kogali and Krafft 2015).
[6] Roushdy, Rania and Maia Sieverding. 2015. Panel Survey of Young People in Egypt (SYPE).

in 2009/2010 (MOETE 2010). Notwithstanding these efforts to improve teachers' status,[7] the teaching profession in Egypt does not attract enough high performing graduates and suffers from a public perception of low status. The selection of teachers ultimately is dependent on secondary examination results.[8] Typically, Faculties of Education (FOEs) are responsible for pre-service training of teachers whereas the Professional Academy of Teachers (PAT) acts as both a regulator of the profession and as the provider of in-service training.[9]

13.   **Poor planning for teacher supply and demand results in inadequate deployment of teachers, including effective targeting of specialized teachers**. Additionally, accountability (and educational supervision) mechanisms and incentives are misaligned. They do not sufficiently motivate teachers to improve their knowledge or teaching practices, which remain based largely on traditional teacher-centric methods. Finally, pay and benefits are not differentiated according to performance, and salaries increase only moderately over a career. For example, after 15 years, a teacher with the minimum qualifications earns approximately only 1.4 times the starting salary. When it comes to promotion, teachers typically climb the ladder based only on years of experience. This structure disincentivizes innovative and highly capable teachers (World Bank 2010).

14.   **School leadership has limited authority over teacher supervision and school budget.** There are notable gaps and overlaps in authority, especially among functions at the central ministry, directorate, and district levels. School principals have generally welcomed the decentralization of funds for maintenance introduced a few years ago. Nevertheless, school principals had reservations about the rigidity and short timeframe set for using the transferred funds.

15.   Of even greater concern is that this limited span of authority has not addressed other important budgetary items, such as teacher training and teaching and learning materials, including equipment and chemicals for laboratory experiments. School leaders still respond to a compliance and control model. Moreover, the school leaders have no legal, institutional, or professional environment for a true leadership role to emerge, related either to teacher professional development or to wider school improvement processes. School leadership, therefore, is far from being a career in its own right with its own career ladder (OECD 2015).

16.   **The Thanawiya Amma national high-stakes examination drives the entire education system and focuses on selection for university entrance.** The entire Egyptian education system revolves around this examination because it sets the incentives for all actors and, thus, shapes the decisions made by teachers, parents, and students. This examination impacts students' future lives because its results are the only determining factor for both graduation from secondary school and admission to tertiary education. In other words, the Thanawiya Amma score determines students' lifetime prospects. The pressure to

---

[7] Past efforts included developing National Standards for Education (2003); establishing the Teachers' Cadre (2007), developing a career path and promotional system for teachers, along with a 50 percent increase in basic pay (2007); and assigning bonuses to each promotional level (from 2008).
[8] The Central Bureau for Admission to University allocates students to the FOEs based on the Thanawiya Amma score and a personal interview.
[9] The PAT performs the following functions: (a) sets the national curriculum for teacher training, including pre-service induction training programs; (b) ensures sustainable professional development of teachers; (c) details teacher responsibilities and their official working time, which is equivalent to, or longer than, some top performing systems in the world; and (d) licenses teachers according to national standards while linking promotions to the license requirements.

perform well on this examination has unlocked a lucrative market for private tutoring. Teachers offer after-school classes to supplement their salaries. This unregulated phenomenon (Hallak and Poisson 2007) was estimated to incur household expenditures totaling up to 1.6 percent of Egypt's GDP (Ille 2015). Throughout pre-tertiary education, at least 50 percent of students hire private tutors to prepare for Thanawiya Amma, including 75 percent of those enrolled in the upper secondary grades (ELMPS 2012). This *shadow education system* further disadvantages poorer students. Only 23 percent of students in the lowest wealth quintile receive private tutoring, compared to 66 percent and 77 percent in the top two quintiles, respectively (ELMPS 2012). Moreover, the grade 9 examination is another high-stakes examination, administered by governorates, that sorts students into technical and academic tracks in upper secondary education. With scores not comparable across years or governorates, the grade 9 examination is a key factor accounting for the gaps in completion and transition rates between students of lower and higher income levels (World Bank 2013).

17.   **MOETE is committed to bring back learning to the classroom using a two-pronged approach.** This approach includes: (a) reforming the current system, referred to as Education 1.0 (EDU 1.0), and (b) transforming the education sector, referred to as Education 2.0 (EDU 2.0). EDU 1.0 aims to serve students in the existing education system through initiatives that make incremental, targeted improvements to the sector. EDU 2.0 encompasses bold interventions to modernize the education system and catapult education outcomes toward Egypt Vision 2030 targets. Both agendas work in parallel, with significant overlaps, toward a shared goal of bringing back learning to the classroom. A key feature of the overall reform program, *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, assessing students, and collecting data. MOETE agenda builds on the initial success and momentum generated through innovative solutions. Two of these are: (i) "The Knowledge Bank," an online digital portal that provides educational, research, and cultural resources for a wide array of users in Egypt; and(ii) "Teachers First," a program to change teachers' behaviors in the classroom. MOETE has requested World Bank (WB) support to strengthen the reform of the system through EDU 1.0 and provide an enabling environment to catalyze EDU 2.0*.* Figure 1 presents the alignment between the proposed World Bank-financed project and MOETE vision.

Figure 1 Alignment of the proposed project with MOETE vision for reform program
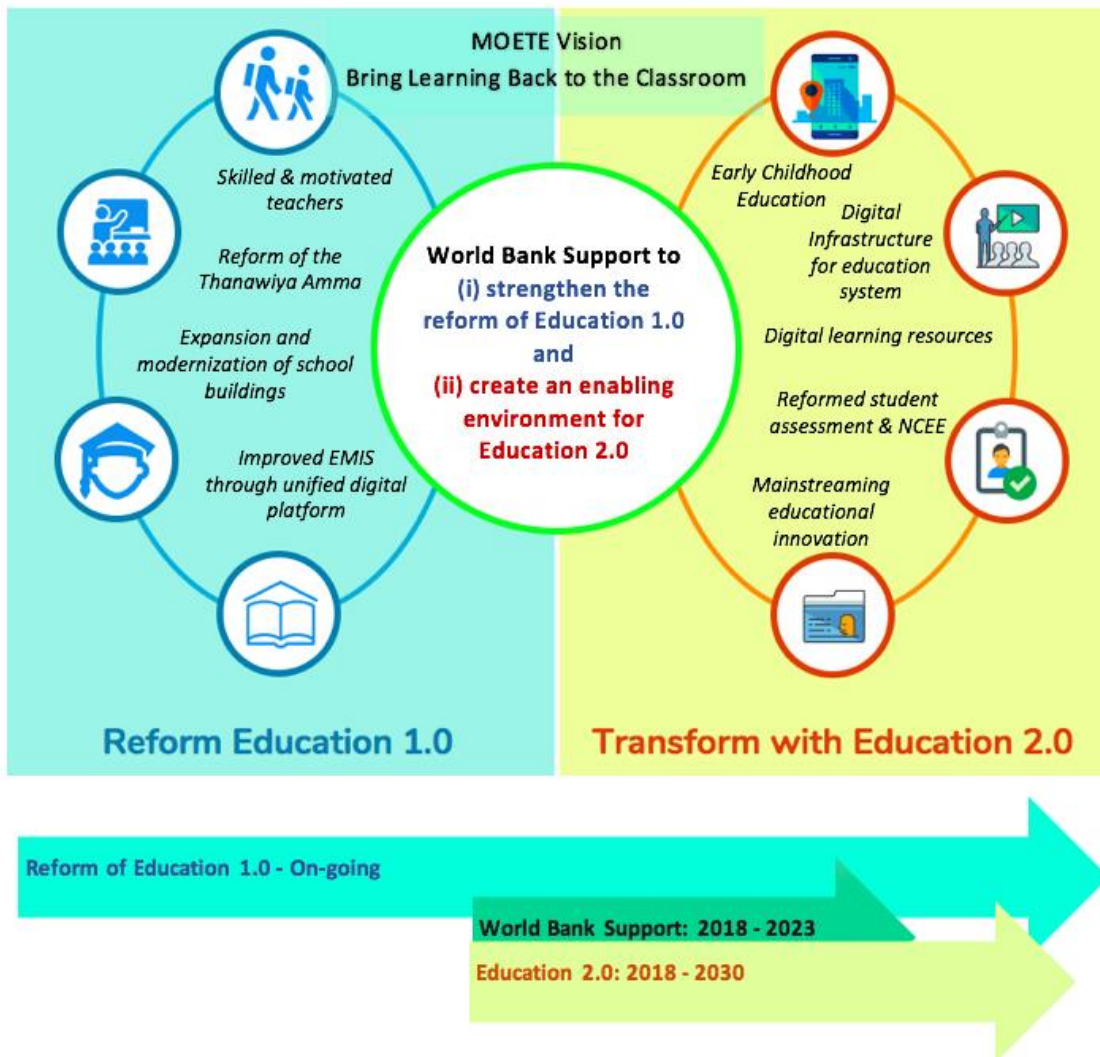
18. **MOETE has already embarked on leveraging private sector services.** The ministry collaborates closely with several international private sector firms to lay the groundwork for the reform program. International publishers were contracted to establish the Egyptian Knowledge Bank (EKB). Subsequently, Discovery and Britannica engaged in mapping their content available on EKB to the national curricula. In addition, Imagine Education was mobilized to develop Teachers First for teachers' continuous professional development (CPD) centered on effective teaching with potential links to performance evaluation. In addition, the ministry has plans to partner with mobile phone companies to enhance connectivity in schools as well as to deploy a Learning Management System (LMS). To further streamline the Nile schools[10] experience, MOETE reached an agreement with Cambridge International Education (CIE) to use its experience with the Nile schools' curricula (developed by CIE) to review the new EDU 2.0 curriculum.

_____

[10] CIE supported the development of the Nile schools' curricula and student assessment system.

The interdisciplinary curriculum framework for the primary stage has already been developed by MOETE's Center for Curriculum and Instructional Material (CCIMD). CIE will also provide capacity building to CCIMD in curriculum development and classroom-based assessment.

19. **Several development partners (DPs) are extending support to the reform program.** Several DPs historically have supported the education system and continue to do so (section IV.D, Role of Partners). To date, USAID and JICA have aligned their support with the broad objectives of the reform program, given that both objectives were designed before the launch. Most recently, JICA has agreed to apply its *Mini-Tokkatsu*[11] to early school years as part of EDU 2.0. The UK Foreign and Commonwealth Office (UK FCO) is providing technical assistance (GBP 1 million in FY18) to support: (a) development of MOETE operational plan, and (b) MOETE's capacity to implement its education reform program. Other DPs, including the European Union (EU), Germany through KfW and GiZ, and Finland, have expressed interest, although not yet specified, in supporting the reform program.

C. Higher Level Objectives to which the Project Contributes

20. The proposed project aims at improving learning quality to increase inclusive growth, prosperity and social cohesion. It is aligned with the World Bank Group's twin goals of eliminating extreme poverty and boosting shared prosperity in a sustainable manner. It also contributes to implementation of the MENA Regional Strategy's pillar for renewing the social contract. By focusing on bringing learning back to the classroom through an ambitious assessment reform and improved teaching and learning conditions, the project is expected to enhance life opportunities for all Egyptian students. The proposed project is also consistent with the Egypt Country Partnership Framework whose third focus area, "social inclusion", calls for innovative interventions in education to address governance weaknesses. Figure A.1 presents the results chain reflecting the theory of change for each component of the project.

II. PROJECT DEVELOPMENT OBJECTIVES

A. PDO

21. The project development objective (PDO) is to improve teaching and learning conditions in public schools.

B. Project Beneficiaries

22. The project is expected to benefit 500,000 students and 14,000 teachers in KG1-2. It will also benefit 338,000 KG-G12 teachers and 130,000 education leaders[12] and supervisors. Further, more than two million students are expected to benefit from the new secondary school graduation system and the new grade 4 assessment and grade 9 examination; and over 1.5 million teachers and students are expected to benefit from enhanced access to digital learning resources mapped to curricular objectives. Other beneficiaries include parents, employers, and MOETE staff at all levels who will benefit from access

---

[11] Mini-Tokkatsu is a subset of the "whole child" model adopted in the Japanese schools. It involves additional classroom and school activities, including each child cleaning the classroom and acting as the class leader for a day. The model is intended to complete the balanced development of students' physical, emotional and cognitive abilities.

[12] Education leaders comprise school principals and vice-principals, and heads of educational districts and educational directorates offices.

to information made available under the new education decision support dashboard.[13]

C. PDO-Level Results Indicators
1. Increased percentage of KGs that reach higher quality standards according to the Quality Assurance system.
2. Increased percentage of teachers demonstrating improved teaching practices (disaggregated by gender).
3. First cohort of students graduates from secondary education under the new grade point average (GPA) based assessment and certification system.

III. PROJECT DESCRIPTION

A. Project Components

23.   The proposed project will support MOETE education reform program (2018-2030) over a five-year implementation period (2018-2023). The project will strengthen the reform of EDU 1.0 and provide an enabling environment for EDU 2.0. The alignment between MOETE reform program that builds on Egypt Vision 2030 and the proposed project is presented in Figure 2. The proposed project will be implemented using investment project financing (IPF) with a results-based funding (RBF) modality. The RBF modality will apply to components 1-4 and will reimburse eligible expenditure programs conditioned on satisfactory achievement of Disbursement-Linked Indicators (DLIs) summarized in Table 1. Activities under component 5 will be implemented using IPF with disbursements against eligible expenditures for specific activities set out in the project's Procurement Plan.

24.   The proposed project comprises five components: (a) **Component 1**: Improved Early Childhood Education (US$100 million); (b) **Component 2:** Effective Teachers and Education Leaders (US$100 million); (c) **Component 3:** Comprehensive Assessment Reform for Improved Student Learning (US$120 million); (d) **Component 4:** Enhancing Education Service Delivery through Connected Systems (US$160 million); and (e) **Component 5:** Project Management, Communication, and Monitoring and Evaluation (US$20 million).

---

[13] Source of data: MOETE EMIS data and World Bank staff estimates.

Figure 2. World Bank support to MOETE reform program

Education 2.0 Objectives	Education Strategy components	Key Interventions of WB Project	Relevant Cross-cutting ICT Interventions
1. Every child given the best possible start	**C1: A great start for every child (KG1, KG2, G1)** [WB C1]	• In-service training program for KG teachers • New quality assurance system	• Digitized KG curriculum
2. Young people developing the skills, behaviors and character with significantly more children achieving to the high levels	**C2: Excellent primary and preparatory education (G2-9)** **C5: Professional development for teachers, principals and education leaders** [WB C2]	• Professional teacher & leader training • Continuous professional development system • New induction system	• Digitized curriculum through EKB & LMS • Expanded Teacher & Leaders professional development portal
	C3: Reform of Thanawiya Amma and secondary education (G10-12) [WB C3]	• New Computer-Based Tests and Examination system • GPA score for secondary graduation system • New G4 national assessment (sample-based) and G9 national exams	• Digitized student assessment & scoring
3. Equity and inclusion	**C6: Technology to connect and learn – an ICT revolution** [WB C4]	• Education Decision Support Dashboard • Education Technology Entity	
		• Curriculum reform for children with special educational needs • Improved school attendance, fewer dropouts	
4. Employers confident in TVET	**C4: Technical and Vocational Education 2.0**	• More relevant courses • Greater employer engagement in the education system	

25.   **Component 1: Improved Early Childhood Education (US$100 million).** The component aims to expand access to quality early childhood education (ECE) in Egypt, through two subcomponents.

   a. **Subcomponent *1.1. Increased access to KG*.** Aligned with the Egypt Vision 2030, the project will support increased enrollment in KG1–2 through refurbishing and equipping existing spaces in public KG classrooms.[14]

   b. **Subcomponent *1.2. Improved quality of KG education.*** The project will ensure that gains in enrollment come hand in hand with quality improvements. Specifically, the project will support: (a) the production and, when applicable, distribution of innovative learning and teaching materials in Arabic, aligned with the new curriculum; (b) the development and rollout of an in-service training program for selected KG teachers that will be aligned with the new curriculum and designed based on a diagnostic study of teaching practices. The training modules will address gender-sensitive behavior in the classroom to address gender gaps and stereotypes in education (attendance, drop outs, and enrollment in science and mathematics tracks) and the specific constraints facing girls, the role of mothers in education, and gender-based violence or sexual harassment in schools; and (c) the development and implementation of a robust quality assurance (QA) system that will include revised quality standards and incentives to promote continuous quality improvement.

---

[14] Refurbishment is limited to using existing spaces and providing necessary equipment and does not involve civil works.

26.   **Component 2: Effective Teachers and Education Leaders (US$100 million).** The component aims to improve the pre-tertiary education effectiveness of teachers, education leaders, and supervisors through two subcomponents.

a. **Subcomponent *2.1. Improved quality of continuous professional development (CPD) system*.** The project will support: (a) developing a comprehensive CPD framework for teachers, education leaders, and supervisors to define MOETE's new approach toward school-based professional development (PD). Gender sensitivity would be integrated in the design of this framework to address gender gaps and stereotypes in education (attendance, drop outs, and enrollment in science and mathematics tracks) and the specific constraints facing girls, the role of mothers in education, and gender-based violence or sexual harassment in schools; (b) assessing the professional development needs of teachers, education leaders and supervisors; (c) formulating and implementing PD plans aligned with the new CPD framework; (d) carrying out of a study of the current teacher induction system to put in place a reformed induction system that applies to newly hired teachers, education leaders and supervisors; and (e) designing and implementing a supervisors' training program aimed at improving their skills in mentoring school teachers instead of inspection-based school visits.

b. **Subcomponent *2.2. Expanded CPD opportunities.*** The project will extend the Teachers Professional Behaviors (TPB) Program to additional teachers, education leaders, and supervisors by: (a) mapping teachers' professional practices and behaviors to develop a TPB expansion plan; (b) adding teachers in new districts and directorates to said TPB Program; and (c) developing, piloting, implementing, and then scaling up a professional behavior program for education leaders and supervisors (EL&S) at the directorate, district, and school levels in line with MOETE's plans to shift to a school-based CPD system. The TPB and EL&S programs aim to establish a foundation of professional behaviors upon which additional pedagogical, subject/content, and leadership-specific training and professional development can improve school-level service delivery, as implemented under the Teachers First (TF) initiative in Egypt.[15] The training content will be adapted to incorporate climate awareness training and the gender dimension in education. The project will also support the preparation and implementation of Community of Practice (COP) and individual learning plans, monitored using ICT-enabled points and tracking system through self-evaluation, and feedback from peer and accredited supervisors; and develop and implement EL&S drawing on lessons learned from the TPB program.

27.   **Component 3: Comprehensive Assessment Reform for Improved Student Learning (US$120 million).** Through this component, the project will support MOETE's reform program to develop a new student assessment and examination system that is fair, valid, and reliable. The component has the following four subcomponents:

a. **Subcomponent 3.1. *Reforming the examination system in upper secondary education*.** The project will finance the design and development of a set of new computer-based tests to be administered twice yearly to students in grades 10, 11, and 12, the results of which will be

---

[15] Teachers First (TF) is a teacher training and professional development program that focusses on improving teachers' classroom behavior. This program comprises four pillars: (a) Continuous Professional Development; (b) Communities of Practice; (c) mentoring; and (d) use of ICT-enabled Lengo platform: a three-way assessment system (self, peer, and mentor).

aggregated to a GPA that will determine graduation from secondary education. The National Center for Examinations and Education Evaluation (NCEEE), with the support of an international firm, will develop procedures for school-based assessment and for external moderation.

b. ***Subcomponent 3.2. Introducing a grade 4 national assessment***. This project will support the design and administration of a sample-based national assessment of grade 4 student achievement in key competencies aligned with the new curriculum and a focus on literacy and numeracy.

c. **S*ubcomponent 3.3. Transforming the grade 9 examination***. The existing grade 9 examination, administered at the directorate/governorate level, regulates the transition from lower to upper secondary education and is used to place student in either general or vocational upper secondary schools. The project will design and develop a new grade 9 national aptitude test that will reform student placement in upper secondary education by reflecting the reformed curriculum for lower secondary education.

d. **Subcomponent 3.4*. Restructuring the NCEEE***. The project will contribute to finance the ongoing restructuring process of NCEEE and to build its capacity in four areas: (a) test design, (b) security and logistics, (c) scoring and management of computer-based assessment, and (d) analysis and reporting.

28.   **Component 4: Enhancing Education Service Delivery through Connected Systems (US$160 million)**. This cross-cutting component will support the government's commitment to invest in new education technology infrastructure and services. Investments in new education technology infrastructure will be funded by the Borrower. These, in turn, will support evidence-based decision-making at the national, directorate, district, and school levels. These will also ensure a focus on learning at the classroom level through the following four subcomponents:

a. ***Subcomponent 4.1. Creating an educational technology platform***. The project will support the creation of a new Education Technology Entity, to be established with legal standing, governance structure, annual budget, and staffing, and with clearly defined roles and responsibilities. This entity will have the mandate to facilitate, manage and oversee the rollout and maintenance of digital infrastructure to support current teaching and learning practices (in other words EDU 1.0), as well as new practices and approaches, enabled by digital technologies (EDU 2.0). The entity would adopt energy efficiency principles in selecting components of the technology infrastructure.

b. ***Subcomponent 4.2 Establishing the Education Decision Support Dashboard***. The project will support the design and development of an education decision support dashboard that will integrate data from other database including: training data, assessment data, content usage data and EMIS data. The dashboard will include reporting tools to support evidence-based decisions at the national and the directorate-level.

c. ***Subcomponent 4.3. Digital learning resources.*** The project will support an expanded use of e-learning resources available through the Egypt Knowledge Bank (EKB) and the Learning Management System (LMS), content mapping between the reformed curriculum framework and

EKB/LMS resources, and a gradual shift away from textbooks to digital learning resources. This subcomponent cuts across component 2.

d. ***Subcomponent 4.4. Establishing of a computer-based assessment management and delivery platform.*** The project will facilitate the design, development, and rollout of a set of new computer-based student assessment tests to be administered twice yearly to grades 10, 11 and 12. Subcomponent 4.4 will also be used for the national grade 4 and grade 9 assessments. The platform will facilitate the secure administration and grading of the tests, and timely delivery of secure individualized student reports. This subcomponent cuts across component 3.

29.   **Component 5: Project management, communication, and monitoring and evaluation (US$20 million)**. Component 5 aims to support project management, monitoring, and evaluation functions, including project coordination and communication, and specific contracts under components 1–4. A Project Director with a Project Coordination Unit (PCU) team will manage these core functions.

a. ***Subcomponent 5.1. Project management support.*** This will support project management, implementation, monitoring and evaluation (M&E), independent verification agent(s), and fiduciary arrangements, including the external auditor.

b. ***Subcomponent 5.2. Education awareness and stakeholder mobilization.*** This will support strengthened communication across the education system. Strengthening communication includes supporting the development and implementation of a communication plan, surveys, and other tools to monitor citizens' voices and engagement under the project scope.

c. ***Subcomponent 5.3. Cross-component support.*** This will support system-level initiatives to enhance the effectiveness of the results-based focus of Components 1-4. It will finance the procurement of goods, and national and international consulting services. These contracts will be included in the 18-month project Procurement Plan as follows:

- *Under component 1:* Diagnostic study of teaching practices in KG classrooms; development of in-service KG teacher training modules in light of findings from diagnostic study; impact evaluation to estimate the effect of the KG teacher training on teaching practices and student outcomes; and training and capacity building for MOETE to collect, analyze, and use data from QA system to continuously improve quality;
- *Under component 2*: Impact evaluation to assess the effect of professional development interventions on classroom performance of teachers, education leaders and supervisors;
- *Under component 3*: Training and capacity building for NCEEE staff in the context of its restructuring;
- *Under component 4*: Technology needs assessment of the education sector and technical assistance for the organizational and operational design of the Education Technology Entity.

Table 1. Summary of DLIs by component for components 1-4

Component	DLI		Allocation (US$ million)
Component 1: Improved Early Childhood Education	**DLI#1**	Increased Access to KG	50
	DLI#2	Strengthened Quality Assurance (QA) System for KG	34
	DLI#3	Extending KG In-service Teacher Training	16
Component 2: Effective Teachers and Education Leaders	**DLI#4**	Improved Quality of Teacher and Education Leader Professional Development	30
	DLI#5	Expanding Teachers Professional Behaviors Program	60
	DLI#6	Expanding Education Leaders and Supervisors Program	10
Component 3: Comprehensive Assessment Reform for Improved Student Learning	**DLI#7**	Successful Implementation of the Reform of The Secondary Graduation and Assessment System	60
	DLI#8	Grades 4 and 9 National Assessments are Designed, Developed and Successfully Administered	25
	DLI#9	NCEEE Restructured as a National Testing and Examination Center	35
Component 4: Enhancing Education Service Delivery through Connected Systems	**DLI#10**	Educational Technology Enabling Environment and Platform	70
	DLI#11	Digital Learning Resources	30
	DLI#12	Successful Implementation of Computer-Based Assessment Management Platform	60

30.   **Enhanced accountability is a key focus of the project design as reflected in all five components and respective DLIs**. Modern technology will be leveraged to increase the data and information made available to policy-makers and the public, thus improving efficiency of resource allocation and service delivery, and transparency around student assessment data and government-citizen linkages in the education sector. The proposed project aims to strengthen accountability across key stakeholders, giving the community/parents a greater *voice* in policy-making, creating a better *compact* between MOETE and schools, improving *management* within districts and enhancing *citizen/user power* over the education system. DLIs #2, #4, #7, and #10 incentivize stronger accountability relationships, which are at the core of the project design (Figure 3).

Figure 3. Enhanced accountability triangle through project design
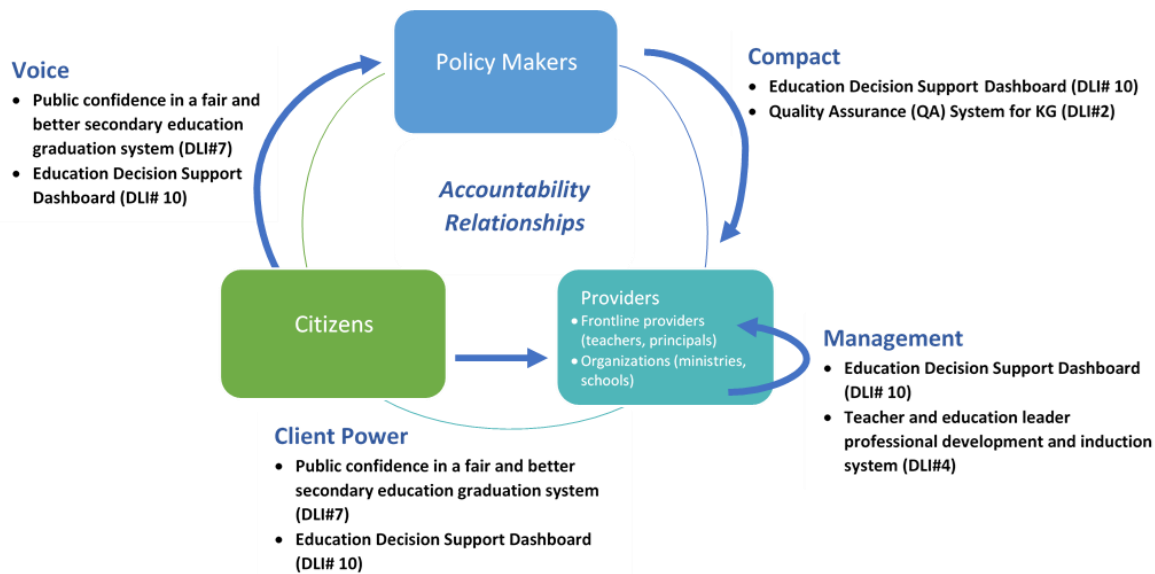
B. Project Cost and Financing

31.   **The government program focuses on the reform of the education sector through Education 1.0 and its transformation through EDU 2.0 (2018-2030). The overall education reform program[16] is expected to cost US$2.0 billion (Table 2).** The proposed World Bank-financed project will support a sub-portion of the government program across five key components. These components fall under the access and quality themes for ECE, and basic and secondary education. The project would support education in Egypt through a five-year IBRD loan of US$500 million. Details of the costs of the government reform program, *excluding the costs of curriculum reform and technical education reform* are provided in Appraisal Summary (Section VI). Table 2 presents the costs for the US$2 billion reform program and for the proposed project.

32.   **The project will be implemented using IPF with a RBF modality.** Under the results-based components 1-4, the project disbursements will be: (a) contingent on the satisfactory achievement of the DLIs, as verified independently by a third party; and (b) against selected key education budget line items, referred to as Eligible Expenditure Programs (EEPs).

33.   **Disbursement under the results-based components 1 – 4 will reimburse expenditures incurred by MOETE in selected budget line items referred to as Eligible Expenditure Programs.** The EEPs include sizeable recurrent expenditures that would have an impact on the agreed results, as well as smaller expenditures that finance small-scale entities and administrative systems. The proposed list of eligible expenditures comprises recurrent expenditures under Chapter 1 (salaries and wages) of the budget allocated to the ministry and its affiliated entities for components 1 and 2; recurrent training cost for component 2; student assessment costs for component 3; and Chapter 1 for the central MOETE and EMIS

---

[16] Excluding curriculum reform and technical education reform.

administration for component 4.

34.   **The RBF mechanism rewards MOETE for addressing significant policy and implementation bottlenecks and achieving key milestones necessary to realize the overall education reform program**. This approach will help increase the overall results orientation of the government's strategy. The results-based approach is critical to strengthen the education system because it is geared toward changing critical behaviors and shifting the focus toward bottlenecks that impede the education system, changes without which the project's strategic investments would have negligible effect. The use of DLIs is an opportunity to leverage MOETE's investments in data systems and to institutionalize a culture of measurement of results. DLIs will serve as a tool to shift the policy dialogue toward results, especially in the initial years.

35.   **The project comprises 12 DLIs with annual results targets from YR 1 to YR 5.** With a total of 33 disbursement-linked results (DLRs) under 12 DLIs and the allocation of US$480 million for the four components, each DLR is priced at a value that reflects its significance in the results chain and that incentivizes the achievement of the respective DLR (Annex D). The World Bank financial management policies and procedures will apply to the eligible expenditures. All procurable project activities will be subject to the World Bank Procurement Regulations.

Table 2. Total costs for the government reform program and the proposed project, by component (US$ million)[17]

PROJECT COMPONENTS	PROGRAM COST	IBRD LOAN	COUNTERPART FUNDING
Component 1: Improved Early Childhood Education	500	100	400
Component 2: Effective Teachers and Education Leaders	250	100	150
Component 3: Comprehensive Assessment Reform for Improved Student Learning	330	120	210
Component 4: Enhancing Education Service Delivery through Connected Systems	900	160	740
Component 5: Project Management, Communication, and Monitoring and Evaluation	20	20	0
Total	2,000	500	1,500

C. Lessons Learned and Reflected in the Project Design

36.   Based on a portfolio review of the World Bank-financed education projects in Egypt since 1977, a review of international good practice, and the World Development Report 2018, the project design

---

[17] Excluding curriculum reform and technical education reform.

incorporates the following lessons learned:

    a.   **Expanding access to quality preprimary education and improving early skill formation are critical**. Limited specialized in-service training opportunities and pedagogical support constrain KG teachers' ability to structure learning around age-appropriate and play-based activities that stimulate child development and early noncognitive skills. Also lacking is an efficient quality assurance system for KGs that could monitor progress and incentivize continuous quality improvements. In turn, these deficits limit preschool education's contributions to children's school readiness. Thus, expanding access to quality preprimary education that is governed by a QA system is key to transform Egyptian students' entire learning trajectory.

    b.   **Provide teachers and education leaders with timely and relevant professional development within the framework of a CPD**. Efforts to develop new guidelines and approaches to improve teachers' and school leaders' effectiveness should be oriented toward CPD. Rather than one-off trainings and activities held "off-site" and far from the location of daily teaching and learning, these efforts should be delivered as close to the classroom and school as possible. CPD systems would include a solid foundation of initial training on professional behaviors to improve educators' "willingness to change" and take advantage or higher order skills and knowledge-based training and professional development. Beyond simply tracking the number of teachers and/or supervisors trained, training programs require built-in M&E mechanisms to track effectiveness of the teacher training. Finally, impact evaluations have been included in the proposed project to properly assess the nature, extent, and actual impact of interventions.

    c.   **Establish a fair, valid, and reliable student assessment and examinations system** consistent with the curriculum reform and prioritize the skills and competencies deemed relevant. In an education system that revolves around high-stakes examinations, the most powerful tool for curriculum reform is to reform these examinations. In Egypt, as in many other countries in which the grade 12 examination has a double function of graduation and selection for university entrance, splitting these two functions can lower the stakes, enabling more students to graduate from secondary education while keeping university entrance competitive. In anticipation of this split, the government plans to replace *Thanawiya Amma* with a fair, valid, and reliable testing system. High-stake examinations are the pivotal entry point of the current reform program and a reform that was not attempted in previous education projects.

IV. IMPLEMENTATION

A.   Institutional and Implementation Arrangements

37.   **A Project Steering Committee (PSC)** will be established to provide overall strategic direction to project implementation and oversight in the context of the overall sector reform program. The PSC will review the project (and the overall reform program) progress and approve annual work plans and help resolve critical implementation issues that may arise. The committee will be chaired by a senior MOETE official designated by the minister on a rotating basis and will include the PSC secretary to support the regular functioning of the PSC. The PSC comprises 5–7 members, including, PCU director (ex officio) and at a minimum relevant representation from MOETE, NCEEE, Ministry of Investment and International Cooperation, Ministry of Finance, Ministry of Communication and Information Technology, and other ministries, and other ministries. The PSC composition and TORs will be included in the Project Operations Manual (POM).

38.   **Project Coordination Unit (PCU).** The project will finance functions for ongoing support for MOETE in implementing the proposed World Bank-financed project: overall coordination of project activities, including communication with MOETE's implementation entities/directorates; M&E, including hiring and interfacing with the verification agent to verify DLIs; and procurement and financial management functions. PCU will comprise: a project director; a co-director for M&E; a M&E technical officer (as may be required); procurement and financial management function that will be performed either through a firm or individual procurement, financial management officers and an accountant; and four technical coordinators in the areas of ECE, teachers and education leaders' professional development, student assessment, and ICT in Education. All PCU staff will collaborate closely with MOETE's relevant directorates/units, and will be full-time staff.

39.   **The PCU** will coordinate with MOETE directorates/units that are responsible for the achievement of the agreed DLRs. To ensure smooth implementation, a focal point will be designated in each relevant directorate/unit to be responsible for communication with the PCU.

40.   The proposed project activities will be implemented in close coordination with key **MOETE directorates/entities.** *For component 1*, MOETE's Central Administration for Basic Education and Kindergarten would play a central role for successful implementation. *For component 2*, a CPD unit will be established to institutionalize the various CPD interventions in MOETE. **NCEEE** will be responsible for implementation of component 3. The restructuring of NCEEE becomes critical for the successful implementation of this component—and for the success of the entire project and the government's overall education reform. *For component 4*, **a new Education Technology Entity** will be established to facilitate, manage, and supervise the rollout and maintenance of a digital infrastructure and decision support platform. Initial steps were already taken by the MOETE to establish the entity in partnership with the Ministry of Communication and Information Technology. A ministerial decree is required to establish this new entity. Its organization, structure, and staffing fall under the project scope. *For component 5*, the PCU will be responsible for implementation, in close conjunction with the ministry's relevant directorates/entities (Annex C, Implementation Arrangements).

41.   **The World Bank will provide continuous implementation support** to ensure meeting the agreed Project Development Objective (PDO) as measured by the Results Framework (RF), and in compliance with the World Bank fiduciary and safeguards policies and procedures.

B. Results Monitoring and Evaluation

42.   **Monitoring and evaluation is built into the design of the proposed project.** M&E will focus on inputs, processes, outcomes, and intermediate outcomes as detailed in the results framework (see section VII) and the DLIs (Annex D. Under component 5, the project's M&E function will have two broad tasks: (a) data collection and analysis, and reporting related to the RF; and (b) management of the third-party entity that is responsible to verify independently the DLRs. To achieve its mandate, the PCU co-director for M&E will be responsible for developing the M&E system to be included in the POM. The M&E system will detail the roles and responsibilities for data collection and data access to ensure timely and regular reporting, including any clearances or approvals required to conduct surveys or field visits. The project will systematically use data to assess whether project implementation is on track and whether modifications and restructuring are needed. Also under component 5, the project will support the design and

implementation of two impact evaluation studies to assess the effect of the KG teacher training on teaching practices and student outcomes, and to assess the effect of the various professional development plans on the behavior of teachers, education leaders and supervisors.

C. Sustainability

43.   **The proposed project is anchored in an unprecedented education sector reform in Egypt aimed to address the root causes of poor learning outcomes.** The reform involves a paradigm shift in the service delivery model for teaching and learning. The EDU 2.0 reform offers a unique opportunity for the World Bank to support critical *game changers* for project's success and sustainability beyond project closing. By establishing new more efficient and transparent systems focused on learning and linking the financing to results, the project has a high chance for sustainability because it will help replace the old system. The proposed project would support restructuring the NCEEE to become the National Center for Examinations. In addition, the ministry is establishing a unit in MOETE to institutionalize Teacher Professional Behavior program and other continuous professional development interventions. Subsequently, the ministry will launch restructuring of all training-related entities/directorates within the ministry to create the organization, mandate, staffing, funding, and capacity to implement the CPD framework.

D. Role of Partners

44.   **Development Partners in Egypt have shown an increased interest in adopting a more systemic approach to support Egypt's education sector.** This interest is evident in the revised terms of reference (TOR) for the DP's sub-group for education, which focus on more effective coordination and harmonization among DPs. The meetings focus on: (a) collaborating with MOETE officials to address sector priorities; (b) engaging the relevant MOETE representatives to present policy directions, annual plan targets, and specific gaps that require the DPs' additional financial and/or technical resources; and (c) enhancing synergy among the DPs' ongoing/planned activities and reaching initial agreement on additional support. The World Bank is proactively engaging DPs to ensure consistency and harmonization in responding to the financial and technical requirements to implement the education reform program. This goal includes regular bilateral and collective meetings with key DPs such as EU, Germany through GiZ and KfW, JICA, UNICEF, UNESCO, UK through UK FCO and the British Council, and USAID. With UNICEF and financing from the UK FCO, the World Bank has embarked on developing the System Approach for Better Education Results (SABER)-ECD.

V. KEY RISKS

A. Overall Risk Rating and Explanation of Key Risks

45.   **The overall risk of the project is considered "high."** Key risks that could adversely affect the achievement of the project development objective and the sustainability of results and risk mitigation measures are described below.

46.   **Political and governance; sector strategies and policies.** Both risks are rated "high" because of the ambitious reform agenda. The government's reform agenda seeks change at the policy, system, and practice levels. With this reform, the government intends to influence the entire education system at the central, directorate, district, school, and classroom levels. For these reasons, this reform requires unprecedented significant and sustained commitment and great political will and stakeholder buy-in. The

President and the government have confirmed their commitment to transformational education reforms. The incentive for educational change is evident in the 2014 Constitution; Egypt Vision 2030; and MOETE reform program, "National Project to Reformulate the Egypt Education System."

47.   **Macroeconomic risk is rated "substantial".** Despite the bold economic reforms adopted by the government, there remains the risk of slower implementation of reforms, which would undermine fiscal sustainability and private investment. The World Bank will closely monitor the situation to develop project-specific mitigation measures over the project life.

48.   **Fiduciary risk.** Based on the review of the fiduciary arrangements of the education sector, the proposed project design, and the gaps to be addressed, fiduciary risk is rated "high." The key risks are: (a) the lack of sufficient assurance regarding other parts of the program-related expenditures; (b) the dispersed nature of sizable recurrent expenditures included in EEPs; and (c) the sustainability of financing the reform program. The main mitigating measures include the accurate definition of the project scope, the deployment of detailed DLIs to verify project results, and strengthened oversight regarding payroll expenditures and controls.

49.   **Technical design of the project and institutional capacity for implementation and sustainability.** Both risks are rated "substantial" primarily due to: (a) the implementation risks posed by the number of policy choices and legislative processes needed to enable specific reform efforts; and (b) the substantial implementation and institutional risks triggered by MOETE's implementation capacity, the need to restructure two MOETE-affiliated entities responsible for student assessment and continuous professional development of teachers, education leaders, and supervisors, in addition to the need to establish a new education technology entity. MOETE generally has the capacity to provide basic services. However, for this reform, the sheer volume of the policy and implementation challenges as well as the need to work collaboratively with other agencies require well-sequenced, well-paced actions that receive sustained political support and sufficient financial resources to fund the achievement of DLIs. As a risk mitigation measure, the ministry is seeking support from local and international private sector firms to design and implement the selected interventions related to teachers', educational leaders', and supervisors' CPD; student assessment; and digital learning resources.

50.   **Stakeholders' risk is rated "substantial",** given that the education reform typically would impact a wide span of stakeholders and beneficiaries. As a risk mitigation measure, the World Bank conducted a political economy analysis (PEA) that guided the project design and the choice of DLIs/DLRs. Another PEA would be conducted toward the end of project implementation as a supplemental element to the Implementation Completion and Results report (ICR). The project also focuses on using communication as a critical basis for citizen engagement, making information available, and including regular opinion and pulse surveys as part of project activities.

VI. APPRAISAL SUMMARY

A. Economic and Financial (if applicable) Analysis

51.   **The project is estimated to yield positive returns on the investment.** The expected net present value (NPV) is US$5,243 million (or US$3,763 per student). As for the investment's efficiency, the internal

rate of return (IRR) is estimated at 32 percent under base case conditions. These estimates are obtained by comparing the projected overall project cost to the present value of the expected benefits of the project. Future benefits use differentiated rates of returns to level of completion by gender, ranging from 5 percent for female primary completion to 40 percent for male upper secondary level completion, to estimate increased lifelong earnings –computed as the appropriate number of years from graduation until the normal retirement age of 65. These estimates rely on several assumptions. Chief amongst these is the plausibility of future employment opportunities for Egyptian students in a labor market without unforeseen frictions. The estimates also assume compliance with annual project targets.

52.   **Economic returns are robust to sensitivity analysis.** Even under more conservative scenarios, the NPV of benefits exceeds those of the costs of investment. Two scenarios, in which the objectives are achieved at higher costs are added to the base case estimates, would yield a NPV of US$3,128 per student, and an IRR of 16 percent. To stress-test the results further, the parameter with the greatest impact on NPV calculations––the discount rate––is increased to 4 percent and then to 5 percent. Even in these scenario, the project continues to yield a positive NPV of greater than US$1,200 per student. This result shows the large impact of educating more students at a higher quality level, despite the higher opportunity cost of investment. The positive social externalities of the project provide an additional rationale for project investment. As high as the above estimated economic returns may be, they do not capture the social and intangible benefits to increasing access to early childhood education and quality primary and secondary education. These benefits range from improvements in health outcomes to greater equity and social welfare. The detailed methodology and results of the economic analysis are available in the project files.

B. Technical

53.   **The proposed project is anchored in the government education reform program, which** aims to bring back learning to the classroom. The reform program has two parallel approaches: (a) EDU 1.0 continues to serve students in the existing education system, and the planned reforms will aim to make incremental and targeted improvements; (b) EDU 2.0 brings a substantive reform agenda for students enrolled in KG 1, KG 2, and grade 1 from September 2018 onward. A key feature of the EDU 2.0 reform program is to use a digital platform for learning and teaching, performance evaluation, assessment, and data collection for M&E and policy-making.

54.   **The project design is aligned with the 2018 World Development Report's** three policy responses to realize education promise: (a) assess learning, (b) act on evidence, and (c) align actors. With its emphasis on transforming the student assessment system in Egypt, component 3 of the proposed project puts the issue of measurement front and center of the country's education agenda. The assessment reform proposes the use of a range of metrics to shine a light on learning and make it a serious goal. In turn, components 1 and 2 act on available evidence to improve learning from KG to upper secondary education. By expanding access to quality early childhood education, component 1 aims to set children on a high-development trajectory and be ready to learn. In turn, through a new CPD for teachers and school leaders, component 2 focuses on making teaching more effective and creating new mechanisms to mentor, support, and motivate teachers. Finally, component 4 supports the development and implementation of a digital platform that would make information and metrics accessible to all actors, and create an enabling environment through which all stakeholders could mobilize and innovate.

55.   **The project is aligned with the priority areas of Education for Competitiveness (E4C),** the Bank's flagship education initiative in MENA. Through expert and stakeholder consultations, E4C has identified priority areas for investment to transform MENA's education systems. These priorities comprise: (a) the accelerated expansion of quality early childhood education, (b) a strong focus on teaching and learning twenty-first century skills and values, and (c) the effective use of information to strengthen accountability. The proposed project aligns closely with these priorities. Component 1 supports a two-fold effort to expand access to KG 1–2, while improving the quality of teaching and learning in KG classrooms through a strengthened QA system and an in-service teacher training program. Components 2 and 3 would shift the learning experiences of students G1–12 from rote memorization to critical thinking by simultaneously upgrading teachers' and school leaders' skills, and reforming the student assessment system. Finally, component 4 is leveraging technology to make student, teacher, and school-level information available for better decision-making and continuous quality improvement.

56.   **MOETE is being selective in its reform approach by tackling early grades, teachers, secondary graduation examinations, and ICT in education as the vehicles to improve service delivery**. The ministry is seeking support from local and international private sector firms for the design and implementation of the selected interventions. In parallel, the ministry is embarking on restructuring its key entities responsible for student assessment and professional development. Both interventions would require legislative changes as well as organizational restructuring in close collaboration with the Central Agency for Organization and Administration. The ongoing redrafting of the Teachers Law is the perfect opportunity to anchor the new vision in the new legislation.

57.   **For the reform program to succeed and for the World Bank's contribution to the program to achieve its objectives**, four fundamental principles need to be established and maintained during project implementation and beyond. They are: (a) effective and timely communication and consultations with sector stakeholders; (b) legislative changes that would entail policy changes within the ministry and the Supreme Council for Pre-Tertiary Education (SCPTE), and approvals of changes that would involve bodies other than MOETE and the SCPTE, as well as higher level legislation requiring Parliamentary approvals; (c) coordinating DPs interventions to respond to reform program priorities; and (d) rationalizing collaboration with the private sector to increase ongoing efforts to leverage private funding.

C. Financial Management

58.   The fiduciary systems underlying the education sector's activities are governed by Egypt's laws regulating the state budget, government accounting, and procurement. The annual budget calendar largely provides for orderly and timely budget formulation and appropriation. The enacted state budget and final account reports are made public. A predictive control system is implemented by Ministry of Finance (MOF) financial controllers stationed in accounting units of all line ministries. Accounting units across the central government use a financial management information system (FMIS) to record budget allocations and modifications, and to execute the budget. MOF has confirmed its plans to complete the automation of the FMIS by end of March 2018, and issued directives no. 2/2018 and 3/2018 with additional instructions on implementation mechanisms and controls in this regard. Monthly budget execution reports detailing expenditures and revenues are produced by budget entities and submitted to the MOF's Final Accounts sector within 10 days after the end of each month. Annual final accounts are produced and audited within six months of fiscal year-end.

59.   The project will be implemented using IPF with RBF modality using a set DLIs described in this document. The DLIs will be verified by an independent third party (entity/consultant), to be contracted by the government. Meanwhile, the eligible expenditures will be reported semiannually to the World Bank through Interim Financial Reports (IFRs), whose design and content were agreed with MOETE, as well as through an annual external audit. The proposed list of eligible expenditures comprises recurrent expenditures under Chapter 1 (salaries and wages) and other budget lines allocated to the ministry and its affiliated entities (see section III.B, Project Cost and Financing). Given the focus on eligible expenditures only, the key FM risks include the lack of sufficient assurance/due diligence regarding other parts of the program-related expenditures; the payroll controls given the massive and extended nature of the education wage bill, the verification of DLIs, the funds flow, and the sustainability of financing the reform program. The main mitigating measures include the accurate definition of the project scope and funds flow arrangements; focusing on payroll controls in carrying out the internal audit function and in the scope of the project's external audit TOR, and hiring an independent qualified third party to verify the achievement of DLIs.

D. Procurement

60.   Procurement will be carried out in accordance with the World Bank Procurement Regulations for IPF Borrowers, dated July 2016, revised November 2017; the Loan Agreement; and the Procurement Plan approved by the Bank. The Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants, dated October 15, 2006, and revised in January 2011 and as of July 1, 2016, will apply to project activities. All procurable project activities, whether or not linked to the DLIs (or the EEPs), will be subject to the World Bank Procurement Regulations.

E. Social (including Safeguards)

61.   The project supports a comprehensive approach to education reform that would improve the education system for all students from KG through secondary school. Since the public education system in Egypt is used primarily by lower and lower middle-income socioeconomic groups, the project would support improvements provided to those less privileged. Component 1 includes DLI#1, which requires that 50 percent of the enrollment increase be in the poorest districts, as identified by the CAPMAS (Annex D). Providing better quality KG education to the poorest segments of society would have fundamental positive outcomes on their education, development, employability, and life skills in subsequent years. Furthermore, the reform of secondary education examination, *Thanawiya Amma*, is envisaged to reduce the widespread use of private tutoring and give every student an equal opportunity to progress in life.

62.   **Transparency and citizen engagement** are embedded in the project design. The provision of data on schools and student assessments will enable stakeholders' engagement and education system accountability. Subcomponent 5.2 supports the development of a communication plan that adopts a two-pronged approach: (a) addressing MOETE's own teaching and nonteaching staff, and (b) addressing sector stakeholders outside the ministry via opinion surveys to assess the impact of communications on citizen engagement. Using existing communications channels/platforms to gather all the information in one centralized system primarily will help take stock of the needs and concerns of students, parents, staff, officials, and other stakeholders so that MOETE decision-makers are aware and can act on those concerns. The project also would encourage schools to establish parent-teacher associations (PTAs) in schools that have none.

63.   **Gender.** At the primary level, female and male students are in balance. However, existing data show a disparity in completion rate at the secondary level (52 percent and 63 percent, respectively). Since secondary completion/graduation depends on success in the *Thanawiya Amma,* it is appropriate to assume that the examination and the rampant private tutoring that it generates is the cause of this gender gap. Therefore, the reform of the examination and the secondary graduation system that the proposed project supports has a strong gender rationale. At the KG1-2 level, female students' enrollment also lags slightly (645,172 males vs. 598,880 females), which makes a strong case for the expansion of KG enrollment targeting the more vulnerable districts, where female enrollment tends to be comparatively lower. Data on teachers does not suggest any disparity in access to employment or in salaries, and data on gender differentiation regarding professional development is not available (Table E.1). As stated above, the project will address the gender dimension by: (a) collecting and monitoring gender-disaggregated data as part of project's results, including data on additional enrollment in KG and student graduates under the new GPA-based assessment system, as well as in the Education Decision Support Dashboard; (b) capturing gender-sensitive behavior in the KG classroom training modules and the gender dimension in the CPD framework and classroom management training; and (c) encouraging a balance of opportunities for teachers' and education leaders' CPD under component 2 through monitoring the percentage of female teachers, education leaders, and supervisors having access to training and other professional development opportunities.

F. Environment (including Safeguards) and Climate Co-Benefits

64.   The project is classified as Category C with no requirements for safeguard instruments.

65.   **On climate co-benefits,** according to the Joint Report[18] on Multilateral Development Banks Climate Finance, the education sector is considered one of the cross-cutting sectors eligible for climate co-finance for both adaptation and mitigation (category 9, sec. 9.1). The use of energy-saving equipment is eligible for mitigation co-finance (category 3, sec. 3.3). The project would yield some environmental benefits associated with expanding the digital infrastructure in the learning process. The reduced paper consumption would minimize indirectly the environmental impacts associated with the paper industry. Under component 2, as part of the Teachers Professional Behaviors and Education Leaders and Supervisors programs, and the induction program for new teachers, school leaders, and supervisors, the project would introduce awareness and educational materials about climate change vulnerabilities, adaptation,[19] and mitigation. Given the large scale of Egypt's education system, teachers', supervisors', and principals' awareness of climate adaptation and mitigation will be raised, thus influencing and/or educating millions of students. This awareness among both education staff and students would support future political shifts to implement necessary adaptation and mitigation measures. The estimated co-benefits that would apply to the project are related to DLIs#5 and #6, totaling US$70 million. Climate awareness will form approximately 11 percent of the training modules. Although the World Bank would

---

[18] This report was written by a group of Multilateral Development Banks (MDBs), comprising the African Development Bank (AfDB), the Asian Development Bank (ADB), the European Bank for Reconstruction and Development (EBRD), the European Investment Bank (EIB), the Inter-American Development Bank (IDB), and the International Finance Corporation (IFC) and the World Bank (WB) from the World Bank Group (WBG). http://www.worldbank.org/content/dam/Worldbank/document/Climate/mdb-climate-finance-2014-joint-report-061615.pdf

[19] The awareness of adaptation would include increasing climate change issues (such as changing patterns of rains, floods, and droughts and their corresponding impacts on food security) and adequate responses to major climate events highlighted in Egypt's Intended Nationally Determined Contribution (INDC), such as floods and extreme heat waves.

advocate for energy savings principles, it is not possible to calculate co-benefits given that, under the relevant DLIs, the project financing is results-based. Regarding the reduced use of paper due to the extended deployment of ICT, assessing the co-benefits is not possible under the current MDB methodology.

G. Other Safeguard Policies (if applicable)

H. World Bank Grievance Redress

66. Communities and individuals who believe that they are adversely affected by a World Bank (WB) supported project may submit complaints to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit *http://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service*. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org.

VII. RESULTS FRAMEWORK AND MONITORING

Results Framework
COUNTRY : Egypt, Arab Republic of
Supporting Egypt Education Reform Project

Project Development Objectives

The project development objective (PDO) is to improve teaching and learning conditions in public schools.

Project Development Objective Indicators

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
Name: 1. Increased percentage of Kindergartens (KG) that reach higher quality standards according to the Quality Assurance (QA) System		Percentage	0.00	50.00	Annual as of YR 3	PCU progress report	MOETE/ Central Administration for Basic Education and Kindergarten
Description: The Quality Assurance (QA) system will be used to assess KGs along a quality classification continuum. This indicator tracks the percentage of KGs that reach at least one higher level in the KG quality classification continuum.							
Name: 2. Increased percentage of teachers demonstrating improved		Percentage	0.00	35.00	Annual	MOETE	MOETE

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
teaching practices							
Percentage of female teachers demonstrating improved teaching practices		Percentage	0.00	40.00	Bi-annual	PCU progress report	PCU

Description: Standards for Teachers' teaching practice will be developed. This indicator will track the increase in the percentage of teachers demonstrating improved practices, in accordance with the teaching practices standards, as a result of the Teacher Professional Behavior (TPB) program.

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
Name: 3. First cohort of students graduates from secondary education under the new GPA based assessment and certification system		Text	Current school graduation system "Thanawiya 'Amma"	First cohort of students graduates from secondary education under the new GPA based assessment and certification system	Annual	MOETE and NCEEE	MOETE

Description: Description: This outcome indicator tracks the design, development, and administration of the new GPA-based assessment and certification system at the end of the secondary education stage (grade 12). Given the project duration of five years, only one cohort of students can possibly undergo the new GPA-based system throughout the three grades of upper secondary, and that would entail the best possible indicator of success for this ambitious reform.

Intermediate Results Indicators

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
Name: 1. Mapping of existing spaces for KG classrooms		Text	Does not exist	Mapping exercise of available public spaces conducted	Once at the end of YR 1	PCU progress report	GAEB

Description: This indicator tracks the mapping exercise of available public spaces conducted during Y1 of the project. The outcome of this exercise will be used to inform the refurbishment and equipment of additional KG classrooms.

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
Name: 2. Refurbishment and equipping existing classroom spaces		Percentage	0.00	90.00	Annual	PCU progress report	GAEB

Description: This indicator tracks the percentage of spaces refurbished and equipped into KG classrooms out of total available spaces, based on the outcome of the mapping exercise completed in YR 1 of the project.

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
Name: 3. Diagnostic study of KG teaching practices		Text	Does not exist	KG Teaching practices study conducted	Once at the end of YR 1	PCU progress report	MOETE/ Central Administration for Basic Education and Kindergarten

Description: This indicator monitors that a diagnostic study of KG teaching practices is conducted in a representative sample of KG classrooms in the country. A KG classroom observation tool will be developed to conduct this study and will be reported by the PCU in the quarterly progress report. The outcome of the assessment will

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
be used in developing or revising the KG teacher training program referenced in DLI#3.							
Name: 4. Developed and implemented Continous Professional Development (CPD) framework		Text	Does not exist	CPD framework in active usage as basis for national, directorate, district, and school levels Professional Development plans	Annual	PCU progress report	MOETE
Description: This indicator will monitor the design, development, and implementation of the CPD framework for professional development plans at the national, directorate, district, and school levels.							
Name: 5. Updated Induction program for new teachers, school leaders, and supervisors		Text	current induction program	Second cohort of new teachers, education leaders, and supervisors hired are trained	Annual	PCU progress report	MOETE

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
				under the new induction program			

Description: This indicator monitors the development and the implementation of a new induction program developed in accordance with the CPD framework.

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
Name: 6. Expanded Teacher Professional Behavior (TPB) program		Percentage	0.00	45.00	Annual	PCU progress report	MOETE
6.a. Percentage of schools with COPs established under the Teacher Professional Behavior (TPB) program		Percentage	0.00	75.00	Annual	PCU progress report	MOETE
6.b. Percentage of female teachers trained under TPB program		Percentage	0.00	40.00	Annual	PCU progress report	MOETE
6.c. Climate awareness training is included in TPB training program modules		Yes/No	N	Y	Bi-Annual	PCU progress report	MOETE

Description: This indicator monitors the percentage of teachers trained under the TPB program, in accordance with the professional development plan

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
Name: 7. Education Leaders and Supervisors (EL&S) program established		Percentage	0.00	45.00	Bi-Annual	PCU progress report/ MOETE	MOETE
7.a. Percentage of female EL&S trained		Percentage	0.00	40.00	Bi-Annual	PCU progress report/ MOETE	MOETE

Description: This indicator monitors the percentage of education leaders and supervisors trained under the new EL&S program as an indication of the establishment of the new program and its usage

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
Name: 8. Grade 10, 11 and 12 tests in eight subjects designed, developed and administered		Text	Does not exist	New grades 10,11,12 tests administered nation-wide	Annual	MOETE and NCEEE	MOETE

Description: This indicator monitor the design, development, and administration of the grades 10, 11, 12 tests nationwide.

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
Name: 9. Grade 4 sample-based national assessment test designed, developed and administered		Text	Does not exist	Grade 4 national assessment successfully administered	Annual	NCEEE	MOETE

Description: This indicator monitors the design, development, and administration of the sample-based grade 4 national assessment by YR 4.

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
Name: 10. Grade 9 new national test designed, developed and administered		Text	Does not exist	New grade 9 national assessment successfully administered	Annual	NCEEE and MOETE	MOETE

Description: This indicator will monitor the design, development, and administration of a fair, valid, and comparable grade 9 test by YR 5

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
Name: 11. Restructuring and strengthening NCEE capacity		Text	Does not exist	NCEEE functions as the national center for tests and examinations	Annual	NCEEE/ PCU progress reports	MOETE

Description: This indicator monitors the progress made toward restructuring the NCEEE into a national testing and examination center.

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
Name: 12. Established education technology entity		Text	Does not exist	Education Technology entity fully operational: (a) adequately staffed; (b)	Quarterly	PCU progress report	MOETE

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
				sufficiently funded; (c) actively monitor and report on implement ation; and (d) produce annual operational plans			

Description: This indicator will monitor the establishment of an operational education technology entity.

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
Name: 13. National Education Decision Support Dashboard operational		Text	Does not exist	Fully operational National Education Decision Support Dashboard: (a) populated with data from four data sources: training	Annual	PCU progress report	MOETE

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
				data, grades 4 and 9 assessment data, digital learning resources usage data, and EMIS data; and reporting tools; and (b) evidence of utilization to support evidence-based budget preparation and allocation at governorate and district levels.			
13.a. Data provided through the dashboard are disaggregated by gender		Yes/No	N	Y	Quarterly	PCU progress report	MOETE

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
Description: This indicator monitors the design and development of an operational Education data dashboard that is populated with data and utilized.							
Name: 14. Connected school infrastructure established		Text	Does not exist	Connected school infrastructure operational	Quarterly	PCU progress report	MOETE
Description: This indicator monitors the digital infrastructure in the classroom necessary for the use of digital learning resources (EKB/LMS) by teachers; educational leaders and students. Digital infrastructure comprise (a) school Internet connectivity; and (b) classroom technology packages, which includes tablets for grades 10–12 students, clickers for KG1–2 and grade 1 students, and digital learning resources uploaded to tablets for teachers and students. It would be considered operational when (a) 80 percent of classrooms have function classroom technology packages; and (b) 80 percent of target schools have functioning Internet connectivity.							
Name: 15. Digital learning resources utlized		Text	Does not exist	Digital learning resources utilized: a.80% of unique monthly users: users include students, teachers, and schools b.80% unique monthly user	Bi-Annual	PCU progress report	MOETE

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
				sessions: users include students, teachers, and schools			
15.a. Percentage of female unique monthly Student users		Percentage	0.00	65.00	Annual	PCU progress report	MOETE
15.b. Percentage of female unique monthly Teacher users		Percentage	0.00	65.00	Bi-Annual	MOETE/ PCU progress report	MOETE

Description: This indicator monitors the utilization of the digital learning resources by: students, teachers, and schools

Name: 16. Computer-based assessment management and delivery platform		Text	Does not exist	Functional Platform: a.platform designed, tested and deployed b.data transfer, management, analysis and reporting platform for	Bi-Annual	PCU progress report	MOETE

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
				individual assessment results developed and deployed			

Description: This indicator monitors the design and the development of the computer-based assessment management and delivery platform.

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
Name: 17. Project communication plan developed and implemented		Text	Does not exist	Project communication plan implemented as a tool for citizen engagement in the education reform process	Quarterly	PCU	PCU

Description: This indicator will monitor (a) the development and the update of the communication plan; (b) the implementation of opinion surveys in YR 1, 3, and 5 to help formulate the communication plan; and (c) the impact of the communication activities in YR 3 and 5.

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
Name: 18. Percentage of planned communication activities, by media category, implemented		Percentage	0.00	80.00	Quarterly	PCU	PCU

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
Description: This indicator monitors the percentage of planned communication activities implemented in accordance with the communication plan.							
Name: Grievances resolved within the stipulated service standards for response times		Percentage	0.00	70.00	Bi-annual	PCU	PCU
Description: This indicator tracks the percentage of grievances resolved within the stipulated service standards for response times as defined in the POM							

Target Values

Project Development Objective Indicators

Indicator Name	Baseline	YR1	YR2	YR3	YR4	YR5	End Target
1. Increased percentage of Kindergartens (KG) that reach higher quality standards according to the Quality Assurance (QA) System	0.00	0.00	0.00			50.00	50.00
2. Increased percentage of teachers demonstrating improved teaching practices	0.00						35.00
Percentage of female teachers demonstrating improved teaching practices	0.00	10.00	20.00	30.00	40.00	50.00	40.00
3. First cohort of students graduates from secondary education under the new GPA based assessment and certification system	Current school graduation system "Thanawiya 'Amma"						First cohort of students graduates from secondary education under the new GPA based assessment and certification system

Intermediate Results Indicators

Indicator Name	Baseline	YR1	YR2	YR3	YR4	YR5	End Target
1. Mapping of existing spaces for KG classrooms	Does not exist	Conducted	Not applicable	Not applicable	Not applicable	Not applicable	Mapping exercise of available public spaces conducted
2. Refurbishment and equipping existing classroom spaces	0.00	0.00	25.00	50.00	75.00	90.00	90.00
3. Diagnostic study of KG teaching practices	Does not exist	Diagnostic study of KG teaching practices conducted	Not applicable	Not applicable	Not applicable	Not applicable	KG Teaching practices study conducted
4. Developed and implemented Continous Professional Development (CPD) framework	Does not exist	New CPD Framework approved by ministerial decree	Implementation Plan for new CPD Framework approved by ministerial decree	Ministry leadership and staff trained on new CPD framework and system	New CPD Framework used as basis of Professional Development plans at national, directorate, district, and school levels	New CPD Framework used as basis of Professional Development plans at national, directorate, district, and school levels	CPD framework in active usage as basis for national, directorate, district, and school levels Professional Development plans
5. Updated Induction program for new teachers, school leaders, and supervisors	current induction program	New induction system approved by ministerial	Implementation Plan for new induction system	Ministry leadership and staff trained on new induction	First cohort of new teachers, education leaders, and	Second cohort of new teachers, education	Second cohort of new teachers,

Indicator Name	Baseline	YR1	YR2	YR3	YR4	YR5	End Target
		decree	approved by ministerial decree	system	supervisors hired are trained under new induction system	leaders, and supervisors hired are trained under new induction system	education leaders, and supervisors hired are trained under the new induction program
6. Expanded Teacher Professional Behavior (TPB) program	0.00	5.00	10.00	20.00	35.00	45.00	45.00
6.a. Percentage of schools with COPs established under the Teacher Professional Behavior (TPB) program	0.00	5.00	10.00	30.00	50.00	75.00	75.00
6.b. Percentage of female teachers trained under TPB program	0.00	25.00	30.00	35.00	35.00	40.00	40.00
6.c. Climate awareness training is included in TPB training program modules	N	N	Y	Y	Y	Y	Y
7. Education Leaders and Supervisors (EL&S) program established	0.00	0.10	5.00	20.00	35.00	45.00	45.00
7.a. Percentage of female EL&S trained	0.00	25.00	30.00	35.00	35.00	40.00	40.00
8. Grade 10, 11 and 12 tests in eight subjects designed, developed and administered	Does not exist	Framework Document for new Tests in Grades 10, 11 and 12 is	G10 tests are administered	Grade 10 & 11 Tests are administered nation-wide	Grade 10, 11 & 12 Tests are administered nation-wide	Increased public confidence in the secondary graduation and	New grades 10,11,12 tests administered nation-wide

Indicator Name	Baseline	YR1	YR2	YR3	YR4	YR5	End Target
		approved				assessment system	
9. Grade 4 sample-based national assessment test designed, developed and administered	Does not exist	Framework Document for Grade 4 assessment is approved	Item development and dry run for the administration of Grade 4 national assessment carried out		Grade 4 national assessment administered		Grade 4 national assessment successfully administered
10. Grade 9 new national test designed, developed and administered	Does not exist			Item development and dry run for the administration of Grade 9 national assessment carried out		Grade 9 national assessment administered	New grade 9 national assessment successfully administered
11. Restructuring and strengthening NCEE capacity	Does not exist	Restructuring plan approved by Central Authority for Organization and Administration Capacity building activities initiated	Specialized education measurement experts recruited for NCEEE Continued capacity building activities	Capacity building activities for NCEEE staff continued, including new staff, proctors and external graders			NCEEE functions as the national center for tests and examinations

Indicator Name	Baseline	YR1	YR2	YR3	YR4	YR5	End Target
12. Established education technology entity	Does not exist	Education Technology entity operational: (a) adequately staffed; and (b) sufficiently funded	Education Technology entity: (a) actively monitors and reports on implementation; (b) produces annual operational plans	Education Technology entity: (a) actively monitors and reports on implementation; (b) produces annual operational plans	Education Technology entity: (a) actively monitors and reports on implementation; (b) produces annual operational plans.	Education Technology entity: (a) actively monitors and reports on implementation; (b) produces annual operational plans.	Education Technology entity fully operational: (a) adequately staffed; (b) sufficiently funded; (c) actively monitor and report on implementation; and (d) produce annual operational plans
13. National Education Decision Support Dashboard operational	Does not exist	National Education Decision Support Dashboard populated with data from three data sources: training data; digital learning resources;	National Education Decision Support Dashboard: (a) populated with data from three data sources: training data; digital learning resources;	National Education Decision Support Dashboard: (a) populated with data from three data sources: training data; digital learning resources;	National Education Decision Support Dashboard: (a) populated with data from four data sources: training data; grade 4 assessment data; digital	National Education Decision Support Dashboard: (a) populated with data from four data sources: training data; grade 9 assessment data; digital	Fully operational National Education Decision Support Dashboard: (a) populated with data from four data sources:

Indicator Name	Baseline	YR1	YR2	YR3	YR4	YR5	End Target
		usage data, and EMIS data	usage data, and EMIS data; and (b) evidence of utilization to support evidence-based budget preparation at governorate and district levels	usage data, and EMIS data; and (b) evidence of utilization to support evidence-based budget preparation and allocation at governorate and district levels	learning resources; usage data, and EMIS data; and (b) evidence of utilization to support evidence-based budget preparation and allocation at governorate and district levels	learning resources; usage data, and EMIS data; and (b) evidence of utilization to support evidence-based budget preparation and allocation at governorate and district levels	training data, grades 4 and 9 assessment data, digital learning resources usage data, and EMIS data; and reporting tools; and (b) evidence of utilization to support evidence-based budget preparation and allocation at governorate and district levels.
13.a. Data provided through the dashboard are disaggregated by gender	N	Y	Y	Y	Y	Y	Y
14. Connected school infrastructure established	Does not exist	a. 0% of the targeted total number of classrooms with functioning classroom technology packages	a. 20% of the targeted total number of classrooms with functioning classroom technology packages	a. 50% of the targeted total number classrooms with functioning classroom technology packages	a. 80% of the targeted total number of classrooms with functioning classroom technology packages	a. 80% of the targeted total number of classrooms with functioning classroom technology packages	Connected school infrastructure operational

Indicator Name	Baseline	YR1	YR2	YR3	YR4	YR5	End Target
		b. 0% of the targeted total number of schools with functioning Internet connectivity	b. 20% of the targeted total number of schools with functioning Internet connectivity	b. 50% of the targeted total number of schools with functioning Internet connectivity	b. 80% of the targeted total number of schools with functioning Internet connectivity	b. 80% of the targeted total number of schools with functioning Internet connectivity	
15. Digital learning resources utlized	Does not exist	a. 0% of the targeted total number of unique monthly users - users include students, teachers, and schools b. 0% of the targeted total number unique monthly user sessions - users include students, teachers, and schools	a. 20% of the targeted total number of unique monthly users - users include students, teachers, and schools b. 2% of the targeted total number unique monthly user sessions - users include students, teachers, and schools	a. 50% of the targeted total number of unique monthly users - users include students, teachers, and schools b. 50% of the targeted total number unique monthly user sessions - users include students, teachers, and schools	a. 80% of the targeted total number of unique monthly users - users include students, teachers, and schools b. 80% of the targeted total number unique monthly user sessions - users include students, teachers, and schools	a. 80% of the targeted total number of unique monthly users - users include students, teachers, and schools b. 80% of the targeted total number unique monthly user sessions - users include students, teachers, and schools	Digital learning resources utilized: a.80% of unique monthly users: users include students, teachers, and schools b.80% unique monthly user sessions: users include students, teachers, and schools
15.a. Percentage of female unique monthly Student users	0.00	0.00	15.00	35.00	55.00	65.00	65.00
15.b. Percentage of female unique	0.00	15.00	35.00	55.00	65.00	65.00	65.00

Indicator Name	Baseline	YR1	YR2	YR3	YR4	YR5	End Target
monthly Teacher users							
16. Computer-based assessment management and delivery platform	Does not exist	Platform designed	a. Platform designed and pilot tested; b. data transfer developed and tested	a. Platform designed, tested and deployed; b. data transfer developed, tested and deployed	a. Platform designed, tested and deployed; b. data transfer, management, analysis and reporting platform for grade 4 individual assessment results developed and deployed	a. Platform designed, tested and deployed; b. data transfer, management, analysis and reporting platform for grade 4 and 9 individual assessment results developed and deployed	Functional Platform: a.platform designed, tested and deployed b.data transfer, management, analysis and reporting platform for individual assessment results developed and deployed
17. Project communication plan developed and implemented	Does not exist						Project communicatio n plan implemented as a tool for citizen engagement in the education reform process

Indicator Name	Baseline	YR1	YR2	YR3	YR4	YR5	End Target
18. Percentage of planned communication activities, by media category, implemented	0.00	20.00	30.00	40.00	60.00	80.00	80.00
Grievances resolved within the stipulated service standards for response times	0.00	0.00	20.00	30.00	50.00	70.00	70.00

ANNEX A: DETAILED PROJECT DESCRIPTION

Egypt, Arab Republic of
Supporting Egypt Education Reform Project

1.   **Component 1: Improved Early Childhood Education (US$100 million).** The component aims to expand access to quality early childhood education (ECE) in Egypt, through two subcomponents:

a.   **Subcomponent 1.1***. Increased access to KG.* Aligned with the Egypt Vision 2030, the project will incentivize increased enrollment in KG1–2 through DLI#1, *Increased Access to KG*, which triggers disbursement when enrollment targets are met. Increased enrollment will be supported through: (1) producing and, when applicable, distributing innovative learning and teaching materials in Arabic aligned with the new curriculum; and (2) refurbishing and equipping existing public spaces into KG classrooms.

b.   **Subcomponent 1.2***. Improved quality of KG education:* The project ensures that gains in enrollment come hand in hand with quality improvements, using a DLI#2, *Strengthened Quality Assurance (QA) System for KG.* Specifically, the project supports the development and rollout of an in-service training program for KG teachers, using DLI#3, *Extending KG in-service Teacher training.* The training program will be aligned with the new curriculum and will consist of modules designed in light of a diagnostic study of teaching practices, and intended to improve specific practices in the classroom such as learning through play, the use of classroom assessment, and the integration of Information, and Communication Technology (ICT) in classroom pedagogy. The training modules would address gender sensitive behavior in the classroom. This includes gender stereotypes in education (attendance, drop outs, and enrollment in science and mathematics tracks) and the specific constraints facing girls, the role of mothers in education, and gender based violence or sexual harassment in schools. The project also supports the development and implementation of a robust quality assurance (QA) system that incentivizes progress of KGs along a quality continuum. The QA system will include revised quality standards for KG, and incentives to promote continuous quality improvement.

2.   **Component 2: Effective Teachers and Education Leaders (US$100 million).** This component aims to improve teachers' and education leaders', and district and directorate-level supervisors' effectiveness in pre-tertiary education through two sub-components. Subcomponent 2.1 is oriented toward enhancing the quality of continuous professional development programs and subcomponent 2.2 to improving professional behaviors of teachers and education leaders. This would fundamentally shift the current rote education oriented behavior in the classroom to effective teaching strategies that maximize student learning and retention. To achieve this goal, the project will support the development of a comprehensive professional development framework that will address the various professional developments needs for teachers, education leaders, and supervisors, including professional behavior, subject as well as pedagogical content knowledge, including a redefinition of the role of educational supervisors from inspection to teachers' mentors. This will ensure increased proportions of new and existing female teachers, education leaders, and supervisors have the opportunity for career advancement and participating in new CPD opportunities. This component will also include climate and awareness raising

among teachers and students on the impacts of climate change and mitigation measures, as well as gender sensitive behavior in the classroom

    a.   **Subcomponent 2.1.** *Improved quality of CPD system*. Through DLI#4, *Improved* Quality *of Teacher and Education Leader Professional Development,* the project would support: (1) development of a comprehensive CPD framework for teachers, school, district and directorate leaders and supervisors which will delineate MOETE's new approach toward a school-based CPD system, and identify its governance, management, and operational aspects. Gender sensitivity would be integrated into the design of the CPD framework, to address gender stereotypes in education (attendance, drop outs, and enrollment in science and mathematics tracks) and the specific constraints facing girls , the role of mothers in education, and gender based violence or sexual harassment in schools; (2) assessment of the professional development needs of teacher, school, district, and directorate-level leaders, and supervisors; (3) the formulation and implementation of professional development plans aligned with the new CPD framework; (4) carrying out of a study of the current teacher induction system to put in place a reformed induction system for newly hired teachers, education leaders, and supervisors; and (5) designing and implementing a training program for supervisors aimed at improving their skills toward the new guidelines for mentoring school teachers versus inspection-based school visits.

    b.   **Subcomponent 2.2.** *Expanded CPD opportunities*: The project would extend the Teachers Professional Behaviors (TPB) Program to additional teachers and establish the Education Leaders and Supervisors (EL & S) Program for education leaders and supervisors in line with MOETE's plans to shift to more of a school-based CPD system. The TPB and EL&S programs will establish a foundation of professional behaviors upon which additional pedagogical, subject/content, and a leadership-specific training and professional development to improve school-level service delivery. The project will: (1) conduct a mapping exercise of teachers' professional practices and behaviors to establish a rollout plans for expansion of the ongoing Teacher Professional Behavior (TPB) program as implemented under Teachers First (TF) initiative. [20] The TPB program will update and finalize the training content in light of the TF initial phase to provide behavioral training for 10,000 teachers. The training content will be adapted to incorporate climate awareness training; (2) extend the TPB program to new districts and directorates including the additional communities of practice (COP) in schools. The project will support the implementation of COP and individual action/learning plans, monitored using an ICT-enabled points and tracking system by teachers themselves (self-evaluation), feedback from peer teachers, and accredited supervisors. During project implementation, the expansion will be according to annual targets initially focusing on primary schools (and prioritizing teachers of KG1, KG2, and grade 1), and subsequently to all stages and general education teachers in grades 2-12 and technical education schools and teachers for grades 10–12; and (3) develop, pilot, implement, and then scale up a professional behavior program for education leaders and supervisors (EL&S) drawing on lessons learned from the TPB program. In the short term, an online pilot professional development course will be developed and delivered to school leaders which would be used to prepare for the plans and

---

[20] Teachers First (TF) is a teacher training program that focusses on teachers' classroom behavior. TF program comprises four pillars: (a) Continuous Professional Development; (b) Communities of Practice; (c) mentoring program; and (d) empowering through the use of Lengo: a three-way assessment (self, peer, and mentor)

updated content for the subsequent rollout of the EL&S program. Two DLIs will be used to incentivize this change: (i) DLI#5 - *Expanding Teachers Professional Behaviors Program*; (ii) DLI#6 - *Expanding Education Leaders and Supervisors Program*. The project would also support: (i) establishment of school-based communities of practice (COPs) with 3-5 teacher-facilitators per school ("local learning ambassadors") being trained on an already piloted set of teacher professional behaviors designed to improve their willingness to change; (ii) preparation and implementation of COP and individual action/learning plans, monitored through the use of an ICT-enabled points and tracking system by teachers themselves (self-evaluation), feedback from peer teachers, and accredited supervisors; (iii) training district and directorate-level supervisors as mentors of the school-level COPS; (iv) use of point-system information and data by program and MOETE supervisors to provide further mentoring support; and (v) piloting and establishment of a similar program of professional behaviors training for Education Leaders and Supervisors, with respective leader COPs and use of a similar ICT-enabled point system.

3.   **Component 3: Comprehensive Assessment Reform for Improved Student Learning (US$120 million).** This component would support MOETE's reform program to develop a new student assessment and examination system which is fair, valid, and reliable. This student assessment reform aims to improve student learning, and to do so by *bringing learning back to the classroom* (this has become the motto of the entire education reform), thus reducing the incentives for and the culture of private tutoring. As a pivotal entry point to the education reform program, MOETE announced, in the Spring of 2017, the decision to replace the *Thanawiya Amma* examination with the grade point average of new national exams to be administered over the final three years of upper secondary education starting in January 2019. This entails modifications to the format and content of the new examinations to promote higher-order thinking skills and to better assess school leavers after the secondary education with skills and attitudes necessary for future employment and for tertiary level selection.

4.   The central issue with the *Thanawiya Amma* is that it has a double function, meaning that the exit/graduation function is combined with the competitive selection for university admission. The latter function prevails and clearly crowds out the former, and that has led to an education system driven by examination scores, to high failures rates resulting in many students failing to graduate from secondary education, and to a widespread private tutoring cartel that is a growing driver of education inequality. MOETE expects that the new examination system will enhance public confidence, diminish the extent of cheating and other forms of malpractice, and reduce student and teacher absenteeism related to the rise of private tutoring, thereby also reducing the financial burden on parents. In addition to the crucial reform of the examination and assessment system leading to secondary graduation, MOETE is also aiming to radically overhaul the grade 9 test turning it into an aptitude test that creates a fairer student placement system in upper secondary education. Likewise, the ministry wants to establish sample-based national assessments in grade 4. Component 3 has the following four sub-components and sets of activities:

a.   ***Subcomponent 3.1***. ***Reforming the examination system in upper secondary education***. Utilizing the DLI#7, *Successful implementation of the reform of the secondary graduation and assessment system*, the subcomponent would finance the design and development of a set of new tests to be administered twice yearly to grades 10, 11 and 12, the results of which will be aggregated to a grade point average (GPA) that will determine graduation from secondary education. The new exams will initially consist of multiple choice items; as NCEEE assessment

competencies increase, the examinations will include short and long-answer (essay type) and performance type assessments, including projects and oral language fluency. NCEEE, with the support of an international firm, will therefore develop procedures for school-based assessment and for external moderation to facilitate marking or scoring of some elements of the proposed new examinations. Moreover, the total of six exams (for eight different subjects) over the three years of upper secondary education will be complemented with six "student projects" – task oriented assessments also for each of the eight subjects examined – which will be evaluated using criteria set by the ministry at the central level.

All these examinations will be computer-based and their administration will take place at the school level. MOETE will distribute tablets to all upper secondary education students, and this will be the device they will use to take the new exams. Even if the examinations will not take place online, computer-based testing will require measures in at least the following five fronts, all of which the project is ready to support:[21]

- Technology: Ensure the prompt distribution of the devices to be used for the test to all students and the minimum connectivity requirements.
- Security: Prevent and anticipate all potential security risks to the confidentiality of test items, marking and grading processes, etc. (This will be the responsibility of an entity outside the education sector).
- Equity: Ensure the same testing conditions to all students and, more importantly, that all students are informed and have become familiar with this type of testing.
- Logistical: Consider all the logistical aspects of the administration of the new tests, including a dry run.
- Regulatory: Amending laws and other regulations concerning the *Thanawiya Amma* and the requirements for secondary education graduation.

b.   ***Subcomponent 3.2. Introducing a grade 4 national assessment.*** This subcomponent, using the DLI#8, *grades 4 and 9 national assessments are designed, developed and successfully administered*, would support the design and administration of a sample-based national assessment of grade 4 student achievement in key competencies aligned with the new curriculum, with a focus on literacy and numeracy.

c.   ***S*ubcomponent 3.3. Transforming the grade 9 examination.** The existing grade 9 examination, administered at the directorate/ Governorate level, regulates the transition from lower to upper secondary education and is used to place student in either general or vocational upper secondary schools. This subcomponent, using the DLI#8, *grades 4 and 9 national assessments are designed, developed and successfully administered*, will support NCEEE in designing, piloting and administering a new grade 9 national aptitude test that will reform student placement in upper secondary education reflecting the reformed curriculum for lower secondary education. In addition to enhanced curriculum relevance and focus on learning, having comparable test scores across the whole country will allow for a fairer student placement in upper secondary education with potentially better orientation services for students and their families.

---

[21] See also Component 4 regarding the computer-based assessment management platform.

d.   ***Subcomponent 3.4. Restructuring of the NCEEE.*** To support the technical aspects of the new examination and assessment system, MOETE plans to restructure the NCEEE, to modify its work program and to enhance its capacity as a professional assessment center with a specific focus on examinations and testing, using the DLI#9, *NCEEE restructured as a national testing and examination center*. In terms of implementation, the restructuring of NCEEE is clearly the greatest challenge for this component (and to a good extent to the overall education reform). This subcomponent will contribute to the financing of the ongoing restructuring process of NCEEE and the building of its capacity in four areas: (1) test design; (2) security and logistics, including test delivery, proctoring, etc.; (3) scoring and management of computer-based assessment, and (4) analysis and reporting. The subcomponent will involve long-term training delivered to NCEEE while at the same time will support the hiring of relevant new staff in areas such as examination paper development, item banking, analysis of student performance results, examination moderation, marker reliability, security enhancement, research on aspects of examination scoring and impact, and effective communication and dissemination of assessment data to different audiences, from top policy makers to civil society, and from education administrators to schools and practitioners.

5.   **Component 4: Enhancing Education Service Delivery through Connected Systems (US$160 million).** A 'Connected Education System' provides a model digital environment supporting evidence-based decision making, student assessment, and modern pedagogical practices promoting active student engagement. It is supported by digital hardware, software, content and assessment tools. Component 4 aims to support MOETE program to develop this type of digital environment, technology platform and evidence-based management system to enhance service delivery at all levels of the education systems. Three DLIs will provide incentives for the achievement of this goal.

a.   ***Subcomponent 4.1. Creating an educational technology platform***. An educational technology enabling environment and platform would be established to help facilitate, manage and oversee the rollout and maintenance of digital infrastructure in support of current practices (i.e., EDU 1.0) through incremental, targeted improvements, as well as new practices and approaches, enabled in part by digital technologies (i.e., requirement of EDU 2.0). A digital platform, including an education decision support dashboard, will be designed and rolled-out to support learning, teaching, performance evaluation, assessment, policy making, monitoring and data collection. Digital infrastructure at the level of the classroom and at all levels of the administration will connect students, teachers, principals, supervisors, and central ministry to help ensure a system of continuous feedback, and the use of information to make evidence based decisions that should enhance the teaching and learning process. Digital infrastructure at the level of the classroom and at all levels of the administration will connect students, teachers, principals, supervisors, and central ministry to help ensure a system of continuous feedback, and the use of information to make evidence based decisions that should enhance the teaching and learning process. A new education technology entity, established with legal standing, governance structure, funding, annual budget, leadership, and staffing, with clearly defined roles and responsibilities, will play a critical coordinating role in this process. The project will support staff training at all levels of the education system to shift organizational culture and staff behavior toward a continuous use of technology and information. Through DLI#10 - *Educational technology enabling environment and platform* - the project will provide incentives to ensure the

establishment and utilization of the technology environment and platform. The platform will include setting-up the new Education Technology Entity that should facilitate, manage and oversee the roll-out and maintenance of digital infrastructure, capacity building of MOETE teaching and non-teaching staff, and decision support platform development. The entity will adopt energy efficiency principles in selecting components of the technology infrastructure.

b.   ***Subcomponent 4.2. Establishing the Education Decision Support Dashboard***. The project will support the design and development of an education decision support dashboard that would integrate data from other databases including: training data, assessments data, content usage data and EMIS data. The dashboard will include reporting tools to support evidence-based decisions at the national and directorate levels.

c.   ***Subcomponent 4.3. Digital learning resources.*** This project will support an expanded use of e-learning resources available through the Egypt Knowledge Bank (EKB), content mapping between the curriculum framework and EKB resources, and a gradual shift away from textbooks to digital learning resources. Available digital learning resources will be made available and accessible through a new learning management system (LMS) which draws on a database of resources available in the EKB that have been mapped to specific elements in the Egyptian curriculum. The newly established digital environment, supported by the use of digital hardware, software, content and assessment tools, will foster the introduction of modern pedagogical practices, promoting active student engagement. Through DLI#11 – *Digital Learning Resources* - the project will provide incentives for the expanded use of e-learning resources available through the Egypt Knowledge Bank (EKB), content mapping between the curriculum framework and EKB resources, and a gradual shift away from textbooks to digital learning resources.

d.   ***Subcomponent 4.4. Establishing of a computer-based assessment management and delivery platform.*** A platform will be developed: A decision support and management platform will provide timely data to enable key decision making to support teacher professional development, curriculum enhancement, improved resource allocation, and the design, development and rollout of a set of new computer-based assessment tests that will form the basis for the new GPA for certification and graduation of secondary education. The platform will facilitate the secure administration of the tests, the grading of them and timely delivery of secure individualized students' reports, as well as the deployment of related tools for data transfer, management, analysis and reporting. Through DLI#12 – *Successful Implementation of computer-based assessment management platform* - the project will provide incentives not only for establishing the platform but, most importantly, for its utilization to support student assessment, evidence based policy making and reporting.

To facilitate the different processes involved in the establishment of digital connectivity throughout the education sector and its utilization for improving decision making and service delivery, the Bank will provide guidance related to relevant international good practice in the use of digital technologies in education. The guidance will give special attention to the needs and contexts of disadvantaged learners and communities. The digital infrastructure provided under component 4 provides the critical enabling environment for all components of this project.

6.   **Component 5: Project Management, Communication, and Monitoring and Evaluation (US$20 million).** Component 5 aims to support project management, monitoring and evaluation function. It will specifically ensure that the project achieves its PDO through securing core functions during the project duration. These include project coordination, communication, and those specific contracts under the components 1-4. It will focus on three areas: (a) strengthening the management and implementation of the proposed project; (b) raising awareness amongst stakeholders around bringing learning back to the classroom; and (c) providing cross-component support to system-level initiatives that enhance the efficiency of all other components. Funding for component 5 will be linked to direct reimbursement of project expenditures. A project director with a Project Coordination Unit (PCU) team will manage functions under component 5. The PCU team will comprise a co-director for M&E; M&E technical officer (as may be required); procurement and financial management function that will be either through a firm or individual procurement, financial management officers and an accountant; and four technical coordinators in the areas of ECE, teachers and education leaders' professional development, student assessment, and ICT in education. These coordinators will collaborate closely with MOETE's relevant directorates/ units, and will be full-time staff. The component will include three sub-components: (i) project management support; (ii) education awareness and stakeholders' mobilization; and (iii) cross-component Support. Component 5 has the following three sub-components:

a.   ***Subcomponent 5.1. Project management support.*** This subcomponent would support project management, implementation, M&E, fiduciary arrangements. This would include the following activities/contracts: (1) technical support for the PCU's M&E function, including and not limited to developing an M&E system, timely data collection and analysis, and reporting; (2) independent verification agent(s) contract(s); and (3) external auditor contract.

b.   ***Subcomponent 5.2. Education awareness and stakeholders' mobilization.*** This subcomponent would support strengthened communication across the education system. The project would adopt a two-pronged approach to support communication: the first directed to MOETE's own teaching and non-teaching staff, and the second addressing sector stakeholders outside the ministry walls. This includes supporting the development and implementation of communication plan, pulse surveys and other tools to monitor citizens' voice and engagement under component 5.

c.   ***Subcomponent 5.3. Cross-component support***. This subcomponent would support specific system-level initiatives to enhance the effectiveness of results-based focus of components one to four. Through IPF, the project will provide the financial resources required for the procurement of national or international consulting services. The related contracts will be included in the enclosed 18-month Procurement Plan as follows:

▪ Under component 1: Diagnostic study of teaching practices in KG classrooms; development of in-service KG teacher training modules in light of findings from the diagnostic study; impact evaluation to estimate the effect of the KG teacher training on teaching practices and student outcomes; and training and capacity building for MOETE to collect, analyze, and use data from QA system for continuous quality improvement;
▪ Under component 2, impact evaluation to assess the effect of professional development interventions on the classroom performance of teachers, and education leaders and supervisors;

- Under component 3, training and capacity building for NCEEE;
- Under component 4, technology needs assessment of the education sector and technical assistance for the organizational and operational design of the Education Technology Entity.

Figure A.1. Results chain
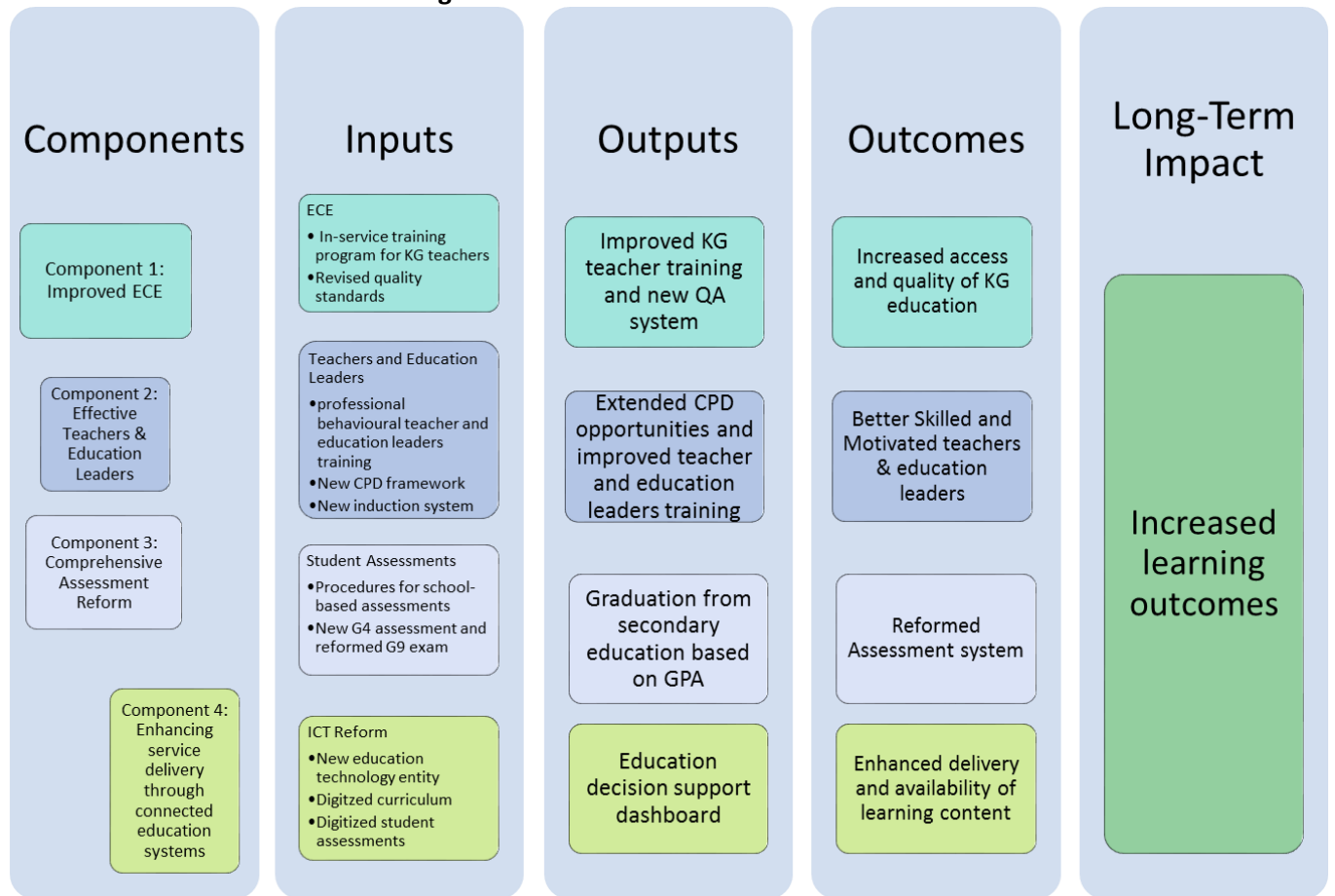
ANNEX B: IMPLEMENTATION ARRANGEMENTS

Egypt, Arab Republic of
Supporting Egypt Education Reform Project

Project Institutional and Implementation Arrangements

1.   **A Project Steering Committee (PSC)** will be established to provide overall strategic direction to project implementation and oversight in the context of the overall sector reform program. The PSC will review the project (and the overall reform program) progress and approve annual work plans and help resolve critical implementation issues that may arise. The committee will be chaired by a senior MOETE official designated by the minister on a rotating basis and will include the SC secretary to support the regular functioning of the PSC. The PSC comprises 5–7 members, including PCU director (ex officio) and at a minimum relevant representation from MOETE, NCEEE, Ministry of Investment and International Cooperation, Ministry of Finance, Ministry of Communication and Information Technology, and other ministries, and other ministries. The PSC composition and TORs will be included in the Project Operations Manual (POM).

2.   **Project Coordination Unit (PCU).** The project will finance functions for ongoing support for MOETE in implementing the proposed World Bank-financed project: overall coordination of project activities, including communication with MOETE's implementation entities/directorates; M&E, including hiring and interfacing with the verification agent to verify DLIs; and procurement and financial management functions. PCU will comprise: a project director; a co-director for M&E; a M&E technical officer (as may be required); procurement and financial management function that will be performed either through a firm or individual procurement, financial management officers and an accountant; and four technical coordinators in the areas of ECE, teachers and education leaders' professional development, student assessment, and ICT in Education. All PCU staff will collaborate closely with MOETE's relevant directorates/units, and will be full-time staff.

3.   The **PCU** will coordinate with MOETE directorates/units that are responsible for the achievement of the agreed DLRs. To ensure smooth implementation, a focal point will be designated in each relevant directorate/ unit to be responsible for communication with the PCU.

4.   **For component 1**, MOETE's Central Administration for Basic Education and Kindergarten would play a central role for the successful implementation of this component. This Central Administration will need to work in close coordination and collaboration with: (a) GAEB for activities related to KG expansion, and (b) the National Authority for Quality Assurance and Accreditation of Education for the strengthening of the QA system.

5.   For **component 2**, a CPD unit will be established in the ministry to institutionalize the various CPD interventions in the MOETE and will assume the implementation responsibility of Component 2.

6.   For **component 3**, NCEEE will be responsible for its implementation. In fact, the component aims at turning NCEEE into a *national center for testing and examinations* which will become self-sufficient,

technically and financially, to run the entire system of tests and examinations in pre-tertiary education in Egypt. The NCEEE will therefore take up the challenge of creating and administering a credible and fair alternative to the Thanawiya Amma as the central pillar of Egypt's education, thus recovering public trust in the examination system as the main gateway and regulator of secondary graduation and further education opportunities. The restructuring of NCEEE becomes critical for the successful implementation of this component – and for the success of the entire project and the overall Government's education reform.

7. For **component 4**, a new *Education Technology Entity* will be established to facilitate, manage and oversee the rollout and maintenance of digital infrastructure and decision support platform. The new entity will guide capacity building activities of teaching and non-teaching staff across all levels of the education sector. Initial steps were already taken by the MOETE to establish the entity in partnership with the Ministry of Communication and Information Technology

8. For **component 5**, the PCU will be responsible for project coordination, M&E and fiduciary functions in close conjunction with the ministry's related directorates/entities.

9. **A Project Operations Manual** will detail arrangements and processes for: (a) the composition and roles and responsibilities of the PSC; (b) institutional coordination and day-to-day execution of the project as well as the roles and obligations of the implementing agencies; (c) monitoring, evaluation, reporting and communication; (d) eligibility criteria, detailed rules and procedures for identification, registration and selection of selected schools and public places, (e) administration, financial management, procurement and accounting; (f) the verification protocol and the appointment of a verification agent; and (g) such other administrative, technical and organizational arrangements and procedures as shall be required for purposes of implementation of the Project. Any subsequent changes to the POM during the project duration would need to be acceptable to the World Bank as referenced in the Loan Agreement.

10. **The World Bank** will provide continuous implementation support to ensure meeting the agreed project development objective as measured by the Results Framework, and compliance with the World Bank fiduciary and safeguards policies and procedures (see Annex C).

Financial Management

11. **The financial management systems** underlying the education sector activities are governed by the Egyptian laws regulating the state budget, government accounting and procurement. The annual budget calendar largely provides for an orderly and timely budget formulation and appropriation process. The enacted state budget and final account reports are made public. Ex-ante control system is implemented by MOF's financial controllers stationed in accounting units of all line ministries. Accounting units across the central government use a financial management information system (FMIS) to record budget allocations and modifications, and to execute the budget. The MOF has confirmed its plans to complete the automation of the FMIS by end of March 2018, and issued directives no. 2/2018 and 3/2018 with additional instructions on implementation mechanisms and controls in this regard. Monthly budget execution reports detailing expenditures and revenues are produced by budget entities and submitted to the MOF's Final Accounts Sector within a maximum of ten days after each month-end. Annual final accounts are produced and audited within six months after fiscal year-end.

12.   **The project financing will be through investment project financing (IPF) instrument with result based financing modality using a set of disbursement-linked indicators (DLIs) described in this document**. The verification of the DLIs will be conducted by an independent verification agent to be contracted by the government/PCU. Meanwhile the eligible expenditures will be reported semiannually to the World Bank through Interim Financial Reports (IFRs) for which the design and content were agreed with MOETE. The list of eligible expenditures comprises mainly recurrent expenditures under Chapter 1 (salaries and wages) and selected budget lines under Chapter 2 of the budget allocated to the ministry and its affiliated entities, as discussed in paragraph 18 below. The key FM risks are as follows: (a) the lack of sufficient assurance/due diligence regarding other program-related expenditures given the focus on a specific list of eligible expenditures; (b) payroll controls given the massive and extended nature of the education wage bill; (c) the verification of DLIs; and (d) the funds flow and the sustainability of financing the reform program. The main mitigating measures include: (i) the accurate definition of the project scope and funds flow arrangements; (ii) focus on payroll controls in carrying out internal audits and in the scope of the project external audit terms of reference; (iii) the hiring of an independent qualified third party to verify DLIs; and (iv) ensuring the political will, the buy-in of stakeholders, and the funding needed to sustain the program before it is launched.

13.   **Risk Assessment.** In addition to the above summary, the proposed design and implementation arrangements raise some fiduciary risks that were assessed during the preparation as described below.

14.   **Eligible expenditures**. While the DLIs were crafted to ensure that reform actions are progressing and systems are developed and functioning, the corresponding eligible expenditures are largely geared to Chapter 1 and few Chapter 2 budget lines. Therefore, a main challenge remains to be the extent of comprehensiveness and relevance of such selection. There are other types of expenditures that are equally critical to the project implementation and success. These include the activities related to digitizing curriculum and training material, and developing a new examination model. If pertinent contracts are administered through a non-competitive process or in a non-transparent manner, the associated program risks will be high. A massive technology infrastructure is also required to enable the implementation of the reform strategy. Securing the appropriate capacity to undertake this challenging task and its administration competitively and transparently are critical measures for proper governance, effective delivery and quality outputs.

15.   **Implementation roles and responsibilities**. The PCU will be responsible for the implementation of component 5, as well as coordinating the achievement of DLRs with the other units and directorates within the ministry. In addition to the challenging coordination role, the various involved units and directorates need to be motivated to deliver on their respective DLRs. This entails a successful communication strategy, change management process, and incentivizing those departments in charge of implementation and achievement of results.

16.   **Stakeholders' interests.** The government reform program offers a combination of opportunities and threats to different education sector stakeholders. To ensure success of the reform program, it would be crucial for the political will to be sustained and to secure the required financial resources. For example, the phasing out of traditional textbooks in favor of digitized teaching and learning materials represents a potential threat to several stakeholders and an opportunity to others. Similarly, expanding digital infrastructure and connectivity pose significant challenges to the roll out plans given that ICT is a

fundamental element of the whole reform. Regarding teachers, they potentially risk losing benefits arising from the status quo while they stand to gain from the comprehensive professional development approach and the focus on bringing learning back to the classroom. It would be worthwhile to consider the broader framework of incentives required for the implementation of the reform. This would include additional significant financial allocations, as well as legislative changes in relation to professional development, performance, and new teacher professional behavior criteria, and the new scale for teachers' salaries.

17.   **Financial management arrangements.** The following paragraphs summarizes the review of the FM aspects related to the project implementation and the key FM arrangements envisaged under the project based on this review.

18.   **Budget.** The ministry's budget includes the Diwan, 27 directorates and seven service entities. The World Bank reviewed the FY 2017/18 education budget breakdown by expenditure type and entity to identify the line items of recurrent expenditures contributing to the project activities. In addition to the economic classification presented per education entity, the ministry's budget is also classified by program using pro rata estimates of costs based on some proxy indicators. The envisaged eligible expenditures were based on the presented MOETE's budget as well as the compilation of additional financial data by the finance department at the MOETE. The 2017/2018 budget showed the following allocations:

Table B.1. The 2017/2018 budget and project estimates

Component	FY17/18 Budget	Recurrent Expenditure	Project
Component 1	Estimated cost for the "Early Childhood Development" program amounted to EGP 3.4 billion, representing 4.2% of the total cost of all ministry's programs budget.	Estimated Chapter 1 budget amounted to EGP2.33 billion calculated based on Early Childhood staff to total staff (48,000 out of 1.38 million staff) representing 3.5%.	EGP 11.65 billion (equivalent to US$ 662 million)
Component 2	The budget allocations to the "Professional Academy for Teachers" (PAT) was only EGP 28 million in FY 17/18 budget.	Estimated Chapter 1 salaries budget of the PAT amounted to EGP17 million.	EGP85 million (equivalent to US$ 4.83 million) and other training related expenses
Component 3	The allocations to the National Center for Examinations and Educational Evaluation (NCEEE) amounted to EGP 26.7 million.	Estimated Chapter 1 budget for NCEEE amounted to EGP25 million. However, the total estimated examination related Chapter 1 budget amounted to EGP600 million.	EGP3 billion (equivalent to US$170 million)
Component 4	Estimated Diwan budget was EGP 4 billion	Estimated Chapter 1 budget amounted to EGP1.1 billion	EGP 5.5 billion (equivalent to US$ 313 million)

19.   The total potential eligible expenditures based on the table above amounts to US$1.15 billion, of which US$480 million will be matched to the achievement of DLIs. A budget of US$20 million will be allocated to component 5 to be managed using the project's designated account (DA).

20.   **Funds flow.** The project will use a DA mainly to manage the financing of expenditures under component 5. With the rolling out of electronic payments for all government expenditures through the Treasury Single Account (TSA), payments are now taking place through e-payment requests by the disbursing entity to the central payments unit at the Ministry of Finance. The DA payments must be traceable, reconcilable and subject to financial audits.

21.   For the project eligible expenditures incurred through the state budget, the Bank will reimburse these expenditures per the assigned values corresponding to the DLIs achieved with every verification cycle unless the amount of such eligible expenditures at the end of the cycle is less than the DLI values. In that case, the Bank will cap the reimbursement to the amount of eligible expenditures. The reimbursement of eligible expenditures will be directed to the government budget account advised by the Borrower.

22.   **Accounting and reporting.** The envisaged expenditure list is largely geared to Chapter 1 budget allocations to the Diwan, Education Directorates in the governorates (mainly salaries pertaining to early childhood teachers), the Professional Academy for Teachers and the National Center for Examination and Educational Evaluation. The budget classification and presentation is not seamlessly conducive to establishing direct linkages between the budget lines and each of the project components. However, tailored/customized expenditure reports can be developed to substantiate the project eligible expenditures lists as agreed between the Bank and the MOETE. The finance department at the MOETE Diwan has compiled some of these data for the budget table above. Semi-annual Interim Financial Reports and annual Financial Statements will be required (design and content already agreed with the MOETE). At a minimum, the following information should be included:

Table B.2. Interim Financial Reviews (IFRs)

IFR/FS	Eligible expenditures	DLI	Reconciliation
Component 1	Salaries and wages per applicable budget lines	DLI values achieved and verified	Reconciling eligible expenditures and DLIs value to calculate reimbursement
Component 2	Salaries and wages per applicable budget lines Recurrent training costs per applicable budget lines	DLI values achieved and verified	Reconciling eligible expenditures and DLIs value to calculate reimbursement
Component 3	Student assessment costs, per applicable budget lines	DLI values achieved and verified	Reconciling eligible expenditures and DLIs value to calculate reimbursement
Component 4	Salaries and wages per applicable budget lines for MOETE central ministry staff EMIS administration	DLI values achieved and verified	Reconciling eligible expenditures and DLIs value to calculate reimbursement
Component 5	Actual expenditures	NA	NA

23.   **Internal control.** The MOETE's expenditure control system is regulated by the national laws, policies and procedures. Given the extensive volume of salaries and wages financing under the project, a general review of the payroll system and applicable controls was conducted by the Bank. Ex-ante review is consistently exercised by the assigned financial controller (representing the Ministry of Finance) who is typically assigned as the second signatory to payments issuance. The complete automation of the records of all accounting units using the Financial Management Information System (expected by the end of March 2018) should help apply further controls on budget commitments. Salaries and remuneration breakdowns are governed by law 155 of year 2007 and ministerial decrees regulating financial rules applicable to staff compensation. Monthly payroll payments are prepared based on staff records established and maintained by the Personnel Affairs department. Assigned staff at the school level report monthly to respective districts on attendance, absenteeism, leaves, new entries, and retirements. Payroll records are prepared by the Education District's Payables department (automation of these records is in progress across education directorates and affiliated districts). All financial and administrative records are subject to internal review and inspection by the Financial and Administrative Supervision department. In addition, external oversight is conducted by the Central Audit Agency as well as the Central Agency for Organization and Administration. The terms of reference for the annual external audit will also ensure a thorough review of the payroll controls and reporting thereon.

24.   It was agreed to create a mechanism to incentivize and reward those MOETE staff who are affiliated to the Implementation Directorates and Units. For this mechanism to be eligible for World Bank financing under the Project, clear guidelines and provisions should be included in the POM and agreed with the World Bank. This mechanism should be fair, efficient and transparent.

25.   **Auditing.** To ensure continued control over payroll payments as well as other project expenditures, internal audits will be required with semiannual reports to be submitted to the minister and shared with the World Bank. An annual financial audit of the project financial statements is required, by the World Bank, with terms and reference and scope to be agreed between the Bank and the MOETE. The coverage of the audit will include the project eligible expenditures corresponding to the specified DLIs values as well as the expenditures under component 5. This is in addition to the verification of results by an independent verification agent(s).

26.   **Risk rating.** Based on the review of the fiduciary arrangements in the education sector, the inherent risks, the nature of the project design, the stakeholders' interests involved, the expanded roles of units and directorates in achieving results and the linkage to wider reform program activities beyond the project scope, the financial management risk deemed high.

Disbursements

27.   **Triggering loan disbursements.** There are two triggers for loan disbursements under the project's EEPs for results-based components 1-4. One is meeting the defined DLRs as identified in the PAD and the verification protocol. The second is the reported eligible expenditures equivalent to at least the value assigned to the achieved DLR(s). Any balance of the allocated EEP disbursement not disbursed at any disbursement cycle may be carried forward to be paid during a subsequent disbursement cycle once there is evidence that the DLR has been achieved. Where achievement of a DLR cannot be certified, an amount equivalent to the unitary DLR price will be withheld. This amount will be paid at any later date, during project life, and at the discretion of the Bank when such achievement can be verified. The World Bank

may consider that a later achievement of the DLR performance would not qualify for disbursement against the unmet DLR if it determines that the on-schedule achievement of the DLR is fundamental to achieving the overall objectives of the project. In such circumstances, the allocation of the undisbursed amount against the particular DLR may, at the discretion of the Bank, be cancelled from the loan.

Procurement

28.   **Procurement will be carried out in accordance with the World Bank Procurement Regulations for IPF Borrowers, dated July 2016, revised November 2017.** The proposed project would support education in Egypt through a five-year IBRD loan of US$500 million using an investment project financing instrument with a results-based financing modality. Under the results-based components 1-4, the project disbursements will be contingent on the satisfactory achievement of the DLIs. These disbursements will be made against selected Eligible Expenditure Programs of MOETE up to capped absolute amounts. As indicated above, the EEPs include sizeable recurrent expenditures that would have an impact on the agreed results, as well as smaller ones that finance small-scale entities and administrative systems. Procurement will be carried out in accordance with the World Bank Procurement Regulations for IPF Borrowers, dated July 2016, revised November 2017, as well as the Loan Agreement and the Procurement Plan approved by the Bank. The Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants, dated October 15, 2006, and revised in January 2011 and as of July 1, 2016, will apply to all project activities. All procurable project activities, whether or not linked to the DLIs (or the EEPs), will be subject to the World Bank Procurement Regulations.

29.   **MOETE, through the PCU, will be responsible for procuremen**t and will act as the Bank's counterpart for all procurement aspects of the project. The PCU will carry out procurement in close coordination with MOETE relevant departments who shall provide inputs on technical aspects of procurement.

30.   **Procurement capacity assessment of MOETE** was carried out as part of project preparation and appraisal. The assessment evaluated the institutional capacity to implement procurement for the project following the World Bank Procurement Regulations for IPF Borrowers, evaluated procurement risks and made recommendations on mitigation measures for efficient procurement under the project. The assessment concluded that MOETE capacity to implement the project is weak and it would require strengthening in terms of staffing and training. The following is a summary of the identified procurement risks and mitigation measures:

Table B.3. Risks and mitigation Measures

Risk	Mitigation measure
Limited experience in Selection of Consultants and International Bidding, Request for Bids	- Hiring a procurement officer at the PCU with solid experience in World Bank procurement procedures, who would work closely with MOETE purchasing department will strengthen the MOETE's capacity would be strengthened through. In addition to day to-day implementation of project procurement, the procurement officer would provide on-the-job training to the ministry procurement staff, who would provide the necessary coordination and follow up.
Limited experience with International Finance Institutions, including the World Bank procurement procedures.	- The World Bank will provide procurement training to concerned ministry staff immediately prior to effectiveness. - The PCU's procurement officer will prepare a Procurement Guide as part of the Project Operations Manual (POM), which: (i) defines the roles and responsibilities of all offices that will be involved in any aspect of procurement during the project implementation; (ii) sets out the sequence and timeframe for the completion of procurement decisions of all individual players including delegation of authority; and
Lack of English Language skills while having to deal with documents in English may cause all sorts of confusion and delays.	(iii) establishes service standards for processing of payments to contractors and suppliers
Poor quality procurement and outcomes due to limited procurement and contract administration capacity.	- The World Bank will provide ongoing procurement and contract management training to the PCU and MOETE relevant staff. The training will include project procurement arrangements as detailed in the POM, as well as the critical steps for the procurement and contract management process. - The World Bank will provide training and ongoing support to use Systematic Tracking of Exchanges in Procurement (STEP) system.
Technical specifications/TORs are vague.	- The World Bank will review the technical specifications and TORs prior to launch of the bidding process.
Project delays due to low quality bidding documents/Request for Proposals.	- Based on the Procurement Strategy, a draft Procurement Plan for the first 18 months was agreed. The Procurement Plan will be updated in agreement with the Bank annually or as required to reflect the actual project implementation needs and capacity improvement.
Lack of accountability mechanisms such as a functioning complaint and grievance systems.	- The PCU will establish and implement a complaints mechanism

31.   **The project would finance goods, non-consulting services and consultant services under component 5**. The envisaged goods and services would be attained from either the local market or the international market. Based on the World Bank Procurement Regulations, the MOETE developed a Project

Procurement Strategy for Development (PPSD) that includes: (a) the project overview, (b) operational context, including governance, economic factors, sustainability aspects, technology factors, (c) market research, and (d) implementation capacity. In addition, the MOETE's Procurement Plan for the first 18 months of project implementation was approved by the World Bank. Procurement activities envisaged under the project would include:

a. Contract PCU staff and consultants
b. Contract Independent verification agent(s)
c. Contract external auditor
d. Develop and implement communication plan
e. Conduct diagnostic study of teaching practices in KG classrooms
f. Develop in-service KG teacher training modules in light of findings from diagnostic study
g. Conduct impact evaluation to estimate the effect of the training on teaching practices and student outcomes
h. Provide training and capacity building for MOETE to collect, analyze, and use data from QA system for continuous quality improvement
i. Conduct impact evaluation to assess the effect of professional development interventions on teachers', education leaders and supervisors' performance in the classroom
j. Provide training and capacity building for NCEEE
k. Conduct technology needs assessment of the education sector
l. Provide technical assistance for the organizational and operational design of the education technology entity.

32.   **Procurement risk is rated high.** The World Bank prior review thresholds for high risk operations shall apply to the project. In addition to contracts estimated to exceed those thresholds, all TORs for consultants' services and technical assistance packages will be subject to the Bank's technical review with no objection. In addition to prior review, the Bank will carry out at least two implementation support missions a year, including one ex-post procurement review that would cover at least 10 percent of the contracts awarded during the review period.

Environmental and Social (including safeguards)

33.   The project is classified as Category C with no requirements for safeguard instruments. The project would yield some environmental benefits, as the introduction of ICT system and use of digital infrastructure in the education process will reduce paper consumption and, hence, will have indirect minimization of environmental impacts associated with the paper industry. Furthermore, MOETE is highly encouraged to consider energy conservation in the equipment specifications as part of the procurement of hardware.

34.   **The climate change risks on the project sustainability are considered low.** The main vulnerabilities to climate change in Egypt are related to the rise of the Mediterranean Sea level leading to inundation of coastal areas in and around the Nile Delta, change of precipitation patterns leading to heavy rains causing urban flooding along coastal areas and flash floods in Upper Egypt and Sinai, and rise in average temperature and more frequent heat waves and dust storms. In the short term, extreme heat waves, strong dust storms, and urban floods could reduce available school days in the academic year. In the long term, some schools in vulnerable areas in the Northern Delta could be inundated. However, such

risks would affect primarily other economic activities, pushing citizens to migrate to safer places.

35.   **In terms of climate co-benefits, the project would introduce awareness and educational materials about climate change vulnerabilities, adaptation and mitigation** as part of the Teachers Professional Behaviors and Education Leaders and Supervisors programs, and the induction program for new teachers, education leaders, and supervisors. The current estimated co-benefits that would apply to the project are: (a) DLI#5 and DLI#6 totaling US$70 million; and (b) the climate awareness will form approximately 11 percent of the training modules. While the World Bank would advocate for energy savings principles, it is not possible to calculate co-benefits given that, under the relevant DLIs, the project financing is results-based. Regarding the reduced use of paper due to the extended deployment of ICT, it will not be possible to assess the co-benefits under the current MDB methodology.

36.   Egypt is one of the most vulnerable countries to climate change. According to the Egypt Intended Nationally Determined Contributions (INDC) toward achieving the objectives of the United Nations Conventions on Climate Change, the GOE has identified many vulnerabilities to climate change such as the rise of sea level which will impact soil and water quality in low lands, especially in the northern Delta region which is estimated to have 12-15 percent of most fertile arable land in the Nile Delta. The INDC also indicates that there will be a change in rainy seasons, rainfall rates, increased evaporation rates, extreme heat waves which will have direct impacts on agriculture (the INDC estimates productivity of wheat and maize will be reduced by 15 and 19 percent respectively by the year 2050), livestock, fisheries, and public health.

37.   Given the large scale of the education system in Egypt, increasing awareness on climate adaptation and mitigation among teachers, supervisors and principals will be transferred to millions of students who will be future leaders in different sectors in the country. This awareness raising would support future political shifts for implementing necessary adaptation and mitigation measures. The Bank team will work with the project counterparts to ensure introduction of important messages about the climate in the professional behaviors and induction programs (under component 2).

38.   According to the Joint Report[22] on MDB Climate Finance, the education sector is considered as one of the cross cutting sectors eligible for climate co-finance for both adaptation and mitigation. The exact amount of financing (under component 2) allocated for climate adaptation and mitigation will be tracked throughout the implementation of the project.

39.   The project supports a comprehensive approach to education reform that aims to improve the education system for all students starting from KG and through secondary school. Since the public education system in Egypt is mostly utilized by lower and lower middle-income socioeconomic groups, the project would support improvements provided to those less privileged. Component 1 of the project includes a DLI#1 that requires 50 percent of the increase in enrollments to be in the poorest districts as identified by CAPMAS. Providing better quality KG education to the poorest segments of society would

---

[22] This report was written by a group of Multilateral Development Banks (MDBs), comprising the African Development Bank (AfDB), the Asian Development Bank (ADB), the European Bank for Reconstruction and Development (EBRD), the European Investment Bank (EIB), the Inter-American Development Bank (IDB), and the International Finance Corporation (IFC) and the World Bank (WB) from the World Bank Group (WBG).
http://www.worldbank.org/content/dam/Worldbank/document/Climate/mdb-climate-finance-2014-joint-report-061615.pdf

have fundamental positive outcomes on their education, development, employability and life skills in subsequent years. Furthermore, the reform of secondary education, Thanawiya Amma, is envisaged to reduce the widespread usage of private tutoring that keeps disadvantaged students at a disadvantage, giving all students an equal and fair opportunity to progress in life.

40.   Transparency and citizen engagement are embedded in the project design. In component 1, the Quality Assurance (QA) system in KG includes parents' involvement as an essential element for assessment. Accordingly, the QA system would produce a Quality Report that will be widely disseminated to all relevant stakeholders. In component 4, an Education Decision Support Dashboard would facilitate timely retrieval and dissemination of information (training data, assessments data, content usage data and EMIS data) and will be available to the public as well as to decision-makers at all levels, from classrooms to central ministry level. The provision of data on schools and student assessments, are expected to improve stakeholders' engagement and education system accountability. In addition, component 5 supports the development of a communication plan that adopts a two-pronged approach: the first directed to MOETE's own teaching and non-teaching staff, and the second addressing sector stakeholders outside the ministry. The communication activities will draw on the current communication channels within MOETE (hotline, Facebook, Twitter, WhatsApp, etc.) to engage with concerned citizens, Civil Society Organizations (CSOs) and any relevant stakeholders, as well as other channels. Utilizing these existing platforms to gather all the information in one centralized system will primarily help communicate the needs and concerns of students, parents, staff, officials, and other stakeholders to the ministry decision makers for review and action. To this end, and in addition to having school-based feedback mechanisms for all actors (e.g., teachers, administrators, students, etc.), the project would encourage schools to establish Parent-Teacher Associations (PTAs) at the schools where there are no PTAs. How feedback will be analyzed and considered in the government program will be developed during project implementation.

41.   **Grievance Redress Mechanism (GRM).** The project will also have a GRM to receive and address complaints that is easily accessible, for students, parents, teachers and other relevant stakeholders. The GRM will utilize the existing communication channels to receive concerns and complaints and respond accordingly in a timely manner.

42.   **Gender**. Even though there is not much disparity between male and female at the primary level, the existing data show a disparity in completion rate at the secondary level (63 percent and 52 percent respectively). Since secondary completion/graduation depends on success in the Thanawiya Amma, it is appropriate to assume that the examination and the rampant private tutoring that it generates is the cause of this gender gap. Therefore, the reform of the examination and the secondary graduation system that the proposed project supports has a strong gender rationale. At the KG1-2 level, female students' enrollment also lags slightly (645,172 males vs. 598,880 females), which makes a strong case for the expansion of KG enrollment targeting the more vulnerable districts, where female enrollment tends to be comparatively lower. Data on teachers does not suggest any disparity in access to employment or in salaries, and data on gender differentiation regarding professional development is not available (Table E.1). The project will address the gender dimension by: (a) collecting and monitoring gender-disaggregated data as part of project's results, including data on additional enrollment in KG and student graduates under the new GPA-based assessment system, as well as in the Education Decision Support Dashboard; (b) capturing gender-sensitive behavior in the KG classroom training modules and the gender dimension in the CPD framework to address gender stereotypes in education (attendance, drop outs, and enrollment in science and mathematics tracks) and the specific constraints facing girls, the role of mothers

in education, and gender-based violence or sexual harassment in schools; and (c) encouraging a balance of opportunities for teachers and education leaders CPD under component 2, through monitoring the percentage of female teachers as well as education leaders and supervisors having access to training and other professional development opportunities.

Monitoring and Evaluation

43.   **Monitoring and Evaluation** is built into the design of the proposed project and will focus on inputs, processes, intermediate outcomes and outcomes as detailed in the Results Framework (Section VII) and the DLIs in Annex D. The project's M&E function under component 5 will have two broad tasks: (a) data collection and analysis, and reporting related to the results framework; and (b) management of the third-party entity that is responsible for independent verification of the DLRs. To achieve its mandate, the PCU's Co-Director for M&E will be responsible for developing the M&E system to be included in the Project Operations Manual and agreed with the World Bank. The M&E system will detail the roles and responsibilities for data collection and data access to ensure timely and regular reporting, including any clearances or approvals required to conduct surveys or field visits. The project would systematically use data to assess whether implementation is on track and whether revisions and restructuring are needed. The project also supports the establishment of the Education Decision Support Dashboard under component 4 that populates data from other data platforms and support evidence-based decisions.

<div style="text-align: center">

ANNEX C: IMPLEMENTATION SUPPORT PLAN

Egypt, Arab Republic of
Supporting Egypt Education Reform Project

</div>

Strategy and Approach for Implementation Support

1.   The World Bank team will provide on-going implementation support throughout the project duration. This will facilitate early identification of issues and challenges, and enable the Bank to provide relevant and timely support to the Borrower that ensures the project implementation remains on track. Structured implementation support visits will take place at least twice per year, with the objective to: (a) review implementation progress, (b) identify and agree on necessary adjustments, and (c) update the Bank's internal status reporting.

2.   The country-based staff, including the co-Task Team Leader (TTL), procurement and financial management staff, as well as safeguards staff, will support MOETE to address technical and fiduciary issues as they arise.   It is expected that the World Bank team will have monthly meetings with the PCU (and possibly more frequently during the first 12-18 months of project implementation).

3.   In addition to procurement prior review, the World Bank will carry out, at least, two supervision missions a year, including one ex-post procurement review that would cover at least 10 percent of the contracts awarded during the review period.

4.   Given the centrality of the M&E function in this project, the Bank team will provide extensive M&E support to the PCU's co-director and the M&E officer to ensure timely and accurate tracking of activities and processes, as well as timely flagging of issues to ensure risk mitigation measures are taken.

5.   Special attention will be given to the PCU staff assessment outcomes to mitigate unsatisfactory staffing related issues, in accordance with the agreed TORs and in close collaboration with the Steering Committee.

Implementation Support Plan and Resource Requirements

Time	Focus	Skills Needed	Resource Estimate	Borrower Role
First twelve months	Technical M&E Fiduciary Communication	Lead Education Specialist Senior Operations Officer Components Technical Leaders Communication Procurement Financial Management Disbursement	US$250,000	The PCU is staffed and funded, in accordance with the agreed TORs; The Steering Committee meets regularly to maintain oversight of the project and address any arising issues The implementation entities are actively engaged in the achievement of the DLRs

12-48 months	Technical M&E Fiduciary Communication	Lead Education Specialist Senior Operations Officer Components Technical Leaders Communication Procurement Financial Management Disbursement		· The PCU is staffed and funded, in accordance with the agreed TORs; · The Steering Committee meets regularly to maintain oversight of the project and address any arising issues · The implementation entities are actively engaged in the achievement of the DLRs

Skills Mix Required

Skills Needed	Number of Staff Weeks[23]	Number of Trips	Comments
Lead Education Specialist and ADM TTL	12	3	
Senior Operations Officer and TTL	24	-	Country-based
Education Specialist – ECE	4	2	
Education Specialist – Teachers and EL&S CPD	4	2	
Education Specialist – ICT	4	2	
Education Specialist – Planning, Management and Evaluation	4	2	
Environment Safeguards Specialist	1	-	
Social Safeguards Specialist	2	2	
Communication Officer	4	-	Country-based
Financial Management Specialist	6	-	Country-based
Procurement Specialist	6	-	Country-based

---

[23] This is for one year of operation

ANNEX D: DISBURSEMENT LINKED INDICATORS
Table D.1. Disbursement-Linked Indicators (DLIs), by component[24]

Component 1 - DLI		Y1	Y2	Y3	Y4	Y5	Total
DLI#1	Increased Access to KG	Number of additional children enrolled in KG (50% of whom are in the poorest districts as identified by CAPMAS) Target: 500,000 additional students					
Baseline		1,244,052 children enrolled currently (31% enrollment rate)					
Allocation US$m		50 (10/yr) (Scalable)					50
DLI#2	Strengthened Quality Assurance (QA) System for KG	Quality Assurance (QA) System for KG has been established and made operational	Percentage of KGs assessed through the newly established QA system (Target: 100% of KGs) Percentage of KGs that have improved quality as per the QA System based on baseline assessment (Target: 50% of KGs)				
Baseline		No QA system	0				
Allocation US$m		6	28 (7/yr) (Scalable)				34
DLI#3	Extending KG in-service Teacher training		Percentage of public KG teachers that have completed the new KG in-service teacher training modules, as further elaborated in the POM (Target: 100% of public KG teachers)				
Baseline			0				
Allocation US$m			16 (4/yr) (Scalable)				16
C1 Total US$m		16	84 (21/yr)				100
Component 2 - DLI		**Y1**	**Y2**	**Y3**	**Y4**	**Y5**	**Total**
DLI#4	Improved Quality of Teacher and Education Leader Professional Development	• New CPD Framework approved by ministerial decree, under terms and conditions acceptable to the Bank • New induction system approved by		The criterion provided under the new CPD Framework has been used to prepare 70% of the PD plans	First cohort of new teachers, education leaders and supervisors are trained under new induction system, as further elaborated in the POM	Second cohort of new teachers, education leaders and supervisors are trained under new induction system, as further elaborated in the POM	

---

[24] Annual allocations are tentative subject to achievement of results as per the verification protocol in Table D.2.

		ministerial decree, under terms and conditions acceptable to the Bank					
Baseline		No CPD framework, current induction system under Teacher Cadre		No PD plans developed with new CPD Framework	Teachers, education leaders, and supervisors trained under current induction system	First cohort of new teachers, education leaders and supervisors trained under the new induction system	
Allocation US$m		**10 (5;5)[25]**		**6**	**10**	**4**	**30**
DLI#5	**Expanding Teachers Professional Behaviors Program**	% increase in schools/COPs participating at "highly engaged" level of Teacher Professional Behaviors (TPB) Program (Target: 40 percentage point increase) % increase in Community Learning Ambassadors (CLA) Teachers participating at "highly engaged" level of Teacher Professional Behaviors Program (Target: 40 percentage point increase)				25 % of CLA Teachers demonstrating impact on teaching by sample surveys	
Baseline		*To be provided by project effectiveness*				*To be defined through the Impact Evaluation Study supported under component 5 of the project*	
Allocation US$m		**52 (26;26)** **(scalable)**				**8**	**60**
DLI#6	**Expanding Education Leaders and Supervisors Program**	Pilot of Education Leaders and Supervisors (EL & S) Program administered to principals and vice principals in at least 500 schools, as further	% increase in education leaders and supervisors participating at "highly engaged" level of EL & S Program (Target: 25 percent of education leaders and supervisors)			% of Education leaders and supervisors demonstrating impact (Target: 25 percent of education leaders and supervisors)	

---

[25] DLR#4.1a and DLR#4.1b should be achieved by FY 2021.

		elaborated in the POM					
Baseline		No pilot	0			*To be defined through the Impact Evaluation Study supported under component 5 of the project*	
Allocation US$*m*		0.5[26]	9 (3/yr) (scalable)			0.5	10
C2 Total US$m		23.5	16	22	26	12.5	100
Component 3 – DLI		**Y1**	**Y2**	**Y3**	**Y4**	**Y5**	**Total**
DLI#7	**Successful implementation of reform of secondary graduation and assessment system**	▪Framework Document for new G10, G11 and G12 assessments approved ▪Item development for Multiple choice questions (MCQs) and open-ended questions completed	▪Successful completion of dry run of grade 10 assessments ▪New grade 10 assessments administered nation-wide ▪New secondary graduation system is established and made operational	Grades 10 and 11 tests administered nation-wide	Grades 10, 11 and 12 tests administered nation-wide	Public confidence in secondary graduation and assessment system, to be further elaborated in the POM (Target at least 60 % of respondents in a public opinion survey display confidence)	
Baseline		No framework, no current item-bank	New assessment and law amendment to govern secondary graduation system not in place	New tests not in place		No survey	
Allocation US$*m*		20 (10;10)	20 (2;8;10)	9	9	2	60
DLI#8	**Grades 4 and 9 national assessments designed,**	Framework Document for Grade 4	Dry run for the administration of Grade 4 national	Dry run for the administration of Grade 9 national		Grade 4 and grade 9 national assessments administered	

---

[26] DLR#6.1 should be achieved by FY 2020.

		developed and successfully administered	assessment is developed and approved by 2020	sample-based assessment carried out	assessment carried out			
Baseline			No framework document	No assessment	No assessment		New assessments not in place	
Allocation US$*m*			6	5	4		10 (5;5)	25
DLI#9	**NCEEE restructured as national testing and examination center**	▪Restructuring plan completed, and approved by Central Authority for Organization and Administration, and approved and signed by Borrower's minister in charge of education by 2020 ▪Capacity building plan developed for all NCEEE staff, graders, proctors, school-level staff in administration of national testing and service providers identified for capacity building activities	▪Specialized education measurement experts recruited for NCEEE for at least three consecutive years (Target: three experts) ▪Training conducted for: (1) NCEEE staff on management of assessment management platform, (2) item-bank developers, and (3) all graders on the database of graders, and (4) at least 70% of proctors on conducting new assessments	All student assessment related budget lines and allocations transferred from MOETE to NCEEE			
Baseline			No plans	No new experts	Budget lines not transferred			
Allocation US$*m*			15 (8;7)	10 (5;5)	10			35
C3 Total US$m			41	35	23	9	12	120

Component 4 DLIs		Y1	Y2	Y3	Y4	Y5	Total
DLI#10	**Educational Technology enabling environment and platform**	Education Technology Entity to support digital technology infrastructure established by ministerial decree and key positions staffed. To be further elaborated in the POM.	Education Decision Support Dashboard populated by data from training data, assessments data, content usage data and EMIS data and related reporting tools developed and functional	MOETE, directorate, district, and school level staff trained in the use of Education Decision Support Dashboard for policy making	% of Directorate level (Mudiriya) budgets prepared using information from Education Decision Support Dashboard		
Baseline		Not established	Not developed	Not trained	Not using the Dashboard		
Allocation US$m		30	20	10	10 (scalable)		70
DLI#11	**Digital Learning Resources**	Curricular objectives in all core subjects mapped to digital learning resources from EKB/LMS and made available to all teachers in KG1 to Grade 12			Percentage of public schools reached by the EKB/LMS portal, where at least 10 students and 3 teachers (across all grades) are using the portal consistently for at least 3 months Percentage of schools in poorest 5 governorates (per CAPMAS) reached through EKB/LMS portal		
Baseline		Not mapped			Not available		
Allocation US$m		18 (6/yr) (scalable)			10 (2) (scalable) and 2 (0.5) (scalable)		30
DLI#12	**Successful Implementation of computer-based assessment management platform**	Management platform for computer-based assessment system designed and functional		District officers, school principals, teachers and students are able to access results at their respective levels through the platform.			
Baseline		No platform		No access			
Allocation US$m		40		20			60
C4 Total US$m		76	26	36	8	14	160
Total US$$m		156.5	98.0	102.0	64.0	59.5	480.0

Table D.2. Verification Protocol and Disbursement Formula

Disbursement-Linked Result (DLR)	Definition	Verification Procedure	(a)Data Source and (b)Verification Entity	Disbursement Formula
DLI#1: Increased Access to KG				
DLR#1 **DLR#1.a** **500,000 of additional students enrolled in KG** **DLR#1.b** **50% of the additional students enrolled in KG are in the poorest districts as identified by CAPMAS**	Number of students enrolled in: • Public KG (including any public-private partnership modality in which KG services are provided privately but fully subsidized through public funding). • KG classroom in which class size should not be larger than 35 students. *Data should be reported disaggregated by type of school, smallest geographic unit, and gender.*	• MOETE EMIS will provide the verification agent with *enrollment data*, disaggregated by type of school, smallest geographic unit, and gender. • Verification agent will spot check in a sample of randomly selected schools to verify enrollment numbers. • During the spot checks, verification agent will review enrollment records and conduct a student headcount. The latter will be adjusted for absenteeism multiplying the number of attendees by 1.2. • Verification agent will verify that the percentage of the additional children enrolled in KG are in the poorest districts as identified by CAPMAS.	(a)EMIS CAPMAS (b)Third Party	**DLR#1.a-**: US$80,000 for every 1,000 additional students enrolled in each Academic Year (AY), starting in AY 2018-2019 **up to a maximum of US$40,000,000** **DLR#1.b**: US$20,000 for every 500 additional KG students enrolled in the poorest districts in each AY, starting in AY 2018-2019, **up to a maximum of US$10,000,000.**
DLI#2: Strengthened Quality Assurance (QA) System for KG				
DLR#2.1 **Quality Assurance (QA) System for KG has been established and made operational**	A Quality Assurance (QA) System developed and made operational for both public and private (for profit, community-based, NGO) KGs. QA system will include: • Clear standards along a quality continuum, which are harmonized with licensing procedures for market entry and renewal for private KGs;	• Verification agent will check that the QA System has been officially approved by MOETE, signed by the minister, and disseminated on MOETE website. • Verification agent will also check that the document contains all elements of the QA System, that have been agreed with WB.	(a)MOETE website Signed documents at MOETE (b)Third Party	US$6,000,000

Disbursement-Linked Result (DLR)	Definition	Verification Procedure	(a)Data Source and (b)Verification Entity	Disbursement Formula
	• System of rewards and sanctions to incentivize compliance; • Evaluation tools with corresponding protocols for assessing KG schools against said quality standards.			
DLR#2.2 **DLR#2.2a:** **100 % KGs assessed under newly established QA System**	**DLR#2.2a**: Assessment of KGs achieved when: • Site visits conducted to administer the evaluation tools with the corresponding protocols, as defined in QA system. • Assessment score falls within the *quality continuum*, under the QA system established to include, at minimum, the following quality classification levels: (a) <u>Inadequate quality</u>: KGs that do not meet minimum quality standards; (b) <u>Minimum quality</u>: KGs that meet minimum quality standards; (c) <u>Good quality</u>: KGs that perform above minimum quality standards; • Assessments score made publicly available.	**DLR#2.2a**: Verification agent will verify the assessment scores for KGs on MOETE website and ensure completion of the evaluation tools. *The assessment procedure and methodology will be agreed upon with the WB.*	(a)Quality reports for KGs (b)Third Party	**DLR 2.2a**: For every 10 percentage points of KGs assessed, reward US$80,000 up to US$8,000,000.
DLR#2.2b: **50 % of KGs assessed have improved quality per QA System**	**DLR#2.2b**: KG schools have improved quality per QA system according to: • Improved quality is defined as the movement to at least one higher level in the KG quality classification continuum. • A quality report needs to be produced for each school detailing the classification justification as per	**DLR#2.2b:** Verification agent will review the quality reports for all KGs at baseline and endline. It will also conduct spot checks in a sample of randomly selected KGs among those that have improved quality per QA System to verify endline quality classification levels.		**DLR2.2b**: For every 10% of KGs with improved quality reward US$4,000,000 up to US$20,000,000.

Disbursement-Linked Result (DLR)	Definition	Verification Procedure	(a)Data Source and (b)Verification Entity	Disbursement Formula
	the QA System.	*The sampling framework should be acceptable to the WB.*		
DLI#3: Extending KG in-service Teacher training				
DLR#3.2 **100 % of public KG teachers have completed the new KG teacher training modules**	New KG in-service teacher training modules developed and used, in light of a diagnostic study of teaching practices and per agreed TORs with WB as further elaborated in the POM.	• Verification agent will verify successful completion of the new KG in-service training through reviewing training records. • Verification agent will also interview a sample of randomly selected KG teachers to verify completion of training. *Sampling framework should be acceptable to the WB.*	(a)MOETE training records (b)Third Party	**DLR#3.2** From a baseline of 0, for every 5 percentage points increase in percentage of KG teachers completing the new KG in-service training modules pre-agreed by the WB, reward US$800,000, up to a maximum of US$16,000,000.
DLI#4: Improved Quality of Teacher and Education Leader Professional Development				
DLR#4.1 **DLR#4.1a** **New CPD Framework approved by ministerial decree,** under terms and conditions acceptable to the Bank	**DLR#4.1a** CPD framework developed to include guidelines and technical details for professional development according to stage, subject specialization, and professional development requirements for promotions.	Verification agent will verify that new CPD framework and document for new induction system have been approved by ministerial decree (s).	(a)Ministerial decree MOETE website (b)Third Party	**DLR#4.1a** US$5,000,000 by FY2021
DLR#4.1b: **New induction system approved by ministerial decree,** under terms and conditions acceptable to the Bank	**DLR#4.1b N**ew induction system developed to include guidelines and technical details for initial training, mentoring, and follow up support for teachers, education leaders, and supervisors before they take up their duty post.			**DLR#4.1b** US$5,000,000 by FY2021

Disbursement-Linked Result (DLR)	Definition	Verification Procedure	(a)Data Source and (b)Verification Entity	Disbursement Formula
DLR#4.3 **Criterion provided under the new CPD Framework used to prepare 70% of the PD plans**	Completed when 70 percent of national, directorate, district, and school level fully funded professional development (PD) plans have been reviewed and approved according to criteria laid out in the new CPD framework.	Verification agent will validate that the PD plans at the national, directorate, district, and school levels have been reviewed and approved according to criteria laid out in the new CPD framework. For district and school levels, an intentional sample will be used. The sample design will be agreed with the World Bank.	(a)MOETE website Training records (b)Third Party	US$6,000,000 by closing date.
DLR#4.4 **First cohort of new teachers, education leaders, and supervisors are trained under new induction system,**	Considered met on confirmation of first cohort of new teachers, education leaders, and supervisors being inducted according to requirements laid out in the new induction system, as further elaborated in the POM	Verification agent will confirm completion through verification of completion certificates and evidence of training programs (program agendas, assignments, expenditure receipts).	(a)MOETE Training records (b)Third Party	US$10,000,000 by closing date.
DLR#4.5 **Second cohort of new teachers, education leaders and supervisors are trained under new induction system**	Considered met on confirmation of second cohort of new teachers, education leaders, and supervisors being inducted according to requirements laid out in the new induction system, as further elaborated in the POM.	Verification agent will check induction records to ensure new inductions follow the agreed requirements.	(a)MOETE Training records (b)Third party	US$4,000,000 by closing date.
DLI#5 Expanding Teacher Professional Behaviors (TPB) Program				
DLR#5 **DLR#5.1a** **40 % increase in schools/COPs participating at "highly engaged" level of Teacher Professional Behaviors (TPB) Program**	**DLR#5.1a** "Highly engaged" level of participation for schools/COPs achieved according to the following criteria: • Schools have an officially established and functioning TPB community of practice (COP) formed by a minimum of three Local Learning Ambassadors (LLAs).	**DLR#5.1a** Verification agent will review and validate the information provided and the findings reports for engagement level of schools/COP.	(a)Teacher Professional Behaviors Program Portal (b)Third Party	**DLR#5.1a** US$6.5m for every 10-percentage point increase in number of highly engaged school/CoPs, **up to a maximum of US$26,000,000.**

Disbursement-Linked Result (DLR)	Definition	Verification Procedure	(a)Data Source and (b)Verification Entity	Disbursement Formula
DLR#5.1b **40% increase in CLA Teachers participating at "highly engaged" level of Teacher Professional Behaviors (TPB) Program**	• COPs have at least 3 or more additional Community Learning Ambassadors (CLAs) beyond the original three LLAs. **DLR#5.1b** "Highly engaged" level of participation for CLA Teachers achieved according to the following criteria: • The number and chronological spread of self-credits: with a minimum of 12 self-credits across at least 4 TPB themes in a period of no less than 1 month. • The number, chronological spread, and number of peers and peer credits: with minimum of 8 peer credits across at least 3 TPB themes from at least 2 peers in a period of no less than 1 month. • The number and chronological spread of visits/uploads to the learning library: with at least 6 visits to the learning library in a period of no less than 1 month.	**DLR#5.1b** • Verification agent will review and validate the information provided and the findings reports for engagement level of schools. • Verification agent will also conduct through spot checks/ random phone surveys		**DLR#5.1b** US$6.5m for every 10 percentage point increase in number of highly engaged CoPs, **up to a maximum of US$26,000,000**.
DLR#5.5 **25 percent of CLA Teachers demonstrating impact on teaching**	Achieved when: • Teaching practices standards developed and approved • Teaching practices standards used to define TPB criteria • Teacher Professional Behaviors criteria used to assess teachers in the baseline, midpoint, and endline of the Teachers' Impact Evaluation study,	Verification agent will conduct school surveys on a sample basis to verify percentage of teachers demonstrating impact per agreed Teacher Professional Behaviors criteria.	(a)Teacher Professional Behaviors Program Portal, School visits (b)Third party	US$8,000,000 for at least 25% of CLA teachers demonstrating impact by closing date.

Disbursement-Linked Result (DLR)	Definition	Verification Procedure	(a)Data Source and (b)Verification Entity	Disbursement Formula
	where the TOR were agreed with the World Bank			
DLI#6: Expanding Education Leaders and Supervisors (EL&S) Program				
DLR#6.1 **Pilot of Education Leaders and Supervisors (EL & S) Program Administered**	Pilot considered successful if the EL&S program developed in consultations with the World Bank was administered in at least 500 schools for principals and vice principals, as further elaborated in the POM	Verification agent will conduct phone surveys on a sample basis to verify successful completion of the pilot. *The sampling framework should be acceptable to the WB.*	(a)Phone surveys (b)Third Party	US$500,000 by end of FY 2020.
DLR#6.2 **25% increase in Education leaders and Supervisors participating at "highly engaged" level of EL & S Program**	"Highly engaged" level of participation in the EL & S Program achieved, according to the following criteria: • The number and chronological spread of self-credits: with a minimum of 12 self-credits across at least 4 education leader themes in a period of no less than 1 month. • The number, chronological spread, and number of peers and peer credits: with minimum of 8 peer credits across at least 3 education leader themes from at least 2 peers in a period of no less than 1 month. • The number and chronological spread of visits/uploads to the learning library: with at least 6 visits to the learning library in a period of no less than 1 month.	Verification agent will validate the information provided on engagement level of EL & S to ensure accuracy.	(a)Teacher Professional Behaviors Program Portal (b)Third Party	**DLR#6.2**: from a baseline of 0, US$1,000,000 for every 10 percentage points increase in "highly engaged" education leaders and supervisors **up to a maximum of US$9,000,000**.

Disbursement-Linked Result (DLR)	Definition	Verification Procedure	(a)Data Source and (b)Verification Entity	Disbursement Formula
DLR#6.5 **25 percent of education leaders and supervisors demonstrating impact**	Achieved when: - EL&S practices standards developed and approved - EL&S practices standards used to define EL&S behaviors criteria - EL&S behavior criteria used to assess EL&S in the baseline, midpoint, and endline of the EL&S Impact Evaluation study, where the TOR were agreed with the World Bank	Verification agent will conduct school surveys on a sample basis to verify percentage of EL&S demonstrating impact per agreed EL&S behaviors criteria.	(a)Teacher Professional Behaviors Program Portal (b)Third Party	US$500,000 for at least 25% of EL& S demonstrating impact by closing date
DLI#7 Successful implementation of the reform of the secondary graduation and assessment system				
DLR#7.1 **DLR#7.1a** **Framework Document for new G10, G11 and G12 assessments approved** **DLR#7.1b** **Item development for MCQs and open-ended questions completed**	**DLR#7.1a** Framework document developed with focus on G10-G12 assessments and include objectives for assessment, curriculum analysis and mapping of learning outcomes to be assessed. **DLR#7.1b** Item bank developed on the new assessment management platform that includes MCQs and open-ended questions for all 8 subjects for G10.	**DLR#7.1a:** Verification agent will check that the Framework Document contains all elements of the new assessments that have been agreed upon with the WB and has been officially approved and signed by the Minister of MOETE, and disseminated on MOETE website. **DLR#7.1b**: Verification agent will check the item-bank is operational and can generate sample tests for 8 subjects for G10. *Verification process will not compromise the security of the assessment system.*	(a)MOETE Website Assessment management platform (b)Third Party	**DLR7.1a** US$10,000,000 by closing date **DLR7.1b** US$10,000,000 by closing date
DLR#7.2 **DLR#7.2a** **Successful completion of dry run of G10 assessments**	**DLR7.2a**: Dry run of G10 assessment considered successful if: All selected students receive the G10 dry run assessment and are able to take it under uniform conditions, where student selection criteria will be agreed with the World Bank	**DLR#7.2a-b**: Verification agent will check that the G10 dry run and G10 national assessment have been carried out according to the criteria defined in the DLR.	(a)Assessment management platform Law amendment, ministerial decree and other legislative	**DLR7.2a** US$2,000,000

Disbursement-Linked Result (DLR)	Definition	Verification Procedure	(a)Data Source and (b)Verification Entity	Disbursement Formula
DLR7.2b: **New G10 assessments administered nation-wide** **DLR#7.2c** **New secondary graduation system is established and made operational**	• All students who take the test receive their scores within two months of test-taking **DLR7.2b**: Administration of G10 assessment considered successful if: • Test creation based on new item bank with MCQs and open-ended questions • National coverage of new G10 assessment • All tests are graded through new scoring software • Dissemination at the national level of assessment results within two months of completion of the testing process. **DLR#7.2c**: Education law amended to end the Thanawiya Amma and put in place a GPA based secondary graduation system based on 12 assessments across G10-G12.	• Verification agent will conduct random spot checks of assessment sites and checking test creation, scoring and data analysis on the assessment management platform. **DLR#7.2c**: Verification agent will check that the law has been amended and any changes in procedures are approved by a Ministerial decree or any other required piece of legislation	documents related to the new secondary graduation system (b)Third Party	**DLR7.2b** US$8,000,000 **DLR7.2c** US$10,000,000 for by closing date.
DLR#7.3 **G10 & G11 Tests are administered nation-wide**	Successful administration of tests completed if: • Test creation based on new item bank with MCQs and open-ended questions • National coverage of new G10, and G11 assessments • All G10 and G11 tests are graded through new scoring software • National dissemination of scores within one month of assessment	• Verification agent will validate successful completion of the G10 and G11 assessments by reviewing the test administration records and scoring records on a sample basis. • Verification agent will also conduct interviews to a sample of randomly selected students to verify test administration and receipt of scores.	(a)Assessment management platform phone surveys (b)Third Party	US$9,000,000 by closing date for administration of nation-wide G10 and G11 tests in one academic year.

Disbursement-Linked Result (DLR)	Definition	Verification Procedure	(a)Data Source and (b)Verification Entity	Disbursement Formula
DLR#7.4 G10,G11,G12 Tests are administered nation-wide	Successful administration of tests completed if: • Test creation based on new item bank with MCQs and open-ended questions • National coverage of new G10, G11, and G12 assessments • All G10, G11, and G12 tests are graded through new scoring software • National dissemination of scores within one month of assessment	• Verification agent will validate successful completion of the G10, G11, G12 assessments by reviewing the test administration records and scoring records on a sample basis. • Verification agent will also conduct interviews to a sample of randomly selected students to verify test administration and receipt of scores.	(a)Assessment management platform phone surveys (b)Third Party	US$9,000,000 by closing date for administration of nation-wide G10, G11 and G12 tests in the subsequent academic year.
DLR#7.5 Public confidence in the secondary graduation and assessment system	At least 60% of respondents of a public opinion survey believe that the new GPA-based secondary graduation and assessment system is (i) fair, (ii) improved and (iii) sustainable. The sample of the public opinion survey will be agreed between MOETE and WB teams and further elaborated in the POM	Verification agent will validate the survey responses on a sample basis. ***The sample framework agreed between MOETE and World Bank.***	(a)Public opinion survey results (b)Third Party	US$2,000,000 for 60% respondents displaying confidence in the secondary graduation and assessment system by closing date.
DLI#8: Grades 4 and 9 national assessment are designed, developed and successfully administered				
DLR#8.1 Framework Document for Grade 4 assessment is approved by 2020	Framework document for G4 assessments developed, and include objectives for assessment, curriculum analysis and mapping of learning outcomes to be assessed.	Verification agent will check that the Framework Document contains all elements of the new assessments that have been agreed upon with the World Bank and has been officially approved and signed by the Minister and disseminated on MOETE website.	(a)MOETE Website (b)Third Party	US$6,000,000

Disbursement-Linked Result (DLR)	Definition	Verification Procedure	(a)Data Source and (b)Verification Entity	Disbursement Formula
DLR#8.2 **Dry run for the administration of Grade 4 sample-based assessment carried out**	Considered successful based on the following: • the sampling approach including sample size (schools and students) commensurate with the objectives of providing national, regional and between group representativeness. • Analysis of test item validity and assessment data management are in place. • Dry run administered based on agreed Implementation arrangements including plans for item and questionnaire development, pre-testing, data entry protocols, the roles and responsibilities of NCEEE and other MOETE and Governorate-level agencies and how assessments.	• Verification agent will validate the information provided and the findings report for Grade 4 national assessment to ensure sample representativeness and soundness of approach. • Verification agent will also validate the publication of the results on MOETE website	(a)Assessment report MOETE Website (b)Third Party	US$5,000,000 by closing date.
DLR#8.3 **Dry run for the administration of Grade 9 national assessment carried out**	Considered successful based on the following: • Dry run based on agreed Implementation arrangements including: plans for item and questionnaire development, pre-testing, data entry protocols, the roles and responsibilities of NCEEE and other MOETE and Governorate-level agencies and how assessments will be administered. • Scoring rubrics, analysis of test item validity and assessment data management are in place.	Verification agent will verify successful completion of the G9 assessment by reviewing the test administration records and scoring records on a sample basis.	(a)Assessment Management platform (b)Third Party	US$4,000,000 by closing date.

Disbursement-Linked Result (DLR)	Definition	Verification Procedure	(a)Data Source and (b)Verification Entity	Disbursement Formula
DLR#8.5 Grade 4 and grade 9 national assessments administered	Successful administration of grade 4 and grade 9 assessment include: • Test creation based on new item bank with MCQs and open-ended questions • All tests are graded through new scoring software • Dissemination of national assessment report within two months	• Verification agent will verify successful completion of the G4 and G9 assessments by reviewing the test administration records on a sample basis. • Verification agent will also conduct interviews to a sample of randomly selected students to verify test administration.	(a)Assessment Management Platform, Phone surveys (b)Third Party	US$5,000,000 for one round of each successful national assessment (G4 and G9) in any given academic year by closing date **up to a maximum of US$10m.**
DLI#9: NCEEE restructured as a national testing and examination center				
DLR#9.1 DLR#9.1a Restructuring plan completed, and approved by Central Authority for Organization and Administration, and approved and signed by Borrower's minister in charge of education by 2020	**DLR#9.1a** Achieved when: (a) Restructuring plan completed and include mapping of new functions, staffing needs; (b) approved by Central Authority for Organization and Administration; and (c) approved and signed by the Minister.	**DLR#9.1a** Verification agent will check that the Restructuring plan has been officially approved and signed by the Minister.	(a)NCEEE records (b)Third party	**DLR9.1a US$8,000,000 by 2020**
DLR#9.1b Capacity building plan developed for all NCEEE staff, graders, proctors, school-level staff in administration of national testing and service providers identified for capacity building activities	**DLR#9.1b** Capacity building plan developed for (i) NCEEE staff, (ii) graders, (iii) proctors, (iv) school-level staff for the successful administration of new national assessments and service providers identified for capacity building activities.	**DLR#9.1b** Verification agent will check that the capacity building plan covers all relevant stakeholders and service providers have been contracted to provide the trainings.		**DLR9.1b US$7,000,000 by closing date.**

Disbursement-Linked Result (DLR)	Definition	Verification Procedure	(a)Data Source and (b)Verification Entity	Disbursement Formula
DLR#9.2 **DLR#9.2a** **Three Specialized education measurement experts recruited for NCEEE for at least three consecutive years** **DLR#9.2b** Training conducted for: (1) NCEEE staff on management of assessment management platform, (2) item-bank developers, and (3) all graders on the database of graders, and (4) at least 70% of proctors on conducting new assessments	**DLR#9.2a** Three Education measurement experts have been recruited for at least 3 years against TORs agreed between MOETE and WB. **DLR#9.2b** Capacity building activities include: • Training for NCEEE staff on management of assessment management platform • Training of item-bank developers • Training of all graders in the database of graders • Training of at least 70% proctors to conduct new assessments	**DLR#9.2a** Verification agent will check contracts of 3 Education measurement experts and ensure that duration is at least 3 years. **DLR#9.2b** Verification agent will verify trainings against the training records and conduct spot checks of training activities. *MOETE is required to share the schedule of capacity building activities with the verification agent at least one month in advance.*	(a)Contracts training records spot checks (b)Third party	**DLR#9.2a** US$5,000,000 by closing date **DLR#9.2b** US$5,000,000 by closing date
DLR#9.3 **All student assessment related budget lines and allocations transferred from MOETE to NCEEE**	Achieved when Student Assessment related budget lines and allocations transferred to NCEEE	Verification agent will ensure that budget lines are reflected in the corresponding year's draft budget and allocations are at least equal to or greater than previous allocations for examinations.	(a)Budget records (b)Third Party	US$10,000,000 by closing date.
DLI#10: Education Technology enabling environment and platform				
DLR#10.1 **Education Technology Entity to support digital technology infrastructure established by ministerial decree and key positions**	A new education technology 'entity' formally established, with a defined TORs in support of planning, deployment, maintenance, and evaluation of key elements of the digital technology infrastructure, staffed by	• Verification agent will check that the Education Technology Entity has been established by Ministerial decree. • Verification agent will also check	(a)MOETE Website (b)Third Party	US$30,000,000 by closing date.

Disbursement-Linked Result (DLR)	Definition	Verification Procedure	(a)Data Source and (b)Verification Entity	Disbursement Formula
staffed.	professionals with related experience and expertise. This will be further elaborated in the POM once the relevant technical support provided under component 5 is completed and found acceptable to the MOETE and the World Bank	that key positions have been staffed using well-defined TORs agreed with the World Bank.		
DLR#10.2 Education Decision Support Dashboard populated by data from training data, assessments data, content usage data and EMIS data and related reporting tools developed and functional	•The Education Decision Support Dashboard populated with data from: • Training data (TF, PAT and others) • Assessments data • Content usage data (EKB/LMS) • EMIS data • The Education Decision Support Dashboard and related reporting tools are fully functioning.	Verification agent will validate that the Education Decision Support Dashboard has been populated with key data in the four identified topics that the Education Decision Support Dashboard and related reporting tools are fully functioning.	(a)Education Decision Support Dashboard website (b)Third Party	US$20,000,000 by closing date.
DLR#10.3 MOETE, directorate, district, and school level staff trained in use of Education Decision Support Dashboard for policy making	Achieved when training of relevant central ministry, directorates and district level staff on the use of Education Decision Support Dashboard completed.	• Verification agent will validate successful completion of the training through reviewing training records. • Verification agent will also conduct interviews to a sample of randomly selected central ministry, directorates and district level staff to verify completion of training.	(a)MOETE training records (b)Third Party	US$10,000,000 by closing date.
DLR#10.4 **Percentage o**f Directorate level (Mudiriya) budgets prepared using information from Education Decision Support Dashboard	Directorate/mudiriya level budgets developed citing information from Education Data Dashboard to inform resource allocation.	Verification agent will review a sample of directorate/mudiriya level budgets and verify that accurate data has been cited from the Education Decision Support Dashboard.	(a)Directorate/mudiriya records (b)Third Party	**DLR#10.4** For every additional 10 percentage points in directorate-level budgets using the Education Decision Support Dashboard data, reward

Disbursement-Linked Result (DLR)	Definition	Verification Procedure	(a)Data Source and (b)Verification Entity	Disbursement Formula
				US$1,000,000 **up to a maximum of US$10,000,000**
DLI#11: Digital Learning Resources				
DLR#11.1 **Curricular objectives in all core subjects mapped to digital learning resources from EKB/LMS and made available to all teachers in KG1 to Grade 12**	Achieved when, for each grade from KG1-G12: • Curricular objectives in all core subjects, are mapped to digital learning available from EKB/LMS; and • Made available to all teachers and KG1-Grade 12 students	Verification agent will select a sample of relevant curricula objectives for 3 subjects across KG1-G12 grades and verify that: • Digital learning resources exist for each curricular objective in the national curriculum for all core education subjects for KG1-G12 levels, • digital learning resources are clearly labelled and accessible to teachers and students.	(a)Curricular Objectives for KG1-G12 for core subjects; LMS interface (b)Third Party	**DLR#11.1** US$5,000,000 for the first grade that has all core subjects' curricula digitized with an additional US$1,000,000 for every additional grade digitized up **to a maximum of US$18,000,000**
DLR#11.4 **DLR#11.4a** **Percentage of public schools reached by the EKB/LMS portal, where at least 10 students and 3 teachers (across all grades) are using the portal consistently for at least 3 months** **DLR#11.4b** **Percentage of schools in poorest 5 governorates (according to CAPMAS) reached through EKB/LMS portal**	**DLR#11.4a** Schools considered "reached" if at least 10 students and 3 teachers (across all grades) are using LMS portal consistently for three months. **DLR11.4b** Schools in poorest five governorates (as measured by CAPMAS) have at least 10 students and 3 teachers (across all grades) using LMS portal consistently for three months.	Verification agent will analyze user data on a quarterly basis to verify that schools have at least 10 students and 3 teachers accessing the LMS portal consistently for three months. **DLR11.4b** Verification agent will analyze user data, in the poorest 5 governorates, according to CAPMAS, on a quarterly basis to verify that schools have at least 10 students and 3 teachers accessing the LMS portal consistently for three months.	(a)LMS usage data (b)Third Party	**DLR#11.4a:** US$2,000,000 for every ten percentage points increase in the percentage of schools reached through the LMS portal **up to a maximum of US$10,000,000.** **DLR11.4b** US$500,000 for every ten percentage points increase in the percentage of schools reached through the LMS portal **up to a maximum of US$2,000,000.**

Disbursement-Linked Result (DLR)	Definition	Verification Procedure	(a)Data Source and (b)Verification Entity	Disbursement Formula
DLI#12: Successful Implementation of computer-based assessment management platform				
DLR#12.1 Management platform for computer based assessment system designed and functional	Assessment management platform developed to include item bank (includes test construction), test delivery (test scheduling, proctor profiles, caching), scoring (graders database, double-scoring) and data analysis (student test results)	Verification agent will assess the functionality of the computer-based assessment management platform. *Verification process will not compromise the security of the assessment system.*	(a)Assessment Management Platform (b)Third Party	US$40,000,000 by closing date.
DLR#12.3 **District officers, school principals, teachers and students are able to access results at their respective levels through the platform.**	District officers, school principals, teachers and students access their respective results through the platform.	Verification agent will validate the availability of results at each level.	(a)Assessment Management Platform (b)Third Party	US$20,000,000 by closing date.

DLI Description and Rationale

DLI#1. Increased Access to KG

a. ***Rationale.*** Access to preprimary education in Egypt has been steadily improving over the last decade. Between 2007 and 2017, the gross preprimary enrollment ratio nearly doubled, increasing from a base of 17 to 31 percent.[27] In spite of this progress, access to preprimary education is far from universal, contributing to poor school readiness. Inequality in access is also prevalent. With KG enrollment strongly associated with family income[28], it is estimated that most children from the two bottom income quintiles are deprived of the benefits of an early childhood education. Far from leveling the playing field for all children, this enrollment structure is likely to widen the school readiness gap across socioeconomic lines in the first years of primary school.

b. ***Description.*** The DLI will incentivize increased KG enrollment, particularly targeting children living in the poorest districts of the country, as identified by CAPMAS. A strong emphasis will be placed on identifying, refurbishing and equipping available public spaces into KG classrooms. MOETE and the General Authority for Educational Buildings (GAEB) will be responsible for this DLI.

c. ***Achievement.*** Disbursements will be made proportional to increases in KG enrollment (with a focus on poor districts).

d. ***Verification.*** Enrollment data will be provided to an independent third party for verification. The third party will also conduct spot checks in a sample of randomly selected schools to verify enrollment numbers.

DLI#2. Strengthened Quality Assurance (QA) System for KG

a. ***Rationale.*** While the country has established quality standards for KG, these standards are mostly geared toward the infrastructure of facilities and the curriculum, leaving behind critical dimensions of quality including the learning environment, requirements for teacher training, and the quality of the teacher-student interaction. In turn, mechanisms to assure quality against these standards are loosely defined, with standards presented as non-binding guidelines that are difficult to measure. Efforts to monitor KGs' performance against these standards cater exclusively for a self-selected handful of KGs that apply to become accredited (approximately 10 percent of KGs in 2016). Such a system leaves the majority of KGs unmonitored, and provides a dichotomous classification of arguably the top performers (i.e. accredited or non-accredited) without clear actions and steps to further improve their quality.

b. ***Description.*** The DLI supports the development and implementation of a robust QA system that incentivizes progress of KGs along a quality continuum. The QA system will include revised quality standards for KG which include the various quality dimensions (i.e. learning environment, teacher training requirement, quality of teacher-student interaction, etc.) and are laid out along a quality continuum. Standards will be harmonized with licensing procedures for market entry and renewal for private KGs. The QA will also include a system of rewards and sanctions to incentivize compliance with said quality standards and promote continuous quality improvement. A set of evaluation tools with corresponding protocols for assessing KGs against quality standards will also be developed. Assessment scores of KGs using the newly developed QA system will be made publicly available.

---

[27] MOE data for the 2016-2017 academic year.
[28] Children from the highest wealth quintile are five times more likely to attended ECE than their peers in the lowest income quintile. El-Kogali & Krafft 2015.

c. ***Achievement.*** A first disbursement will be made upon the development and adoption of the QA system for KG. Once the QA system is adopted, disbursements will be made proportional to the percentage of KGs assessed through the newly adopted system. KGs that are assessed, will become candidates for disbursement against quality improvements. That is, disbursements will be made proportional to the percentage of KGs that move to a higher level in the KG quality classification continuum, as per the QA system. The Central Administration for Basic Education and Kindergarten of MOETE will be responsible for this DLI.

d. ***Verification.*** An independent third party will verify that the QA system contains all elements agreed upon with the World Bank and has been officially approved and adopted by MOETE. The third party will also conduct spot checks in a sample of randomly selected KGs to verify baseline and endline quality classification levels.

DLI#3. Extending KG In-service Teacher Training

a. ***Rationale.*** Limited specialized in-service training opportunities and pedagogical support constrain KG teachers' ability to structure learning around age-appropriate and play-based activities that stimulate child development and early socio-emotional skills. Recently, the "Teachers First" program has been developed and is incrementally being rolled out to K-12 teachers, providing training on a set of teaching behaviors. Yet, this program does not cater for specific KG-related skills and knowledge.[29]

b. ***Description.*** The DLI supports the development and rollout of an in-service training program for KG teachers. The training program will be aligned with the new curriculum and will consist of modules designed in light of a diagnostic study of teaching practices, and intended to improve specific practices in the classroom such as learning through play, the use of classroom assessment, and the development of early socioemotional skills. The Central Administration for Basic Education and Kindergarten of MOETE will be responsible for this DLI.

c. ***Achievement.*** Disbursement will be made proportional to the percentage of KG teachers that undergo KG in-service training.

d. ***Verification.*** An independent third party will verify that the in-service KG teacher training modules have been developed aligned with findings from the diagnostic teaching practices study. This agent will also verify successful completion of the training by reviewing training records, and conducting interviews to a sample of randomly selected KG teachers to verify completion of training.

DLI#4. Improved Quality of Teacher and Education Leader Professional Development

a. ***Rationale:*** The quality of education in Egypt is constrained, among other factors, by the comparatively low level of service delivery at the classroom, school, district, and directorate levels. This is partially a function of a weak and ineffective system of pre- and in-service professional development wherein teachers, education leaders at the school, district and directorate-levels, and supervisors often graduate lacking the requisite knowledge, skills, and attitudes needed to meet current instructional and supervision requirements. These lacks negatively affect the quality of support given to education leaders and teachers, and thus on the quality of classroom instruction limiting the chances for high quality classroom learning. Improving the quality of the system for in-service teacher and education leader professional development will provide educators with a clear understanding of the opportunities to enhance and update their knowledge, skills and competencies offered and expected

---

[29] See description of "Teachers First" under Component 2.

by MOETE. Moreover, improving the system will allow them to access appropriate professional development opportunities more in line with their specific needs.

b. **Description:** The DLI will support design, development, and implementation of new, CPD framework, and an updated induction system for new teachers, education leaders at the school, district and directorate-levels, and supervisors for the purpose of improving the quality and relevance of professional development for those in the education system.

c. **Achievement:** Disbursement will be made in Year 1 on the achievement of the development and approval of both a new CPD framework and a new induction system by respective ministerial decree. Disbursements will be made in Year 3 on the new CPD framework being used as the basis of preparing professional development plans at the national, directorate and district-levels. Disbursements will be made in Year 4 upon the training of first cohort of newly hired new teachers, education leaders, and supervisors, under the new induction system. Final disbursements will be made in Year 5 on the achievement of the second cohort of newly hired teachers, education leaders, and supervisors being trained under the new induction system.

d. **Verification:** A third party will review the information provided and the findings report for the new CPD framework; new induction system; training of MOETE leadership and staff on the new framework and new induction system; approval of directorate and district-levels professional development plans based on new CPD requirements; and training of the first cohort and then all new cohorts of teachers, education leaders and supervisors being trained under the new induction system to ensure compliance, accuracy, sample representativeness and soundness of approach. Confirmation of completion of training of MOETE leadership and staff on new CPD framework and new induction system through verification of completion certificates and evidence of training programs (program agendas, assignments, expenditure receipts, etc.).

- Confirmation of national, directorate and district-level fully funded professional development plans being reviewed and approved according to criteria laid out in the new CPD framework.

- Confirmation of new teachers, education leaders, and supervisors being inducted according to requirements laid out in the new induction system.

DLI#5. Expanding Teachers Professional Behaviors Program

a. *Rationale:* Effective learning continues to be inhibited by teachers using outdated pedagogical practices that promote rote learning and information recall. There are limited opportunities, however, for systematic professional development oriented to changing these practices and teaching behaviors. Existing programs are often of poor quality, ill-timed in relation to when teachers need the training and support, are usually one-off trainings unconnected to teachers' specific needs, or focus on delivery of isolated subject content and/or pedagogical skills unrelated to the underlying behaviors which are often needed as a pre-cursor to professional improvement. The lack of high quality and sustained professional development prevents teachers from acquiring the knowledge, skills, and attitudes and behaviors they need to meet the varying learning needs of individual students they teach. Infrequent and poor quality professional development leads to weak and ineffective teaching practices, which in turn contribute significantly to the low levels of student learning and performance. Expansion of a professional behaviors-based development system for teachers, including the establishment of communities of practice in respective schools, will shift the balance and focus of professional development closer to schools and allow teachers to establish a foundation of behaviors upon which additional subject/content and pedagogical professional development can be built. This will allow their professional development to be more in line with teachers' and schools' specific needs.

b. *Description*: The DLI will support the expansion and scaling up of the Teachers Professional Behaviors program beyond the current prototype (pilot) phase for the purpose of improving teacher practices and their attitudes and behaviors related to how to promote active student learning, and to continuous professional development.

c. *Achievement*: Disbursements in Year 1-4 will be made proportional to percentage increase in schools/ CoP participating at a "highly engaged" level of the Teachers Professional Behavior program; and percentage increase in Center Learning Ambassadors (CLA) Teachers participating at a "highly engaged" level of the TPB program. Final disbursements will be made in Year 5 on the achievement of a minimum percentage of CLA teachers demonstrating impact per an agreed Teacher Professional Behaviors criteria/index.

d. *Verification*: The information provided and the findings reports for engagement level of CLA Teachers and schools will be reviewed by a third-party firm to ensure validity of reported engagement levels. Achievement of a "highly engaged" level of participation for CLA Teachers will be assessed to ensure that teachers meet with the agreed standards.

DLI#6. Expanding Education Leaders and Supervisors Program

a. *Rationale:* The quality of education in Egypt overall, and teaching and learning in particular, are constrained, among other factors, by the poor quality of leadership, management, and supervision of schools by education leaders and supervisors, respectively. Effectively functioning schools and effective classroom instruction continues to be inhibited by principals and vice-principals using outdated management practices that focus primarily on basic administrative tasks and much less on instructional improvement, supervisors that play more of an inspection rather than a professional development and mentoring/support role for teachers; and district and directorate leaders who focus primarily on administrative and management tasks, rather than on educational and student achievement results. Oversight of teachers by education leaders and supervisors is mostly limited to infrequent compliance checks to assess whether or not teachers are staying on track with curricular timelines and keeping order among students in classrooms. The lack of high quality and sustained school-based professional development support prevents teachers from receiving performance feedback necessary for improving teaching practices. Establishment of a behaviors-based professional development program for education leaders and supervisors, including the establishment of communities of practice among respective groups of schools and subject supervisors, will shift the balance and focus of school supervision and school management from checking of compliance with rules and regulations to support to facilitate performance improvement, and allow education leaders and supervisors to establish a foundation of behaviors upon which additional skills-based professional development can be built.

b. *Description:* The DLI will support the establishment of an Education Leaders and Supervisors (EL&S) professional behaviors program similar to the existing program for teachers for the purpose of improving school principal and supervisor practices and their attitudes and behaviors related to teachers' support and continuous professional development.

c. *Achievement:* Disbursement will be made in Year 1 on the achievement of a successfully administered pilot of the education leaders and supervisors program. In Year 2 - 4 disbursements will be made on proportionate increase in the percentage of education leaders and supervisors participating at a "highly engaged" level of the (EL&S) behaviors program. Final disbursements will be made in Year 5

on the achievement of a minimum percentage of education leaders and supervisors demonstrating impact per an agreed Education Leaders and Supervisors professional behaviors criteria/index.

d. *Verification:* A third party will review the information provided and the finding of reports related to the implementation of a successful pilot of the education leaders' and supervisors' professional behaviors program, as well as the engagement level of school leaders and supervisors, to ensure accuracy, thoroughness and compliance of data and reporting documents.

DLI#7. Successful Implementation of the Reform of the Secondary Graduation and Assessment System

a. *Rationale*. The *Thanawiya Amma* has a double function, meaning that the exit/graduation function is combined with the competitive selection for university admission. The latter function prevails and clearly crowds out the former, and that has led to an education system driven by examination scores, to high failure rates resulting in failure to graduate from secondary education, and to a widespread private tutoring cartel that is a major driver of education inequality. The way forward to get rid of this bottleneck in Egyptian education is to draw a line between the graduation function and the competitive selection function, and to do so in such a way that most of those completing 12 years of education would have a fair chance to graduate while those who want to get into the most sought after and demanded tertiary programs still must compete for it. How to do this within a fair academic competition environment (examination system) that the Egyptian society clearly values and wants to keep is the key challenge for the reform. MOETE expects that the new examination system will enhance public confidence, diminish the extent of cheating and other forms of malpractice, and reduce student and teacher absenteeism related to the rise of private tutoring, thereby also reducing the financial burden on parents.

b. *Description*: This DLI will support the design, development and administration of a set of new tests in grades 10, 11 and 12, the results of which will be aggregated to a grade point average (GPA) that will determine graduation from secondary education. These scores will also be used, at least during an interim period, for the purpose university admission.

c. *Achievement*: Disbursement will be made initially on the approval of a Framework Document for the new set of tests and the availability of a first batch of items developed for both multiple choice questions and open-ended and task-oriented tests. Furthermore, the DLI will incentivize the approval of the new secondary graduation system, which entails an amendment in the Education Law, and then the actual administration of the tests. In Year 5, disbursement will be made against survey data on public confidence in the new secondary graduation and assessment system (Thanawiya Amma versus GPA-based).

d. *Verification*: The Framework Document for the new set of tests will be assessed against the four dimensions of the Assessment Management Platform developed by NCEEE, i.e., Item Bank, Test Delivery, Scoring, Data management and analysis. Concerning the actual administration of the new set of tests, third-party verification will consider the availability of the test scores for all the relevant students in all subjects tested.

DLI #8. Grades 4 and 9 National Assessments Are Designed, Developed and Successfully Administered

a. *Rationale:* There are currently no national-level data on primary or secondary school student learning outcomes in Egypt (not including Egypt's participation in PIRLS and TIMSS, which are international assessment studies). The lack of information on learning outcomes prevents the tracking of progress or identifying areas of weakness in teaching that require attention. A lack of information on learning

can also mask differences between schools or between different types of students, and this entails that the additional support that these schools or students need cannot be provided. A sample based national assessment can provide an important source of information on learner achievement and support better decision making in primary education. Better information on student learning outcomes will help to identify strengths and weaknesses in secondary education and support better decision making in areas including pre- and in-service teacher training. A good national assessment can also identify learning disparities and their causes between different groups of learners (e.g. girls, special needs) and help to develop programs of targeted support. The existing Grade 9 examination, administered at the directorate level, regulates the transition from lower to upper secondary education and is used for student placement in either general or vocational upper secondary schools. The scores of this exam are not comparable across directorates/Governorates, testing centers and over time, all of which introduces a serious inequity factor at this crucial stage in the school system. Reforming this Grade 9 examination has become an urgent goal for two reasons. The first reason is the need to reflect the reformed curriculum for lower secondary education and the focus on learning brought by the EDU 2.0 reforms. The second reason is that having comparable exam scores across the whole country will allow for a fairer student placement with potentially better orientation services for students and their families.

b. *Description:* The DLI will support the design, development and administration of a sample-based Grade 4 national assessment and a reformed examination in Grade 9 for transition and student placement in upper secondary education. NCEEE will be responsible for this DLI, from crafting the concept and framework to the actual administration of the test, the scoring, data management and analysis, and the effective reporting and dissemination of assessment data to different audiences.

c. *Achievement:* Disbursement will be made initially on the approval of a Framework document for both assessments. Further disbursement will be made after the piloting/dry run of both assessments and then the actual administration.

d. *Verification:* Guidelines and development of instruments/materials for assessment will be assessed to ensure that they meet with agreed standards. To be considered achieved, the guidelines and materials will need to include the following:

- Framework document for both tests (objectives for assessment, curriculum analysis and mapping of learning outcomes to be assessed)
- For Grade 4 national assessment, the sampling approach including sample size (schools and students) commensurate with the objectives of providing national, regional and between group representativeness.
- Implementation details including plans for item and questionnaire development, pre-testing, data entry protocols, the roles and responsibilities of NCEEE and other MOETE and directorate-level agencies and how assessments will be administered.
- Scoring rubrics for both assessments, analysis of test item validity and assessment data management.

The information provided and the findings report for Grade 4 national assessment will be reviewed by a third-party firm to ensure sample representativeness and soundness of approach. Verification of the publication of the results on MOETE website will be carried out by the verification entity. For Grade 9, the student interface allowing access to their scores will also be reviewed by a third-party firm

DLI#9. NCEEE Restructured as a National Testing and Examination Center

a. *Rationale*: To support the technical aspects of the new examination and assessment system, MOETE plans to restructure the NCEEE, to modify its work program and to enhance its capacity as a professional assessment center with a specific focus on examinations and testing.

b. *Description:* This DLI will support the ongoing restructuring process of NCEEE and the building of its capacity in four fundamental areas: (1) Test design and Item bank construction; (2) Security and Logistics; (3) Scoring and Management of computer-based assessment, and (4) Analysis and reporting. While this will involve long-term technical assistance and training to be supported by the Project, this DLI will incentivize the hiring of relevant new staff in areas such as examination paper development, use of technology, analysis of results, analysis of student performance, examination moderation, performance assessment, marker reliability, security enhancement, objective research on aspects of examination scoring and impact and, effective communication and dissemination of assessment data to different audiences, from top policy makers to civil society, and from education administrators to schools and practitioners

c. *Achievement*: Disbursement will be triggered initially on the approval of NCEEE's restructuring plan and the start of the capacity building activities with NCEEE staff. Further, disbursement will reward the hiring of new and highly capable specialized staff and the transfer of budgets used nowadays for the Thanawiya Amma to NCEEE as a restructured center for tests and examinations.

d. *Verification:* A third party agent will verify that the restructuring plan for NCEEE is approved by the Central Authority for Organization and Administration and, further down the implementation process, that the hiring of new staff is properly carried out with minimum provisions including contract terms and contract duration, TORs, and others.

DLI#10. Educational Technology Enabling Environment and Platform

a. *Rationale*: MOETE aims to improve the quality of general education and learning in pre-tertiary education. Simply put: Children are not learning nor acquiring basic skills, and the education system is not delivering the necessary learning outcomes, skills, and competencies for further education and transition to the job market.

b. *Description*: To help address this challenge, this project will help facilitate, manage and oversee the rollout and maintenance of digital infrastructure in support of "Education 1.0" (i.e. current practices), continuing to serve students in the existing education system through incremental, targeted improvements as well as of EDU 2.0' (new practices and approaches, enabled in part through the use of digital technologies), which has a significant reform agenda for students to be enrolled in KG 1, KG 2, or grade 1, in line with Vision 2030 targets. A key feature of the reform program is to utilize a digital platform for learning, teaching, performance evaluation, assessment, and data collection. Digital infrastructure at the level of the classroom and at all levels of the administration will connect students, teachers, principals, supervisors, and central ministry to help ensure a system of continuous feedback, and the use of information to make evidence based decisions that should enhance the teaching and learning process. A new education technology entity, to be established with legal standing, governance structure, annual budget, staffing, and clearly defined roles and responsibilities, will play a critical coordinating role in this process.

c. *Achievement*: Disbursement will be made once an Education Technology Entity has been established by ministerial decree and key positions staffed at the entity has been staffed. Additional disbursement will occur once the Education Decision Support Dashboard has been populated with data from four

separate data sources (training data, assessments data, content usage data and EMIS data) and related reporting tools have been deployed. Further disbursement will occur upon completion of training of relevant ministry, directorate, district and school level staff on the use of dashboard. Evidence of the use of Education Decision Support Dashboard data in the preparation of directorate/ mudiriya level budgets will trigger additional disbursements.

d. *Verification*: To be considered achieved, the following conditions must be met:
- A new education technology 'entity' will need to be formally established, with a defined TOR in support of planning, deployment, maintenance, and evaluation of key elements of the digital technology infrastructure, staffed by professionals with related experience and expertise.
- An independent group will verify that the education data dashboard has been populated with key data in the four identified topics, that the dashboard and related reporting tools are fully functioning, and that there is demonstrated evidence that data from the dashboard have been utilized in the development of district-level budgets.

DLI#11. Digital Learning Resources

a. *Rationale*: MOETE aims to improve the quality of general education and learning in pre-tertiary education. Simply put: Children are not learning nor acquiring basic skills, and the education system is not delivering the necessary learning outcomes, skills, and competencies for further education and transition to the job market.

b. *Description*: In order to help address this challenge, this project will support an expanded use of e-learning resources available through the Egypt Knowledge Bank (EKB), content mapping between the curriculum framework and EKB resources, and a gradual shift away from textbooks to digital learning resources. Related reforms aim to produce graduates equipped with the knowledge, values and skills required for tertiary education, the job market, and citizenship. Component 4 will make available digital learning resources, accessible through a new learning management system (LMS) which draws on a database of resources available in the EKB that have been mapped to specific elements in the Egyptian curriculum.

c. *Achievement*: Initial disbursement will be triggered once there are digital learning resources available from the EKB through the LMS mapped to each curricular objectives or lesson plans in all core subjects, from KG1 to G12. Additional disbursements will be made once designated levels of usage of the LMS/EKB have been achieved, measured by the number of monthly user sessions by both students and teachers. Further disbursement will occur once 80 percent of students and teachers in the bottom 5 governorates (as measured by the UNDP human development index or CAPMAS) register unique monthly user sessions on the LMS/EKB, thus demonstrating equitable access to the LMS/EKB in economically disadvantaged regions.

d. *Verification*: To be considered achieved, the following conditions must be met: An independent group will be granted access the live LMS/EKB and verify that digital learning resources exist for each curricular learning objective or lesson plan in the national curriculum in core education subjects from KG1-G12 levels, and that this content mapping is clearly labelled and accessible to users. Access to raw user data will be analyzed to verify monthly user sessions of teachers and students across the education system, as well as in the "bottom five" governorates, in accordance with related international data analysis standards and best practices.

DLI#12. Successful Implementation of Computer-based Assessment Management Platform

a. *Rationale*: with its focus on selection for university entrance, the Thanawiya Amma national high-stakes examination drives Egypt's education system. The entire Egyptian education system revolves around this examination because it sets the incentives for all actors and therefore shapes the decisions made by teachers, parents and students. This examination impacts students' lives because the results are the only determining factor for both secondary graduation and admission to tertiary education. As such, the Thanawiya Amma score determines students' lifetime prospects. Because assessment drives action, the reform and replacement of the Thanawiya Amma is critical to help improve education service delivery in Egypt.

b. *Description*: This project will finance the design, development and delivery of a set of new tests to be administered computer-based assessments twice yearly to grades 10, 11 and 12, the results of which will be aggregated to a grade point average (GPA) that will determine graduation from secondary education.

c. *Achievement*: Disbursement will be made once a management platform for computer-based assessment system has been designed and is fully functioning. Further disbursement will be made once the relevant results are accessible to relevant users.

d. *Verification*: To be considered achieved, the following conditions must be met: An independent group will assess the functionality of the computer-based assessment management platform, as well as the deployment of the related reporting platform for data transfer, management, analysis and reporting, according to pre-defined success criteria. In addition, this group will evaluate a representative, statistically significant random sample of schools to verify that the computer-based testing assessment environment on end user devices is successfully functioning, according to pre-defined success criteria.

ANNEX E: TABLES AND FIGURES

Table E.1. Pre-Tertiary Education Sector Data

Education Stage	Enrollment	Enrollment in Government Schools	Number of Schools	Of which: Number of Government Schools	Number of Teachers (% female)	Of which: Number of Teachers in Government Schools
Pre-primary	1,244,052	932,879	1,1250	8,955	45,699 (99.5%)	32,937
Primary	11,074,835	10,012,983	18,263	16,196	420,840 (62%)	382,272
Preparatory	4,725,732	4,392,097	11,667	9,955	253,927 (52%)	238,062
Secondary	3,434,326	3,108,776	5,538	4,244	254,240 (47%)	246,929
TOTAL	**20,478,945**	**18,446,744**	**46,718**	**39,350**	**1,221,635**	**900,200**

Source: MOETE EMIS, September 2017

Table E.2. Enrollment Data by Stage and Gender

Stage	Male	Female	Total students	Percentage
KG1-2	645,172	598,880	1,244,052	6.0 percent
Primary	5,706,572	5,368,263	11,074,835	54 percent
Preparatory	2,412,605	2,313,127	4,725,732	23 percent
Secondary	1,788,339	1,645,987	3,434,326	17 percent
Total	**10,552,688**	**9,926,257**	**20,478,945**	

Source: MOETE, EMIS – September 2017

Table E.3. Completion Rates of Poorest Students in Egypt (by stage and gender, 2009-2014)

	Completion Rates (%)					
	Primary		Preparatory		Secondary	
	Female	Male	Female	Male	Female	Male
Poorest students	87	86	70	71	52	63
Average all student wealth quintiles		91		80		71

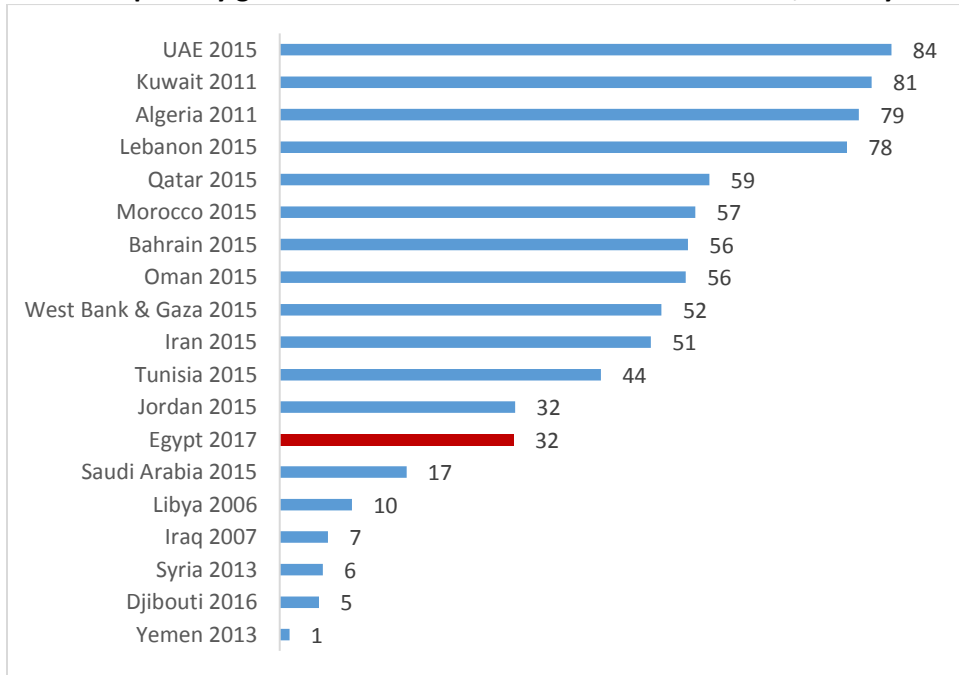*Source: Global Education Monitoring Report, UNESCO – 2016*

Figure E.1. Gross enrollment ratio per education level in Egypt, latest year available
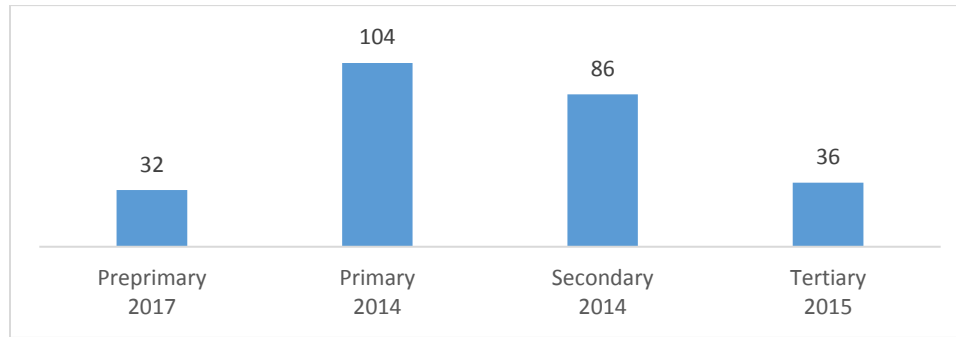
Source: World Development Indicators (WDI). Latest year of data available is presented.

Figure E.2. Preprimary gross enrollment ratio across MENA countries, latest year available

Source: World Development Indicators (WDI). Latest year of data available is presented.