Project Information Document (PID)

Appraisal Stage | Date Prepared/Updated: 03-Jun-2020 | Report No: PIDA29432

BASIC INFORMATION

A. Basic Project Data

Country	Project ID	Project Name	Parent Project ID (if any)
Turkey	P173997	Safe Schooling and Distance Education	
Region	**Estimated Appraisal Date**	**Estimated Board Date**	**Practice Area (Lead)**
EUROPE AND CENTRAL ASIA	27-May-2020	25-Jun-2020	Education
Financing Instrument	**Borrower(s)**	**Implementing Agency**	
Investment Project Financing	Government of Turkey	Ministry of National Education of Turkey	

Proposed Development Objective(s)

To enhance the capacity of the education system to provide e-learning equitably to school-age children during and following the COVID-19 pandemic and future shocks

Components

Emergency Connectivity and Education IT Infrastructure
Safety and Quality Digital Content and Pedagogy
Capacity Building for E-Learning Resilience

The processing of this project is applying the policy requirements exceptions for situations of urgent need of assistance or capacity constraints that are outlined in OP 10.00, paragraph 12.
Yes

PROJECT FINANCING DATA (US$, Millions)

SUMMARY

Total Project Cost	160.00
Total Financing	160.00
of which IBRD/IDA	160.00
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Bank for Reconstruction and Development (IBRD)	160.00

Environmental and Social Risk Classification

Moderate

Decision

The review did authorize the team to appraise and negotiate

B. Introduction and Context

Country Context

1. The proposed project supports the immediate education response to the COVID-19 outbreak, while laying the groundwork for critical investments to preserve education human capital equitably over the mid-term and to face future shocks. It supports the Government of Turkey's efforts to mitigate rising pressures on education service delivery through distance learning for school-age children. COVID-19 has spread rapidly in more than 189 countries across the world since December 2019[1]. As of early June 2020, approximately 6.5 million cases have been detected across the world, with over 380,000 deaths. The first case was reported in Turkey on March 11, reaching 165,000 cases by early-June 2020, out of which there have been more than 4,500 deaths.[2] This operation is prepared under procedures for project for urgent need for assistance.

2. The high uncertainty associated with COVID-19 exacerbates Turkey's economic and demographic challenges, The COVID-19 outbreak is straining health and public health systems, while measures to contain its spread are resulting in an economic slowdown and threaten the economic security of many of its citizens, particularly those with low-incomes. The more prolonged the situation, the more significant the impact would be on overall population health, as well as the economy at large. This would, in turn, place additional strain on public services, including the public health system and requires preparation in terms of physical, human and financial capacity nationwide. While the toll the pandemic ultimately takes on the country would not be clear for some time, a strong, coordinated institutional response is critical to both containing the spread of COVID-19 and working to limit the social and economic effects.

Sectoral and Institutional Context

1. EBA (Eğitim Bilişim Ağı) is Turkey's digital education system that can be strengthened and scaled up for the present crises, and it can be reformed to build a more resilient digital education system for post-COVID19 blended (face-to-face and on-line) teaching and learning. It can also promote a shift towards new behaviors and technologies in the education sector that may have lasting influence on reducing carbon emissions. EBA has established more than 1,600 courses and more than 20,000 interactive content for learning from preschool to 12th grade. Teachers, students, and parents have access to the EBA platform which is an online learning environment and interface which can be customized for

[1] Johns Hopkins University Coronavirus Resource Center. https://coronavirus.jhu.edu/map.html
[2] Ministry of Health, Republic of Turkey, and Johns Hopkins University Coronavirus Resource Center.

student-specific learning: calendar, supportive publications and library resources. Course contents for all grade levels are available, including supportive materials for teachers, tests and exams.

2. Turkey aims to minimize the educational costs of school closures stemming from the COVID-19 outbreak. The "Learning Adjusted Years of Schooling (LAYS)" indicator, within the World Bank's Human Capital Index, shows that although the Turkish school system has been able to provide access to more than 12 years of education to its children and youth, this has only translated to 8.9 years of learning. In most recent international assessments (e.g., PISA 2018), Turkey had begun to improve this access-learning gap. However, the COVID-19 crisis threatens to erase these gains. Without the COVID-19 related short-term and medium-term investments – proposed by the Ministry of National Education (MoNE) to face school closures and re-opening – the access-learning gaps would worsen.

3. Turkey's education technology investments to-date aimed to improve the quality of education for the 21st century, now they are also required to respond to emergencies. Just in 2020, Turkey has been responding to the Syrian crisis, a 6.8 magnitude earthquake (Elazig province), and now the COVID-19 pandemic. Syrian students in the border provinces have receive education through EBA at times when security concerns interrupted face-to-face schooling. After the Elazig earthquake schools were closed and distance education was provided as well through EBA. A national and strong system for distance-based education is crucial for MoNE's readiness to respond during emergencies, both to deliver protection and life-saving information, as well as to continue teaching and learning to minimize learning loss during crises.

4. The Project's design and operational strategy balance interventions to support the COVID-19 emergency response and to develop and roll-out a stronger educational digital system capable of facing any future shocks. It is aligned to most recent evidence of how best to respond to emergencies by closing gaps between (i) urgent social measures to protecting the most vulnerable against shocks, and (ii) resilient recovery to restore livelihoods, equity and sustainable growth. The three Project components address, respectively, enhancing information technology, educational services, and institutional capacity building. Each component has investments allocated for (i) immediate response (during school closures and gradual re-opening) and (ii) for setting the IT, educational and institutional foundations to support longer-term blended (classroom-on-line) education needs.

5. For the Government of Turkey, the project aligns to the Education Vision 2023, which provides the overall strategies for education equity, learning and access, including for vulnerable groups and in emergencies.[3] The Education Vision 2023 strategies for digital education, special education, school counseling, school development, and teachers' professional development are also operationalized in MoNE's 2019-2023 action plan. Although this project provides emergency response to COVID-19 school closures and reopening, it also frames its interventions within the education sector institutional pillars. This guarantees leadership, ownership and resilience (or building better) after the present crisis.

[3] For detailed description of education related strategies and policies to which this project is aligned see "Turkey's Education Vision 2023": https://2023vizyonu.meb.gov.tr/doc/2023_VIZYON_ENG.pdf

C. Proposed Development Objective(s)

Development Objective(s) (From PAD)

To enhance the capacity of the education system to provide e-learning equitably to school-age children during and following the COVID-19 pandemic and future shocks

Key Results

i. **Percentage of K-12 students using EBA and (or) new digital education system for online distance education**. Increase the usage of the online distance education from 13% (or 2,145,713 students) during baseline (or before March 13, 2020), to 45% (or 7,427,469 students) by midline (or by the end of 2021), and finally to 70% (or 11,553,841 of students) by the end of the project, at least 50% of whom are girls.

ii. **Number of concurrent users served by EBA and (or) new digital education system**. Increase the number of concurrent users of the online distance education from 300,000 during baseline to 600,000 by the end of 2020, to finally 5,000,000 by the end of the project.

iii. **Percentage of students from the lowest quintile of regional poverty that access the EBA and (or) new digital education system in the last 30 days.** Increase the number of students from the lowest quintile of regional poverty from 14% to 20% by the end of 2021, and to 30% by the end of the project.

iv. **Number of teachers that complete on-line certified professional development training on distance education**. Increased number of teachers that received certifications of completion of distance education training on-line from 96,000 to 300,000 by the end of year 2021, and to 800,000 by end of the project. 59% of which are female.

D. Project Description

Component 1: Emergency Connectivity and IT Infrastructure for Education in Emergencies (US$98 Million)

Subcomponent 1.1: COVID-19 School Closure Response

1. This subcomponent would finance goods and services to expand the operation of the current online education system (EBA). It would increase simultaneous access to the existing online education system for up to 600,000-1 million students (from a current level of 300,000 students) – prior to an expansion to 5 million concurrent users through a new system (see sub-component 1.2). Given the on-going COVID-19 emergency, improvements to EBA have begun and retroactive financing would be requested from the Project. To bridge the digital gap, especially in poor households, access to the EBA's online education platform would be complemented with courses, materials and messages delivered through television and mobile phones. Student participation in distance education modalities would be monitored, including by gender.

2. This emergency response sub-component would finance immediate enhancements of the existing EBA learning system and related digital infrastructure. While the initial design of EBA system projected its usage at 40,000 simultaneous users, MoNE has already extended the platform to accommodate up to 300,000 users and intends to increase this number. Expansion of the EBA platform benefits the overall education system; however, equity issues are considered including guaranteeing access in Provinces with lower socio-economic indicators, financing awareness and outreach campaigns, and combining different delivery forms of distance education, including Television and mobile phones. The subcomponent would provide EBA software updates and integration, servers' scalability, on-going data storage and backing and software maintenance. The proposed activities would be undertaken during the COVID-19 school closure period and financed through a retroactive financing arrangement. The proposed upgrades would allow EBA to provide simultaneous instruction to up to 1 million students. Combined with sub-component 2.1 (Digital Content and Pedagogical Support During School Closures and for School Re-opening), these investments contribute to minimizing loss of learning due to COVID-19 related periods of school closure.

Subcomponent 1.2: Resilient Digital Education System

3. This subcomponent would finance feasibility studies, consultancies, goods, services and small refurbishments to set the IT infrastructure for a new digital education system and increased capacity from 600,000-1 million concurrent students to 5 million; and from 50,000 to 100,000 simultaneous virtual classrooms. The aim is to support blended learning (classroom-online) in schools post-COVID 19 and to support the education response in future emergencies. Given that the current system architecture is not designed to serve that number of simultaneous users, the project would finance a new higher capacity system and related horizontal IT infrastructure expansion. It would enhance datacenter capacity or completely migrate to cloud platform on an Infrastructure as a Service (IaaS) and/or Platform as a Service (PaaS) model, new system's software architecture, testing and quality assurance, cybersecurity, learning analytics system, and new CDN architecture. To support the resilience of the digital education system in the face of future shocks, service outage and data loss would be minimized (for example through a cloud-based backup data center) and recovery approaches would be included within MoNE's disaster response plan in case of an extreme climate event or any other emergency. The sub-component would finance procurement of necessary as hardware/service for the data centers, consultancies, feasibility studies, and technical know-how.

4. The design and launching of the new digital education system would include three phases. During the first phase, this subcomponent would finance the needs assessment, feasibility studies, design and preparation of tender documents of a new digital education system, including (i) approaches to integrate the digital education system with other delivery modalities most accessible to low-income groups (TV, mobile, etc.), and (ii) a backup datacenter arrangement and a disaster recovery plan that lays out the procedures to restore the system and quickly recover crucial data in case of an extreme climate event. During the second phase, the subcomponent would finance the modular development of the new digital educational system. During the third phase, the new system would be rolled out. The roll-out of the new system would pay attention to issues of digital content archive, scalability, data integration and operability, disaster recovery procedures, and usefulness for monitoring and evaluation.

5. Lastly, activities financed under this subcomponent aim at making the new digital education system more climate resilient and energy efficient.[4] Beyond analyzing operational and financial models, impacts and sustainability, the feasibility studies also would analyze environmental impacts and sustainability, resilience to climate change and energy efficiency achievable for the new system and related IT infrastructure. Results of the feasibility analysis would inform the overall solution for the new digital education system which would be financed. Notably substantial positive externalities are expected from the adoption of technologies such as cloud computing because of energy savings – the improvement of energy consumption and efficiency can lead to a substantial reduction of carbon emissions.[5] For instance, based on the current research quantitative assessment of environmental impacts allows for reduction of carbon emission for 30% for large companies and up to 90% for the smallest and less efficient businesses.[6]

Component 2: Digital Content and Pedagogy for Safety and Quality (US$ 54.9 Million)

Subcomponent 2.1 Digital Content and Pedagogical Support During School Closures and for School Re-opening

6. During school closures and gradual re-opening, this subcomponent would finance consultancies, goods and services for the adaptation and development of digital content for K-12 curriculum delivery, pedagogical practices, COVID-19 risk mitigation, and teacher training. These would be delivered on-line and through TV channels and would include support for catch-up courses and blended teaching and learning programs. Content for psycho-social & mental health counseling/guidance, risk mitigation and social distancing measures also would be delivered online, TV and phone applications. It would target parents, teachers and students.

7. To minimize learning loss due to COVID-19 related school closures, especially for low-income and vulnerable students, this sub-component would support TV- based educational materials and delivery. TV programming is especially targeted for poor households without digital devices or internet access. Approximately 2,000 new TV videos would be adapted based on content already developed for the education digital platform, EBA. For students with hearing impairment, all content would be prepared with sign language and subtitle support. For students with visual impairment, all content would include audio descriptions. Lastly, on-line and TV based materials and courses (through www.eba.gov.tr website and TRT

[4] especially comparing to current EBA solution
[5] Cloud Computing and the Sustainability: The Environmental Benefit of moving to the cloud (2010), Accenture, WSP and Microsoft; R.H. Katz, (2009), Tech titans building boom, IEEE Spectrum (February), at http://www.spectrum.ieee.org/feb09/7327 accessed 23 February 2009.
[6] Cloud computing and the Sustainability: The Environmental Benefit of moving to the cloud (2010), Accenture, WSP and Microsoft and http://www.scientificamerican.com/article/cloud-computing-saves-energy/

EBA TV) would support the development of learning assessments, catch-up programs, and school counseling to support school re-engagement.

8. The sub-component would support MoNE's school opening plan and would finance outreach and school re-engagement outreach in low-income and vulnerable areas, with targeted messages for girls, as well as for boys. Building on EBA's already available materials (e.g., videos, applications, digital and audio-visual materials), additional content would be adapted and developed to support re-opening of schools, including for teacher training. These would be aligned to curricular needs for primary, lower secondary and upper secondary education that meet the needs of different types of learners.

Subcomponent 2.2: Educational Innovation and Participatory Ecosystem

9. This subcomponent would finance feasibility and design studies, consultancies, goods, services and small refurbishments to establish a sound collaboration and communication "ecosystem" for the on-going development of digital education technologies. This would include feasibility and design studies for the "EduTech Innovation Hubs" and their operationalization to incentivize development of digital materials for teachers and students. Materials for teachers would include a variety of multimedia, CPD materials, instructional materials, pedagogical tools. Materials for students would target educational level K-12. Digital and distance education strategies and tools for education emergency response would be developed as well.

10. The new digital education system (see component 1.2) and the development of innovative digital education materials would also benefit the education needs of different groups of students, given their interest, background, gender and other characteristics requiring personalized learning approaches. The ecosystem would incentivize innovation and services for schools and would bring together education technology stakeholders and users. The organizational structure for the "education technology ecosystem" would consist of the "EdTech Innovation Hub" that would coordinate the research and development process for education technology innovations, as well as the strategy to involve teachers and schools to identify, test and evaluate innovations. Teachers' involvement would be organized as a unit and function of the EdTech Innovation Hub, called the "Professional Learning Lab."

11. The **EdTech Innovation Hub** would guide the development and testing of educational digital materials and technologies through targeted research and development (R&D). The **R&D Program** would incentivize start-ups and entrepreneurial ventures in EdTech through public private partnerships targeting companies, industry partners, universities, and individuals to test and develop products, software, and hardware to connect schools, teachers, and students to digital learning. Targeted R&D services would be procured to develop innovative approaches to tackle special educational technological challenges (e.g., digitalization, artificial intelligence, sustainable development goals, supporting learners with disabilities/special needs, upskilling teachers, catch-up programs for students with low academic background, innovative functionalities for the EBA platform). All activities to develop new digital education materials and tools (in-house or contracted) would involve innovative teachers as collaborators, and would commit and evaluate the impact of innovations at the school level. Model testing of new education technology innovations at the school level would include feedback from teachers and students, through a "funnel" evaluation model to be included in the new digital education system. The feasibility assessment for the design of the EduTech Innovation Hubs would include targeted beneficiary groups, types of instruments for financing and contracting of services, rules and procedures for planning, implementation, evaluation and digital education innovations.

12. The **"Professional Learning Lab (PLL)** would support pedagogical and organizational improvements at the school level, including training of trainers and contributions to teachers' professional development. School actors would contribute to the innovation process, and teachers and students would participate in the evaluation of new teaching and learning materials. The PLL strategies would support and incentivize school level innovations and knowledge exchange across teachers. This flexible learning environments provide opportunities for teacher training and knowledge exchange in specific areas of interest. For example, the Project would provide dedicated online spaces and other flexible learning environments for female teachers to exchange new online practices, emerging strategies to meet the learning needs of boys and girls adequately and identify school leadership training options and opportunities. Once the education technology ecosystem is operational – including the EdTech Innovation Hubs and PPL approach – the subcomponent would finance its initial roll-out.

Component 3: Institutional Capacity for Education Technology Resilience (US$7.1 million)

13. This component would strengthen MoNE's organization and capacity for the coordination, management, monitoring and evaluation of the Project and to sustain the delivery of safe and equitable digital education services. The component includes support for monitoring of project inputs, activities and outputs. For new interventions, such as the development of the EdTech Innovation Hub and blended learning approaches, rigorous impact evaluations would be conducted to inform policy and program scale up. Studies and technical assistance also would build MoNE's strategic approaches and EiE models to face future crises. To support data collection and monitoring of EBA users by gender and other socio-economic characteristics, the Project would support the integration between EBA and E-Skol (MoNE's education management information system). Lastly, it would support the design and implementation of a robust disaster risk management and disaster recovery plan in the education sector, which would include strategies for the sustainability of the new digital education platform in the face of climate, environmental or other crises.

Legal Operational Policies

	Triggered?
Projects on International Waterways OP 7.50	No
Projects in Disputed Areas OP 7.60	No

Summary of Assessment of Environmental and Social Risks and Impacts

This is a summary of the assessment of environmental and social risks and impact. Full assessment will be disclosed separately.

14. The environmental risk of the project is rated as Moderate. The anticipated risks are minor and can be easily avoided or minimized. Those risks are mainly associated with the implementation of activities under Component 1, minor non-structural refurbishment for the upgrade of IT infrastructure through usage of data centers, and under Component 2, the refurbishment work for setting the EdTech Innovation Hub within a techno-park, in one of the university campuses in

Ankara.

15. The project would also finance the procurement of equipment to support effective teaching and learning through the improved distance learning platform, EBA. The operating environment associated with the installation and use of the IT equipment can have implications related to occupational health and safety risks as well as energy consumption, electronic waste generation and disposal etc. The environmental aspects to be considered in relation to the operation and functioning of the new developed systems for reaching out to 5 million users might include efficient use of resources such as energy and water. Theses aspects can be addressed through the application of the WB ESHGs and Good International Industrial Practices (GIIPs).

16. The social risk rating for the project is moderate. The potential adverse risks and impacts on human populations and/or the environment are not likely to be significant and they are predictable and expected to be temporary and/or reversible. No land acquisition or asset loss is expected, and minor refurbishment works are expected to be carried out within techno-parks, for the EdTech Hub, which are already designated areas managed by universities and hence, considered as public land with no prior use of private individuals for livelihoods activities. Labor risks are low and would be integrated as part of Environmental and Social Management Framework (ESMF).

17. The project risks would be mitigated through the Project Operational Manual, Stakeholder Engagement Plan, the ESMF and Environmental and Social Management Plans (ESMPs), as relevant.

E. Implementation

Institutional and Implementation Arrangements

18. **The Project would be implemented by the MoNE through a Project Implementation Unit (PIU) within Directorate General (DG) of Innovation and Education Technology (DGIET), benefiting from the experience of the existing PIU that manages other World Bank financed projects within MoNE.** This PIU is within MoNE's Construction and Real Estate Department. To address the need for specific technical expertise to effectively implement the SSED project, a dedicated team within the Directorate General for Innovation and Education Technology would be created. This SSED PIU would be supported by technical specialists of the MoNE and technical consultants, including one environmental and one social specialist. The relevant structures would be strengthened by the recruitment of additional staff/consultants responsible for technical design and implementation, overall administration, procurement, and financial management. To this end, project would support costs associated with project coordination. Also, the required set of operational manuals and other management resources – including a detailed project description to guide implementation – would be developed.

19. **A Disaster Risk Management-Education in Emergencies (DRM-EiE) Steering Committee (SC) is established to oversee the coordination, monitoring, and implementation of MoNE's response to crises, including now the COVID-19 response.** This is chaired by the Minister of

Education with delegation at the Deputy Ministerial level as needed. The SC under would be responsible for overall implementation and coordination of MoNE's education response during the emergency and would delegate authority for operational issues to the responsible project implementation units (PIUs). The Directorate Generals for education levels (Basic, Secondary Education and TVET, as well as the DGs for Religious Education, for Special Education and Counseling Services, and other related DGs) would be responsible for coordination of information to schools (through PLEDs and DLEDs) on the policies, guidelines, and services provided by MoNE, including from the SSDE project.

20. **At the local and school levels,** the main frontline actors are the public schools, where School Management Committees (SCMs) are responsible to manage all school-level active involvement to the distance education.

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