



HOW DID COVID-19 PANDEMIC IMPACT EDUCATION IN EGYPT?

Marwa Biltagy

April, 2021



ABSTRACT

On 11th, March 2020, the World Health Organisation declared the new coronavirus as a global pandemic, after the outbreak of the disease in the Chinese city of Wuhan. Later on, the virus spread to Italy, Spain, Germany and many other countries all over the world. Before this pandemic, some countries were suffering from many educational problems. Specifically, the Egyptian education system faced several restrictions that limit its efficiency and weaken the quality of its outputs. The most prominent and influential of these restrictions are the limited funding resources and the low efficiency of allocating them to the components of the educational process. But with the spread of this virus, the educational system is facing a special type of crisis, due to school closures and potential losses in human capital.

The main objective of this policy paper is to determine the effect of the pandemic on the Egyptian educational system. The COVID-19 pandemic leads us to respond to an actual challenge and to take real responsibility. Indeed, the new Coronavirus represents a shock to all countries, but economies that have relied on technology and ensured online services have been relatively less affected. Policymakers can benefit from this crisis and use it as a good opportunity to introduce new learning methods, paying more attention to the quality of the educational system, dealing flexibly with technology and modern learning techniques, continuing to develop the digital platforms that have been created and integrating the concept of lifelong learning and sustainable education, in order to achieve sustainable development and poverty reduction.

*The author is Professor of Economics, Faculty of Economics and Political Science, Cairo University and member of the expert panel of Euro-Mediterranean Economists Association and researcher at the Euro-Mediterranean Network for Economic Studies. She wishes to thank Prof. Rym Ayadi, Dr. Sandra Challita, Dr. Mais Shaban and Sara Ronco for their valuable comments.

Keywords

Education system, sustainability, Covid-19, Egypt.

1 INTRODUCTION

The impact of the new Coronavirus on education is more severe in countries that already suffer from structural educational problems, such as high dropout rates and low return on education. Despite the fact that the suspension of studies and closure of schools and universities helped limit the spread of the virus, it had some negative effects on the students and their families. For example, students with low abilities were greatly affected due to their inability to self-learn, in addition to the lack of technological capabilities that are the main component of the educational process at this stage. Also, many families faced great challenges in providing the continuous care required for their children, especially in the case of working mothers. With the spread of the Coronavirus, the educational system all over the world faced a massive new crisis, due to the closure of schools (World Bank Education and COVID-19) and potential losses in human capital, considering that education is one of its basic components (Mincer, 1958 and Becker, 1962).

At the beginning of the pandemic, more than 1.5 billion students worldwide were been affected by the closure of schools and universities due to the spread of the new Coronavirus. This number decreased to 990,324,537 by the end of May 2020 due to de-confinement (UNESCO, COVID-19 Educational Disruption and Response).

The main objective of this policy paper is to determine the effect of the Coronavirus pandemic on the Egyptian educational system and to provide policy recommendations.

Egypt has adopted a comprehensive plan to face the consequences of the pandemic, in order to reduce its impact on citizens and on the country's various sectors and entities.¹ A number of presidential decisions were issued in response to the crisis, in addition to the government's adoption of a set of immediate measures and precautionary measures, taken in the fiscal year 2020/2021 budget. In fact, 36 billion Egyptian pounds have been allocated to the new budget, to support the healthcare, education and social solidarity sectors.

Regarding the education system, studying at universities and schools was suspended, for two weeks, starting on Sunday, March 15, 2020. This suspension was extended until October 16, 2020, as part of the country's comprehensive plan to deal with the repercussions of the Coronavirus. The new academic year 2020-2021 commenced on October 17, 2020.

To examine the resilience of the education system, some questions for policy makers should be raised, for example:

¹ Detailed information about the macroeconomic and sectoral policies can be found in Ayadi et al. April 2020.

- To what extent were they prepared to handle such exceptional circumstances? i.e., the capacities of educational institutions, teachers, professors and education managers to deliver quality education for students.
- Have all barriers to learning and participation been removed? What about infrastructure, technology and flexible learning assessment?
- What are the main factors that allowed some educational systems to adapt more efficiently than others, i.e., what are the factors that promote resilience in education?

What are the leading guidelines that should be taken into consideration in the future to confront any sudden shocks and to ensure education continuity?

Education systems worldwide changed severely because of this pandemic, in many contexts, i.e., academic education and social communication and knowledge. Chances and good opportunities should emerge to confront these challenges; otherwise, bad economic and social consequences will arise in the long run. Accordingly, the principal priority for the next period is to improve the resilience of the education system, promoting education for all with pronounced quality education development and delivery, especially for the most disregarded children.

Decision makers should plan effectively for this situation that is causing education disturbance because of the COVID-19 pandemic. That means ensuring education system resilience will decrease the effects of this pandemic on the educational process, guarantee better readiness for future possible emergencies and enhance the quality of education. Furthermore, the pandemic has worsened social inequities in some countries, where children from poor families with deprived infrastructure were facing substantial barriers to participate in online education (UNICEF, 2020).

UNICEF has created a resilient path for supporting governments in improving education systems and making them stronger by implementing advanced curricula, ensuring professional development and teacher training, and supporting children out-of-school. UNICEF has focussed on three pillars; first, education technology to design digital learning for students and teachers/professors. Second, activities related to teaching support, containing professional development of educators, development of educational materials and curriculum and assessment issues. Third, activities related to code of practice and rules to facilitate the process of assessing the learning process (UNICEF, 2020).

UNESCO (2020) proposes a number of ideas that ensure a resilient education system in the future:

1. Develop the definition of the right to education (education for all).

2. Improve curriculum that should not be based on memorisation, to cope with the new educational environment.
3. Appreciate the teaching job. “There has been remarkable innovation in the responses of educators to the COVID-19 crisis, with those systems most engaged with families and communities showing the most resilience” (UNESCO, 2020).
4. Keep the social spaces provided by the educational institutions when converting to online education.
5. Support digital education and distance learning.
6. Make use of all the available financial resources (local and international) of public education, since the pandemic has the power to damage several years of developments.
7. Resolve the issue of inequality by developing global solidarity. Ayadi (2020) emphasised that solidarity should be developed as a collaboration between governments and the private sector to outline the optimal public policies.

This policy paper is composed of five sections, including the introduction. The second section discusses the impact of the Coronavirus on educational systems; whilst the third section presents an overview of the policy responses from the education system perspective. The fourth section suggests a matrix of proposed resilience pillars and implementation mechanisms and the final section offers a conclusion and policy recommendations.

2 THE IMPACT OF THE CORONAVIRUS ON THE EDUCATIONAL SYSTEMS: SOME GLOBAL EXPERIENCES AND EGYPT

Most countries have tried to continue the educational process and to provide the service - but in a different way - by teaching students remotely, using technology through a variety of online classes and lectures, books and electronic platforms. This is what characterises the impact of the pandemic on the education sector, which is the continuation of the service with the transformation of its entire delivery pattern, the introduction of new learning styles and the change of the educational system so that it is more resilient to deal with distance education methods. However, the situation has differed according to the degree of progress and readiness of countries, in terms of communications and information technology infrastructure.

For example, in Europe and Central Asia region, there are different groups of countries with varying levels of income and development. The spread of technology and its availability is essential and, vice versa, the lack of computers puts students in a disadvantageous position for academic achievement. Most countries in Europe and Central Asia region have the basic capabilities that enable schools and homes to provide and obtain educational services using technology. More specifically, 50% of these countries have the basic resources to ensure a minimum level of ability to deliver electronic content and 20% are in a position to provide good computers and internet networks. Whilst 30% of countries do not have sufficient internet networks, these countries are trying to use some old technologies, by using media such as radio and television broadcasting and social media (Patrinos and Shmis, 2020).

The experience of the World Bank in supporting Latin American and Caribbean countries in responding to the current education crisis is a good example, as the countries of the region have adapted innovative and flexible methods during this crisis. Various channels and media have been merged to facilitate teaching and learning, as follows:

- All countries participating in the support programme create national centres for digital educational resources or a Learning Management System (LMS), where students can communicate easily with their teachers.
- Adopting WhatsApp, phone, or social media to provide educational guidance and support to teachers and parents.
- Using educational radio and television, as the Internet is not available to everyone.

In general, distance learning via the Internet, has been used in many countries, including, for example, China, Italy, France, Germany, the United States and the Kingdom of Saudi Arabia (Azzi-Huck and Shmis, 2020).

According to the Egyptian education system, it can be said that one of its most important elements of excellence, according to the Global Knowledge Index² 2020, is the low percentage of children out of school, the high percentage of students enrolled in vocational education programmes at the secondary level, the high percentage of students enrolled in pre-university education in general, the high percentage of students enrolled in internationally ranked universities and its higher student competence; Egypt occupied an advanced position (24th place) with an index value of 42.9, a distinguished position ahead of several prominent countries, including Germany, Finland, Sweden, Belgium and China, which indicates the uniqueness of Egyptian human capital. However, the education sector in Egypt still faces several challenges that limit its efficiency and weaken the quality of its outputs (Biltagy, 2015_a). Perhaps the most prominent and most influential of these constraints is the low spending on education (Egypt ranked 93rd out of 138 countries) and the inefficiency of allocating enabling resources to the components of the educational process. Another constraint is related to the high unemployment rate among those with higher education (Egypt ranked 119th out of 138 countries).

Table (1): The educational performance of Egypt

Indicators	Value of Indicator (Egypt)	Rank (Egypt)	The First Ranked Country	World Average
GLOBAL KNOWLEDGE INDEX	45	72	Switzerland	46.7
PRE-UNIVERSITY EDUCATION	57.2	83	Finland	58
Knowledge Capital	53	85	Finland	56
Enrollment	62	58	Sweden	55.4
Educational Enabling Environment	63.6	69	United Arab Emirates	60.9
Expenditure on Education	39	93	Azerbaijan	44.5
TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING	47.6	80	United States	50.8
Formation and Professional Training	43.9	96	United States	50.2
Educational Structure	48.8	80	Bolivia	51.1
Qualifications of Human Capital	48.6	53	Finland	46.4
HIGHER EDUCATION	45.6	42	Switzerland	40.3
Higher Education Outputs and	37.5	60	United Kingdom	36.4

² The Global Knowledge Index is issued annually and it is a tool for bridging knowledge gaps to assess the knowledge performance of 138 countries around the world, using 199 sub-indicators branched out of 7 basic sector indicators, amongst them, pre-university education, technical education and vocational training, higher education, research, development and innovation and information and communication technology.

Quality				
Employment after Graduation	27.4	119	Canada	55.2
Student Competence	42.9	24	Luxembourg	20.3
RESEARCH, DEVELOPMENT AND INNOVATION	19.9	74	Switzerland	26
Research and Development	22.5	58	Israel	25.1
INFORMATION AND COMMUNICATIONS TECHNOLOGY	52.4	74	United States	53.8
Infrastructure	56.4	97	Hong Kong, China	61.9
Sector Competitiveness	73.0	84	United States	72.6
Impact on Development	49.6	45	Sweden	44.1

Source: From the author based on Global Knowledge Index, December 2020.

Table (1) ascertains that Egypt has made progress in terms of educational indicators. As it ranked 83rd out of 138 countries, compared to 94th position in 2019 in the sub-index pre-university education. Moreover, it ranked 80th out of 138 countries compared to the position 103 in 2019 in the sub-index technical education and vocational training. Furthermore, Egypt advanced 7 positions in the higher education index, ranking 42nd out of 138 countries, compared to 49th position in 2019.

As for modern teaching and learning methods, Egypt advanced 4 places in the information and communication technology index, with a ranking of 74 out of 138 countries. However, this indicator does not reflect the nature of use, that is, it does not confirm that progress in the outputs of this indicator necessarily tends to increase individual and governmental uses in the education sector, in particular. In terms of infrastructure, it ranked 97th, with an index value equal to 56.4, which means that the country needs to develop its technological infrastructure in order to be able to keep pace with modern technological developments, especially given that the information and communication technology (ICT) sector has a great developmental impact; Egypt occupied an advanced position (45th place) out of 138 countries in the ICT development impact sector.

3 AN OVERVIEW OF EGYPTIAN POLICY RESPONSES: THE EDUCATION SYSTEM PERSPECTIVE

As a response to the health crisis, the government via the Ministries of Education and Higher Education and Scientific Research, took decisive measures from March 15, 2020, such as:

1. Suspending activities at all educational levels, in order to reduce the number of hours in the school day.
2. Suspending studies in universities and schools for a period of two weeks, starting on Sunday, March 15, 2020, and this suspension was extended until 1 October 16, 2020.
3. Closing all private educational centres and warning violators that legal action would be taken against them.

The total number of students affected by the closure of schools and universities in Egypt has reached 27,024,690 students, of which 13,144,435 are females and 13,880,255 are males. The following table shows the number of students enrolled in the different stages of education in Egypt (UNESCO Institute for Statistics data, 2020).

Table (2): The Number of Total Students in Different Educational Levels in Egypt

Educational Stage	Males	Females	Total
Pre-Primary Education	716,651	673,291	1,389,942
Primary Education	6,271,344	5,928,755	12,200,099
Preparatory Education	2,571,718	2,440,586	5,012,304
Secondary Education	1,897,868	1,780,302	3,678,170
Al-Azhar Education	891,640	765,196	1,656,836
Society Schools	41,402	91,605	133,007
Handicapped Education	25,244	14,615	39,859
Total Number of Students in Pre-University Education	12,415,867	11,694,350	24,110,217
Higher Education*	1,464,388	1,450,085	2,914,473

Source: From the author based on the data of CAPMAS, Egypt in Figures, 2020, Arab Republic of Egypt.

* The data is obtained from UNESCO Institute for Statistics data, 2020.

According to the Human Development Report 2020 (UNDP, 2020), Egypt ranked 116th out of 189 countries, with an index value of = 0.707 (high human development). The expected number of years of schooling was 13.3 years and the average number of schooling years was 7.4 years, with the value of the education index = 0.618.

Table (3): Human Development Index trends in Egypt from 1990-2020 (Education Index)

Year	Expected Number of Schooling Years	Average Number of Schooling Years	HDI
1990	9.8	3.5	0.546
1995	10.4	4.1	0.576
2000	11.1	4.8	0.611
2005	11.5	5.6	0.634
2010	12	6.6	0.665
2015	13.1	7.1	0.691
2020	13.3	7.4	0.707

Source: From the author based on the World Human Development Report (various issues).

The Ministries of Education and Higher Education and Scientific Research have accelerated the procedures and decisions to curb the negative impacts on the educational process. The impact was more severe on the Ministry of Education, due to the huge number of students enrolled in this sector, compared to the number of university education students, in addition to the fact that university students are more connected and interacted with distance learning technology and the Learning Management System (LMS) applied in some Egyptian universities.

The procedures for dealing with the crisis and the transition to on-line education were as follows:

- **Ministry of Education (Pre-University Education):**

The Ministry of Education quickly took the necessary measures and procedures to help transform the traditional educational process into distance learning methods, in order to complete the academic year 2019/2020. These measures can be explained as follows:

1. Limiting the curricula to what was taught until the date of suspension of education (March 15, 2020) for all educational levels (general/technical).
2. Developing research projects as an alternative to the traditional exams applied to some educational stages, starting from the third grade of primary school to the third grade of preparatory stage. These have been published on the Ministry of Education website.
3. Providing a digital library (<https://study.ekb.eg>), which includes many different digital educational references and resources that help students with self-learning?
4. Announcing electronic exams for the first and second grades of secondary education, with the free delivery of tablets and internet slides to first-grade students.
5. Introducing a live broadcast platform for virtual classes (<https://stream.moe.gov.eg>) and creating an educational communication platform (<https://edmodo.org>) which is a free educational platform that helps teachers communicate safely with their students and supports virtual classroom online classes under the supervision of the parents.

6. Disseminating many videos explaining the methods of interaction with the Edmodo communication platform, the live broadcasting platform for the virtual classes and the digital library (<http://portal.moe.gov.eg/Pages/single-news-view.aspx?NewsID=4455>).
7. Cooperating with Microsoft to provide office software to nearly 20 million students, free of charge, to support the new educational system and encourage students to deal with the digital software.
 - About 981,716 teachers and 5,438,351 students registered on the platform and nearly 1,358,750 virtual classrooms were created. More than 417,788 parents interacted on the platform with their children. It should be noted that all these numbers increased significantly by the end of quarantine after the completion of registration of all students, teachers and parents on the platform.
8. Requiring social distancing and wearing face masks/face shields in all schools. The new academic year 2020-2021 commenced on 17th October, 2020. The Minister of Education announced that the two to three days per week rule for attendance will apply to all students at all stages and the other days will be scheduled online, to reduce the high density of students in classrooms.
9. According to the rules, classrooms would be closed for 28 days in the case of more than one student testing positive for coronavirus in a period of two weeks. Also, a school would be closed for 28 days in case two or more classrooms in the same school are closed due to coronavirus cases.

- **Ministry of Higher Education and Scientific Research**

The role of the Ministry of Higher Education and Scientific Research was different, given that Egyptian universities include the largest university hospitals. The professors and students at these university hospitals were at the forefront of facing the COVID-19 pandemic. In addition, student guest houses in some universities, for example, Cairo, Helwan, Ain Shams, Assiut, Minya, Alexandria and Mansoura, were prepared to receive COVID-19 cases.

As mentioned before, there is a large percentage of universities and students dealing with e-learning methods, which facilitated the continuation of the educational process in most Egyptian universities. The Supreme Council of Universities issued a number of decisions, in accordance with the development of the situation; the most recent decisions were announced in mid-April 2020, as follows: (<http://portal.mohe.gov.eg/ar-eg/MediaCenter/Pages/news.aspx>):

1. Written and oral exams in all colleges are cancelled for all students enrolled in the first to third stages and those exams are replaced by one of the following two alternatives:
 - Preparing students for research theses in the courses that were taught in the second semester of the academic year 2019-2020. Each university has set up the standards,

controls, conditions and rules necessary to evaluate and approve these theses, according to the nature and specialisation of each college.

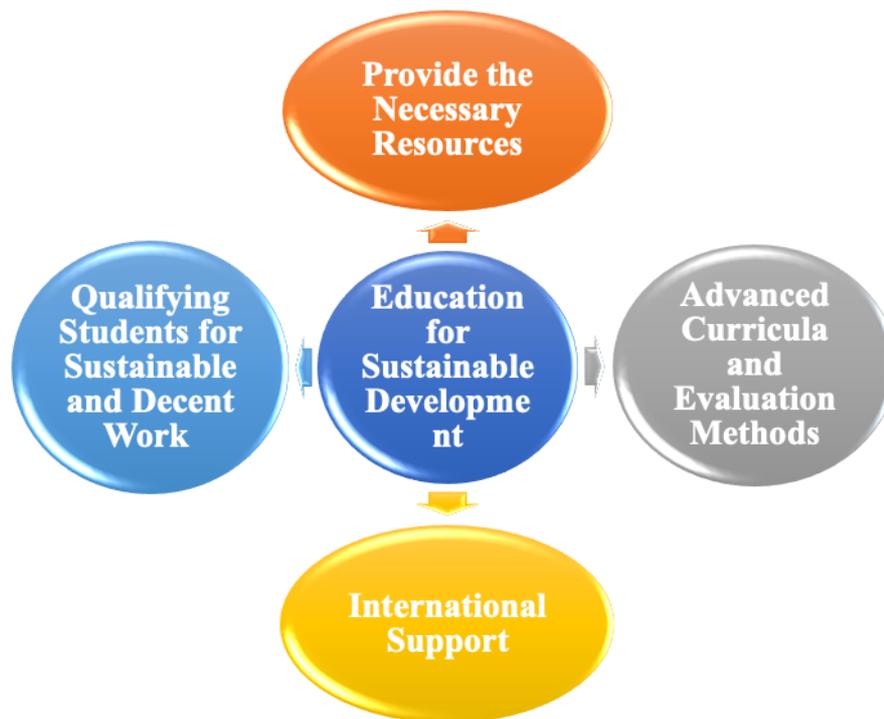
- Holding electronic exams for the courses that were taught in this semester for colleges or study programmes that have a limited number of enrolled students and have the sufficient infrastructure and technological capabilities.
2. For other colleges where bylaws require practical or clinical training and practical examinations:
It was stated that, the timetables that were scheduled for practical and/or clinical training are completed in the second semester, after the end of the suspension period or at the beginning of the new academic year 2020-2021.
 3. For students in the final stage in all colleges:
Examinations that were scheduled to be held by the end of the second semester of the academic year 2019-2020 were postponed until July 2020 and universities are entrusted with setting schedules and controls, taking into account giving the students an appropriate period of time before taking the exams.
 4. For postgraduate students:
Each university was free to determine the date of the examinations scheduled to obtain these degrees, according to what it deems appropriate after the end of the study suspension period, provided that the period of suspension of study is not counted within the period of study necessary to obtain the academic degree.
 5. Supporting scientific research to confront the virus:
There have been intensive efforts by the research centres of the Ministry of Higher Education and Scientific Research to confront the emerging Coronavirus, as:
 - The Science, Technology and Innovation Funding Authority (STIFA) has launched projects to confront the emerging Coronavirus pandemic, provided that the required research is in the fields of medicine, pharmacy, medical supplies, public health and information technology.
 - Universities announced opportunities for funding research that would help in combatting the virus and its multiple effects, for example Cairo University allocated ten million Egyptian pounds as a first stage to support research teams to find a vaccine for the Coronavirus, in addition to overcoming the negative economic and social effects of the virus (<https://cu.edu.eg/ar/Home>. <https://cu.edu.eg/ar/Cairo-University-News-13166.html>).
 6. The new academic year 2020-2021 started on 17th October, 2020. The Ministry of Higher Education and Scientific Research has adopted precautionary measures against the

Coronavirus, including the implementation of a system using both in-person learning and e-learning. The Ministry imposed social distancing and the wearing of face masks inside the campus.

4 PROPOSING SUSTAINABILITY PILLARS FOR EDUCATION POLICY AND IMPLEMENTATION MECHANISMS

Education for Sustainable Development includes the learning values and curricula that should be formulated, the assessment methods that support the learning process, the required educational planning and resourcing systems, the suitable approaches of learning needed for decent and sustainable work and the role of international support in achieving sustainability in education (Biltagy, 2015_b). Covid-19 can be used as a good opportunity to make the educational system more oriented towards sustainable education. The following figure illustrates the concept of education for sustainable development.

Figure (1): The Concept of Education for Sustainable Development



Source: Author's elaboration.

The COVID-19 pandemic leads us to face an actual challenge and a real responsibility. This requires quick action by governments, the private sector, civil society and international organisations.

Sustainability Pillars	Implementation Mechanisms
<p>Developing the educational curricula and enhancing digital infrastructure</p>	<p>Attention should be paid to developing the educational curricula, creating new specialisations that help in catching up with any updates, increase the level of quality of education, use modern technologies for education and use the latest developments in knowledge and technology revolution, and distance learning approaches. Progress has been made in the possibility of using electronic devices; this makes this transition to online learning possible. But at the same time, not every student has access to digital devices or the Internet at home. Accordingly, this is the main challenge that should be considered to ensure that these students have access to learning resources and finding an appropriate way to help them.</p>
<p>Creating the necessary learning methods for decent and sustainable work</p>	<p>It is essential to make good use of the resources allocated to the education sector to help promote and raise the efficiency of education, improving its outputs and linking those outputs with the requirements of sustainable development and the needs of the labour market.</p> <p>Moreover, mixed learning methods should be used; it is well-known that the most attractive learning styles are those that are more interactive, i.e., face-to-face learning is better than online learning, but blended learning that combines these two alternatives, can build on the best of both options and create a better learning experience. This positive idea is already being applied in some universities in the academic year 2020-2021, amongst them is Cairo University.</p>
<p>Using advanced planning methods to provide the required resources and exploiting international support to achieve sustainability in education</p>	<p>Whilst there is no ideal formula for determining the optimal rate of public spending on education, it would be beneficial to allocate a large percentage of the state budget to the education sector. Of course, these amendments will result in a tangible increase in the resources allocated to education.</p> <p>Also, it is possible to rely on huge investment projects to pump more capital into many governmental educational institutions to improve their deteriorating conditions by modernising their buildings and educational equipment,</p>

	<p>improving management systems and encouraging the decentralisation trend. That is, applying the mechanism of self-development for achieving sustainable development and refining the skills of faculty members. Likewise, the benefits of international grants and loans, provided by international organisations, should be maximised, such as the Higher Education Development Project Fund, which is part of the loan agreement between Egypt and the World Bank (Biltagy, 2013).</p>
<p>Maximising the role of the private sector</p>	<p>Education in developing countries depends mainly on the funds provided by the government, unlike the case in developed countries where private financing plays an influential role; this can be attributed to the high standard of living, which enabled many people to cover the educational costs for their children and the increasing role of industrial and financial institutions in financing education, because of the profits they make and the incentives and exemptions they receive, due to their participation in providing social services. As for most developing countries, the role of governments is essential, as the role of the private sector is still very limited. Consequently, the organizations and civil society institutions should contribute to developing the educational process. The traditional relationship between the education system and the government should be replaced by another one based on cooperation, i.e., civil society organisations should participate in supporting government efforts (Biltagy, 2013).</p>

5 CONCLUSION AND POLICY RECOMMENDATIONS

Generally, countries with resilient systems could better react to the shocks and to manage them effectively (Ayadi, R. et al., 2020). The responses to the COVID-19 pandemic differ from one country to another and from one context to another. But they must be based on a social vision of education and human rights contexts. Action plans must support public education, reinforce the common good and increase global solidarity that emphasises the cooperative responsibility for the education of everyone worldwide. Education needs to be at the heart of a post COVID-19 world.

Countries can overcome the Coronavirus crisis with the minimum possible losses, if governments take appropriate policies and procedures. Policy makers can use this sudden catastrophe as a chance to make the educational system more able to deal with technology and more oriented towards continuity and sustainability. Amongst the proposed alternatives to the Egyptian education system are:

- Continuing to develop the digital platforms that have been established and increase the number of subscribers to eliminate private lessons and reduce the density of classes, which are amongst the biggest problems of the education system in Egypt, as well as developing the Ministry of Education and the Ministry of Higher Education and Scientific Research websites. The Ministry of Education has already launched a new platform for reviews of preparatory and secondary education. Furthermore, two new educational channels, opened in November and December, 2020 called Madrasatna (1) and Madrasatna (2).
- Creating new curricula and developing educational systems; so that they will be more flexible for any developments that may arise in the future and improving the financing of digital curricula and materials (digital libraries, lessons, educational materials, etc.).
- Increasing funds devoted to human development, especially the health and education sectors³.
- Incorporating the concept of sustainable education to achieve sustainable development and to reduce poverty⁴, but with a focus on quality education and innovation in addition to

³ The economic development plan for the year 2020/2021 has actually been an exceptional one as a result of the Coronavirus pandemic, which differs in its orientations, goals and priorities. The government increased its investments in pre-university education and higher education. Moreover, some technological universities have been inaugurated recently and university hospitals were developed and renovated.

⁴ According to the recent data, the poverty rate in Egypt reached 29.74% in 2019-2020 (Results of the study of income, expenditure and consumption, nutritional support and poverty indicators, 2020/2019).

lifelong learning. Learning at all ages plays an active starring role in developing a sustainable future. Education in general is essential in achieving sustainable development agenda (Lozano et al., 2011 and Elmassah, Biltagy and Gamal, 2020). Higher education is uniquely positioned to drive the transition to sustainability; universities have the various means to influence students and provide them with the skills needed to transform existing societies into sustainable cultures. The challenge of integrating sustainability into the university curriculum is important. This includes curriculum development and the creation of new academic programmes (Biltagy, 2015_b).

- Targeting the poorest areas, providing the necessary technological equipment and internet and improving communication capabilities to ensure continuity of distance learning, whether for schools or households.
- Providing learners and teachers with new skills to support the knowledge-based economy by implementing an ambitious, transformative and comprehensive educational agenda.

6 REFERENCES

1. Ayadi, R. (2020). Proposal for a Three-Pillar Resilience Framework to Face External Shocks: The Case of COVID-19 Pandemic, EMEA Policy Paper.
2. Ayadi, R., G. Barci and Ronco, S. (2020). COVID-19 Policy Assessment Monitor Mediterranean and Africa, EMEA – EMNES Studies, March – September 2020.
3. Ayadi, R. et al. (2020). Covid-19 in the Mediterranean and Africa: Diagnosis, Policy Responses, Preliminary Assessment and Way Forward, EMEA-EMNES Studies, April 2020.
4. Azzi-Huck, K. and T. Shmis. (2020). “Managing the impact of COVID-19 on education systems around the world: How countries are preparing, coping, and planning for recovery”, Published on Education for Global Development.
5. Becker, G.S. (1962). “Investment in Human Capital: A Theoretical Analysis.” *Journal of Political Economy*, 70.
6. Biltagy, M. (2013). “Higher Education in Egypt between Financing Constraints and Development Strategies”, in *Higher Education Reform in Egypt*, Edited by El-Sayed, Mustapha Kamel, Partners in Development (PID), Cairo, Egypt. (In Arabic)
7. Biltagy, M. (2015a). “Financing Higher Education in Egypt: Problems and Suggested Alternatives”. *FEPS Journal, Journal of Faculty of Economics and Political Science, Cairo University*, Vol. 16, No. 3, pp. 3-24, July 2015 (In Arabic).
8. Biltagy, M. (2015b). “Education for Sustainability: Vision and Action of Higher Education for Sustainable Consumption.” *International Journal of Economics and Finance*; Vol. 7, No. 12, pp. 282- 290.
9. Elmassah, S., M. Biltagy and D. Gamal. (2020). “Engendering Sustainable Development Competencies in Higher Education: The Case of Egypt.” *Journal of Cleaner Production*, Volume 266, 1 September 2020, 121959.
10. Global Knowledge Index, December 2020. The United Nations Development Programme and the Mohammed bin Rashid Al Maktoum Knowledge Foundation, the Knowledge Project.

11. Lozano, R., R. Lukman, F.J. Lozano, D. Huisingh, and W. Lambrechts. (2011). Declarations for Sustainability in Higher Education: Becoming Better Leaders, through Addressing the University System. *Journal of Cleaner Production*, 48, 10-19.
12. Mincer, J. (1958). Investment in Human Capital and Personal Income Distribution, *Journal of Political Economy*, 66.
13. Patrinos, H. and T. Shmis. (2020). "Can technology help mitigate the impact of COVID-19 on education systems in Europe and Central Asia?" *Eurasian Perspectives*, World Bank.
14. UNDP. Human Development Reports, various issues.
15. UNDP. (2020). Human Development Report 2020, "The next frontier: Human Development and the Anthropocene".
16. UNESCO. (2020). Education in a Post-COVID World: Nine Ideas for Public Action, International Commission on the Futures of Education, Paris, France.
17. UNESCO, COVID-19 Educational Disruption and Response.
18. UNESCO Institute for Statistics data, 2020.
19. UNICEF. (2020). Building Resilient Education Systems beyond the COVID-19 Pandemic: Considerations for education decision-makers at national, local and school levels, UNICEF Europe and Central Asia.
20. World Bank Education and COVID-19.
21. Results of the study of income, expenditure and consumption, nutritional support and poverty indicators, 2020/2019. www.capmas.gov.eg
22. <http://portal.moe.gov.eg/Pages/single-news-view.aspx?NewsID=4455>
23. <http://portal.mohe.gov.eg/ar-eg/MediaCenter/Pages/news.aspx>
24. <https://cu.edu.eg/ar/Home>. <https://cu.edu.eg/ar/Cairo-University-News-13166.html>



ABOUT EMEA

The Euro-Mediterranean Economists Association (EMEA) is a Barcelona-based regional think-tank established in 2012 that serves as a leading independent and innovative policy research institution; a forum for debate on the political and socio-economic reforms in Mediterranean and Africa; and promoter of actions and initiatives that fulfill objectives of sustainability, inclusiveness, regional integration and prosperity. It strives to contribute to the rethinking of the Euro-Mediterranean and Africa partnerships in view of the new dynamics of an emerging multi-polar world.

EMEA has a large network of economists, high-level experts and institutional partners (research institutes, think tanks and universities) in the Euro-Mediterranean and Africa. EMEA builds on the collaborative research network MEDPRO (funded by the EU's Seventh Framework Programme (2009-13)) and provides forward-looking thinking and political and socio-economic integrated analyses on the Euro-Mediterranean region. EMEA is also the promoter and co-funder of the Euro-Mediterranean Network for Economic Studies (EMNES), co-funded by the European Commission (DG NEAR) between 2015 and 2019. EMNES is a regional network composed of 30 institutions and more than 100 experts and researchers in the Mediterranean region.

From January 2020, EMEA coordinates The Euro-Mediterranean Network for Economic Studies (EMNES). EMNES, aims to provide a renewed vision for socio-economic development in the Mediterranean region, mainly focusing on employment creation, social inclusion, sustainable development and regional integration. It performs economic and policy research exploring the pillars of inclusive and sustainable economic models in the Euro-Mediterranean region.

DISCLAIMER:

The contents of the documents are the sole responsibility of the authors and can under no circumstances be regarded as reflecting the position of the Euro-Mediterranean Economists Association.

© Copyright 2021, EMEA - Euro-Mediterranean Economists Association
Published by the Euro-Mediterranean Economists Association

All rights reserved – No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means – electronic, mechanical, photocopying, recording or otherwise without the prior permission of the authors.

