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Increasing Demand for E-learning in the Southern Mediterranean: An Opportunity for Entrepreneurs*

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Authors

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Executive Summary

E-Learning is one of the biggest revolutions in the education sector that has reshaped the learning process. Today, the global e-learning market is growing exponentially and is estimated to reach 370 billion US$ by 2026, up from 226 billion US$ in 2020 (this includes the academia, government and corporate sectors). The health crisis has changed the way education systems work across the world. In the Southern Med region, the transition to e-learning ensuring pedagogical continuity during periods of confinement have shown the fragility and the unpreparedness of the education system in these countries. Gaps are mainly related to weaknesses in supply and demand for e-learning, in addition to institutional, financial and infrastructural challenges. Therefore, reform strategies and action plans are needed to enable these countries to catch-up with this growing trend.

The present policy brief aims at helping promote the e-learning sector in the region by first, providing an overview of the sector and identifying some of the main challenges that this sector is facing in the South Med region. The brief then highlights the success story of two entrepreneurs that have created their own e-learning start-ups in an attempt to contribute in

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finding solutions to problems that exist in their communities. These entrepreneurs who took part in THE NEXT SOCIETY project (TNS) that is funded by the European Commission, have participated in a questionnaire that gathered information about their motivations, challenges and recommendations. The policy brief concludes with some operational recommendations based on the analysis.

In a nutshell, these entrepreneurs have exhibited the significant obstacles that are holding back the expansion and development of the e-learning industry in the region. These obstacles are: institutional, financial, finding partnerships, culture & commercialization, and access to infrastructure. Some practical policy recommendations are drawn from their experiences, which could contribute to unlock the potentials of the e-learning systems in the South-Med countries, especially after the Covid-19 crisis constraints. These recommendations include the necessity: to modernize, streamline and simplify administrative procedures, to carry out legislative reforms, to improve access to finance, to put into practice alternative tools to stimulate the creation, to promote national and international partnership, and to invest in young people which leads to changing mentalities and prejudices about e-learning and developing skills.

1. Introduction

Today's educational canvas is going through a real revolution. The Covid-19 crisis has forced the education sector to adapt to national and global measures of constraints. These changes have allowed the emergence of new insights dealing with the technological innovation and optimizing digital technology for greater academic performance. Indeed, e-learning presents several advantages like cost-effectiveness, flexibility and accessibility[2]. It is also argued that having access to lessons and lectures anytime permits students to better memorize the information, which is needed for a continued learning process[3].

This revolution enabled the launching and the recognition of many regional and governmental projects that aim to develop the e-learning sector. The global e-learning market (including academia, government and corporate sectors) is growing exponentially and is estimated to reach 370 billion US$ by 2026, up from 226 billion US$ in 2020[4] driven by the emergence of Artificial Intelligence (AI), Virtual reality (VR), and cloud-based Learning Management Systems (LMS). More specifically, the corporate e-learning sector is expected to increase to $38 billion from 2020 to 2024.

These e-learning initiatives are considered an important development opportunity with a considerable positive impact in the Southern Mediterranean region. In addition to the general benefits of the e-education, distance learning can benefit South-Med students that wish to access international education, this means avoiding sending students abroad and hence minimize travel related expenses and risks of brain drain. It can also help reduce inequalities (between men and women, rich and poor) and create as such a more inclusive society. However, although e-learning solutions for training and education have significantly

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[2] N. Q. Naveed, M. AbulHafeez, S. Sanober, M. R. N. Quresh and A. Shah, "Barriers effecting successful implementation of e-learning in Saudi Arabian universities," International Journal of Emerging Technologies in Learning, p. 94−107, 2017.

[3] S. Hameed, A. Badii and A. Cullen, "Effective e-learning integration with traditional learning in a blended learning environment," *In Proceedings of the European and Mediterranean Conference on Information Systems,* p. 25−26 , 25−26 May 2008.

[4] Global eLearning Market report, *History and Forecast 2016-2027.*

developed in all countries of the region in the past few years, the sector is still behind in terms of achieving its potentials. At the same time, the measures undertaken during the Covid-19 pandemic could represent a good start for the region to seek further development and expansion of the sector to match the global trends.

Moreover, this ongoing trend presents a window of opportunity for entrepreneurs that are seeking to establish their start-ups in the field of digital education. However, they still face challenges on their road to success in this field. Based on the experience of some innovative startups entrepreneurs focusing on the e-education sector and operating within THE NEXT SOCIETY (TNS), funded by the European commission, the present policy brief withdraws the challenges that e-learning industry entrepreneurs encounter and the ways to overcome them. In addition, it proposes some useful policy recommendations for political decision-makers and government officials dealing with the topic of innovation and education on how to further enhance entrepreneurship in this sector especially after the Covid-19 crisis constraints.

2. E-learning in Southern Mediterranean region: Challenges and Opportunities

The e-learning sector is facing numerous challenges that are impeding its development. This could be summarized in different categories as follows; institutional, financial, infrastructural and cultural.

On the institutional front, the development of e-learning is not a major priority for these countries. This means that the development of skills and adapted training programs are scarce and often poorly coordinated. Implementing distance learning is often done through individual efforts by specific educational institutions (e.g. universities, high schools, etc) rather than through a coordinated national strategy. As most of the countries in the region are looking into reforming their education system, including e-learning as part of their strategy will have a great impact in developing this sector.

On the financial front, the lack of funds is one of the main obstacles to the development of education in the South Med countries in general. The average regional expenditures on education stands at 4.1% of GDP which is relatively low compared to other emerging regions such as Sub-Saharan Africa (4.3% of GDP) and Latin American (4.5% of GDP). Introducing e-learning in the education system could represent a further financial challenge. However, following the Covid restrictions, many governments provided funding to enable students to access education online. It will be important to capitalize on these investments to develop the sector and provide equal access.

On the cultural and language front, e-learning is not only about introducing ICT (Information and communication technology) infrastructure for learning but to also cultivate a new way of thinking about learning. It is important to introduce the idea of e-learning for young students to create a culture that will embrace e-learning means. Autonomy and individualism are not favored as part of the education systems in the majority of South-Med countries which depends heavily on teachers' learning[5]. Furthermore, as only less than half of the South Med population speaks English, this could represent an obstacle for the development of international e-learning system, unless specific native programs are developed and encouraged.
Infrastructure yet represents another challenge for the region due to the lack of ICT equipment, only 53.7% households in the region have a computer and 64.7% have smartphones, while

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[5] G. Osman, Formal e-learning in Arab countries: Challenges and opportunities. Learning, design, and technology, Springer, 2018.

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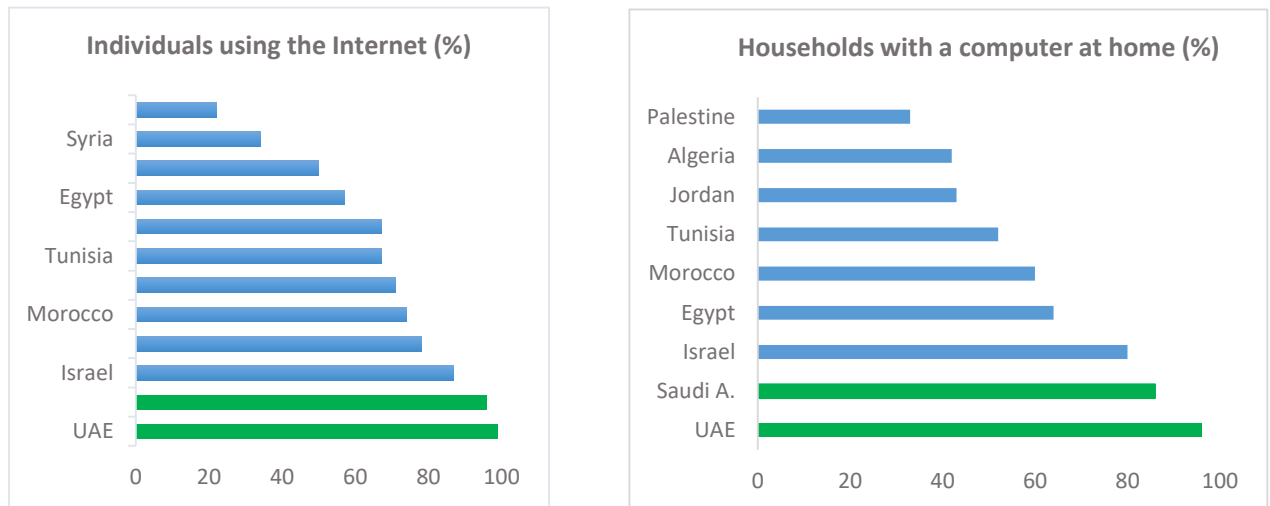FEMISE NETWORK

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access to the internet is only possible for 53.4% of the households (TNS scoreboard in Graphs 1 and 2).

Graph 1: Scoreboard of innovation (infrastructure)
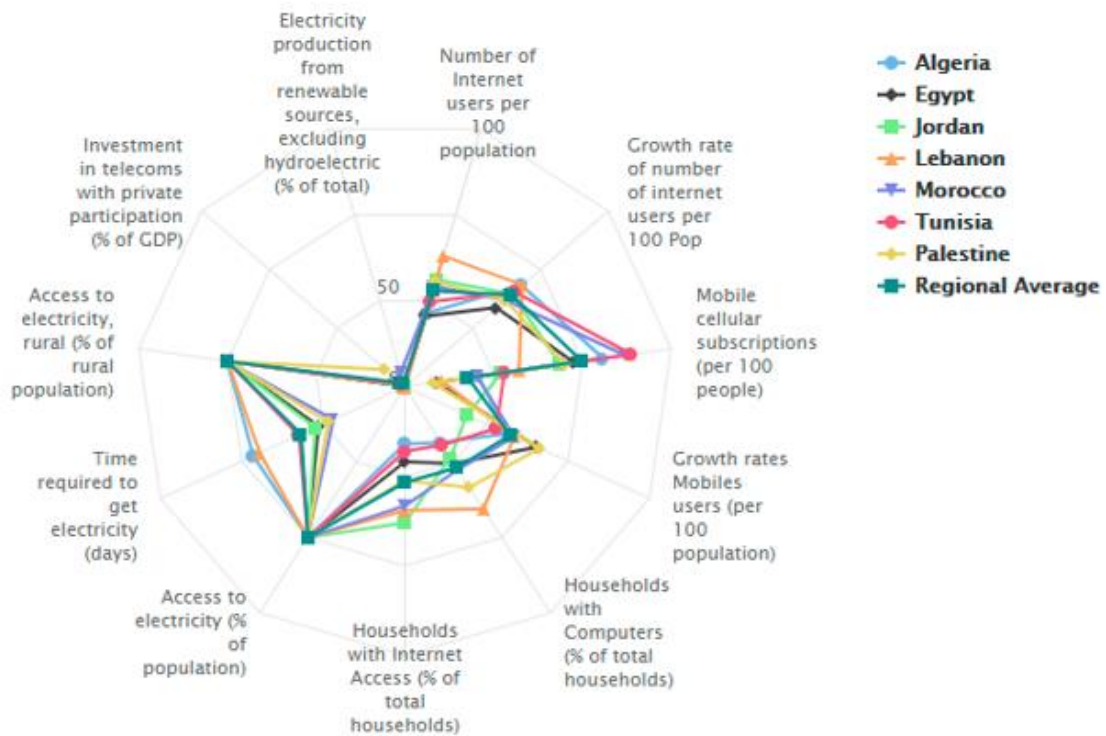
Source: Femise for TNS[6]

Graph 2: ICT access by country in 2019[7]

Source: Authors on International Telecommunication Union (UIT) data.

In addition, the region is suffering from insufficient course materials, and ICT skills: on average only 26% of South Med population have standard ICT skills. The lack of access to internet

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connections and computers at home for learning has revealed the strong digital divide that is pervasive in most countries[8]. As a result, teachers and students face challenges using the new learning tools remotely. All these obstacles are few examples that are holding back the expansion and development of the e-learning industry in the region.

While still in its early stages, it is important to highlight the national efforts that have been put towards introducing ICT and e-learning in the region. In fact, even from before the health crisis, decision-makers in the region showed a growing interest in developing education systems through ICT as an attractive option to complement, enrich and transform education for the better. They remain conscious of the need to implement action plans and reform strategies to promote e-learning by enhancing technology infrastructure, computers equipment and internet penetration[9].

This is the case of **Tunisia**, with the launch of the ambitious project of the Tunisian Virtual University (UVT) in 2002, which has provided higher training sessions for academic employees across the country. UVT has helped integrating ICT in Tunisian universities[10]. Also in 2015, the government launched one of the largest e-learning projects in Tunisia "Digital Tunisia 2018" with a budget of 5.522 million dinars. The ambitious objective of which is that by 2018, the network communication technology would have reached 80% of all Tunisian households. This goal is yet to be achieved (see graph 2). In May 2016, the Ministry of Education published the "White Paper on Education Reform" that presents policy priorities to address deficiencies in teachers' training, programs, and infrastructure. The book is composed of eight chapters discussing the restructuring of the education system and presents future projects and strategic goals. ICT integration in education is one major strategic goal cited in the book. However, this project encountered some obstacles related to e-readiness for both teachers and students. Several schools still lack the basic infrastructure and materials to be involved in this ICT integration project.

Moreover, **Morocco** launched various strategic plans to develop the e-learning sector. We cite as an example the one prepared by the Supreme Council of Education. This strategy devised the 2015–2030 Vision for Moroccan education on three pillars: equal opportunity, quality for all, and equity. These pillars have been translated into levers with specific actions, where e-learning becomes a crucial means to set up an attractive and efficient education system (lever 7) and to foster lifelong education (lever 19). Alongside the strategy, the Ministry of Higher Education launched a number of programs supporting the 2015–2030 Vision such as: MARWAN 4; E-Sup program; Net-U program; and INJAZ program.

In **Libya**, the main policy consisted of implementing ICT programs in the local and regional communities, and increasing the national academic curriculum to create careers in the ICT sector and raise overall awareness[11]. Three main ICT projects and initiatives have been undertaken in Libya before the revolution: (1) in 2006, 200 students were sent to the United Kingdom to follow intensive training in management and modern management techniques

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[8] N. Aissaoui, COVID-19, enseignement à distance et fracture numérique :Quelles mesures prendre pour la Tunisie?, 2020.

[9] T. Kelly, A. Liaplina, S. Tan and H. Winkler, "Reaping digital dividends: Leveraging the internet for development in Europe and Central Asia," 2017.

[10] B. Alessandro, "Digital Skills and Competence, and Digital and Online Learning," European Training Foundation, 2018

[11] S. ISAACS, "Survey of ICT and education in Africa: South Africa country report," 2007.

within the education system in Libya, (2) in 2016, an ICT training program was offered for staff and teachers, (3) In 2005, several ICT projects were given to 149 Libyan universities.

In *Lebanon*, it was recognized that there was an absence of ministerial regulations and policies of e-learning as distance learning programs are organized according to internal universities practice rather than on the national government level. This was during a symposium organized as a part of the project "Apprentissage à Distance et Innovation Pédagogique" in September 2016. As a result, an e-learning workshop was organized by the Ministry of Education and Higher Education in collaboration with the Higher Education Reform Experts and called to promulgate policies, guidelines and regulations for the implementation of e-learning in higher education. However, little tangible results have been made regarding regulatory procedures and policies for recognizing e-learning in the Lebanese higher education.

Palestine provides another example of how e-learning was introduced in the government plans as several e-learning projects have been conducted since 2005[12]. One of the foremost projects is the Mediterranean Virtual University (MVU) set up in 2005, which was a collaboration between 11 northern European and Mediterranean universities aiming to set up online courses of information technology and engineering, allowing global learners to study online. Another project, the "2005–2008 RUFO" project, launched to establish an inter-university network in Palestine in order to reinforce skills and knowledge in open and distance learning. Several Erasmus+ projects were implemented the aim to strengthen cooperation between Palestinian universities and other universities in the South med such as Tunisians and Jordanians as well as universities in Europe; such as "Serious Games" (2013-2016) and the METHODS.

The recently launched Erasmus+ project OpenMed (2016-2018) aims to develop awareness and simplify the adoption of open educational practices (OEP) and open educational resources (OER) in the South-Med region, with a specific focus on Palestine, Jordan, Egypt and Morocco. Foremost among governmental efforts in the region, before the health crisis, is the *Syrian* Virtual University (SVU) created in 2002. Its strategy is to partner with foreign universities with strong online education experience to offer full programs online, in either English or French. The program is planned to consist of courses already created by the partner universities, but later to offer courses devised by SVU faculty exclusively[13]. Other initiatives in Syria include the utilization of Cloud Technologies. Due to the crises in Syria, most of the private universities around Damascus had to leave their campus and move to safer locations in the city with no internet access. Teachers opted for using free storage services such as the cloud to host course contents as a start.

These governmental projects are considered an important development opportunity with a positive impact in the Southern Mediterranean region.

3. E-learning a necessity due to COVID-19 in the South Med

The pandemic has an unprecedented impact on the education of children and young people, and it exacerbates the crisis that was already raging in this sector before the health crisis. As of April 2020, 1.6 billion children in schools (94% of the world's children in schools) and 220 million university students were no longer attending classes following the closure of schools

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[12] A. S. WEBER and S. HAMLAOUI, E-Learning in the Middle East and North Africa (MENA) Region., Springer, 2018..
[13] e Learn magazine," [Online]. Available: https://elearnmag.acm.org/archive.cfm?aid=1190058.

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and universities[14]. By January 2021 there were still around 700 million children that were required to study at home

The pandemic has changed distance education, in South Mediterranean region, from an attractive option to a necessity. Since COVID-19 was declared as a global pandemic, governments in South Mediterranean countries have taken strict public health measures to enclose the pandemic. As shown in Table 1, most countries in the region imposed lockdowns and school closures as instructors and educational institutions suspended face-to-face education and they were instructed, whenever possible, to deliver their courses online. Since then, the e-learning market has experienced considerable growth in this region.

Table 1. Governments' measures taken against the pandemic in some South-Med countries from March 11, 2020 to February 2, 2021

	Movement restrictions	Duration of the School closures[15] (days)	Containment measures for the education sector	Number[15] of students impacted[16]
Egypt	Night-time curfew Restrictions on opening hours of public venues Night-time curfew Restrictions on opening hours of public venues Restrictions on re-opening of certain public venues	71	Adopt online education (Specialized television channels, Zoom, WhatsApp, Skype, Classera, Google classroom, GoToMeeting, etc), increase the capacity and speed of internet packages, purchase 100 smart classrooms for children, provide two million tablets to secondary school teachers and students.	23,157,420
Lebanon	Full lockdown Night-time curfew	106	Platforms, such as Zoom, Moodle, Blackboard, and Skype have been employed to deliver the content to the students, Faculty members have been challenged to make themselves familiar with new teaching methods, EAA's Digital School Programme developed the Internet Free Education Resource Bank (IFERB) to support those not digitally connected, Additional EAA projects include online resources, developed in partnership with UNESCO, to assist in educational planning and curriculum for safety, resilience, and social cohesion.	1,132,178
Morocco	Night-time curfew Restrictions on opening hours of public venue Movement restrictions on certain cities/areas	87	Adopts online learning, from primary to secondary: The TelmidTice portal which presents digital courses, television channels and virtual classes through the collaborative service Microsoft Teams, for higher education: the integration of e-learning as a compulsory activity instead of an individual desire, the provision of interactive digital platforms, such as Moodle, edX, to students and Google Classroom, offering various courses, the involvement of a national television channel and regional radio stations in the broadcasting of university education courses. Virtual classes will also	7,886,899

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[14] Banque Mondiale, "Face aux conséquences de la COVID-19 sur l'éducation, il faut agir vite et efficacement,," 2021. [Online]. Available: https://www.banquemondiale.org/fr/news/immersive-story/2021/01/22/urgent-effective-action-required-to-quell-the-impact-of-covid-19-on-educati.
[15] https://data.unicef.org/resources/one-year-of-covid-19-and-school-closures/
[16] Students include pre-primary, primary and secondary

			be created through the Microsoft Teams service.	
Tunisia	Full lockdown	75	Postponement of conferences, educational events and cultural and sporting activities scheduled from March and the start of distance education from March 30, 2020, Digital platforms accessible through fixed and mobile internet networks (three operators) have been set up to enable pupils and students in Tunisia to access distance education, Free access to the Moodle platform through the mobile telephone networks of the three telecommunications operators (Tunisie Télécom −Ooredoo Tunisie - Orange Tunisie) has been made available in,the event that this is not possible via the fixed networks. trainings on e-learning were provided by the Virtual University (UVT), other communication tools such as TV and radio have been set up to support e-learning.	2,479,163
	Night-time curfew			

Source: Unicef (2021)

This sudden need to move to distance learning has revealed the unpreparedness of the region to embrace the digital learning option and governments face crucial challenges concerning how to move courses online. In tertiary education, despite the early interest in distance learning and the presence of a few universities equipped for online education through earlier investments strategies, most universities in Southern Med countries are struggling with the sudden necessity to switch to fully online education for all grade levels. Moreover, most of the distance learning initiatives focused on high-level education (above the school levels).

For primary and secondary education, countries have adopted different methods of distance education, depending on grade level, and the availability of ICT access. In areas where internet access is limited, states have favored traditional means of distance education, such as broadcasting educational programs on radio and television and distributing printed materials[17].

However, the situation is more complicated for other South Med countries, like Syria, Palestine and Libya and the gap with other countries is glaring due to political instability and security problems.

4. Finding solutions to e-learning challenges: experiences of entrepreneurs —

In an attempt to respond to the e-education needs in their communities, a number of entrepreneurs have turned these challenges into opportunities by establishing their own start-ups in the field of e-learning and thus providing concrete solutions to ongoing problems.

We present this analysis based on the experience of two entrepreneurs who have created innovative start-ups in the education sector as shown in the Table 2. These start-ups were supported by the European Commission Funded Project "THE NEXT SOCIETY" (TNS). The mentoring and the Boot camps provided by TNS have been very helpful for the development of their projects. According to the entrepreneurs, these sessions have helped them to put their

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[17] Nations Unies, Note de synthèse: L'éducation en temps de COVID-19 et après, 2020

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project into action, increase the network, forge new partnerships and exchange knowledge and experiences with peers.

This section highlights the motivations and challenges faced by the entrepreneurs in Southern Med countries and provides some critical recommendations on how to improve e-learning sector in this region.

Table 2: List of start-ups that participated in the study

Country	Name	Description
Algeria	Quizzito	"Quizzito" is an educational platform with online quizzes. It aims to encourage children to enjoy reading books. Quizzito mixes reading with games and technology to help children stay engaged and have fun while reading. It uses cutting-edge technologies to assess the level of understanding of each child, including artificial intelligence to assess the level of performance. **www.quizzito.com**
Lebanon	Green Robot Tech	"Green Robot Tech" aims at helping teachers, parents, and students to be part of an easy, fun, and personal educational journey. The project introduces procedures needed for building models, turning theory into practice throughout an assembly process. **www.greenrobottech.com**

The motivations of entrepreneurs in establishing their startups are mainly cultural. For Quizzito for instance, as reading has become a less and less popular activity among many children and adults in Algeria, as in the case in many other countries in the region, the project aims to encourage children to read from an early age using ICT and rewards system to develop reading as a habit. In fact, the lockdown period during the Covid was used to develop specific tools to meet the needs and increasing acceptance of online tools. This has helped more children to read more books in spite of the several difficulties to follow learning techniques online particularly for smaller children. As a result, Quizzito has inspired some 25,000 readers from over 15 different countries to read over 250,000 books, in two years.

For Green Robot Tech, it was revealed that in Lebanon there is a need to physically apply what has been learnt at school by creating customized projects. Thus, the main motivation was to bridge the gap between scientific theories that are taught at school and practical skills that children need to acquire using ICT. Green Robot Tech helped children get interested in the ICT sector, created a new generation of students in that field, and enhanced the ability to develop and manifest creative and critical thinking online.

Thus, the two entrepreneurs have provided innovative solutions that help improve the e-learning system. The stories of these entrepreneurs are considered a great achievement given the many challenges they have been (and still) facing. The obstacles highlighted by the entrepreneurs in this questionnaire confirm what other surveys have highlighted[18]. Two categories of obstacles could be identified: general obstacles that are related to entrepreneurship and specific ones that are related to the case of e-learning.

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[18] Word Bank, "Word development report 2013: Jobs," Washington, DC, 2013.

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General obstacles related to entrepreneurship:

First, **institutional issues** represent the leading group of obstacles mentioned by entrepreneurs, this includes administrative burdens and legislative obstacles which are often identified as some of the main challenges for the development of entrepreneurship in almost all countries of the region. The entrepreneurs seem to suffer from the complexity, uncertainty, lack of communication on new legislative standards, and high administrative delay.

Second, the **financial issues** remain unresolved in the majority of countries in the Southern Med region, this includes relatively high taxes and the difficulties and delays in accessing funding as mentioned by entrepreneurs. To overcome these institutional and financial challenges, Quizzito resorted to found a foreign company.

Third, **implementation technology and skills issues,** the lack of qualified specialists in AI, VR, Big Data and software developer have been also revealed by the entrepreneurs surveyed. To overcome this challenge Green Robot Tech saved from their profits to hire experts that will fulfill these requirements.

Specific ones related to the e-learning:

Fourth, some entrepreneurs have had difficulties in **finding partners**. Partnerships make it possible to share risks, responsibilities and work. This was particularly highlighted by Green Robot Tech: the entrepreneur has difficulties developing innovative partnerships. Therefore, TNS has contributed to accelerating the project's development by offering the possibility of attending its periodical events for partnership opportunities.

Fifth, **culture** (or resistance to change) **and commercialization issues** were among the challenges identified. Quizzito revealed in that they needed to convince both parents and children that technology can be used to encourage reading and to avoid cheating among children.

When asked about how they overcome this challenge, the entrepreneurs emphasized that patience and persistence are key for their success.

Conclusion and Policy Recommendations

The Covid-19 crisis has indeed forced South Mediterranean countries to switch to e-learning using available educational platforms This sudden transformation to e-learning has clearly shown the digital, economic and financial gaps that these countries are facing.

Today, the e-learning market is receiving more attention in the South Mediterranean countries than ever before. This presents an opportunity for innovative ideas and startups to flourish, grow and boost their activities. Moreover, having an e-learning platform developed by nationals will overcome the language and culture barriers and hence expand use as it would be more suited to the needs and characteristics of the region (content in Arabic for example).

However, in order to embrace this transformation and move forward to catch up with the global trends, the South Med region needs to act on several issues, as follows:

At the entrepreneurship level:

- Modernize (digitize), streamline and simplify administrative procedures and carry out legislative reforms to facilitate business creation processes. Cumbersome administrative procedures such as high number of papers requested and long wait times prevent young people from evolving and getting started quickly.

- Improve access to finance and put into practice alternative tools to stimulate creation (crowdfunding, honorary loan, guarantee system, etc.) and increase entrepreneurs' investment capacity and access to a leverage effect with financial institutions

- Invest in young people to change mentalities and culture to overcome their resistance to change. This change in mentality will have to be accompanied by an evolution of digital skills (IA, Big Data, etc.) that can be promoted through schools' curriculum.

At the sector of e-learning level:

- From now on, make e-learning an integral part of the education system by adopting a hybrid teaching formula, even after the health crisis period, to improve digital skills and benefit from the advantages of e-learning. In this context, the countries that have the best education system and today rank at the top of the world, such as Asian countries (Japan, China, South Korea), adopt e-learning as an integral part of their education systems since the 2000s. Hence, the South-Med region countries must draw inspiration from these experiences for the development of their educational sectors.

- Encourage vocational training within the ICT sector itself, and provide support and recognition to specialized capacity-building and certification programs, such as micro-credentials, addressing the needs of individuals, institutions and industry. This will "harness the sector's full potential, and ensure the market's future skills needs are met."[19].

- Given the general benefits of e-learning, it is important to raise awareness among young people of the importance of e-learning regardless of the crisis and support the promoters of innovative projects at each stage of their development. Training through specialized incubation and acceleration programs encourages the creation and development of businesses.

- Distance education programs should be easily accessible in terms of approach, availability and understanding (capsules, QCM, forums, courses recordings, evaluation technics…).

- Improve internet connectivity, especially in poor regions, and allow access to educational platforms to all students without internet fees, by building partnerships between ministries and internet service providers. In addition to devoting a budget to develop ICT infrastructure and accelerate digitization of the administrative and banking sectors.

- Deliver training programs for teachers and educators and equip them to use new tools and technologies of the e-learning approach.

- Solve the problems related to access to ICT in academic institutions and renew distance education materials, continuously, particularly in disadvantaged regions and among marginalized people. On top of that, provide more scholarships for students in need to acquire devices and equipment in order to be able to connect from home.

- Promote cooperation among peers, national partnerships, partnerships among Mediterranean countries and international partnerships to develop e-learning market.

- Demonstrate that e-learning and the activity of startups performing in this field are useful for developing education and skills and, therefore, for the economic sector, as

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[19] K. Schwab, Word Economic Forum: The Global Competitiveness Report 2017–2018, 2017.

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the Covid-19 crisis has proven. Better access to data is needed to better evaluate and measure the impact to improve its performance, methods and practices.

Entrepreneurs who participated in this study

Green Robot Tech – Randa Harb

Randa Harb is formerly a Science teacher, an Educational Consultant in leading robotics center & the founder of Green Robot Tech. Randa's passion has allowed her to land third place in the Kiri Mompreneur Challenge, Hikmat Nasser Award for Excellence in Entrepreneurship & Vice President of the Lebanese Innovators Association

Quizzito – Fabienne Harizi

Fabienne Harizi has a degree in Social Sciences from the University of Neuchâtel. She has 4 years of experience in the field of youth protection. Fabienne is the co–founder of the company "Eurl Kitabquiz" in Algiers through which the Quizzito project, online reading contest and quiz, was developed. Quizzito was notably incubated by the Ooredoo company as part of the T-start project.

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