Evolution of Greek university students into a generation of workforce with digital skills as a result of the COVID-19 pandemic - a case study

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Abstract: *The appearance of the COVID-19 pandemic changed the operating conditions of the world market. New needs were created which due to social distancing had to be met with new production methods, with organizations making use of digital technology. The article focuses on Greek university students who experienced pandemic lockdowns during their studies. The necessary interaction with the academic knowledge took place daily through digital media used by universities. Based on the theory, we speculate that this generation of students due to the continuous use of digital education technologies, for the first time in Greece, has developed digital work and communication skills more than any other generation. We believe that this generation of students, due to their experience as a Generation Z with digital technology and the skills it has developed through daily contact, is a new workforce, equipped with the appropriate digital supplies to meet the needs of the market. We believe that they will be a new productive force that will overturn the data in the Greek and global market as they combine academic knowledge with digital technology.*

Keywords: COVID-19, Pandemic, Digital skills, Digital transformation, Generation Z, e-Learning, Remote working

1. Introduction:

Although the 21st century is characterized by the advent and use of new technological methods in every field, now the need for their use is more important than ever. As is well known, the COVID-19 virus has disrupted the functioning of the market. The World Health Organization has declared COVID-19 a pandemic (WHO 2020), with countries, one after the other, adopting standard elements of shaping social life to protect public health. In Greece, the first lockdown was implemented from March to May 2020 (Hellenic ministry of foreign affairs 2020). From the beginning of November 2020 until April 2021, Greece remains in a lockdown regime, for which it is unknown when it will be lifted. Workers, students, and pupils were forced to stay indoors to prevent the spread of the disease, restricting travel as the market and education facilities remain closed. The advent of the COVID 19 pandemic has brought dramatic changes to the global labor market. Since March 11, 2020, the conditions under which businesses and organizations operate in Greece have taken a special form with continuous breaks, which forced professionals to use digital technology to meet the needs. Occupations involving processes that were done exclusively for a living have acquired a digital form. The need to use technology more than ever has become imperative to fill the gap created by social distancing. In Greece, the use of technology has increased dramatically. Within the first few months of the lockdown, organizations have adopted digital methods to serve their audiences. It was deemed necessary as they had to increase their work flexibility, their response to requirements, efficiency, and innovative actions so that they could successfully meet the challenges locally and globally. (Lecat et al, 2018; Lee et al 2016). Respectively, education took equally big steps in this direction, improving its digital infrastructure.

2. Review of literature:

It should be mentioned that at the time this article is written the students of Greek universities are members of Generation Z. This generation consists of people born after 1995 (Cilliers, E.J, 2017). As human beings, they are always connected to the internet from which they influence, have evolving needs in various fields, prefer to do things on their own, are career people, enjoy business, prefer interpersonal communication, and are faithful to their ideas (Mandelbaum, 2016). They are born into a world of vast technological progress and consider the digital environment as their natural one (Menendez et al 2020). They spend more than 9 hours a day in a digital environment (Menendez et al 2020). They are addicted to technology and for this reason, they are called i-Generation, Online Generation, Switchers, Gen-Tech, Facebook generation, and Zoomers (Dolot A. 2018). Digital communication and gaming are extremely important to them. Regarding their learning behavior, they enjoy studying independently, collaboratively but at their own pace (Moore et al, 2017).

As the universities remained closed for a long time in order to deal with the pandemic, the teaching needs of the students were decided to be met by the model of modern distance education with the use of digital technology (Hellenic Ministry of Education 2020). Learning through mobile devices can be described as a method of learning in multiple frameworks, through social and content reactions, using electronic devices (Crompton, 2013). According to this definition, there is a divergence from

traditional pedagogical methods and associated technologies to provide new financial resources for learning, including seamless involvement in environments, are involved in the learning process. The use of a technological device offers the possibility of connecting the learners with the teachers, digitally, as well as the interaction with the content without spatial and temporal restrictions. Also, their use in the learning process is to avoid the use of a specific educational method (Crompton, 2013).

UNESCO has suggested to university educational institutions to be provided with online educational tools to avoid disrupting the learning process due to the conditions created by the pandemic (Crawford et al., 2020). Greek universities have integrated the use of technological methods with interactive forms of learning, to make teaching more effective. The use of multimedia, email, e-class platform and office applications are some of the tools that are widely used by students. The majority of students believe that the use of online multimedia in education is done to quench the thirst for information as it is necessary (Talebian, et al., 2014). They use their mobile devices as platforms to implement learning strategies as they have been taught (Jeng et al., 2010), to receive learning assistance (Reeves & Sperling, 2015), and to participate in the interactive collaborative learning process supported by computers (Hsu & Ching, 2013; Lai & Wu, 2006). Studies from various departments already show that education has begun to become more flexible as modern needs presuppose their fluidity (Bauman 2013). Now, due to the conditions of distance learning from conventional use, students had to be trained exclusively in it to become experienced users, something that is given by those as members of Generation Z due to their experience.

The distance learning methods offered have been extended to mobile devices such as tablets and smartphones to give more students access at the same time. The advantages of mobile learning theory are the reformulation of learning theory and practices, utilizing the possibilities of digital learning, and using augmented reality technologies to explore the perspectives of learning through the use of multimedia (Mayer, 2014). The students' constant interaction with digital information transmission systems helped them develop multitasking skills, making them more efficient in the computer user interface. The use of the educational method of e-learning in combination with high-quality study material can help academic institutions also develop the satisfaction of their students (Oduma et al.2019). The quality of the e-learning method is the most important perspective of e-learning in which the individual teaches and is followed by the quality of the cognitive material but also the possibility of support and feedback (Pham et al., 2019).

The importance of promotion between an organization and its audience, on the one hand, concerns the perception we have of it and on the other hand, it concerns the information to the public about new products and services (Al-hroot, 2007; Chiu and Ananzeh, 2012). In this way, it becomes more desirable as an organization in the eyes of the public, the demand for its services increases, and the final purchasing decision of the public are influenced (Al-hroot, 2007; Chiu & Ananzeh, 2012). In this case, it concerns the Universities as organizations to their audience consisting of students but also prospective students. Promotional tools such as advertisements, websites, and direct sales closure are very important as they deal with public negativity in times of financial crisis (Al-Azzam, 2016; Ali, 2016), such as the one we are in at the moment, due to the pandemic.

Universities use methods and strategies to achieve the formation and strengthening of the Brand (Yoo et al., 2013). Certainly, the need to recognize the Brand of universities for competitive reasons, makes it necessary to implement marketing strategies (Azoury et al.2014). With these, students come in constant contact during their studies, having the opportunity to study them and to understand how the public is approached. This is an extension of the development of students' digital skills as for many academic institutions they are an important element of international repercussion for academic, political, and social reasons (Maringe, 2010). In order to attract international students, many universities are implementing digital marketing campaigns on social media (Kuzma and Wright2013) with previous studies confirming this (e.g. Peruta & Shields 2018; Valerio et al.2015), as well as the impact of social media advertising campaigns on the decisions of international students (Assimakopoulos et al.2017; Constantinides & Stagno 2012).

It was predicted that 5 million jobs would be lost by 2020 (The Future of Jobs 2016), due to artificial intelligence, revolutionary technology, robots, and nanotechnology (Sousa, MJ, & Rocha, Á. 2018). But the loss of jobs is not entirely due to technological progress. Many have already begun to evolve as needed. Technology is changing companies and people. (M.J. Sousa 2017, Y. Sun, H. Yan, C. Lu, R. Bie, P. Thomas 2012). Older professional opportunities have been overtaken and eliminated with necessary new ones. The continuing need to acquire professional skills is a financial issue (Sousa, M. J., & Rocha, J. 2018).

The skills created by the continuous learning that takes place in a new digital environment lead to adaptations that prove to be important in this difficult period. These skills are essential for effective job performance, as employees today work in uncertain and more complex work environments than ever before (Nissen et al., 2014; Trevithick, 2012). According to the research results of Papouli, Chatzifotiou, and Tsairidis (2020) in Greece, one can say that students who are familiar with digital technology easily adapted to the new learning reality. They also learned to train themselves in electronic matters and to develop new useful digital social skills. The skills that are needed nowadays for working in the private sector are called "the 21st-century skills" (Van Laar et al, 2020). The need to use technology in the development of professional skills has raised a multitude of theoretical frameworks that highlight its importance for the digital age (Ferrari, 2012). These digital skills according to Van Laar and partners (2020) are divided as:

- Digital information capabilities: to manage the organization's information needs, to identify digital information that is important to the organization, and to select from the appropriate ones efficiently and effectively (Van Laar et al, 2020; Ananiadou & Claro, 2009)

- Digital communication: communicating effectively using email, social networking sites, and instant messaging services (Van Laar et al, 2020; Lewin & McNicol, 2015; Wang et al., 2012)

- Digital collaboration: colleagues being able to connect and collaborate outside of the natural work environment (Van Laar et al, 2020; Starkey, 2011)

- Digital critical thinking: to be able to process digital incoming information and communicate with their transmitter, drawing valuable conclusions (Van Laar et al, 2020; Dede, 2010).

- Digital creativity: to create digital content online using digital platforms including blogs, photo and video sharing (Van Laar et al, 2020; Brake, 2014)

- Digital problem solving: finding different solutions to problems that are often unfamiliar to them but also to transfer their knowledge to their partners about them (Van Laar et al, 2020; Barak, 2018)

These skills are necessary to process in a wide range of the modern professional market (Van Laar et al, 2020).

Regarding the cognitive data sought by business human resource management are divided into Hard and Soft Skills (Ferraris, A., Santoro, G., & Scuotto, V. 2018). Hard skills are defined as skills that are related to technical issues concerning the fulfillment of professional obligations (Bani-Melhem et al 2018). Furthermore, in the context of project management, they are referred to as procedures, processes, tools, and techniques (Chatterjee, A. et al. 2018; Che T. et al 2019; Durana et al 2019). On the other hand, soft skills consist of knowledge that is found in the human mind with a special personal approach (Ferreira, J., Mueller, J., & Papa, A. 2018). It is particularly difficult to shape, divide and tame (Gale, AJ, Duffey, MA, Park-Gates, S., & Peek, PF 2017). For this reason, it is necessary the personal participation of the individual himself in this process (Ganguly, A., Talukdar, A. & Chatterjee, D. 2019). Soft skills are based on the actions, experiences, ideas, values, and emotional charge of an individual (Ghozali, I 2014; Hair, J. F., Black. W. C., Babin. B. J.; & Anderson. R. E. 2010; Hamada, T. 2019). Familiarity with digital technology is a complex concept and we can say that it is necessary as a piece of professional equipment, as a hard but also as a soft skill in a different form. In technological issues, it is categorized as a hard skill while when it comes to the digital dimensions that knowledge can take for an issue, it is categorized as a soft skill.

An extension of the concept of digital capabilities is the possibility of working remotely, which is a widespread method in the global market. It is characterized by the ability to work from anywhere as in times of crisis, productivity does not stop. Online markets in which companies and professionals work together to complete professional projects are an integral part of this transition to a common economy (Gandini 2014). A sharing economy is a system in which people share resources using shared networks (Cohen & Kietzmann 2014; Kathan et al. 2016), intending to create products and services in the form of collaborative creation (Prahalad & Ramaswamy 2004). New forms of work, such as remote work, reduce the costs of managing and directing an organization, as more emphasis is placed on the results of management practices rather than the physical presence of the workforce (Larsen & McInerney 2002).

3. Methodology:

The methodology with which the article was written is that of the bibliographic review. Scientific sources and information obtained from the internet were used also.

4. Conclusion:

As the European Union continues to promote the remote working model, it is expected that companies will continue to emerge that will follow suit. Also, the sector of professions related to digital technology such as digital marketing and advertising, in the last year in Greece has shown a very large increase due to the pandemic. This situation has taught us that in times of social stagnation, digital professions continue to be active. The possibility of engaging in professions that can take digital form, if the circumstances require it, is an important advantage for all young people who have the appropriate cognitive background. They should take charge and give a digital dimension to the academic knowledge they have received from the universities they attended. Undoubtedly, the involvement of young Greek students-graduates with distance learning methods with digital multimedia does not necessarily mean that they are professionally prepared for the challenges in the field of business. But they are certainly more

familiar and have grasped the essence and use of these technological tools in carrying out tasks. Therefore, they can direct their involvement, education, and professional approach, to the new market trends as they can combine the digital and academic background they have as members of Generation Z.

This generation of Greek students, which has been pushed to develop digital skills in the use of distance education technologies, has acquired a qualification that is an important professional resource for their future professional careers. Human resources professionals, in the Greek market and globally, are looking for candidates with specific elements in which as familiarity with digital multimedia. A great effort is being made on this by the Greek state for the training of young students and graduates of higher education in digital technology in the workplace, through training programs.

The interconnection of students' study objects with digital technology and the market's needs is expected to be the solution to facing the phenomenon of "Brain Drain" and youth unemployment. Approaching the labor market through digital methods is an effort of years of the European Union which, due to the conditions, is expected to bear fruit in the Greek market. Because of this, we would like through the analysis of this phenomenon to highlight the need that has been created in professions that relate to digital technology. It is essential for every student to maintain contact with digital technology after the end of the COVID-19 pandemic, but also to continue to develop professional skills in this direction. The market needs for professions based on digitals skills tend to increase and this is a phenomenon of significant research importance because it concerns the digital transformation of conventional professions which are studied by Greek students in universities.

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