THE IMPACT OF DIGITAL SOCIETY ON EDUCATION AND THE LABOR MARKET: CHALLENGES AND OPPORTUNITIES IN THE AGE OF GLOBAL CONNECTIVITY

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ABSTRACT

Digital society is reshaping our lives and the way of integrating day by day. Today's digital environment is distributed between people and machines. Market dynamism and people mobility is changing the rules and both companies and education needs to innovate and create new experiences.

Technology is changing the relationship between people. Digital influencers are working globally in order to offer a common and easy access space for digital society. In order to gain the capabilities, both employees and students needs the skills to interact with technology and the most important to have access to it. Nowadays, digital adoption suppose as well to reduce the gap between the ones that could use the internet and those who couldn't. Education process continues with / or without access to internet and application as Facebook, WhatsApp, Netflix etc.

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We have to be aware of what's next, as digital is about both physical and virtual world merging. Developing partnerships and collaborating both, education and business will facilitate and faster the access to technology infrastructure for the emerging countries. Students, professors, administrative must be online as globalization lead to e-meetings, digital tests, digital admission etc. Online presence is mandatory but the connection speed to internet is also a key factor. Developing and investing in infrastructure is crucial for seeing the benefits and the value that this will add to day by day work. Unfortunately, Internet access has remained inequality distributed in the world. Also, this has a major implication in education. Unstable and slow speed of the internet connection affects and impacts the access of learning who in the end will lead to an unequal access of education. Taking action without knowing the context can easily end up being pointless or worse.

This new market trends have deeply implications in labor market. Without adopting new technologies, people will have low productivity at work, jobs less paid, higher insecurity and the chances of developing in their carrier will decrease. With imagination, invention and investments universities need to mobilize students for creating new classes, developing new strategies. Later, the students might be advocate for the products and support the university brand.

Keywords: E-Learning; Technology; Students Skills; Software; Strategy.

1. INTRODUCTION

1.1. Education And Social Context

Education environment needs to align actors and resources in order to create value for both students and professors. This present paper is designing the relationship between the two dynamic fields, education and business sector. (Celuch, et. All 2017). Accenture's report from 2016 defines the intersection between education and business sector can generate various strategic opportunities as creating sustainable, intensive learning platforms which will encourage the rapid development and can reduce future program designing. The participation of students or non-students in a variety of activities as part of a degree or certificate program, for their personal and professional development is reducing the degree-non-degree boundary. (Celuch, et. All, 2017).

New technology trends and the changing of job structure is removing boundaries and changing competition, reducing trust and public financial support, and new questions about costs and productivity are complicating the context of higher education. Further, the areas where higher education institutions have grounded their value propositions, build their trust and image – is being challenged. (Hondros, 2014). Digital transformation changed the game rules and the universities has to adapt and change their strategies. One of the issues that should be changed or adapt is the actual evaluation in university.

The actual system is the majority of universities is focused on accumulation of points instead of the accumulation of competences. (Scott, 2015). This has an important impact for students as their focus is mainly on gathering points instead of being in developing their skills and competencies. This has a major influence for institutions as creating new education models that not always is related by the time spend by the students in the classroom (Peery, 2013). Participation to students online class will sharpen their skills and agile their learning processes. In this process an important pillar is the accreditation and the online class recognition. (Rena, 2010).

Nowadays, the knowledge transfer must be more focused on providing access to students to latest information via platforms, developing their skills through mentorship and encourage them to test the acquired skills to practice. The practice means a creative and tight collaboration between universities and business environments. Universities, colleges and high schools can play a meaningful role in creating the capacity and engaged collaboration and collective action. (Stephens, 2015). Their challenge is to develop new strategies that will shape the new learning and change the mindset of teachers and students regarding education system and teaching methods. (Kampylis and Berki, 2014).

New working relationships, vales and skills are essentials to educate and participate to community building through collective impact models. (Ramaley, 2015).

According to Gartner Innovation is the evolution of customer expectations, customer data and technology keep speeding up the pace of both business and marketing, moving toward real-time interactions. Organization needs to accelerate investments in innovation — at the strategy, research, communications, operations and data level in order to gain the competitive advantage. As a result, understanding innovation processes has been identified as an imperative by business and educational realms (AACSB, 2010; The Chronicle of Higher Education, 2013). More specifically, it is crucial that we understand the situational processes that can engender innovative ideas to solve complex issues (Davis, 2000; Isaksen et al., 2009). Education ecosystems refer to dynamic and co-evolving communities of diverse actors who create and capture new value through increasingly sophisticated models of both collaboration and competition. (Russel, 2018).

Source: Gartner (November 2013)

1.2. Treating students as customers

According to OECD students differ in abilities, competencies, motivations and emotions; they differ too in their linguistic, cultural and social backgrounds. All these differences significantly affect what happens in classrooms and the learning taking place; grasping such differences is critical to understanding the strengths and limitations of each individual learner and the larger group. A major challenge for all learning environments is to be sensitive to these differences, understand the different starting points of their students and adapt learning activities to them.

Technology is an important mean to individualize information, communication and materials. Formally recording individual progress, with the active involvement of the learners themselves, permits the information to move from inside the teacher's head to become more visible and useful – to the learner, to the teachers in general and to others. oecd

The SAC model ("student as client") is a feature of a growing number of universities who, in the attempt to adopt a market orientation, embrace the first dimension, consumer orientation. The motivation for the emergence of this model was created and sustained by governments around the world as they redirect the responsibility of higher education funding from central governments to individual students (Maringe, 2011), causing students to become more aware of their posture as a service consumer education. De Jager and Gbadamosi (2013) define students as the primary consumer of the higher education institution, and they frequently adopt different roles in relation to the university: as a product of the educational process, as internal consumers of campus facilities or as learning workers. Similar to any educational reform, the SAC model has both supporters and critics, each with strong arguments for or against the consumer's perception of the students.

The arguments for the SAC model include the fact that it allows for the democratization of experience in higher education institutions, strengthens the responsibility for the educational act, and contributes to improving the quality of higher education (Maringe, 2011). In addition, Temizer and Turkyilmaz (2012) argue that with greater influence and high awareness of the role of consumers, students become more interactive and selective for the quality of services. On the other hand, the arguments against the SAC model are highlighted by research such as those by Finney and Finney (2010), research that highlighted that students who regard themselves as consumers of educational services are predisposed to the formation of attitudes and behaviors that do not lead to the success of the educational process. Beyond inappropriate attitudes and behaviors, studying as consumers in a commercial transaction creates the risk for students to consider that their payment gives them the right to receive the desired qualification (Eagle and Brennan, 2007) or to develop perceptions that their poor performance is caused by the teacher and not by themselves (Clayson and Haley, 2005). Beyond the pros and cons of the SAC model, some authors propose a more balanced vision: Halbesleben et al. (2003) advocates studying students as contributors to work in their own educational process, and Eagle and Brennan (2007) support the student's approach as professional consumers or as a customer at the expense of students' vision as consumers.

Because to achieve optimal performance, research directed directly to target markets must form the basis of marketing strategies of educational institutions (Cheung et al., 2010), the essential elements to be investigated within the target market fall within the expectation triangle - perception - satisfaction. Reporting on this triangle is also confirmed by Ryan, Buzas and Ramaswamy (1995), according to which satisfaction can be quantified by addressing questions related to three aspects: a brief judgment, a comparison with expectations, a comparison with the ideal situation.

Thus, students' expectations are formed around three major areas: learning and career, reputation and university facilities, availability and sympathy of the employees (Sudharani and Kalpana, 2012), while their perceptions are based on such factors as: university reputation, financial, total cost of schooling, graduate employment history, faculty quality, geographic position and number of students (Sudharani and Kalpana, 2012). Knowledge of students' expectations and perceptions is particularly relevant as previous research has highlighted the importance and understanding of what the consumer expects as a precondition for the organization's ability to deliver quality services and consumer satisfaction (Sudharani and Kalpana, 2012). Especially in the educational field, knowing these elements is of major importance in order to reduce the difference between the ideal situation and the de facto relative to the university experience experienced by the students (Kebriaiee and Roodbari, 2005). This difference is considerable, as contemporary students are looking for institutions that will provide them with unique, memorable and personal educational experiences (Sudharani and Kalpana, 2012), forming a very high set of expectations. However, some authors have found that student expectations have the least and insignificant impact on their satisfaction (Temizer and Turkyilmaz, 2012), but this does not exonerate the higher education institutions from the need to quantify student satisfaction as a prerequisite for the development of strategies successful educational marketing.

Student satisfaction is a central element in adopting a marketing vision in higher education institutions. Regardless of the field, consumer satisfaction is defined as the post-purchase evaluation of the product or service by the consumer (Temizer and Turkyilmaz, 2012). Quantification of consumer satisfaction in any area of activity as an essential component of any marketing approach is substantiated by the conclusion that the connection between consumer satisfaction and company performance / profitability is the cornerstone of the marketing concept (Helgesen and Nesset, 2007).

In the field of education, student satisfaction is a short-term attitude resulting from the assessment of their experience by students with the educational services actually received (Elliot and Healy, 2001). The emphasis on quantifying student satisfaction is argued by the correlation identified between higher student satisfaction and a strong competitive position that can translate into attracting new students and keeping current students (Temizer and Turkyilmaz, 2012), as previous research has identified student satisfaction as a significant determinant for word-of-mouth, retention, and loyalty. For example, Helgesen (2008) argues that student satisfaction and university reputation are variables with direct influence on students' loyalty, while Keshavarzi and Ahmadi (2013) demonstrate that there is a significant correlation between student satisfaction with educational services and their academic success. Quantification of student satisfaction becomes all the more necessary as the main determinant of general student satisfaction is represented by the quality of the educational services provided by the higher education institution (Sudharani and Kalpana, 2012), and the increase in student dissatisfaction with higher education institutions generates the potentiation of feelings (Keshavarzi and Ahmadi, 2013), demonstrating the high social impact of a low level of student satisfaction.

Numerous scholars have built up various models of quantifying and representing student satisfaction: Temizer and Turkyilmaz (2012) are amongst them by adapting the European Customer Satisfaction Index (ECSI) to Higher Education resulting in the Studen t Satisfaction Index (SSI). The results of this research demonstrate that the image of the institution and the perceived quality of educational services have a strong impact on student satisfaction (Temizer and Turkyilmaz, 2012).

II. RESEARCH ABOUT ELEARNING ADOPTION IN ROMANIA UNIVERSITIES

Romania has a growth potential regarding elearning adoption and in order to identify the hightligts we designed a research methodology who involves the students from different universities from Bucharest. The research aims to study the way of perceiving the eleaning methods and the students understanding for the importance of developing in order to improve and transform teaching methods and redifine university strategy. Our sample was composed from 50 students from ASE, University and Politehnica.

The research objectives were: Identifying the most popular elearning methods existing; Determine the attributes for an efficient usage and performance, Measure the importance, Identifying reasons of a slow adaptation and adoption of these technologies.

2.1. The study

The research has collected primary data from students through questionnaire. The data were validated and analysed using SPSS software.

### 2.2. Research Methodology

The research was conducted through a survey based on a structured interview. The sample to which we have managed the interview will be composed students. (50 respondents).

2.3. Developing the interview guide

The Interview Guide consists of 7 main questions and 4 demographic questions.

2.4. Interpretation of results

In order to obtain the desired results, the respondents offered the following answers regarding the regularly usage of use e-learning in their universities.
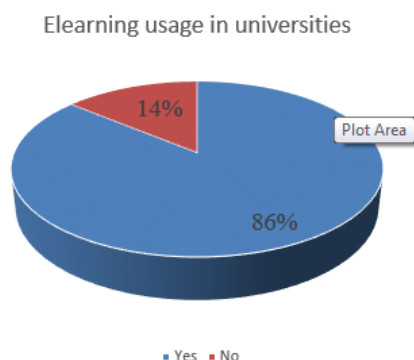

Fig. 1. Elearning usage in universitie

Source: Research developed by authors

In our research we also evaluated Mangers opinion regarding where they consider that Romania is situated regarding digital transformation adoption. Majority of the respondents consider that Romania made a good progress regarding new technology adoption.

Figure 2. Most popular elearning methods
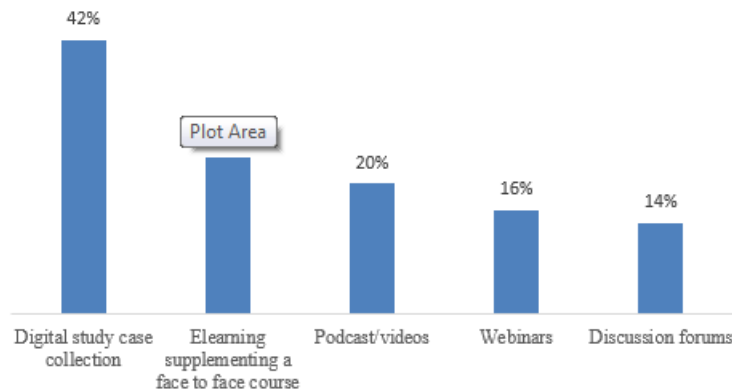
Source: Research developed by authors

In our research we also evaluated students opinion regarding the most popular elearning methods. Majority of the respondents consider that Digital study case collection .

As well, there were been evaluated the criteria that can help of the improvement if the elearning platforms. More than 35% percent from the respondents consider that Personalisation in education has a high importance. The answers are in descending order:

Personalisation in education

Complemntary/ additional information

Offer diferentiation

Class support

Improving the system

Table 1. Modal variables

N	Valid	50
	Missing	0
Mean		3.64
Median		4
Mode		4

Source: Research developed by authors

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Table 2. Importance of adopting elearning for discipline as (web design, coding, marketing research, cybernetics) and parterships with business sector

		Frequency	Percent	Valid Percent	Cumulative percent
Valid	1 Not important	4	8	8	8
	2	6	12	12	20
	Neither agree, nor disag	8	16	16	36
	4	18	36	36	72
	5 Very important	14	28	28	100
	Total	50	100	100	

Source: Research developed by authors

As our interview was conducted through students from different universities we wanted to find if they will recomnad the elearning methods used in their university.

Table 3. Modal variables

N	Valid	50
	Missing	0
Mean		4.48
Median		5
Mode		5

Source: Research developed by authors

Table 4. Elearning recomandation

		Frequency	Percent	Valid Percent	Cumulative percent
Valid	Very Probably	2	4	4	4
	Probably	6	12	12	16
	Possibly	15	30	30	46
	Probably Not	20	40	40	86
	Definitely Not	7	14	14	100
	Total	50	100	100	

Source: Research developed by authors

Table 5. The frequency of opinions, attitudes and experiences evaluation of your students on the subject of e-learning

		Frequency	Percent	Valid Percent	Cumulative percent
Valid	Very Frequently	3	6	6	6
	Frequently	2	4	4	10
	Occasionally	17	34	34	44
	Rarely	13	26	26	70
	Very Rarely	12	24	24	94
	Never	3	6	6	100
	Total	50	100	100	

Source: Research developed by authors

As university strategy is a key factor during elearning implemetaion, universities needs to identify students needs and to constant evaluate actual used methods.

Table 6. Modal variables

N	Valid	50
	Missing	0
Mean		1.66
Median		2
Mode		2

Source: Research developed by authors

Table 6. Faculty-wide strategy for increasing the scope and quality of e-learning tools over the coming years

		Frequency	Percent	Valid Percent	Cumulative percent
Valid	YES	17	34	34	34
	NO	33	66	66	100
	Total	50	100	100	

Source: Research developed by authors

The changing's in the next period regarding elearning has an impact in the qulity offered.

III. CONCLUSIONS OF THE STUDY

Next-generation of students is focused more on saving time and developing their digital skills and knowledge's. Increasing personalization of classes puts an emphasis on digital transformation and the alignment of university strategy with business sector.

This is a result of their open nature, as millennials (those born between 1981 and 2000) are not the only that companies need to attract, but also universities has to capture their attention and interest in order to benefit from their digital underrating.

Competition in education without a strategy and a clear implementation program can increas in time. Universities needs to define a clear strategy and aligned with students expectations. One of the conclusions is that personalization in education, offer omplemntary/ additional information; have a high importance in the way that students perceive elearning programs in universities. As webinars and other course are expensive this can be considered an opportunity by the universities to attract new students and involve them in sharing their knowledge. Nowadays, students select the institution based on the direct needs and their career path. Sometimes selection criteria are highly specific, thereby universities has to implement specific programs to adapt to curent technolgies and increase students trust in the capacity of adaptaion of those.

Students are really ambasadors of universities that's way evaluationg constantly their oppinion and satisfaction will guarnty professor success. The learning methods are keep changing and the students are both participant and professor.

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In this digital dimension, eBooks, online courses had the advantage of being read anywhere and also the possibility of interact easier and to solve problem. However, universities need to put in place the needed ecosystem as computers, platforms, materials, servers, and internet speed.

Through study limitation there is the respondent's number and their profile. Because the sample size is small, is difficult to extrapolate the results.

As well, we can admit that one of the study limitation is lack of data availability and prior research studies on this topic. More studies in this area will helps us to better understand the problem that we investigate. On the other side, this is an opportunity on developing future studies complementary to our research.

REFERENCES

[1]   Frank, A. (2016), "Emerging Marketing Technology and Trends Primer for 2016" [Accesed on: 12.10.2018] Available online at https://gtnr.it/2qhAI3Y

[2]   Bollier, D. (2016), " The Future of Work". [Accesed on: 03.08.2018] Available online at: https://www.weceurope.org/uploads/media/WEC-Europe___The_Future_of_Work_-_What_role_for_the_employment_industry.pdf

[3]   Chen, I.J., Popovich, K. (2003), " Understanding customer relationship management (CRM): People, process and technology". [Accesed on: 15.07.2018] Available online at: https://www.emeraldinsight.com/doi/abs/10.1108/14637150310496758?journalCode=bpmj.

[4]   Fernandez-Gago, C., Moyano, F., Lopez J. (2017), " Modelling trust dynamics in the Internet of Things". [Accesed on: 15.07.2018] Available online at: https://www.sciencedirect.com/science/article/pii/S0020025517305364

[5]   Michelino, F., Caputo, M., Cammarano, A., Lamberti, E. (2014), "Inbound and Outbound Open Innovation: Organization and Performances". *Journal of technolofy and innovation*. Vol 9. No 3.[Access on 15.10.2018] Available online http://www.jotmi.org/index.php/GT/article/view/1540/922

[6]   Jayaram, D., Manrai, A., Manrai, L., (2015), "Effective use of marketing technology in Eastern Europe: Web analytics, social media, customer analytics, digital campaigns and mobile applications" [Accesed on: 6.06.2018]Available online at: https://www.sciencedirect.com/science/article/pii/S2077188615000256

[7]   Kemp, R. (1994), "Technology and the transition to environmental sustainability: The problem of technological regime shifts". [Accesed on: 6.06.2018] Available online at: https://www.sciencedirect.com/science/article/pii/001632879490071X

[8]   Kerr, G., Kelly,L. (2015), " IMC education and digital disruption". [Accesed on: 1.08.2018] Available online at: https://www.emeraldinsight.com/doi/full/10.1108/EJM-08-2015-0603.

[9]   McLellan, L. (2013), "Agenda Overview for Digital Marketing Essentials, 2014". [Accesed on: 10.10.2018] Available online https://www.gartner.com/document/2627816

[10]   Mazzone, D. (2014), "Digital or Death: Digital Transformation - The Only Choice for Business to Survive, Smash, and Conquer Paperback" . Smashbox Consulting INC. Page 4

[11]   McAfee, A., Brynjolfsson, E. (2012), " Big Data: The Management Revolution". [Accesed on: 12.07.2018] Available online at: https://hbr.org/2012/10/big-data-the-management-revolution

[12]   Percy, L., (2014), "Strategic Integrated Marketing Communications". New York : Routledge; page 26

[13] Raskino, M.,Waller, G. (2015), " Digital to the Core: Remastering Leadership for Your Industry, Your Enterprise, and Yourself". New York: Bibliomotion Inc. 2015 Page 13

[14] Heffey, D., Smith, P.R., (2013), " Marketing excellence: planning and optimizing your digital marketing". Harlow : Pearson; Page 55-56

[15] Hanafizadeh, M. , Behboudi, M., (2012), " Online advertising and promotion : Modern Tehnologies for Marketing". SUA : IGI Global ; Page 9

[16] Shane, S. (2008), " Handbook of Technology and Innovation Management". SUA : John Wiley and Sons; page 273

[17] Vaceslav, G., Tănase. A., Leonte, A. (2017), "Studiu al evoluțiilor sectorului IT&C în România" [Accesed on: 12.06.2018] Available online at: http://www.bnr.ro/Studii,-analize,-puncte-de-vedere-4009.aspx

[18] Digital Transformation (DX): An Opportunity and an Imperative (https://www.idc.com/prodserv/decisionscapes/RESOURCES/ATTACHMENTS/IDC_25 4721_ExecBrief_Digital_Transformation.pdf) [Accesed on: 12.06.2018]

[19] Digital Twins, IoT, and the Future of Business. Available online at: http://www.marketingjournal.org/digital-twins-iot-business-sanjay-sarma/ [Accesed on: 03.07.2018]

[20] Understanding the impact of digitalization on society. [Accesed on: 07.07.2018] Available online at: http://reports.weforum.org/digital-transformation/understanding-the-impact-of-digitalization-on-society/

[21] Hype Cycle for the Digital Workplace. 2017. [Accesed on: 7.06.2018]Available online at: https://www.gartner.com/en/newsroom/press-releases/2017-08-17-gartner-releases-hype-cycle-for-the-digital-workplace-2017 [Accesed on: 7.06.2018]

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