ONLINE STUDIES IN HIGHER EDUCATION DURING THE COVID-19 PANDEMIC: STUDENTS' PERSPECTIVE

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ABSTRACT

Globally universities today almost universally employ online (distance, remote) teaching and learning due to COVID-19 coronavirus pandemic. Fully online studies were not universally offered by all higher education institutions before the pandemic both globally and in Lithuania. Therefore, it can be argued that before 2020, studies, which analysed distance teaching and learning were to a major degree intended to discuss experiences and attitudes of technology enthusiasts and visionaries. The aim of this paper is to discuss a swift and forced innovation in terms of universal expansion in online learning models and to reveal the perspective of students towards online studies, because the lessons learnt in 2020 may serve for enhancement of higher education didactics even after the quarantine is over.

KEYWORDS

Online Studies, Forced Innovation, Virtual Learning Environments, Online Studies during the COVID-19 Pandemic

1. INTRODUCTION

If history serves as judge, we may recall historical incidents when crises prompted innovations, which seemed unrealistic, at times unnecessary, and even undesirable before crises emerged. In 2020 situation universities globally shifted to full online studies: either online teaching and learning during the COVID-19 coronavirus pandemic was implemented, or universities curtailed activities. The rapid spread of new COVID-19 coronavirus throughout China and the world in 2020 has had a grave impact on world economic and social development. The pandemic has radically changed people's lives and activities. Though at first it seemed a temporary emergency, however, experts in various fields are already predicting significant changes in various areas of people's lives. Before the pandemic both on-site and off-site (online) modes were carried out by different universities: at some universities these two modes were complementing each other, when other universities focused largely on on-site activities, however, there were many, which also focused on off-site educational services. Twelve months ago, almost all teachers knew how to teach and understood how their students learn, but to a major degree they applied traditional teaching methods. Now university teachers have changed the nature of their work and they have learnt new skills themselves, for example, while using web-camera for teaching, because even maintaining proper eye contact and monitoring facial expressions require skill and will. It is imperative already now to perform inventory about the experiences in 2020, because the lessons learnt may serve the enhancement of didactics in higher education after quarantine is over. While the pandemic resulted in unsurmountable loss and tragedy, at the same time, the reflection of experiences, including in education, may produce insights for filtering the productive practices, and those that should be reconstructed. According to Davidson and Waddington (2010), Jonson (2009), universities – at least before the pandemic – used to be - 'technology resistant institutions'. One of the key obstacles related to a successful implementation of ICT in some universities was the fact that the management sometimes did not support or determine relevant priorities for ICT. Such a situation might have been caused – presumably - by historical traditions; university management did not emphasise ICT and e-learning issues, as that was not considered being the basic field of activities (Rutkauskiene et al., 2006; Stacey and Gerbic, 2009), however, pandemic changed the situation dramatically.

The aim of this paper is to discuss forced innovation (swift implementation of universal online study models) on higher education and to reveal the perspectives of students towards online studies, which may serve as advice for enhancement of higher education didactics.

The research question addressed in the study: In what way do students reflect on using virtual learning environment (VLE) for their online studies? What is the perspective of students, who have studied in a VLE in extreme conditions, to online studies?

The study involved students who shared their learning experiences at least in Autumn 2019 and then - in the Spring and the Autumn semester of 2020 (i.e., when they had to learn under the conditions of forced innovation).

In this paper e-learning is analyzed as a socio-cultural system, as 'a multi-dimensional' concept. (Mamardasvili, 1958, Butrime and Zuzeviciute, 2014). The analysis of e-learning as a socio-cultural system enabled the formulation of interdisciplinary problem, for the solutions of which it is necessary to invoke theories and outcomes of computer science, also culture and education.

2. ONLINE STUDIES: YESTERDAY AND TODAY

University studies, under the influence by contemporary information and communication technologies (ICT) were already changing from the teaching paradigm to the learning paradigm even before the pandemic for at least the last twenty years. What are the characteristics of e-learning (and teaching) in university academic community, and what comprises the phenomenon of e-learning as socio-cultural system?

Socio-cultural system of e-learning is a system. ICT have been artificially designed by a human being; however, ICT, as a consequence, now influence the development and structure of this system (Butrime and Zuzeviciute, 2014). Key elements of each and any e-learning episode are: participants (teachers, students, IT professionals); technologies (ICT); processes; relationship/connections/interaction; material/contents (information).

Modern ICT are identified as one of the factors in this system. An individual is identified as a key element of socio-cultural system – he or she is the creator of knowledge seeking to respond to the needs of knowledge society. The socio-cultural system of e - learning is disclosed as a contemporary phenomenon, as earlier classic pedagogical systems (Butrime and Zuzeviciute, 2014) did not identify ICT as the element of the system. Universities operate now in the society, which changes faster than ever before (Zuzeviciute, 2011). The so called "knowledge society" is only a symbol which denotes the fact that the structure of the society that we used to know has collapsed. Society under our very eye is becoming a multi – dimensional/bubble society in which different models of a society operate at the same time, starting from the agrarian, industrial, information and ending, of course, with knowledge and many other models. Shiva (2005) notes that a function of science is to investigate and to find out, whereas a function of technologies is to act on what has been found out. Today these processes are inseparable.

In several publications authors of this paper conceptualize ICT in higher education, as a system, emphasizing the importance of all comprising elements involved (e.g.: Butrime and Zuzeviciute, 2014). Traditional education system (primary, secondary, higher education, vocational training and informal education) remains essentially unchanged in its structure, management and the concept despite the changing conditions of life and is basically not adjusted to new social needs (Augustinaitis, 2004). The breakthrough of Web 2.0 sometimes brought confusion to the already well-established life of university (and other organizations), to its activities, communication, information movement and processing. Tools and means based on Web 2.0 in many instances are spontaneous, informal, horizontal, heterogeneous, volatile and unstable, which might result in a contradiction between the quickly spreading Web 2.0 and institutions (or, rather, their community members), which sometimes refused (or were afraid) to use these technologies (Davidson and Waddington, 2010; Stacey and Gerbic, 2009). Over the past 20 years, various scholars had studied distance teaching/learning in detail and highlighted its advantages (for example, flexibility in learning, opportunity to study at a convenient time and place). The authors identify nine dimensions, each of which has numerous options, highlighting the complexity of the design and decision-making process. The nine dimensions are: modality, pacing, student-instructor ratio, pedagogy, instructor role online, student role online, online communication synchrony, role of online assessments, and source of feedback (Means et. al., 2014). However, online studies/distance teaching and learning was not a mass phenomenon before 2020.

The results of survey, conducted in 2017 by European Digital Learning Network showed moderate level of employment of online studies mode at that time. The most popular forms were found: blended learning approaches (42 %); e-assessment (40 %); website development (40 %); learner engagement (38 %). It was also identified that 50,43 % of respondents while predicting the level of employment in 2020 thought the level to be moderate (What do you think about the future of digital Education and Training in EU? 2017). Little did they know...!

During the COVID-19 pandemic, educational institutions have been forced to employ more VLE, i. e. changed traditional teaching to distance teaching/learning. Many researchers have been analyzing this extreme situation (Truskauskaite-Kuneviciene et al., 2020; Kaunas University of Technology, 2020; Vytautas Magnus University, 2020; Lithuanian University of Health Sciences. 2020; World Health Organization, 2020). It can be argued that the studies, which analysed distance teaching and learning before 2020 in most instances were intended to discuss the experiences and attitudes of technology enthusiasts and visionaries (according to qualitative diffusion model of G. A. Moore (2002). Their diffusion model describes experiences of technology enthusiasts, early adopters, early majority, late majority and laggards.

The sudden shift from face-to-face to online studies triggered many challenges for teachers in university (and all other levels of education): "For many universities, these methods considered as new platform and the ability of using such tools for online teaching created many challenges among the teachers in higher education. The familiarity with new digital platforms and tools in short period of time as well as the pedagogical demands of online learning that they never had to think of in conventional delivery become one of the challenging factor among lecturers in higher education. Furthermore, they need to ensure to retain the program and module-learning objective even after adjustment of the teaching style" (Ramayah and Kumar, 2020).

Change has not been easy: there are both positive (Burgess and Sievertsen, 2020; Ramayah and Kumar, 2020; Rizk, 2020; Kucharczyk-Brus and Mielcarski, 2020) and negative experiences (Burgess and Sievertsen, 2020; Souleles and Laghos, 2020; Kucharczyk-Brus and Mielcarski, 2020).

3. ONLINE LEARNING DURING THE COVID-19 PANDEMIC

For the past two decades' universities were introducing opportunities presented by information communication technologies (further on – ICT) to a varied degree. Any organisation is an entity with structural parts and people, also teams, who have to work in systemic collaboration in order to ensure the systemic functioning of an organisation itself. Though certain principles are the same, e.g., the information is being produced and shared, each organisation is a unique entity, however. Though each organisation has its own structure, also the traditions will be different, as will be the style of management, at the same time, in each organisation we will find people, structures, technologies (Abarius and Liubinas, 2014; Kacinskaite and Motiejune, 2011).

University, as an organisation, employs ICT for its functioning, the same way any other contemporary organisation does. Communication is mostly ensured due to internet, intranet and extranet. Universities use the same technology, however, choice of software depends on financial situations, the experience of teachers, and on support personnel, including the IT professionals and the administrations. Online operation during the pandemic was essentially different from the gradual incorporation of online services into universities, therefore, it is legitimate to identify the conditions as extreme conditions. „Moving instruction online can enable the flexibility of teaching and learning anywhere, anytime, but the speed with which this move to online instruction is expected to happen is unprecedented and staggering" (Hodges et al., 2020). Even before the pandemic universities had necessary infrustructure and support personnel, who could have been relied on for supporting teachers for online work. However, before the pandemic, only a part of teachers were seeking advice from support personnel, those in most cases were the teachers, enthusiastic about online studes. Hence we all experenced extreme conditions when during the extremely short time, having limited resources and not that many support personnel, we still had to teach teachers to transform from traditional teaching to online work. Hodges et al. (2020) argue that 2020 online work deserves a special event status and suggests the term for denoting it: emergency remote teaching. Authors argue, that teachers had to cope with the heaviest workload, because it was critical during an extremely short time to ensure the access to both synchronous and a-synchronous process and contents for studies. Moreover, the necessary changes for the regulation of online studies had to be introduced, which meant an additional workload for administration in order to legitimise "emergency remote teaching", a huge workload was on the IT professionals who suddenly had to re-arrange

access opportunities within the capacities, which had not been designed for the scope needed. The support personnel suddenly had to consult also teachers who had never even tried online teaching tools. Thus it is useful to analyse the "emergency remote teaching", because lessons learnt during the time may be used for the future.

Contemporary global situation in universities is (distance) teaching and learning/online studies during the COVID-19 pandemic. COVID-19 has urged universities around the globe to relocate traditional classes to online classes. The COVID-19 health crisis has resulted in school and university closures affecting over 90% of the world's students (Protecting and Transforming Education for Shared Futures and Common Humanity, 2020). From the beginning of COVID-19 pandemic the International Association of Universities (IAU), has been closely monitoring the impacts on higher education around the world. IAU with partners from around the world has developed two Global surveys, one has been held in the beginning of pandemic, the second global survey will be held in the fall 2020. Based on the first survey the major challenges have been already listed and possible solutions provided (COVID-19: Higher Education challenges and responses, 2020). Although ICT was used by universities around the world as part of study process, the traditional paper-based learning approaches were still the most commonly utilized, as opposed to web-based and electronic learning methods. COVID -19 urged the university to adopt distance learning as a necessary option to keep education going on.

3.1 Online Learning during the Covid-19 Pandemic: Lithuania

Today most higher education institutions in Lithuania employ different academic information systems, some of them use intranet and content management systems. For online studies Lithuanian universities (and colleges) use learning management system Moodle. In Spring, 2020 Lithuanian Ministry of Education, Research and Sports purchased platform Microsoft Teams for Education. The majority of higher education organisations use Microsoft 365 family products. For synchronous communication teachesr use those tools, which are recommended by their respective organisations, or the most user-friendly (BigBlueButton, MS Teams, Google Meet, Zoom, etc.).

Lithuanian academia, starting 16th March, 2020, had two weeks to fully re-organise activities and introduce universal online studies. The universities and colleges charged of planning and setting the following guidelines surrounding distance learning:
- The course must be ensured even in the case of technical difficulties.
- The process and methodology of distance learning can be openly chosen in the light of the above recommendations. Technological and logistical support was provided using the tools, which universities and colleges owned at a time (Moodle, BigBlueButton, MS Office 365, MS Teams, Google Meet, Zoom, etc.) The universities and colleges provided an opportunity for teachers to prepare for work online. Teachers had 2 weeks to upload the study content into a virtual learning environment.

At least in Lithuanian the first wave of quarantine was curtailed on 17th June, 2020, the second quarantine (in Lithuania) was announced on 9th October, 2020. Surely, in other countries the specific dates were a bit different, but the principle remains: after the first quarantine, after a short respite during summer, almost globally, in Autumn, quarantines were re-instated, which meant return to full online study mode for higher education in Lithuania during October. At least in Lithuania starting 16th December, 2020, restrictions of commutation between municipalities were introduced (and they remain in place during the time this paper is being developed, well into the third month). Interestingly, based on the assumption that students knew how to use ICT for studies, rarely they were provided with training how to use ICT for learning. Therefore, it is worth examining what were the experiences of students while studying fully online during the challenging 2020. Therefore, a pilot study was designed and carried out in late Autumn 2020, where students were invited to share their perspective.

4. STUDENTS' PERSPECTIVE ON ONLINE STUDIES IN AN EMERGENCY SITUATION

4.1 Methodology

Students were asked to assess their participation in online studies in Spring semester, 2020, and in Autumn semester 2020. Students were asked to provide a quantitative assessment. A scale of 1-5 was used: 1 meant 'did not like at all' to 5 'my competencies increased significantly'. Also a qualitative approach was used, where students were asked to provide an explanation for a grade given by formulating 3 explanatory statements. Due

to limitations for the scope of the paper, only findings from this part of qualitative data are analyzed and discussed further in this paper. An online survey platform apklausa.lt was used to collect data in late Autumn, 2020.

Sampling and procedure. Though totally 72 students participated, however, the responses of 37 students are analyzed in this paper; these particular students had a totality of experiences as students at least in Autumn 2019 and then - in Spring and Autumn, 2020. Thus these particular students could compare their on-site and online study experiences (other participants were still in high school in Spring 2020). Students from three universities in Lithuania (in Klaipeda (1), Vilnius (1), Kaunas (1)) shared their perspective anonymously. 33 (20 in 4th year of studies; 6 in 3rd and 7 in 2nd year of studies) of students were undergraduates, 4 graduates. 24 women, 13 men shared perspective. One university represented technology studies; another social sciences, and the third - specifically studies in education.

Limitations. Due to the dominance of qualitative approach to study, and the number of participants, generalisations will not be provided, however, certain insights and implications for higher education will be formulated.

4.2 Results

As it was identified above, students were invited to provide explanations to the grade they gave for their experiences in studies in Spring 2020, when the first wave of Covid-19 struck, the quarantine was announced, and higher education in Lithuania (and globally) was swiftly re-organised to a fully online mode. Later, in Autumn semester after a brief respite in September (in some university-also early October), again a fully online mode was started, therefore in second part of November, 2020, students already had extensive experience on online studies in Autumn semester. It is important to note that N is fluid, it does not represent the number of students (37), because they were asked to provide three explanatory statements for each grade. However, some of them provided none, some of them provided more than three, therefore, the analyses finally resulted in 85 explanatory statements, 54 while evaluating experiences in studies in Spring semester and 31 while evaluating experiences in Autumn semester.

Firstly, we will note that the positive explanatory statements in Spring and in Autumn exceeded negative explanatory statements: 29 versus 21 (4 undetermined/other) and 22 versus 9 respectively. In Spring negative statements accounted for 38.8% of statements, in Autumn Semester the percentage is 29 %. Obviously, due to limitations of the study, generalisations should be avoided, however, certain positive perspective tendency towards online studies is evident.

Secondly, none of the statements, provided by undergraduate and even graduate (37 in total) students in any way was related to Covid-19. This finding, according to our opinion, is one of the most significant findings in relation to both the online study process and the educational realities at large, which deserves an in-depth further analysis. None of the students noted that the difficulties posed by online studies should have been overcome due to the circumstances of quarantine, or that this was a safer mode for studies, or a necessary choice. The only two statements, related to health were grouped into the group of 'negative' statements. The statements were provided by the same participant: "Due to online studies my back and eyes ache" and "Online studies lead to inactivity and that is detrimental to health". As professionals in education, we find the data worth further analysis, because, while global economy, policies, medicine, decision making processes were orientated towards managing the huge, at times almost insurmountable crises, however, the young people, students (at least those participating in the study) did not integrate the crises into interpretation of their immediate study experiences. While from educational point of view these are the most interesting questions: How is that possible? and then - What are the pillars/grounding rules for young person's interpretation of realities? – these questions are for the future however, because the direct focus in this paper is different.

Thirdly, some statements added to well established data on the reactions to online studies, however, some of the statements added new dimensions or nuances to subjective students' perspectives.

Among the statement that we had expected: positive ('saves time' (6 statements), 'saves money (for renting dormitory/flat and travel' (4 statements); 'flexibility and comfort' (5 statements). Also, among positive (1 statement), online being helpful for complementing work and studies was mentioned, which always, at least for 20 years, had been identified among the advantages of online studies.

Also, regarding teachers' competencies to provide educational online services, and the level of employment of opportunities and tools of VLP (predominantly, Moodle was identified, also students informed having used Zoom, BigBlueButton and MS Teams) a clear positive tendency was identified, Table 1.

Table 1. Students about their online study experiences

Spring semester (2020, first wave of Covid-19 triggered quarantine and thus swift shift to complete online studies)	Autumn semester (2020, second wave of Covid-19 triggered quarantine and thus shift to complete online studies)
Evaluation of teachers' competencies	
2 **positive** statements, e.g., Teachers did well, especially under the circumstances'	5 **positive** statements, e.g, Teachers' competence clearly improved since last semester"
3 **negative** statements, e.g. ‚Not all teachers were competent in organising classes and seminars online'	2 **negative** statements, e.g. ‚Still some teachers do not know how to use VLP'
Employment of various tools, opportunities, incorporated in VLP	
1 **positive** statement, e.g, ‚We used many methods and tools'	5 **positive** statements, e.g, ‚Teachers use more tools, such as breakout rooms' or ‚A variety of tools and methods are used, which are good for learning and keep up our motivation'.

Also, as expected, students shared concerns regarding the lower quality of studies, in particular, related to the laboratory work and practical assignments (4 statements in Spring, and 3 statements in Autumn semester).

The statements that add new dimension or at least nuance to the phenomena will be analysed further on.

1)   Interestingly, students shared that online studies caused less stress. 10 statements were grouped into this group, when students described their experiences in Spring and 3 statements regarding experiences in Autumn. Interestingly, and we think, very importantly, 6 of the positive statements of less stress were on testing (in Spring: 'clear test – less stress'; 'tests for self-assessment reduce stress, very useful'; 'feedback on assignments - very useful'). In Autumn - 1 statement ('tests for assessment and for self-assessment- very useful', 'easy, I like tests, good for me'). One statement regarding lack of clear rules regarding assessment was provided in Spring and then again one in Autumn by the same participant.

2)   Regarding methods used, students noted that online studies are well equipped for theory-orientated classes, and lectures. However, 1 statement in Spring and again 1 in Autumn, by different participants about the insufficiency of methods for group work and for project method were identified.

3)   Also, unexpectedly, only 1 statement (out of total 85) was about having learnt a lot in Spring semester.

4)   2 statements in Spring semester seem interesting, they were not allocated to either group (Positive or Negative): 'On the one hand, very convenient, because I was multi-tasking, I could have coffee, and do other things during the class, but then, it was a bit difficult to follow the class, and thus the quality of my studies was not great". The statement is interesting, because at least one of 37 participants demonstrated quite a high level of self-reflection, and also, this is a good example, that nothing in social/educational realm is straightforward and one-dimensional. In this case, while the flexibility of online studies has been universally praised for decades, at the same time the flexibility and multi-tasking have their downturns too. Structure, clear time-table, clear genres (a class, a seminar, laboratory work, team work using project method) of activities contribute to effectiveness of studies, because flexibility will not at all times add to overall in-depth learning. As another participant (in Spring semester) shared: 'All in all, online classes, clear tasks, self-assessments gave the structure for my studies'.

The statements of general nature: 'More difficult'; 'Too much hassle', 'Difficult to concentrate", 'Lack of personal time management skills, 'It is always better to have actual face-to face consultations' were identified, however, they do not seem to add any significant new dimension to the general picture.

5. DISCUSSIONS AND CONCLUSIONS

The limitations of the study have to be taken into account, such as the relatively small number of participants. However, the fact that participants were asked to give the grade to their experiences in online studies in Spring and then in Autumn semester, and then provide explanatory statements for the grade. Therefore, they were encouraged for introspection in a structured, yet open way, which, we believe, compensated for some if the downturns.

Therefore, some of the results may generate interesting and productive insights for higher education didactics for online studies, because, we believe, even after the quarantine is over nationally and globally, universities will transfer a larger proportion of activities online as continuing practice. The 2020 may have prompted a major transformation in higher education.

While a significant portion of findings added to the existing body of findings or the educational practical experiences of authors, however, some findings potentially may add to the enhancement of didactics.

Firstly, the unexpected dimension regarding assessment. Our findings may be related to other findings on tests and testing. E.g., IAU completed a global survey on the impact of pandemic on higher education around the world; the survey was distributed in Spring 2020. It revealed that globally two thirds of institutions replaced classroom teaching and learning to an online studies (p. 11). More than a half of institutions planned (at the time of the Survey, in Spring 2020) to organise exams online, though the variation was identified, because as many as 80 % of European universities planned to organise online exams (The impact of covid-19 on higher education around the world IAU Global Survey Report, 2020). Evidently, back in Spring 2020, when the total swift shift to online studies had to be performed because of necessity, though institutions struggled with a task, some Lithuanian students (10 statements out of 85 totally comprise 11.8% of total number of statements) were positive about online testing, self-assessment tools. Lithuanian students noted the benefits of online feedback. While this particular finding remains to be further investigated, we, however, posit, that the positive reactions may be related to personal learning styles (Zuzeviciute, 2011). Here it is important to note that both summative assessment and formative evaluations, it seems, may be further integrated into post-quarantine higher education without detrimental effects to a significant proportion of students.

Secondly, the fact that 10.6% (9 statements: 7 statements about laboratory work and 2 statements about group work/project method) of all statements were about insufficiency of practice-related and even team activity methods, leads to formulating of at least two tasks for the immediate future.

1) There is a need to invest into teachers' competencies in the field, because there might be tools that will prompt students' more effective engagement in the group/project work. Though, evidently, some laboratory/practice work cannot - and must not –be transferred into online mode, however, there are many activities, which may be performed in teams. Teachers may not be aware of the assortment of tools already available;

2) There is need for further in-depth cooperation with the IT professionals, because it may be that in some cases the assortment is insufficient. It would seem that the IT and education professionals still need to invest into designing IT tools and IT based methods that will facilitate work in teams, support project method, may be even supplement to some degree laboratory work. Surely, again, not all laboratory/practice work can – and must - be transferred into the online mode. However, multi-way instead of two - way or one-way online communication needs to be strengthened both by developing teachers' IT- didactical competence, and the IT tools in this regard.

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