FROM FACE-TO-FACE TO ONLINE: ASSESSING THE EFFECTIVENESS OF THE RAPID TRANSITION OF HIGHER EDUCATION DUE TO THE CORONAVIRUS OUTBREAK – THE STUDENT PERSPECTIVE

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Abstract

In 2020, the coronavirus outbreak and the second wave that followed this outbreak compelled Higher Education (HE) institutions worldwide to cancel campus-based teaching and conduct a variety of lessons remotely. This transition was implemented in a short period because it was deemed necessary to maintain continuity of teaching and learning provision. Even in ordinary times, i.e. in periods that do not necessitate a hurried implementation of remote learning, several challenges are associated with distance education. The objective of this paper is to critically consider whether this rapid transition from traditional modes of teaching and learning to online delivery was effective and what issues emerged from the learners' perspectives. Specifically, this study focuses on a public university in Cyprus that previously to the pandemic predominantly offered face-to-face teaching. Data was gathered through an online questionnaire (n=86), and a thematic analysis was undertaken to determine the learners' perspectives on the rapid transition to online learning. The results of this investigation indicate that the learners were confronted with a variety of challenges ranging from pedagogical to technical. It is argued that to a large extent these challenges can be resolved by addressing the professional development of academic staff regarding teaching and learning online.

Keywords: Higher education, coronavirus, rapid transition, face-to-face, online, covid-19.

1 INTRODUCTION

Since early 2020, the response of Higher Education Institutions (HEIs) worldwide to the coronavirus outbreak has been to resort to their existing technological and human infrastructure to connect students and educators and conduct online delivery. In the last two decades, various forms of online learning have been adopted by HEIs, but the recent rapid transition to online learning due to the coronavirus pandemic is unique. Universities that were predominantly set up to offer face-to-face teaching in a short time had to rise to the challenge of online provision. The difference between 'emergency remote education' or 'emergency remote teaching' – as it is called – and distance education is that the former is an obligation while the latter is an obligation [1], [2].

Recent studies and reports into HEIs' rapid transition to online delivery due to the pandemic reveal common concerns that centre around a variety of challenges, both pedagogical and technological. The transition has not been without problems [3], [1], [4]. For example, in an extensive worldwide report titled 'Global Survey of College and University Leadership' from the International Association of University Presidents (IAUP) and Santander Universidades [5], only 37% of university leaders considered their institution ready for the COVID-19 pandemic. Specifically, on online learning, it emerged from this report that the biggest challenge HEIs are confronted with due to the pandemic is faculty training for online, hybrid or remote education (58%), followed by access to the technology needed for online, hybrid or remote education (54%) and maintaining academic standards (53%).

Similarly, in a national investigation undertaken in Norway [6], the authors determined that 74% of the participants in the HEIs surveyed had significant challenges, and only 13% reported none. This survey suggested that institutions need to be better prepared regarding available digital technologies, knowledge on how these can be used for teaching, and skills in managing software for various purposes (lecturing, interaction, communication and group work). The findings of the same report also highlight the need for pedagogical advice and guidance for staff. Indicative is the following statement from this report:

"…Attempts were made to foster interaction [with learners], identified as a major element of successful online learning environments. This was reported as the most […] challenging teaching effort, as it

required not only more insight into (new) digital technology affordances and [a] decent level of digital competence but also pedagogical knowledge and [the] ability to anticipate students' involvement (and lack of it)…" [6]

Even in ordinary times, i.e. in periods that do not necessitate a rapid implementation of online learning due to unforeseen circumstances, several challenges are associated with the effective implementation of online education [7]. How these challenges can be addressed was elaborated upon in a previous article by the present authors [8]. In brief, the multifaceted and complex organisational changes needed by HEIs to pursue effective implementation of online learning start with the premise of a learning organisation, followed by a shared institutional vision expressed through over-arching Information and Learning Technology (ILT) policies that address, amongst other things, the appropriate strategy to engage academic staff and their training requirements, including the meaningful and effective incorporation of ICTs in teaching and learning and how academics can balance their workload with the demands of online learning. Traditional face-to-face HEIs that undertook the recent rapid transition to online learning in the form of emergency remote education are unlikely to have had sufficient time to consider these issues to any significant degree and implement viable and appropriate strategies.

Nine months after the rapid transition to online delivery and towards the end of 2020, these challenges and how they were addressed was greeted by the principal of the public university under consideration in this article, with the following words:

"…we are investing in innovative pedagogical and teaching methods. Technological infrastructure is certainly important for a university to meet the needs of the new digital age and modern education, but it is not enough on its own to achieve the right learning and the right results. That is why we invested in the creation of the Learning Enhancement and Development Network [to support] … continuous vocational education and training but also in the lifelong learning of the academic and administrative staff by organizing seminars and other events… We should also invest in teaching methods such as experiential learning, social constructivism and problem-based learning…" [9]

The aim of this paper is to identify the range of issues that emerged from this rapid technological transition to emergency remote education from the perspective of the learners in a public university in Cyprus. The paper critically explores the range of views on how the latter evaluated academic staff's engagement with online learning as well as the learning experience per se. Data was gathered through an online questionnaire of university students (n=86) and was thematically analysed to identify the variety of emergent themes.

2 LITERATURE REVIEW

The various forms of elearning have been researched for at least two decades now, and the consensus is that the required instructional design process to deliver effective online learning demands careful consideration and planning. This is unlikely to have taken place under current emergency remote education [2]. The trend with emergency remote teaching has been to apply quick fixes and short-term solutions for what are long-term issues, mainly because this has been the easiest way to deal with the pandemic circumstances. However, this approach leaves much to be desired [3]. In this brief literature review, we examine some of the factors that contribute to effective online learning to compare them against the data gathered for this article.

Interactivity is identified as a critical factor for learner satisfaction with online learning [10]. In a meta-analysis of 74 studies on distance education, the quality of learner-instructor, learner-content and learner-learner interactions in an online learning environment was identified as directly related to educational achievement outcomes [11], with the quality of learner-content interaction being the strongest predictor of learner satisfaction. One explanation for the significant role of interaction in online learning environments is that learners who interact with the instructional process have a reduced sense of isolation, are inclined to take responsibility for their learning and are less likely to disengage. It is the instructor's role to develop the competencies needed to foster active learning strategies that foster interaction [12] and create a sense of community [13].

Another parallel and related theme to interaction is learner engagement with online courses. One of the various models to gauge learner engagement in learning contexts relates to the frequency, consistency and persistence of engagement with online learning activities. Research has demonstrated that instructional activities that promote online presence, discussion forums, blogs, collaborative assignments, online quizzes and, in general, those that entail a level of learner involvement can foster confidence and improve academic performance [14]. From a social cognitive perspective, knowledge is

developed while learners are engaged in activities, receive feedback and interact in social contexts. Learning and knowledge are shaped by the kinds of interactions a learner has with others. A well-designed online course should provide an active learning environment in which learners are highly engaged in the learning process through interactions with peers, instructors and content [10]. In short, an online learning environment that fosters active, engaged learning and provides the interactive support necessary to assist students to understand what is expected, leads to a satisfied learning group [13].

A plethora of additional topics that can contribute to learner satisfaction with online learning were mapped out in an extensive scoping review of 2038 related articles by Yunusa and Umar [15]. The authors developed four categories of predictive factors of learner satisfaction and perceived learning. The first category is communication dynamics, which relates to communicativeness, information quality, interaction (student-student, student-content, student-instructor), instructor feedback, student technology and classmates. The second category is elearning environmental factors and covers course structure, course responsiveness, ease of navigation and access, content completeness and currency and perceived usefulness. The third category refers to organizational factors, such as service quality, technological support and service and system functionality and quality. Lastly, the fourth category is personality and situational factors and focuses on the individual characteristics of the learners, such as competence, autonomy, persistence, self-efficacy, personal innovativeness and skills.

Of concern during the implementation of emergency remote education is summative assessments. Amongst the challenges (pedagogical and technological) identified with the delivery of learner assessments online, the main challenge is with proxy supervision of learners during exams while trying to eliminate cheating and plagiarism [16]. To some extent, these concerns have been addressed with the provision of randomised quizzes and other forms of electronic assessments that the various online platforms allow for, as well as the use of other methods of assessment such as open book and take-home assessments, learner presentations and/or demonstrations, the request for annotated bibliographies and the creation of e-portfolios [16]. This switch to alternative methods of assessment and the "re-assessment of assessment may be one of the more fruitful outcomes" of emergency remote education [4].

3 DATA AND ANALYSIS

Due to social distancing measures, the authors avoided individual interviews with the students for the collection of data and instead developed an anonymous online survey comprising seven questions. In October 2020, this was circulated to students through electronic mail. A total of eighty-six replies (n=86) were received. The sample is thus random and based on voluntary participation. Since a margin of error is possible, the results should be considered as indicative rather than exhaustive. However, since the objective was to capture the range of learner views, it is possible to discern through the emergence of themes in the data that a degree of saturation was achieved.

3.1 Question 1: In what faculty are you studying?

The academic disciplines of the learners who replied to the survey are of relevance due to studies that show disciplinary differences in how online learning is perceived and what it can offer to teaching and learning from each discipline's perspective [17], [18]. The underlying idea is that instructional design considerations ideally should consider disciplinary differences.

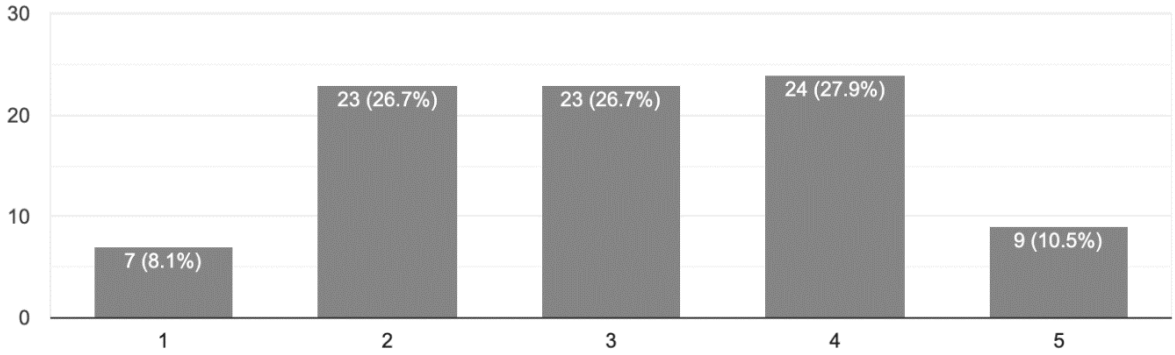
Table 1. Disciplinary breakdown of participating students.

Faculty of Geotechnical Sciences and Environmental Management	*Faculty of Management and Economics*	*Faculty of Communication and Media Studies*	*Faculty of Health Sciences*	*Faculty of Fine and Applied Arts*	*Faculty of Engineering and Technology*
11 (c.12.79%)	30 (c. 34.88%)	14 (c.16.27%)	12 (c.13.95%)	12 (c.13.95%)	7 (c. 8.13%)

3.2 Question 2: How satisfied are you with your distance learning experience during the pandemic?

The participants were asked to rank their level of satisfaction with their distance education from a scale of 1 (*lowest*) to 5 (*highest*). Table 2 shows that 38.4% (27.9% and 10.5%) valued the experience highly, while 26.7% perceived it as satisfactory and/or acceptable, and 34.8% (26.7% and 8.1%) considered it unsatisfactory. The reasons for these rankings are provided in the following question.

Table 2. Degree of satisfaction with distance learning.



3.3 Question 3: Explain/justify your answer to question 2 above.

The replies to this open question were thematically analysed, redundancies and repetitions were removed, similar statements were combined into one, and the emerging themes were divided into the following three discrete categories: a) Satisfied with the distance learning experience, b) Ambivalent and c) Not satisfied.

a) Satisfaction: Improved focus and concentration due to less distraction and more motivation; Feeling protected from the pandemic; Savings in printing and other expenses as study work is forwarded in digital form; Saving time from moving between classes; Where available, recordings of the lessons can be accessed repeatedly; Some lecturers make an effort to explain things well.

b) Ambivalent: Some lessons better managed than others but overall, not much different to face-to-face classes; The occasional technical problems but these are expected; Need some time to get used to the online tools but after that no problems.

c) Not satisfied: Poor communication with lecturers, lack of interaction and engagement, lecturers read the PowerPoint presentations; Difficulties with lessons that entail a practical component; Often lecturers feel the need to rush through the material faster than they would normally do and without considering our understanding; Insufficient individual feedback, fewer question-answer sessions; Difficult to concentrate and focus; Difficult to carry out group work; Not as effective as face-to-face teaching; Numerous technical problems with audio and camera; Online exams are much harder, more study material is assessed, and there is less time to complete the exams; Online evaluations of work are not satisfactory; Too many multiple-choice exams; Missing the social aspects of being a student.

From the above, it is noted that the learners who expressed some or complete satisfaction with their experience of distance learning did so mostly due to personal and situational factors. Those who were critical referred to the lack of interactivity and engagement and instructional design concerns, including evaluation and summative assessments.

3.4 Question 4: How effective was the instructor's organization and preparation for the distance classes? Explain why

As with the previous question, here too the replies were analysed and organised similarly, and three distinct categories emerged: a) Effective, b) Somewhat effective and c) Not effective.

a) Effective: Some instructors were well prepared; They informed learners ahead of sessions what to expect; They had good knowledge of how to use the online platform and the relevant software/hardware; They were effective because distance lessons were like face-to-face ones, so teaching was not compromised.

b) Somewhat effective: Instructors were well-organised but on occasion they were confronted with technical problems; There were scheduling issues, but these were resolved; Nothing changed much to make distance lessons more effective than face-to-face sessions.

c) Not effective: Some instructors had no idea what they were doing; They did not have sufficient knowledge of the online platform and how to use it; Some shortened the length of lessons, while others did not upload notes or were late providing them; There was a lack of feedback; Some international students were left in the dark by their instructors and did not know how to progress; Instructors made no changes to their teaching strategy and simply read out their notes.

The above themes correlate with the categories of predictive factors of learner satisfaction and perceived learning mentioned in the literature review above and, more specifically, with communication dynamics and elearning environmental factors. These themes also relate to how the learners ranked their satisfaction with distance lessons (Question 3). In brief, there were both pedagogical and technological challenges.

3.5 Question 5: Did you encounter any technical problems? Please elaborate

The learners who participated in the survey identified several technical problems that affected their distance education experience (Figure 1). Due to the overall sample size for this investigation, the percentages in Figure 1 cannot be considered statistically significant, but it can be argued that technical problems were evident. Some of these were individual to learners, such as hardware/software issues, weak internet connections, audio and/or camera problems, unsuitable software and other hardware difficulties. Similar difficulties were also experienced by some lecturers (Souleles et al., 2020). Also, some issues related to the institutional infrastructure, such as learner inability to log onto the online platform and an overloaded platform slowing down due to the high number of students trying to access it at the same time.

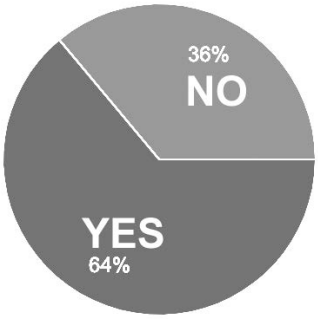


Figure 1. Percentage of participants who encountered technical problems.

3.6 Question 6: Were you asked by your instructor to provide feedback for your distance education lessons?

One significant way to gauge the level of learner satisfaction and engagement with distance lessons is to seek their feedback at the level of each programme of studies – this is an acknowledgement of disciplinary differences and the different instructional approaches each requires. The university under consideration did seek feedback with a general email to all learners nine months after the implementation of emergency remote education. As Figure 2 indicates, the lack of targeted feedback remains a concern.

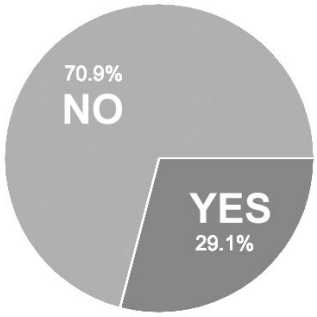


Figure 2. Percentage of learners asked to provide feedback from their instructors.

3.7 Question 7: What is your view of blended learning as implemented at your university?

When guidelines for social distancing allowed, the university decided to transition for a short period from complete distance education to a combination of small groups of learners physically attending classes in restricted numbers complemented with online delivery (synchronous and asynchronous learning). Once social distancing guidelines became stricter, the learners moved back into full-time emergency remote education. The former was presented as blended learning. This question sought participants' answers about this learning experience. As with the previous questions, here too the replies were analysed and organized, and the following distinct categories emerged:

a) Positive: A good way to handle teaching as classes are not too big; The physical attendance part was useful because it kept us in touch with classmates and instructors even for a short time; It was a necessary step to protect learners from the pandemic; It is a more flexible approach to the lessons and can save time.

b) Ambivalent: This mixed approach is a bit tiring but interesting; Not ideal but much better than being at home for all the lessons; It is effective but not as useful as face-to-face.

c) No opinion: Some learners declared that they had no understanding of what blended learning is, while others had no opinion.

d) Unsatisfactory: The mixed approach [synchronous and asynchronous] was not effective and can be confusing; The time for individual lessons was reduced, and the distance part is not essential for learning; It resulted in less interaction with classmates and lecturers; The flow of lessons was interrupted due to scheduling issues, lack of coordination and a seemingly ad-hoc approach.

4 CONCLUSIONS

The benefits of elearning have been associated with graduate employability and competencies for the knowledge economy (Souleles, 2005). However, even in normal, non-pandemic times, the implementation of online learning is a complex and multifaceted organizational task (Souleles et al., 2020). The relatively recent literature that refers to how HE institutions have dealt with distance education in the middle of a pandemic acknowledges this complexity and how troublesome rapid transition can be for the maintenance of academic standards. Emergency remote education inevitably borrows from online learning, which provides a benchmark for comparison of best practices.

This paper considered whether the rapid transition from traditional modes of teaching and learning to online delivery was effective in a public university in Cyprus and the range of issues that emerged from the learners' perspectives. The data suggest that interactivity and engagement with the course content were not pursued by the instructors in any systematic manner. The learners were not exposed to any innovative instructional strategies that foster active learning environments. In some cases, weak instructional practices from face-to-face teaching were transferred online. Issues were also evident with the appropriateness of distance assessments. Where learners expressed satisfaction with distance learning, it had more to do with personal and situational factors. There were technical challenges. These findings are consistent with the recent literature on emergency remote education and how troublesome the transition can be. To a large extent, the challenges posed by emergency remote education can gradually be resolved by providing for the professional development of academic staff in a tailored manner that caters for disciplinary differences. Ideally, this should be approached not in an ad-hoc and top-down manner but rather informed by an extensive survey of their existing skillset to identify areas for improvement. Such professional development can set the basis for a staged and effective transition into blended learning.

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