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DISTANCE LEARNING AND ONLINE PEER TUTORING FOR BETTER DIGITAL EDUCATION ENVIRONMENTS: A POST-GRADUATE EXPERIENCE

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Abstract

This paper presents the results of qualitative research conducted on two post-graduate courses Museum Education and Advanced Studies in Museum Education (jointly University of Modena and Reggio Emilia and University of RomaTre) in the academic year 2021/2022. Students were involved in focus groups in order to enquire how digital transformation in education brought about by the COVID-19 pandemic can foster distance learning for better futures and help shape digital education environments that are accessible and equitable. Results show that the combination of technologies for distance learning and online peer tutoring can play a pivotal role in helping students develop their potential and build a sense of belonging, thus promoting their well-being.

Keywords:

Distance learning, peer tutoring, post-graduate courses, evaluation.

Introduction

In a period of great uncertainty such as the current one opened up by the COVID-19 pandemic, Education professionals must consider how best to deal with occurring changes. The digital transformation has been accelerated (or imposed) by the pandemic and it increasingly appears to be a significant opportunity that must be understood and addressed with the most appropriate methodological and research tools, in order to aim at and deliver on the promise for better futures for all.

The UN 2030 Agenda provides valuable guidelines in this regard. Goal 4, specifically dedicated to the field of education, states the need to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all; it also recalls that providing it is fundamental to creating a peaceful and prosperous world. Goal 3, on the other hand, deals with good health and well-being, also aiming at the promotion of mental health well-being.

Digital transformation provides unprecedented opportunities for contact and training, also in the Creative Industries Education context (Poce *et al.*, 2021). However, more attention should be devoted to the digital sphere within the sector, not only with regard to the adoption of new digital technologies, but also in terms of digital skills and transverse competences professionals should possess (Poce, 2019). Nevertheless, within the cultural context transverse competencies and their development proved to be linked to people's well-being, considered in its multidimensional nature as comprised of many interrelated aspects (O'Brien & O'Shea, 2017; DES & NCCA, 2017). Therefore, new tools or new opportunities assured by the digital transformation, their positive effects, and new possible implementation must be taken into account and examined.

A useful tool for improving educational experiences, even more so in distance education (Valente, 2022), is peer tutoring. Peer tutoring is defined as an interaction between peers that leads to learning, i.e. a peer teaching activity in which students, adequately prepared for the purpose, provide help and support for the learning of

others in an interactive, intentional, and systematic way (Topping, 1996; Topping, 2000). Studies conducted in the Italian context have highlighted the advantages of peer interaction, which favours and improves the learning process and experience (La Rocca, 2012). Moreover, among the positive effects observed also in distance learning, the creation of group bonds, and interactions that stimulate a sense of community, identity, and collectivity can be highlighted. (Poce *et al.*, 2022; Valente, 2022).

The study presented here involved students from two online post-graduate joint degree courses in Museum Education and Advanced Studies in Museum Education, both promoted by the Intellect Centre - Department of Education and Humanities, University of Modena and Reggio Emilia, jointly with the University of RomaTre, in the academic year 2021/2022. The courses, due to the COVID-19 pandemic in March 2020 underwent a transformation from blended to online teaching mode; moreover, peer tutoring was introduced from the academic year 2020-2021, in order to provide greater support to students (Poce *et al.*, 2021).

Methodology

Research Questions

This research contribution inquires how digital transformation in education brought about by the COVID-19 pandemic can foster distance learning for better futures. Four research questions are set:

- How is students' well-being affected by the pandemic and the post-graduate course online attendance?
- How do technologies for distance learning affect students' motivation and learning process?
- What is the students' perceived usefulness of peer tutoring?
- Does the online peer tutoring service promote the development of students' transverse competences?

Participants

Five peer tutors and 34 students were involved. The former acted as researchers and were students attending the second year of the post-graduate course in Advanced Studies in Museum Education, who received special training to work as tutors. Their average age was 32 years old and they had a background in Western and Eastern history of art, archaeology, and museum activities. The interviewed students attended both post-graduate courses. All students had a similar profile: most of them fell in the 30-40 age range, with an average age of 35 years old; they all had a background in humanities, i.e. art, history, and archaeology, and were mainly employed in the cultural and educational sector.

Data Collection and Data Analysis

Peer tutors designed and carried out five focus groups targeted at students of both post-graduate courses, and then analysed the resulting data.

The focus group technique was employed because of its feasibility for deep data collection as it allows "more profound information than what can be obtained through interpersonal relationships" (Oprandi, 2000: 14). Peer tutors divided students into five small groups ensuring that each peer tutor was not interviewing their peer tutored group to avoid noble answers. Each focus group was one hour and a half long and was led on Teams by a peer tutor in charge of mediating and assisted by another peer tutor who took notes. Meetings were recorded and participants were informed of it as well as of the research purpose, the data processing, and the privacy policy. Table 1 summarises the structure of the focus groups.

Table 1: The structure of the focus groups

Section	Guiding questions
Well-being in relation to the COVID-19 pandemic and distance learning	How has the COVID-19 pandemic affected your well-being? How has attending the online post-graduate course affected your well-being?
Technologies for distance learning	What is your experience regarding the technologies for distance learning adopted for the post-graduate course? Did you experience Teams and Moodle before the post-graduate course?

Perception of the peer tutoring service	Have you used the peer tutoring service before this course? What are your impressions of this peer tutoring service? Do you think your expectations about peer tutoring are met? What do you think are the advantages and disadvantages of peer tutoring? Do you think the peer tutor is facilitating your learning?
Transverse competences promotion	Do you think that the online peer tutoring service is promoting your transverse skills? (i.e. Communication, Collaboration, Critical thinking, Divergent thinking)
Future implementations for distance learning	Do you think the peer tutoring service is fostering a sense of belonging? Do you think there are weaknesses in the way the online peer tutoring service is delivered? How could the online peer tutoring service be improved in order to better help future students?

The recordings were transcribed and the notes previously taken in relation to non-verbal aspects and group dynamics were inserted where relevant. Data were analysed following the guidelines elaborated by Hycner (1985).

Due to the students' similar profiles and the two post-graduate courses' analogous structure and delivery mode, results are discussed cumulatively for each section of the focus groups.

Results

Well-being in relation to the COVID-19 Pandemic and Distance Learning

Firstly, students were asked how the COVID-19 pandemic impacted their lives. 18 students confirmed the negative impact of the lockdowns and just 2 students took only advantage of it. Interestingly, 9 students admitted having mixed thoughts about it, as the event had partially positive repercussions. This result is somewhat related to the post-graduate courses: 29 students recognised the positive impact of the online courses on their lives, and 11 of these added that the fundamental element was the online delivery of the training offer.

The next question asked the students how the online post-graduate course affected their well-being. 12 students emphasised the importance of the course online delivery because it allowed them to participate without needing to commute. According to 2 students, the online delivery reassured them in anticipation of possible further lockdowns. 12 students benefitted from the course by investing time in their training and by reskilling. 4 students recognised the course as a chance to keep themselves busy.

These results suggest that, during such an uncertain time as the COVID-19 pandemic, technology has played a central role in increasing student well-being.

Technologies for Distance Learning

Concerning the technologies adopted for distance learning, students were asked about their own experiences, also regarding previous familiarity with digital tools. 25 students stated that they had not encountered any difficulties, finding them often intuitive, even when they had no previous experience with the platforms - Teams for synchronous lessons and Moodle for asynchronous activities.

Significantly, for those who claimed to have experienced an initial difficulty - 9 students - the intervention of the tutors proved crucial in overcoming it, thanks to the clarification and the technical support guaranteed. Tutee n° 15 explained: "I had never used Teams or Moodle, but [...] I found it quite intuitive right from the start. The initial lesson on how the platform works was enlightening. From there on everything went quite smoothly."

Moreover, 16 students believed they acquired new skills concerning the use of the technologies adopted. Student n° 36 claimed: "For me, they were extremely useful, I really learnt things that are useful for my job."

Digital technologies also allowed breaking out of the boundaries imposed by the pandemic and other factors, as expressed by some of the students (n° 33, n° 35): “The use of technology [...] allowed me to participate in this course; living in Milan I would have never been able to attend it otherwise”; “As I have difficulty commuting for health reasons, without these technologies I wouldn't have been able to do any of this at all”.

These results show a widespread good mastery of the e-learning tools, as well as the effectiveness of the peer tutoring intervention in solving those cases in which the students encountered difficulties. Distance learning appears to be fundamental in guaranteeing learning opportunities for all. Furthermore, the use of digital tools led some of the students to improve their perception of the digital skills they possessed.

Perception of the Peer Tutoring Service

Students were initially asked if they have had peer tutoring experiences in previous training contexts and 25 answered that it was their first time.

27 students reported to have had positive first impressions of the service and only 4 found that their expectations were not met or partially missed. When asked about the advantages they identified them in: a constant presence for 16 and a liaison between students and lecturers for 7; their speed in responding for 22 and thoroughness for 3; the possibility of more informal communication for 11; a constant stimulus and encouragement for 3 and a way to network for 1.

In addition to this, the presence of the tutor also proved to be very useful during the lectures, as underlined by student n° 16: “I find tutors' mediation during the lessons very useful, because they make the different phases of the lesson clearer”.

The evidence of the usefulness and effectiveness of peer tutoring service was demonstrated by the first positive impressions and the advantages mentioned by the students. Student n° 7 observed: “I'm glad to be able to compare notes with a colleague because I believe that peer tutors are on the same level as us in terms of human experience and age, so in any case there is a strong exchange. So, let's say, that is the optimal solution”.

Other students (n° 9 and n° 21) affirmed: “I am a very shy person, so knowing that on the other side there is a person who is more or less my age, who is having an experience like mine, was like a Linus blanket for me”. “I think having a tutor is essential. [...] This is especially important when people like me, unable to follow most of the lessons, find themselves a bit lost.”

These results show that peer tutoring is a valid and appreciated tool to offer a more effective and engaging educational experience to students.

Transverse Competences Promotion

When asked if peer tutors facilitated the development of their transverse competences, 17 students responded negatively, while 4 said they were uncertain. However, the answers to the following inputs that investigated the development of collaboration, critical thinking, divergent thinking, and communication showed that perhaps the initial question was not fully understood or that the concept of transverse competence was not clear. 3 of these 17 respondents stated that in fact collaboration (2 people) and critical thinking (1 person) had been facilitated by the peer tutors. In total, 13 students indicated one or more competences that, according to them, peer tutoring helped them develop. 10 people did not express their opinion on this matter.

Specifically, 9 people believed peer tutoring facilitated the implementation of divergent thinking. Student n°7 argued: “During the lectures, listening to a prompt from the tutor [...] helps you to think differently, which doesn't mean different from your own, but it's something additional [...] so in my opinion [this is a] very useful discussion.” Student n° 29 felt that the peer tutors' involvement during classes: “stimulates me and [it] opens my mind a little more on some aspects that during the lecture I had not thought about”.

Similarly, 9 people found their communication competence, especially with lecturers, improved as a result of the peer tutors' intervention. Student n° 30 explained that: “I was able to attend almost all the classes and I noticed

how they [the peer tutors] helped me, because I could see that they would start asking questions right away; that made me feel a little more confident; so seeing them jumping in, I told myself let's jump in too".

6 students believed that critical thinking was facilitated and according to 2 people collaboration was similarly stimulated. Student n° 36 reported that: "The tutor asked us to help each other look for solutions to actual problems".

These results show that, when reflecting on each skill, not only most respondents identified improvements in their transverse competences but also provided insightful examples of how peer tutors supported them in developing them.

Future implementations for distance learning

Considering the question of whether the peer tutoring service fostered a sense of belonging, 4 students responded positively. Nevertheless, 12 felt the opposite: 2 students did not feel the need for it, while 10 believed that there weren't the conditions for it. However, when discussing the weaknesses of the peer tutoring service, only 1 student highlighted poor interaction between the tutor and the tutees, whereas 23 did not identify any weaknesses in the delivery of the peer tutoring service.

Concerning future opportunities to improve the peer tutoring service, 7 students considered it already adequate. 12 recommended creating regular opportunities for discussion. 8 stressed the importance of establishing relational connections and fostering a sense of belonging. 3 admitted that they could have used the service more. With particular reference to the online course delivery, 1 student expressed a desire to conduct in-person classes as well. Quite the opposite, 4 students emphasized the need to maintain the online delivery.

Conclusions

This study explored how digital technologies for distance learning and online peer tutoring can foster better futures for all. Previous research on the effectiveness of distance learning (Poce *et al.* 2021) and online peer tutoring (Poce *et al.* 2022) in the post-graduate courses under examination showed the need for further in-depth analyses, thus the adoption of the focus group approach. Although this method can lead to different outcomes depending on the participants' willingness to communicate and the group dynamics, and data gathered cannot be generalised due to the low number of study participants, results highlighted that technology and peer tutoring played a pivotal role in the students' learning process and motivation.

Students' well-being was positively affected by the attendance of the course. In such a time of uncertainty as the lockdowns, having the chance to keep busy, to receive adequate training, and to reskill was largely appreciated. In particular, technologies for distance learning ensured the delivery of the course regardless of the unfolding of the health emergency. Platforms such as Teams and Moodle allowed students and lecturers to break out of the boundaries imposed first by the pandemic and then by geographical or personal health reasons. This is the main reason students invested and engaged in a complex academic course. Overall, it appears that technology sustained students' learning path insofar as they already mastered or developed their digital skills.

Students found peer tutors especially helpful because of their constant presence and support both for technical aspects and during lectures, when they encouraged a dialogue between learners and presenters. No weaknesses were found in the delivery of the peer tutoring service, except for one person that highlighted poor interactions between the tutor and the tutees. Through their role as facilitators, peer tutors helped remove the barriers created by physical distance and influenced the behaviour of other students, encouraging them to develop their potential thus contributing to their well-being. Peer tutoring proved to be a positive, profitable and useful experience for the promotion of transverse competences, especially regarding divergent thinking and communication.

Students' suggestions for improvement will certainly be considered to further increase the quality of the distance education delivered in the context examined. Results show the need for further research in developing a sense of belonging. Therefore, more opportunities for group discussion will be created and the peer tutoring service will be enhanced, as they are linked with the development of a sense of belonging to a group (Delahunty *et al.*, 2014). In

the upcoming years, the effectiveness of new technologies for distance education and further tutoring methodologies ought to be tested with the final objective to build digital education environments that are inclusive and equitable.

Authors' statement

The authors of the present paper contributed to the writing of this article as follows: A. Poce (Introduction, Conclusions); E. Torre (Methodology, which comprises the subparagraphs Research Questions, Participants, Data Collection and Data Analysis); G. Innocentini (Results. Well-being in relation to the COVID-19 Pandemic and Distance Learning, Future Implementations for Distance Learning); L. Contardi (Results. Technologies for Distance Learning); S. Pirchi (Results. Perception of the Peer Tutoring Service); M. Tolaini (Results. Transverse competences Promotion).

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