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Anna Mavroudi et Kyparisia Papanikolaou

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Résumé de l'article

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A Case Study on How Distance Education May Inform Post-Pandemic University Teaching

Anna Mavroudi[1,]and Kyparisia Papanikolaou[2]
[1]University of Oslo, Norway; [2]School of Pedagogical and Technological Education, Greece

Abstract

Higher education recently found itself in the unprecedented situation of being forced to rapidly switch to online education as a demand of the COVID-19 pandemic. The aim of this article is to compare and contrast the experiences of university tutors who teach in two distance education universities with those who teach in a traditional university concerning their online lessons during lockdown. Forty university tutors participated in a survey to capture their teaching experiences. The survey was based on the transactional distance theory. Both qualitative and quantitative data were collected from both groups. Analysis of the quantitative data indicates no significant differences between the two groups in scores regarding course structure flexibility and the degree of student autonomy; however, significant difference with a high effect size was found regarding instructional dialogue, in favor of the distance tutors' group. Thematically analyzing the qualitative data allowed the researchers to group the data into three main themes focused on how the instructional dialogue was manifested in the classes of both groups: (a) the learning design approach adopted, (b) the tutor-led interaction for student support, and (b) learner-to-learner communication and the sense of an online community. Ensuing recommendations involve adopting social-constructivist approaches that can sustain high-quality instructional dialogue in online learning settings and creating distance education faculty development programs in traditional universities that will help tutors support dialogical forms of online pedagogy.

Keywords: distance education, higher education, emergency remote teaching, transactional distance theory, university tutors' perceptions

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To cope with the forced isolation globally experienced during the spring semester of the 2020 academic year due to the COVID-19 pandemic, higher education (HE) moved online. Online courses in most cases adopted a blended learning mode aiming to balance between synchronous and asynchronous learning experiences (Bruff, 2020; Miller, 2020) depending on the university policy, available resources, and faculty's digital literacy (Beaunoyer et al., 2020). This situation affected both distance education (DE) and traditional universities in various ways, although the former were already oriented to distance learning. The term *emergency remote teaching* (ERT) (Hodges et al., 2020) was adopted to underline universities' immediate actions with respect to modifying the teaching aspect, as well as the difference between courses already offered online in a distance learning institutional context and online courses offered as an emergency response to keep the educational process moving at a high-quality level and support the cohesion of the academic community (Bawa, 2020; Hodges et al., 2020; Roberts, 2020). Currently, effort is devoted to analyzing online courses offered due to the COVID-19 pandemic, focusing on the lessons learned from this experience, in order to reconceptualize academic teaching in a way more beneficial for the students and society as a whole (Bawa, 2020; Ferdig et al., 2020).

Those implementing ERT tried to integrate online learning approaches; however, the particular circumstances under which this happened did not allow for the affordances of online learning design to be fully exploited (Means et al., 2014). It is crucial to investigate the key differences between ERT and DE (Bawa, 2020). Many researchers in digital teaching and learning have highlighted that during the pandemic, to a large extent, the concept of DE and its underlying principles were misperceived (Taskiran, 2022). Bozkurt and Sharma (2020) provide some examples of why it is important to know the differences between these two terms. For instance, they argue that "designing learning systems under the wrong assumptions and framing them around wrong definitions will make us more vulnerable to errors along the way" (Bozkurt & Sharma, 2020, p. ii). Also, naming bad implementations of ERT as examples of DE will have a negative and unfair impact to educators' views toward DE, and in that sense, it would undermine the efforts of promoting DE in the educational community that have been taking place for many decades.

The process of moving online was quite stressful for many tutors (Hodges et al., 2020). Wise (2019) found that prior online or face-to-face (f2f) experience does not correlate to tutors' sense of efficacy in enacting meaningful student engagement and learning mastery in the online classroom. Challenges that university faculty had to face include creating content for online classes, learning new tools for developing or delivering content, understanding online pedagogy and media affordances, and attempting various pedagogical strategies to address both synchronous and asynchronous teaching and learning (Hartshorne et al., 2020; Hodges et al., 2020), as well as addressing the communication gap with their students (Karakaya, 2021). In relation to the aspect of faculty professional development, Luongo (2019) suggests programs that provide enhanced opportunities that (a) focus on models for online pedagogy, (b) can assist faculty in practicing DE by identifying and meeting their needs, and (c) cater to course management suitable for DE.

Aiming to contribute to the ongoing dialogue on ERT in the COVID-19 period, we used conceptual tools of distance learning such as Moore's (1993) transactional distance (TD) theory to analyze how this emergency situation was perceived by active university tutors of two DE universities and one traditional

university and, additionally, to articulate on the affordances of the DE learning design for promoting more active and student-centered approaches in academic teaching. In particular, the current study focuses on the following research question: Were there any differences between two groups of active university tutors in their perceptions regarding the parameters of TD theory in their online lessons during the COVID-19 emergency situation? If yes, what were these differences, and how were they manifested in their online lessons?

The two groups are university tutors who were working at two European DE universities and university tutors who were working at a European traditional university that had to switch to fully online teaching/learning due to the COVID-19 crisis.

Theoretical Framework

Although it was originally proposed many years ago (Moore, 1993), the TD theory is still considered one of the most influential theories of DE (Paul et al., 2015; Weidlich & Bastiaens, 2018). It reconceptualized the construct of distance in DE by viewing it in learning design terms rather than just in terms of physical separation between the students and the tutor (Paul et al., 2015). Moore views TD as a separation between these two that brings about "a psychological and communications space to be crossed, a space of potential misunderstanding between the inputs of the tutor and those of the learner. It is this psychological and communications space that is the transactional distance" (1993, p. 22). Thus, TD has a negative effect on the teaching–learning process.

In any educational program, TD is bound by three variables (Moore, 1993): course structure, student autonomy, and instructional dialogue. *Structure* expresses the rigidity or the flexibility of educational objectives, teaching strategies, and evaluation methods and the extent to which an education program can accommodate or be responsive to students' individual needs. Structure was operationalized as *learner–content interaction* and *learner–interface interaction* (Benson & Samarawickrema, 2009; Huang et al., 2015, 2016). Processes that can be structured are, among others, presentation of information (e.g., information, recorded media) and stimulation of analysis and criticism, as higher-order thinking skills that university students are expected to develop (e.g., by organizing discussions in a Web conference session in conjunction with a recorded video presentation) (Moore, 1993).

Autonomy denotes the degree of autonomy exercised by the student in the teaching–learning process. It was operationalized as *independence of learning* and *study habits* (Huang et al., 2015, 2016; Macaskill & Taylor, 2010). The former can be further operationalized as responsibility of learning, openness to experience, intrinsic motivation, and self-confidence in new activities. The latter can be further broken down into learning and study practices, reflecting on time management, attitudes to working alone, and procrastination.

Dialogue is developed by students and tutors during their interaction. It can be characterized by its extent (e.g., a frequent basis and through multiple means) and by its quality. The latter is the defining characteristic between dialogue and interaction, since dialogue helps achieving a purposeful, constructive, and valued interaction (Moore, 1993; Huang et al. 2015; 2016). Dialogue has been operationalized as *learner–instructor interaction* and *learner–learner interaction* (Benson & Samarawickrema, 2009; Huang et al., 2015, 2016). Shearer (2009) has suggested a theoretical

framework for the dialogue in these two types of interaction that discerns two forms, namely, dialogue toward understanding and dialogue toward conversation. The latter pinpoints to the importance of using educational technologies in DE to support social presence that caters to student motivation and a sense of being there for the learner, whereas the former conveys the idea that the dialogue should support students to achieve the learning objectives and that this is possible via well-orchestrated discussions.

In addition to its three central constructs, some researchers suggest that the teaching *context* should also be considered as a central, constituent component of the TD theory (see, e.g., Benson & Samarawickrema, 2009). Moore (1993) also suggests that dialogue can be dependent on a number of environmental factors, such as the number of students per class, the subject matter, and the academic level. Benson and Samarawickrema (2009) used six cases with different relative levels of structure, autonomy, and dialogue as examples illustrating that the context in which the learning is taking place can affect the patterns of the relationships between the three central constructs of the TD theory and TD itself in the selected learning contexts. This is in contrast with previous ideas suggesting that fixed relationships exist between these three variables.

In terms of pedagogical approaches, Zhang's (2003) empirical research suggests that constructivist and social learning theories, as well as the creation of learning communities, might have a positive effect toward TD, as perceived by students. Consequently, orchestrating a sense of community is the first step a tutor needs to take in an online environment (Naidu, 2018). Literature on TD theory points out the importance of dialogue as a driver of a constructivist DE environment and also a need for guidance on promising strategies for increasing dialogue (Farquhar, 2013). Established by the Institute of Technology at the University of Ontario in Canada, the Fully Online Learning Community (FOLC) is a social-constructivist model for online learning that reduces TD. The FOLC model (Blayone et al., 2017), based on the Community of Inquiry model (Garrison, 2009), emphasizes collaborative learning as "a symbiosis of social and cognitive interactions amplified through effective use of synchronous and asynchronous digital affordances" (Blayone et al., 2017, p. 1), incorporating authentic assessment and recognizing students' contexts and competencies. Finally, Papanikolaou et al. (2017) discuss a blended learning approach enacting social orchestration patterns in order to cultivate the sense of community in a teacher training context.

Relevant Works

To understand better how TD among DE university students affects the DE learning process, Kassandrinou et al. (2014) explore students' perceptions. They conducted a small case study interviewing 12 undergraduate students at the Hellenic Open University and analyzed the results via content analysis. Their main finding is that students perceived TD in terms not only of physical separation, but also of restricted communication and interaction. They also found that the lack of communication among peers has a negative effect, whereas building learning communities among peers can reduce the dropout rate.

Bawa (2020) uses a quantitative approach and an experimental design to understand the effect of ERT on students' grades. In doing so, she defines ERT as "the shift from f2f courses to alternate or online delivery modes, to provide instruction during a crisis situation" (Bawa, 2020, p. 1). The experimental group comprised students who had experienced ERT when their f2f courses moved online during

COVID-19 lockdowns, whereas the control group comprised students who did not experience ERT. Both groups are coming from a US-based university that was not a DE institution before the COVID-19 crisis. Bawa (2020) also collected student perceptions of the ERT using excerpts from course discussion forums and personal communications between faculty and students. The quantitative analysis indicates that student grade performance was not negatively affected when students faced ERT and that the experimental groups who transitioned to ERT performed better than the control group. Yet the students' perceptions of ERT were more negative than positive. The qualitative analysis also revealed that communication is a key factor in making student experience of ERT positive or negative, and it expresses concerns around collaborative and group work.

By conducting interviews, West (2019) explored the experiences of faculty members who were teaching in DE to a diverse student population regarding teaching methods and student–teacher interaction in an ethnographic case study. Regarding the former, the participants reported their experiences on differentiated instruction (e.g., different formats of learning materials to meet the different learning styles), interactive instruction (e.g., using interactive Web 2.0 tools), and collaborative learning activities (e.g., group discussions and case scenarios to enhance student participation). In addition, they mentioned methods that build on students' motivation, support tutor–student communication, or support knowledge retention. Regarding the latter, they focused on the social and teaching presence of the tutor (e.g., interaction through assignments, discussion boards, e-mails, phone calls, and conference calls).

In their study, Kara and Yildirim (2020) aimed to determine best practice faculty behaviors in DE, according to perspectives of different DE stakeholders in Turkey (experts, faculty members, administrators, and students) using the TD theory framework. They collected data from various sources and analyzed them via the constant comparison method. The codes that emerged created themes based on the TD theory. Optimal behaviors critical to dialogue involved student–faculty interaction (establishing human touch, responding timely, providing feedback, providing alternative ways for interaction), student–student interaction (supporting students in discussions, encouraging collaboration), student–content interaction (guiding for learning), and student–interface interaction (providing easy navigation for materials, guiding for instructional tools on the learning management system, facilitating access to materials). Regarding pedagogical practices, they involved appropriate methods (demonstrating effective presentation skills, establishing social interaction with students, paying individual attention to each student, using alternative evaluation methods based on objectives).

Finally, a case of Peking University's online education (Bao, 2020) presents several instructional strategies from current online teaching experiences that were adopted during the COVID-19 emergency situation: (a) high relevance between online learning design and student learning, (b) effective delivery of online learning materials and information, (c) adequate support provided by faculty and teaching assistants to students, (d) high-quality participation to improve the breadth and depth of student's learning, and (e) having a contingency plan to deal with unexpected incidents of online education platforms. The case study does not include a methodology section, thus making the validity of these principles questionable.

Method: Participants, Instrument, Procedure, and Design

Participants in this research were 40 active university tutors, divided into two equal groups (of 20 persons each). The first group comprised tutors working in the DE sector via a formal institutional structure (i.e., working in a DE university), and the second group comprised tutors working at a traditional university who had to move online due to the lockdowns and their university's closure during COVID-19. Typically, each participant was teaching one course or supporting equivalent teaching/learning activities (e.g., supervising of undergraduate students doing their master's thesis and PhD students). Participants were self-selected, since participation in the survey was voluntary. We used maximum variation sampling (Suri, 2011), which is a purposive sampling technique used to capture a wide range of perspectives relating to the research question, with key criteria being the teaching context and the class size. The participants taught in diverse subject matters, ranging from engineering to humanities. In terms of class size, the distance tutors worked with relatively small class sizes (i.e., < 30 students per class), which is typical for DE universities. The second group of participants were more diverse with respect to the teaching context, ranging from a small research team (e.g., in one case involving research supervision of master and PhD students) to a large class of more than 300 students, where a faculty member is typically supported by several teaching assistants. All participants lived and worked in Europe. This kind of variation is referred to as phenomenal variation, according to which researchers working with limited resources can reduce the minimum number of sampling units required in a single research project, but still produce credible and significant findings (Sandelowski, 1995).

The survey was online and anonymous, and it contained three main sections. The first involved basic information about the teaching context, that is, subject matter, class size, and academic levels, in accordance with Moore's (1993) suggestion on what to focus on with respect to the context and environmental variables. The second section involved the three main constituent variables of the TD theory: structure, autonomy, and dialogue. The TD theory was selected by the authors as being one of the most robust and influential theories of DE. The participants were asked to assign scores to their course in each of these three variables using a five-point Likert scale. The survey also provided participants short definitions of the variables in line with Moore's (1993) work. This survey section consisted of answering the "what" dimension of the research question. The third part of the survey involved a small number of open-ended questions. Participants were asked to comment on the previously assigned scores and to briefly describe (a) their role as a tutor during the lockdown, (b) any educational technology tools used, and (c) whether they had to change/adjust their teaching practices during the lockdown and if yes, how.

Triangulation of methods (or mixed methods) was deemed an appropriate approach to study the phenomenon at stake and answer to the research question. *Triangulation*, which herein is defined as "the use of multiple methods mainly qualitative and quantitative methods in studying the same phenomenon for the purpose of increasing study credibility" (Hussein, 2009, p. 1), has been advocated by several social sciences researchers (see, e.g., Altrichter et al., 2018; Heale & Forbes, 2013; Hussein, 2009). It has been suggested that when combined, there is a great possibility of neutralizing the flaws of one method and strengthening the benefits of the other for better research results (Heale & Forbes, 2013; Hussein, 2009). Also, combining qualitative and quantitative methods may provide complementary results highlighting different aspects of the phenomenon (Heale & Forbes, 2013). Consequently, two different methods of data collection and analysis were applied and combined: to answer the first part of the question (the "what" aspect of the studied phenomenon), the participants

reflected on and characterized their lessons with respect to the three parameters of the theory of TD using the Likert scale (quantitative data); to get a more detailed picture that would enable us to answer the second part of the question (the "how" aspect), participants completed the open-ended questions prompting them to describe their lessons and teaching experience (qualitative data).

The quantitative data were analyzed using appropriate statistical methods: descriptive statistics and a nonparametric statistical test to measure any difference between the two groups. The Mann–Whitney *U* test was employed as opposed to the independent samples *t*-test because it is similar to the *t*-test and can be used when data do not meet the parametric assumptions of the *t*-test—for example, when the data are not normally distributed. The qualitative data were analyzed using thematic analysis, as described by Braun and Clarke (2012)—that is, by following a six-step process: (a) familiarize oneself with the data, (b) generate initial codes, (c) search for themes, (d) review potential themes, (e) define and name themes, and (f) report results. Two analysts (i.e., the authors) worked in parallel with the tutors' answers to the open-ended questions; they had three online consensus meetings to discuss their understandings with respect to the six-step process and to resolve any differences with respect to the findings of the thematic analysis.

Results

Table 1 shows basic quantitative results (i.e., descriptive statistics) on the scores of the parameters of the TD theory between university tutors who were working in DE and those working in the traditional university.

Table 1

Descriptive Statistics

Parameters	Distance university			Traditional university		
	Median	*M*	*SD*	Median	*M*	*SD*
Structure	4.000	3.700	1.174	3.500	3.400	1.429
Dialogue	5.000	4.500	0.761	4.000	3.800	0.951
Autonomy	4.000	4.050	0.999	5.000	4.600	0.995

Mann–Whitney *U* tests were run to determine if there were significant differences in the scores assigned in the variables structure, autonomy, and dialogue between university tutors in the two groups. Distributions of the scores for the two types of university tutors were similar, as assessed by visual inspection (but they did not follow the normal distribution; thus, the *t*-test was not appropriate). The structure and autonomy scores were not statistically significantly different for the two types of university

tutors. The dialogue score was statistically significantly higher in tutors who worked in DE universities than those working in the traditional university ($U = 115$, $z = -2.459$, $p = .05$). The effect size of this result was calculated using Cohen's d. It was found equal to .78, indicating a medium to strong effect size.

Driven by the quantitative results that point to nonsignificant differences with respect to the structure and autonomy scores and to a significant difference with a large effect in the dialogue score, the qualitative analysis was oriented to the "how" aspect of the dialogue phenomenon—that is, how dialogue was manifested in praxis in the online classes of the two groups (including interaction, communication, social learning, etc.). The analysis concluded in three main themes that are presented in detail below: the learning design approach adopted, the tutor role concerning their interaction with students with respect to support offered, and the student perspective—mainly, student-to-student interaction.

"To Lecture or Not to Lecture?": Lecture-Type Approach with Tutor-Led Dialogue Versus Participatory Approaches (Theme 1: Learning Design Approach Adopted)

The first theme maps the focus of the learning design approach adopted in both groups as this mainly affects the flow of interaction and dialogue in the group. Traditional university tutors primarily adopted a lecture-type approach enhanced with tutor-led dialogue, while more participatory approaches were adopted by the DE tutors. For traditional university tutors, a common pattern of dialogue between tutor and students pertains to tutors answering students' questions related to video lecture recordings that students were supposed to watch before the live online session. Tutors' reflections often underlined the focus of the learning design as providing either f2f or recorded lectures and delivering them to students to watch them at their own pace:

> Lectures … were given during the semester.

> We decided to record the teaching content for each session and then upload it couple of days before the session starts.

> I found it crucial that I can meet and work with the students on the tasks given after the video lecture.

The tutors mentioned they then answered students' questions either synchronously or asynchronously:

> During online teaching session time students can ask their questions about the recorded presentation.

> [Using] the university learning management system discussion board. By e-mail, if any problem [occurs] in understanding the concepts of the lectures.

However, the traditional university tutors expressed their disappointment in the level of dialogue and interaction in this learning design, mainly during synchronous meetings:

> Live-digital lecture [using the Web conference system] this semester had resulted in 200 black screens, where nobody dares to speak.

> I did feel quite lonely in the teaching process, and it was odd to sit in "classrooms" where I couldn't see others, and where they wouldn't speak to me.

Sometimes it felt weird to talk in front of a computer screen without being able to feel the reactions and body language of the students.

I think the live (synchronous) lectures on the Web conference system leave students quite isolated (unless it's a small class). They tend to speak less than in physical class, hence they appear to be more lonely.

In the case of DE tutors, tutors explicitly mentioned the focus on creating a participatory and social learning environment ("participatory teaching of student-centered philosophy"), indicating that this was an intentional learning design effort: "I was interested in formulating an appropriate learning environment, where everyone feels safe to express themselves and actively participate."

Thus, tutors in DE universities aimed to *increase opportunities for interaction*: "I doubled the number of online meetings and I tried to activate the online forum towards a more participatory process." They also aimed to *promote engagement*, caring for fostering dialogue and participation either during synchronous online meetings or between them:

I tried to avoid lecture—presentation so that the lesson would become more participatory.

Combination of lecture, discussion, and brainstorming using tools of the online platform.

Discussion is the basis of communication during online meetings and between them.

Tutor-Led Interaction for Student Support (Theme 2: Dialogue Toward Understanding)

The DE group tutors intensively supported students, also providing personalized feedback in many cases. In particular, *support and personalized feedback* was regularly offered to students:

[I have] weekly plenary meetings, plus frequent individual meetings with students.

The course structure is more flexible regarding the support offered to students which can be also personalized.

The focus was on pacing advice, study support, and feedback on assignments:

Students' guidance on their assignments, feedback, study guidance and counselling.

[I have] frequent communication with students on the assignments' topics and course content.

The three assignments that students submit were initially on the same topic which they transformed in successive versions due to my feedback on each particular version.

Even the telephone and their personal phone number were used as a means of communication: A participant mentioned they used "telephone-based communication once a week."

On the other hand, support provided by traditional university tutors was mainly taking place during synchronous sessions, where students could pose questions or work together on specific tasks:

> I found it crucial that I can meet and work with the students on the tasks given after the video lecture.

> I felt I was closer to the students because of the possibility of anonymous interaction in the live Web conference system.

> [I] spend most of the time in the class on problem solving.

Much effort was put by the traditional university tutors in preparing content and recording lectures, that is, in communication-free tasks:

> What I did and also in the meeting with my colleagues, we decided to record the teaching content for each session and then upload it.

> I was able to capture 85%–90% of the content before lockdown.

> I decided to record the lectures and upload the videos.

> We made tests with more than 2,000 pictures and 200 videos.

In a few cases, asynchronous support offered by the traditional university tutors aimed at increasing engagement and interest:

> As a teaser we also used Facebook and Instagram to promote interest.

> [I] tried to be more flexible in my communication with them, through personalized e-mails and questions about their well-being.

What About Learner-to-Learner Communication? Emphasis on Community and Collaborative Learning Versus Tutor-Led Communication (Theme 3: Dialogue Toward Understanding and Conversation)

DE tutors adopted a student-centered learning design approach that emphasized *learner-to-learner communication*. One way they did this was by promoting a sense of community:

> I believe that the development of a network among the students works very well.

> This process helped me to organize better the communication and the peer support processes in my group by adopting a learning community form.

> We had the chance to discuss our assignments, to listen what other students were working on. (student excerpt from participant tutor)

Another way was through collaborative learning approaches:

> Moreover, I think it is important to propose them studying strategies (mainly collaborative).

> I insisted particularly in creating groups (freely organized) out of the formal university context.

> The students' deliverables were the two group assignments.

A DE tutor noted that training is necessary to effectively apply collaborative learning in online learning settings, however:

> Migrating an f2f collaborative learning approach into an online environment was a difficult task. There is a training need for effectively moving collaborative approaches online.

In the case of the traditional university tutors, learner-to-learner communication does not appear as a goal in itself. However, there are cases in which learner–learner collaboration is a demand of a course's main project:

> Students work in groups to develop a software product through a software engineering process.

> For the last five days the teaching context changed drastically as the groups became remote collaborators and we had to meet in the digital classroom.

In the last quote, the teaching context refers to a flagship course titled "Experts in teams", a course that aims to help students developing their interdisciplinary teamwork skills.

Learner–learner collaboration also came up as a learning design decision:

> In the research methods course I arranged a total of five asynchronous learning activities: [for example,] ... comment on classmates' reflective texts.

> Learning activities in plenum, exercises in the groups and work on the group projects.

> Group work took place in break-out rooms on [one of the Web conference systems offered by the university].

Discussion and Conclusions

The aim of the study was to contribute to the ongoing discussion about better understanding of what happened to teaching and learning in HE as a result of universities' sudden shift to online education during the COVID-19 pandemic and the ensuing ERT. To that end, this case study conducted a comparison between 20 tutors working in two DE universities and 20 tutors working in a traditional university (all of them European). The rationale is that DE is a long-established scientific field and DE universities have a much longer tradition in providing it than traditional universities. ERT and DE are distinctively different, yet they are frequently perceived as similar (Bawa, 2020). It is crucial to investigate the key differences between ERT and DE (Bawa, 2020), and this case study focused on empirical research by comparing and contrasting the perceptions of the two groups of participant tutors regarding the classes that they offered during the pandemic. The research design was guided by the TD

theoretical framework originally proposed by Moore (1993), a seminal and robust framework of DE. Consequently, the research work focused on three parameters—course structure, student autonomy, and instructional dialogue—as these are defined and operationalized by the analytical lens of the theoretical framework used.

Methodologically, the research work used a triangulation of methods combining quantitative and qualitative data. The results of the quantitative analysis indicate that the scores that the tutors of the two groups assigned on the course structure and student autonomy variables were not statistically different. Yet, there appears to be significant statistical difference with high effect size on the dialogue variable between the two groups. Qualitative analysis of the tutors' comments on open-ended questions resulted in three themes around instructional dialogue: (a) lecture-type approach with tutor-led dialogue versus participatory learning approaches, (b) differences in tutor-led interaction for student support, and (c) emphasis on community and collaborative learning versus tutor-led communication.

The ensuing results have both research and practical implications. The research implications touch upon the need to examine the key differences between ERT and DE (Bawa, 2020), as well as DE learning design approaches that may be used to address the communication gap between tutors and students in an ERT setting (Karakaya, 2021). Currently, limited research has been done on this. We can separate similar works mentioned in the relevant works section into two main categories: those conducted before the beginning of pandemic when ERT was not a usual situation (if it even existed), and those conducted after (starting in 2020). In the first category, West (2019) observes that the participant DE tutors adopted participatory learning approaches and emphasized community learning. In this line of research, Kassandrinou et al. (2014) emphasize that building learning communities among DE students can reduce dropout rates. In the second category, Kara and Yildirim (2020) report similar results with respect to DE tutors' behaviors, where tutors facilitated various student-centered interactions between the student and faculty members, peers, the learning content, and the interface of the learning technologies used. The authors consider establishing social interaction among students as best pedagogical practice. Bao (2020) presents several instructional strategies of current online teaching experiences that were adopted during the COVID-19 emergency situation. Bawa (2020) finds that although ERT didn't negatively affect students' grades, students' perceptions were more negative than positive, with communication being a key factor. However, the control group in Bawa's (2020) study consists of students who took the same f2f course in previous academic years. In the research conducted herein, we adopt an experimental approach by comparing and contrasting two groups of university tutors, both teaching at a distance, one of them in DE universities and the other in a traditional university. This approach is unique, and furthermore, its methodology could entail less conceptual and design bias.

Additionally, we have shed light on the various aspects of instructional dialogue by comparing how it manifested in praxis in the online classes of both groups in terms of the learning design adopted, the tutor role in interacting with students, and student-to-student interactions. Thus, the results of this research go beyond exploring either DE or ERT, elaborating on the different approaches that they adopt on various aspects of instructional dialogue. All in all, the research works mentioned above as the most similar to the present research arrive at conclusions similar to ours with respect to the importance of facilitating the social aspect in DE settings. However, none of these studies has examined the different aspects of instructional dialogue, comparing the approaches adopted in DE with ERT.

DE is multifaceted and time-consuming in regard to the necessary analysis, design, development, and enactment of courses. Thus, it needs meticulous planning, development, and evaluation (Karakaya, 2021). In contrast, ERT is based on the need to shift to alternative learning solutions until the crisis is over, and it uses practices and features of f2f teaching, but modifies them (Karakaya, 2021). In the study herein, the instructional dialogue appeared to be an issue that did not work well in ERT compared with the typical DE setting. This is important since it is known from previous literature that communication, collaboration, and dialogue in online learning are essential for a quality teaching and learning experience. Conveyed is the idea that the use of learning technology should be examined on the grounds of the pedagogical necessity and integrated into suitable pedagogical models, as well as that technology is actually innovating the learning process and not just technologizing it (Baneres et al., 2019). Consequently, an emerging recommendation herein is the use of social-constructivist pedagogical models, in line with previous suggestions on DE in relation to TD, for example, by Zhang (2003).

The findings also have practical implications for faculty professional development. In particular, the need to offer enhanced opportunities that focus on online teaching pedagogy and course management is highlighted (Luongo, 2019). An ensuing recommendation is to focus on the creation of faculty professional development programs that provide support to traditional university tutors who wish to embark on DE with respect to dialogic forms of online pedagogy. Farquhar (2013) also supports dialogue as a driver of a constructivist DE environment, as well as the need for guidance on promising strategies for increasing it. Furthermore, we need to provide support for both types of dialogue, that is, for dialogue towards understanding but, most importantly, for dialogue towards conversation (Shearer, 2009). With respect to sustaining a high-quality instructional dialogue in a DE setting, the results indicate that suitable instructional strategies are those that help university tutors to make better use of the affordances of the learning technologies in tandem with the affordances of online learning design. In particular, those strategies are the following: (a) embrace participatory approaches with increased opportunities for interaction, (b) create a social learning environment that promotes engagement, (c) provide support and personalized feedback, and (d) cater to learner-to-learner communication (in addition to tutor-to-learner communication) and collaboration.

Finally, designing a course suitable for high-quality DE is a time-consuming, multifaceted, and interactive learning design process (Bawa, 2020; Luongo, 2019). Therefore, the universities and their leadership need to provide more incentives to faculty members who wish to embark on it (Luongo, 2019). With respect to the human resources needed, the two groups of tutors (i.e. traditional university tutors and DE university) are comparable, since in the case of big classes in the traditional university included in the empirical study, the teaching team was made by the course responsible and several teaching assistants, where typically a teaching assistant is responsible for fewer than 30 students (also true in the typical case of the two DE institutions). This creates, in turn, the implication of extending faculty development programs to teaching assistants, wherever possible, since they are closer to the students in larger classes.

One limitation of this work is the small sample size; in addition, participants are self-selected. According to Moore (1993), context variables (such as the class size, the subject matter, and the academic level of the course), could affect the instructional dialogue. In this study, while there was a wide range of subject matters and academic levels taught by the participant tutors in both groups, the number of students per class in the case of DE is relatively small—this is typical for DE settings. In addition, the data presented are from self-reported scores and perceptions; observations would help provide a more holistic and

objective view. Still, this does not affect the research question, but instead it provides directions for possible future research.

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