

Coronateaching in a Palestinian University: Changes, Challenges, and New Conceptions

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ABSTRACT

This longitudinal qualitative case study comprised an investigation of the experiences, perceptions, and beliefs of five ELT teachers at a Palestinian University where government-mandated COVID-19 emergency closure forced an institution-wide implementation of emergency remote teaching. It is among the few research projects to date that encompass the entire first year of work in pandemic emergency conditions as viewed from the perspective of instructors working in a higher education ELT program. The research was framed within an interpretative, constructivist paradigm, with data collected by means of semi-structured interviews and interrogated via thematic analysis. Topics of interest included the challenges, benefits, drawbacks, and general processes associated with e-learning as experienced by teachers involved in the rapid deployment of online education at an institution with no history of offering such courses. The results indicate that teachers faced significant pedagogy shock along with an immediate need to reconsider and reconfigure their roles within the teaching space and teacher-student relationship. Findings highlight the need for dedicated institutional e-learning support infrastructures, both hard and soft, comprehensive technical training and general digital literacy development for teachers and students, specialized teacher education in digitally-mediated pedagogies, and effective awareness-raising campaigns directed at students' families and other community stakeholders.

Keywords: corona teaching, emergency remote teaching, e-learning, online learning

1. INTRODUCTION

1.1. COVID-19 and Higher Education

On March 11, 2020, the WHO officially declared COVID-19 to be a pandemic – the first such designation since 2009 when the H1N1 influenza outbreak was assigned pandemic status [1]. As national and local governments across the world implemented quarantines and other measures intended to combat the spread of the disease, school closures were initiated based on evidence and assumptions from historical influenza outbreaks that such closures can interrupt transmission by reducing social contacts between students [2].

Between March 25 and April 17, 2020, the International Association of Universities (IAU) carried out a global survey in order to gain a better understanding of the pandemic's effects on higher education [3]. In the first analysis of the situation to be conducted at a global

level, the IAU contacted 9670 higher education institutions with a request to participate. The online survey received 576 replies from 424 universities and other higher education institutions based in 109 countries and two Chinese Special Administrative Regions (Hong Kong and Macao). Almost all responding institutions reported being impacted by COVID-19, with 58% reporting complete institutional closure. The emergency affected teaching and learning at 98% of the institutions, and 67% replaced classroom sessions with online distance teaching and learning. Another 24% were working on developing ways to continue instruction via digitally-mediated delivery or self-study methods.

1.2. Emergency Remote Teaching

A general definition of online education is the provision of access to course content and other institutional resources via the Internet with the aid of various types of websites, software platforms, and

applications [4], [5], [6]. Such access is realized through the affordances of various digital devices, including computers, tablets, smartphones, and any other technology that is useful for working with digitized content and carrying out communications and interactions over digital networks. In normal working conditions, effective online courses are the product of proper pre-introduction planning and design as well as ongoing continual evaluation and validation processes [7], [8]. Teaching and learning online involves specific roles, competencies, and professional development approaches engaged by teachers [9], along with specialized strategies in regard to curriculum, pedagogy, assessment, and interactions among participants [10].

In the context of the COVID-19 pandemic, at institutions across the world, unprepared teachers were expected or required to continue teaching by moving their classes online. There are numerous examples where this occurred at institutions that had little to no previous experience with or infrastructure for delivering online education [10], [11], [12]. Institutions and educators across the globe were suddenly participants in an unplanned experiment in the use of educational technology, and a form of teaching emerged that is being referred to in the literature as *Coronateaching*: the process of transforming classes to a virtual mode without changing the curriculum or methodology [10], [12]. Other authors use the terms emergency e-learning [13] or emergency remote teaching [8] when referring to the instructional approaches associated with the forced adoption of online instruction.

The nature of emergency remote teaching (ERT) is supported by Senthil's [14, para. 8] quote of Yusra Mouzoughi, vice-chancellor of Muscat University: *"What we have seen in many cases ... has not necessarily been e-learning but the delivery of the same material on a virtual platform. E-learning has a different pedagogical base."* In contrast to a planned e-learning offering, ERT is not based on a set of strategies devised before the pandemic emergency set in. Therefore, many teachers were not properly prepared before ERT implementation, and the results of ERT deployment have not been universally positive [10], [11], [15]. As noted in the UNESCO-IESALC 2020 report [12, p. 25]: *"The term Coronateaching is also used to refer to an emerging socio-educational phenomenon with psycho-affective implications for both teachers and students. This would be something similar to a syndrome experienced by the teacher or student when feeling overwhelmed by receiving excessive information through educational platforms, mobile applications, and email. To this can be added the frustration and helplessness derived from the*

limitations in connectivity or the lack of know-how for the operation of platforms and digital resources."

1.3. ERT in Palestine

In Palestine, where the research reported in this article was carried out, President Mahmoud Abbas declared a 30-day state of emergency in the West Bank on March 5th, 2020, after 16 coronavirus cases were confirmed in Bethlehem [16]. At the same time, the Palestinian Authority closed all 24 universities, colleges, and junior colleges in the Occupied West Bank and Gaza Strip until early April, a closure that would later be extended [17]. In a country where the people already struggle with a deteriorating political and economic situation, the pandemic introduced new challenges and exacerbated existing structural oppression [17].

In countries and at institutions where an infrastructure of networked educational technology was in place, and online course delivery was a common practice, the implementation of ERT often represented a broader application of pedagogical strategies that were already an established aspect of educational practice. For schools in Palestine and many other developing nations where online education is not common, and in wealthy countries at schools where economic and other disadvantages have hampered the adoption of digital technology, the sudden transition to ERT represented a challenging unplanned foray into the realm of digitally-mediated teaching and learning [8], [10], [12].

This unexpected venture into nearly complete reliance on e-learning inspired an immediate response on the part of authors and researchers, leading to a rapidly-growing body of literature related to the impact of COVID-19 on schools, teachers, students, and education in general. The relative ease and speed of Internet-powered research and publishing allowed research-based articles to begin appearing within weeks of the pandemic emergency declaration (e.g., [11] August 4th, 2020; [18] August 6th, 2020; [19] April 4th, 2020) and the pace of publication remained brisk as the pandemic entered a second year.

However, there have been few reports based on the longitudinal investigation. The study reported here captured a snapshot of the experiences of 5 teachers in the ELT department of a Palestinian university as they negotiated the first 16 months of the COVID emergency at an institution that was forced into a rapid implementation of an ERT e-learning program despite having no prior history of delivering online courses. Aside from providing additional insight into the experiences and perceptions of teachers working through this unprecedented period in the history of education and EFL/ESL instruction, this research adds

to the body of practical knowledge regarding technological and pedagogical challenges and possibilities that can arise during the development and execution of e-learning programs in the field of ELT.

2. LITERATURE REVIEW

A comprehensive literature review provided context for the study and revealed a gap in the research caused by the absence of longitudinal work that captured teachers' experiences and impressions throughout the entire period of COVID emergency-induced ERT at a higher education institution.

2.1. E-learning and Inequity in Access

As Carrillo and Flores [10] note, educational disadvantage arising from inequity in access to technology and the Internet is a reality that COVID-19 lockdowns and the adoption of remote learning exacerbated. Suddenly demanding teachers and students to rely on technology to continue schooling exposed layers of digital inequality arising from differential access to technology resources along with differences in digital literacy tied to social, economic, and cultural contexts [20]. Describing the impact of such inequities, a UNESCO Global Education Coalition (GEC) report [21] cites pandemic school closures as dramatically exacerbating inequalities in access to educational opportunities.

Concerning the Arab States in specific, International Telecommunications Union data [22] indicate that Internet availability is relatively widespread, with 74% of urban households and 34% of rural households having a computer and/or Internet access at home as of 2019. Mobile Internet accounts for much of the overall access in the region: 61.9% of people have access to 4G, and 28.9% can access 3G. However, Palestine might be regarded as falling on the wrong side of the digital divide in the Arab region, with Internet penetration at 64.8% in the West Bank and Gaza as of June 2021. For a local regional comparison, consider the substantially higher penetration rates in the neighboring countries of Israel (79.7%), Lebanon (81.9%), and Jordan (84.7%) [23].

Effective digitally-mediated education is powered by a modern, reliable technology infrastructure that can support a variety of delivery systems, with the quality of learning being dependent on the level and quality of digital access [24]. Studying university COVID-ERT programs at 6 universities in Saudi Arabia and Jordan, Almaiah et al. [25] found the dominant factor in e-learning program success to be the presence, quality, and accessibility of technical infrastructure and associated digital tools. Dealing effectively with technical issues in e-learning systems

and overcoming budgetary constraints in locales where the provision of adequate financial support is difficult are critical challenges that must be met for a useful deployment of e-learning.

A survey of 27 academics and administrators at leading universities in Palestine revealed that IT departments of universities are not universally well-equipped to support digital initiatives [18]. Inflexible policies, aging infrastructure, and inexperience working with digital agencies are noted obstacles. Academics, staff, and students who attempt to use technology in new and innovative ways are at risk of being shut down by IT departments dominated by fear of losing control or concerns regarding issues of risk and compliance.

Virtual classes on personal tablets may be the norm in Hong Kong, but with less than 60% of the global population online, many students in less developed economies must rely on lessons and assignments sent via WhatsApp or email [24]. Moghli and Shuayb investigated teaching and learning in Jordan, Lebanon, and Palestine between March–June 2020 [11]. They discovered that teachers in Lebanon and Palestine, particularly in the Gaza Strip, struggled with expensive and unreliable Internet connections, daily prolonged electricity cuts, and limited technical support.

Although developing countries are becoming increasingly capable of providing adequate technological infrastructure for e-learning, the mindset and digital literacy level of users are also critical contextual factors related to success or failure in the development and use of new e-learning programs [26]. A primary challenge associated with the rapid deployment of pandemic ERT arose from the fact that many teachers lacked the technological fluency and other skills necessary to properly use online tools or use them well enough to provide students with effective educational content [10], [19], [27]. To deliver effective digitally-mediated lessons via the Internet, teachers need to proficiently combine knowledge of content, pedagogy, and technology [28]. In regions where e-learning became a focus rather recently, in-service teachers may not receive technology training during their teacher education programs and so are likely to lack confidence when faced with the need to adopt online educational technologies for lesson delivery [29].

2.2. E-learning and Cultural Context

In Arab education systems, cultural factors tend to hamper digital initiatives. Across the Arab world, online learning has generally been marginalized, unrecognized, and suspended, with education

methodology still biased toward face-to-face teaching methods [30]. Arab faculty members are often resistant to change and reluctant to incorporate digitally-mediated methods and materials into their pedagogical approaches [31]. The work by Almaiah et al. [25] revealed that managing change from a policy-making standpoint and handling resistance to change on the part of instructors and students was a primary challenge affecting the successful use of e-learning systems during the COVID-19 emergency.

Drawing on data from interviews carried out between March and August 2020 with 100 randomly-selected students from 6 English literature programs at universities in Palestine, Hamamra et al. [32] claim that the COVID-19 pandemic *“revealed the perils and shortcomings of the teacher-centered, traditional education which colonizes students’ minds, compromises their analytical abilities and, paradoxically, places them in a system of oppression which audits their ideas, limits their freedoms, and curtails their creativity”* (para. 1). Online education has *“forced many instructors to give up their domination over the process of education and to create a more collaborative atmosphere of education that is based on dialogue, research and flexibility of the curriculum content”* (para. 1).

General levels of digital literacy present in the population of current and potential educational technology users as well as users’ views of their own self-efficacy and the level of public trust in the security and reliability of e-learning systems, are important determinants of program success [25]. In many Arab countries, including Palestine, online learning is viewed as being vulnerable to fraud and cheating [16], [33]. Diplomas and certificates earned by means of online education and training are generally neither recognized by Arab governments nor widely accepted by employers [34].

2.3. ERT and ELT

Gao and Zhang [35] undertook a qualitative study of three Chinese EFL teachers who had to abruptly shift their courses to online mode due to the pandemic emergency. Three emergent themes were related to teachers’ initial acquisition of ICT literacy needed to cope with the situation: having a clear understanding of students’ needs and adopting tools appropriate to meeting those needs, acquiring ICT literacy gradually via on-the-job-training in the form of online teaching practice, and integrating adapted techniques and principles of traditional classroom teaching into online

teaching. The findings indicated that the level of ICT mastery possessed by teachers acted as a limit to the potential of online EFL teaching. Such mastery was attained via practice over time as teachers adjusted their online teaching practices to meet students’ learning needs.

Wen and Kim [36] conducted a quantitative study of 153 randomly-selected Malaysian primary and secondary school ESL teachers tasked with adapting online ERT strategies in the face of COVID-19 school closures. Of interest was the relationship between teachers’ intention to adopt online educational technologies and the factors of self-perceived ICT competence, infrastructure and online resources, and working environment. Multiple linear regression applied to survey responses indicated that the accessibility of infrastructure and online resources were the most significant predictors of teachers’ intention to transition to online education. The researchers defined infrastructure to include laptops, speakers, and stable Internet connections, while online resources were represented by digitized textbooks as well as videos and online quizzes. Wen and Kim concluded that government and school administrative teams needed to ensure that teachers have sufficient access to the tools and materials needed to sustain online education.

Khatoony and Nezhadmehr [37] studied the challenges faced by 30 Iranian EFL teachers working at English language institutes where online ERT implementations took place. A survey revealed that the teachers were able to use the various e-learning platforms and applications efficiently and expressed positive views regarding the adoption of educational technology. However, the teachers faced numerous challenges, including a lack of appropriate materials, lack of attention to and demotivation towards online classes on the part of students, and lack of government funding and support for the language teaching institutions’ efforts to adopt e-learning.

Concerning the use of e-learning in Palestinian ELT, in particular, the adoption of e-learning pedagogies presents various challenges. These include poorly-designed and inadequate content, administrator and teacher fixation on traditional instructional methodologies, and a lack of ELT educators who have the professional preparation needed to incorporate educational technology into their classes [38]. Many Palestinian educators and students are resistant to change and reluctant to try new teaching/learning

methodologies that do not align with a traditional classroom setting [39].

3. METHODS

3.1. *Setting and Participants*

The study presented in this research report took place in the ELT department at Al Istiqlal University, a relatively new (opened in 2011) Palestinian university focused on security and military studies and training. Though Al Istiqlal lacks an institution-wide e-learning program, computer technology was integrated into curriculum delivery in 2017 with the objective of creating and facilitating the use of digital libraries and e-learning methodologies. The expansion and application of existing university Information and Communication Technology (ICT) facilities represents an integral part of this program, and university administrators stipulated a timeline of three years (2017 to 2020) to develop a strategic plan and implement related policy directives.

The university had also embarked on an introductory e-learning initiative in the form of a virtual exchange project operated in collaboration with Erasmus+, the European Union's program to support education, training, and sport for youth in Europe and beyond. Pandemic-related restrictions disrupted many aspects of the university's digitalization initiative, including participation in the Erasmus+ program, so during 2020 little relevant progress was made in reaching planned e-learning program development objectives at the university.

Five teachers from the Al Istiqlal ELT program participated in this study. The participants are colleagues of the researcher and were selected based on a combination of purposive and convenience sampling [40], [41]. The participants indicated a willingness to participate in the study and met the criteria of being forced to suddenly adopt online teaching methodologies as part of their institution's implementation of ERT strategies during the period of school closure mandated by the Palestine government in response to the COVID-19 pandemic. Only one of the five participants had previous experience with teaching online classes.

3.2. *Design of the Study*

This study was designed as a qualitative case study as per the paradigm proposed by Yin [42] that positions case study methodology as useful for the development of theory via analytic processes rather than statistical generalization. To this end, a case or case should be viewed as a source for principles or lessons learned that may potentially apply to various

situations rather than as a sample that represents a larger population [42]. This qualitative case study should serve as a source of general principles to be learned from the experiences of the participants instead of being taken as representative of circumstances faced by other populations of online educators. The choice of research design is supported by Flyvbjerg [43], who offers evidence of the power of case study methodology by pointing out the examples of Galileo, Newton, Einstein, Freud, and others who demonstrated the capacity for a single case to spur major advances in knowledge.

Qualitative research in the social sciences commonly involves the researcher assuming a specific theoretical stance that serves as the background and conceptual lens for the planning and conduct of the study. For the purposes of the project reported here, the researcher adopted a general interpretive perspective framed within a social constructivist ontological viewpoint that calls for the study of "*the details of the situation to understand the reality or perhaps a reality working behind them*" [44, p. 35].

The aim of this qualitative case study was to investigate the beliefs, understandings, and experiences of university ELT teachers involved in the implementation of online ERT methodologies and to explore, identify and describe specific factors that affected the teachers' adoption and use of e-learning pedagogy under the conditions of the pandemic emergency school closure. The objectives of the study were:

1. to explore and describe the possibilities and challenges related to the adoption and use of e-learning as a pedagogical and professional-development tool for Palestinian teachers in the field of ELT,
2. to explore and describe the key issues teachers faced regarding the use of e-learning in ELT,
3. to analyze how and why these issues affected teachers' beliefs and perceptions regarding the use of e-learning, and
4. to identify problems and solutions around the transition from ERT to an effective ongoing e-learning program.

3.3. *Research Questions*

The aim and objectives of this study were achieved by answering the following research questions:

1. What benefits and drawbacks do Al-Istiqlal University ELT teachers associate with the

- adoption and use of e-learning as a pedagogical tool?
2. What specific problems do Al-Istiqlal University ELT teachers face when transitioning from traditional F2F teaching to the use of e-learning methodologies?
 3. What are Al-Istiqlal University ELT teachers' beliefs about the use of e-learning in the Palestinian educational context?
 4. What is the current landscape of challenges and possibilities in the adoption and use of ICT as a pedagogical and professional-development tool for the ELT program at Al-Istiqlal University?
 5. How can theories regarding effective e-learning pedagogy contribute to the development of a model for e-learning adoption and use in the Al-Istiqlal University ELT program?

Primary data collection was carried out by means of semi-structured interviews ($N=18$), with each interview guided by an interview protocol. Interviews were conducted remotely via google meet. Four of the five participants took part in 4 interviews each; 1 participant took part in 2 interviews. The interview series spanned the time period from October 2020 to July 2021 (see Table 1).

Supporting data was collected by means of an online survey distributed to students in the participants' online courses; the survey included both open-ended and Likert-type items. A systematic literature review and analysis of relevant institutional and classroom documents and online materials also supplemented data collection efforts.

Thematic analysis was used to extract answers to the research questions from the data. This well-established qualitative research methodology entails the use of various methods of coding and categorizing data in an effort to identify patterns in the data and extrapolate meaning from those patterns [45], [46].

3.4. Data Collection and Analysis

Table 1. Interview dates

Participant	Interview 1	Interview 2	Interview 3	Interview 4
P1	06/11/2020	21/12/2020	24/04/2021	28/07/2021
P2	24/10/2020	15/12/2020	06/03/2021	31/07/2021
P3	16/10/2020	26/11/2020	11/02/2021	04/06/2021
P4	27/12/2020	11/03/2021		
P5	15/10/2020	26/11/2020	27/02/2021	13/07/2021

The flexibility and effectiveness of thematic analysis as a tool for the exploration of data and the ability to use it in generating a detailed account from rich, complex data makes it popular within a range of theoretical and epistemological approaches [46]. Both manual "pawing" through the data as per Bernard and Ryan [47] and processing via the NVivo 12 Mac qualitative analysis software application (www.qsrinternational.com/nvivo/home) were used to pull themes from the raw data.

In the context of qualitative data analysis, a theme is some level of patterned response or meaning that is found within the data and captures or illustrates

something about the data that is important or relevant in relation to answering one or more of the research questions [46], [47]. In the literature on qualitative analysis, the process referred to as searching for themes in data involves the engagement of the analyst in constructing or generating themes respective to the purpose of the research and reflective of the researcher's theoretical positions and values in regard to the research [46].

4. FINDINGS AND DISCUSSION

The findings of this qualitative case study provided insight into the perceptions and experiences of the participants (P1–5) as they made the transition from leading in-person classes to ERT-style online instruction in March 2020 and then continued with the implementation of e-learning methodologies until June 2021.

4.1. Implications for Practice

Several findings that have implications for general practice were drawn from the results of this qualitative case study. These findings are summarized below and followed by a concise presentation of answers to the research questions that guided the study.

4.1.1. Finding: Teachers faced pedagogy shock and were also forced to go beyond reconfiguring their practices to reconsidering and restructuring their roles within the teaching space and teacher/student relationship.

When the first interviews were conducted, the e-learning program had been in place for two semesters. All participants expressed initially undergoing some degree of pedagogy shock: *“We have started using the*

Online courses in the middle of the semester. And that was a huge confusion for me at least, and of course, I think most of us have been confused. Since it has been our first-time experience experiencing such thing, and also, we are asked to cover all the course 100% no matter how the circumstances that we all are facing at that time” (P5).

The teachers were cognizant and contemplative regarding the changes that the transition to e-learning brought to their roles within the teaching space and teacher/student relationship. *“There’s a shift in the techniques that I use and delivering my sessions. Moreover, there’s a change in the way that I address the students”* (P4). *“Students are accustomed to a teacher-centered class. I think they are used to not being the center of the class in my face-to-face or traditional way of delivering the content or pedagogy. What was challenging to my role was the e-learning pedagogy; I was sometimes or most of the times dominant in the class, and I hate this role to be dominant, to be the center”* (P2).

Some of the participants contrasted online e-learning with the existing education system in Palestine. *“In the Palestinian education context, face to face, the villages are so traditional where students are passive, and the majority of the time is allotted to teachers”* (P2). The participants referred to online learning as *“a kind of breaking this routine”* or *“a big shift”* from the teacher as a store of knowledge—*“a*

kind of spoon-feeding method”—to new ways of transmitting knowledge that involved more project-based learning and discussion: *“I can say that they are learning by discussing or by doing”* (P4).

Despite the shock and obvious contrasts between e-learning and traditional instruction, the participants were able to recognize a multitude of benefits associated with the implementation of digitally-mediated instructional methodologies. Interview responses noted the current importance of being skilled in the use of technology and the value of modern educational methods: *“E-learning gives you a chance to be good in both technology and your specialization that enhance learning in general or searching for books, e-books I mean, to look for good materials also of English”* (P1). *“Now we are in the century of technology and modernism. So, we have to equip ourselves with the knowledge, with the modern techniques of the technology. We have to apply it in the teaching method”* (P3).

Participants noted opportunities for both teachers and students to learn news of current events, access a wide range of useful online resources, and enjoy flexibility in teacher prep and student study times. The development of learner autonomy and ownership of the learning process were also mentioned as advantages of e-learning. This was in addition to acknowledging the crucial pragmatic role of online learning as a solution for continuity of learning in the time of emergency: *“I think basically e-learning is very important in this era. You know the coronavirus we have to e-learning and distance learning in general, I mean because there is no contact with the teachers and instructors at the university”* (P1).

4.1.2. Finding: Dedicated institutional support infrastructures, both hard and soft, were needed to support teachers’ delivery of effective e-learning opportunities.

The teachers initially experienced some struggles with e-learning and expressed a sense of receiving insufficient institutional support. One of the participants (P2) had gained significant experience with online learning while working at Al Quds Open University (QOU), the pioneering Arab institution in the field of e-learning. P2 commented that *“The university is not experienced enough in the e-learning. This is a very important point, compared with other universities such as the QOU university.”*

Google Classroom and Google Meet were the primary e-learning content management and communications applications made available to the participants by their institution. P3 felt unsupported in the sudden adoption of these tools: *“They give us a lot of instructions ok that also trouble us definitely they*

trouble us and these instructions and these are really not in the, not in its place, ok?" Despite the challenges, in a relatively short time the teachers perforce became accustomed to using the applications: *"The Google Classroom is really nice, nice with me. Google Meet, it's really a helpful way of teaching, particularly in the circumstances during the COVID-19. You don't feel that you are away from your students or there is some gap between you and the students"* (P3).

However, even as teachers adjusted to the new work routines and demands presented by the switch to e-learning, questions of increased workload and a perceived lack of institutional support continued to overshadow the practical matters of adopting e-learning as a mode of course delivery.

Preparation time was seen to be increased because the instructors were not accustomed to planning and prepping for online courses: *"If you want to deliver or teach online, I think you need a lot of time to prepare. Yes, precisely speaking because this is our first experience in teaching online"* (P2). Findings like this indicate the need for support from the institutional side in technical skills training for teachers and work on curriculum and materials acquisition or development. One participant considered it unfair to be forced into a more demanding workload with no additional compensation: *"They don't support, they don't pay more, they don't look at I think, this is a very difficult task, using the Internet, especially for those who are old age"* (P1). This opinion was echoed by the single participant experienced with online teaching and learning: *"I think teachers are overloaded with the 12 credit hours so, the department should focus on shorting or decreasing the number of hours that every faculty member should teach"* (P2).

An area of persistent difficulty was the realm of relationships and interactions between teacher and student. Communication with students posed a burden in the virtual environment: *"The equipment is also exhausting, because every time you need to check your email, or you need to check the messages from your students"* (P2). Participants who were generally positive about e-learning expressed frustration with a perceived inability to connect with, monitor, and assess students in the virtual environment. *"Students are more controllable when we have face-to-face instruction, but in e-learning, there is no guarantee that students are focusing or concentrating, or that they can get what actually we are explaining or debating"* (P5). The limited interaction with students in e-learning courses was a significant concern highlighted by the professors. Students might use forbidden applications: *"They can use and apply all the facilities like media player or the techniques on the computer which are not allowed at the University to be used in certain time"* (P3), or they would often fail

to participate in class to a satisfactory level: *"There are shy students who prefer not to ask nor to participate. So, this is the large or the most problematic aspects in online teaching"* (P5).

Moreover, conflict occurred when students voiced expectations that assessments would be carried out online just as the classes had been. *"The administration asked students to sit for the exam face to face, and we noticed some complaints from students that they were preparing for online assessment, and were shocked that their assessment could be face to face"* (P2). Although professors tried to adapt their evaluation strategies, it was difficult to achieve valid evaluations in the online environment. *"To me, this [student learning] can't be measured because in evaluating their information or by the end of the semester it cannot be evaluated because cheating is existed"* (P5).

The e-learning challenges described here point to the necessity for a coherent, well-developed institutional infrastructure and learning culture built around and in support of e-learning technologies and pedagogies. *"These days, there is no excuse for the university administration to say no, we don't have a platform, they should create their own platforms"* (P2). Having well-trained, digitally-fluent teachers and students along with a high-quality, fully-supported digital tool suite and a refined set of e-learning-specialized curricula will reduce problems of all types. Appropriate teaching and evaluation strategies positioned within an institutional culture that centers and values e-learning can help to reduce the motivations for and incidences of academic misconduct.

4.1.3. Findings: The participants lacked specialized teacher education in the development and deployment of digitally-mediated pedagogy; this type of training is the basis for effective e-teaching. / Comprehensive technical training and general digital literacy development would enhance both teachers' and students' ability to fully leverage the advantages of e-learning.

A majority of the participants (4/5) were engaging in their first experiences with e-learning and the extensive and intensive use of educational technologies. *"We are not accustomed to this system of teaching previously. And most of the teachers did not take sessions or training courses"* (P4). It is easy to infer that training and technical skills development would lead to more efficiency and less expenditure of effort by any individuals who are engaged with designing and using e-learning methodologies. *"If I don't know how to use the Google Classroom, it could be a challenge for me as an instructor to use it bigger way and to implement it effectively"* (P2). *"There are*

certain difficulties when you have to present activities for the students, how to design learning activities because it needs someone who is skilled in ICT. So this skill really was lacking for me, and also I think for my colleagues” (P4).

The participants were similarly aware of difficulties that some of their students might face: *“Some students have come from let's say not so good background and some of the students they are not skilled enough. They didn't take some training course regarding how to use these methods” (P3).*

A consistent theme throughout the data referenced the lengthy, detailed effort needed to plan online class sessions and ensure the provision of high-quality, engaging materials. *“The preparation for online teaching is quite longer than face to face because you have to think of many angles when you are preparing for online classes because you have to design activities should be interactive activities which are lacking instruction classes so surely online the preparation takes longer time than the traditional way” (P4).*

Participants acknowledged the specialized demands of effective e-learning design, with a need to focus on interactivity and the provision of opportunities and support for independent learning. *“The students should come with the output; they should work or cooperate together as a group, providing me with the process how they did so and so autonomous learning” (P2).* These ELT teachers felt that audio materials, in particular, needed to be of very high quality for requirements of appropriate vocal language modeling and so that students could understand lesson content in the absence of a teacher's face-to-face explanations. *“I should say because you don't see students, you will choose a very clear video or a very clear audio that makes sense to the students” (P1).*

Although the participants were aware of the requirements associated with quality e-learning design and delivery, they lacked the practical training and experience needed to execute their e-learning objectives with ease. *“We need some training I think, and maybe a lot of teachers, especially those who are old age above more than 50 years, need how to teach e-learning, I mean how to use computers, how to use books from the Internet, and how to download books” (P1).*

P2 pointed out the importance of training to the successful implementation of e-learning strategies: *“I taught at Al Quds Open University for 15 years. I received at least five training sessions, although I was a part-time lecturer there. So, the training is important.”* Even with this background of experience, P2 acknowledged the need for additional and ongoing training for work in an e-learning program: *“I trained*

on some apps and platforms such as Moodle and for example applications such as the e-journal and so on, but I still need to have more training and more professional development in this area.”

4.1.4. Finding: Teachers identified the adoption of e-learning as having effects on student motivation and performance.

The teachers described differences in motivation among their students in the virtual classroom. Some teachers noticed students who seemed to be motivated by the enjoyment of the technology and connectivity: *“Actually, there are the students who are really motivated to use the Internet, and they are motivated to participate. They are not reluctant to take part in the activities” (P4).* The ability of most of these digital native students to quickly adapt to the use of online applications was noted: *“I think all the students have a good idea about and acquaintance with using the Internet and using Google Classroom and the other program Google Meet in the process of teaching and learning. I think that most of them have [the applications] available and they know about Google Meet in a good way, and they have a good idea about this” (P1).*

Other participants offered contrasting observations of students who were reluctant to participate: *“I think not all students are highly motivated to participate in online learning. Most of them are motivated but not highly motivated. A number of them are de-motivated because they don't know how to engage in the classroom” (P2).* As the most experienced online teacher, P2 offered a cogent observation regarding diminished social interaction in the virtual classroom and the possible effects that might have on both teacher confidence and student engagement: *“We move to the other question, or problem, or challenge, which is the domain of social interaction. Sometimes I felt afraid of feelings I have created from my students in one way or another. Also, [in the online classroom], there is no social presence or social context you feel. Also, students don't know how to collaborate or cooperate with each other. I noticed that my students or some of my students prefer to work alone, even in person. They don't like to communicate among the other students” (P2).*

Some students are unmotivated in the face-to-classroom: *“Even face-to-face, when you are in the class, in the lecture you see that they are watching the time and when the lecture is going to end” (P5).* This instructor observed that if students lose motivation during face-to-face learning, how can they be motivated when e-learning? *“They are not motivated at all. Unless you motivate them and force them. It is a problem” (P5).*

The teachers viewed student motivation in the virtual classroom as ranging from high to low/non-existent and dependent on various factors. Most prominent was the effect on the motivation of direct interaction with the teacher and other students in face-to-face classes. Immediate direct responses to questions about content combined with active interchange among teacher and class members to act as positive impacts on student motivation. When learning online, social interaction is diminished, and there are fewer exchanges between learning community members. *“Most of them, 99, 90 percent are against e-learning. They said it is not useful because most of them, when I ask them, are saying it’s not alive”* (P5). This effect combines with challenges associated with trying to address the course material as an independent learner and obstacles posed by Internet connectivity problems and electrical outages to decrease student motivation levels.

In this case, low motivation and engagement may have translated into decreased learning outcomes. The data revealed that, by the end of two semesters of work under the ERT model, the participants were unanimous in harboring the general impression of student performance levels falling short of planned objectives. *“Our experience at Al-Istiqlal these days proves that an online learning experience with the students this semester and the previous semester, students were not acquiring or were not mastering the content very well”* (P2).

4.1.5. Finding: Awareness-raising campaigns directed at students’ families and other community stakeholders would have been useful in supporting this university e-learning program.

The conditions imposed by the government response to the pandemic emergency dictated that teachers and students carry out most aspects of their engagement with e-learning from home. P3 concisely summarized the general situation faced by all teachers and students during the period of ERT: *“First of all, we have family, ok?”* Predictable disturbances are caused to teaching and learning processes that must be carried out in relatively small, non-private home spaces filled with young children, siblings, and other family members: *“Are they [students] focusing or not? Are their environments helping them? To get the lectures easily, can they focus or not? Can they participate or not? Do they have their individual room for each student, or are they sharing the same room, for example, for five or three sisters in the same room, and they can’t. We don’t know”* (P5).

In this type of challenging environment, it is not surprising that students who have only experienced the role of the passive learner in traditional teacher-centered classrooms will have difficulty taking

responsibility for their own learning. *“They don’t automate cameras, and so you don’t know what the students are doing, while you’re giving the lecture, whether they are attentive, they are listening to you or the opposite”* (P4). Participants reported that, in some cases, students seem to appear for an online class session but are not actually attending to the classwork: *“I might see that they are online, they access Google Meet or Zoom or whatever, but they are not there, I can see that. I have faced a situation many times that, whenever I call a certain student, they are not there. They access, but actually, they are not there actually they are some, they might be sleeping or doing something else. So, you cannot rely on or depend that they are actually present”* (P5).

To some extent, the nature of Palestinian culture and family relationships comprises a barrier to successful home-based e-learning: *“There are families who really do not cooperate with their sons or daughters that they have to attend the courses, they have to attend lectures”* (P5). The student’s parents were in many cases attached to traditional models of schooling and resistant to the adoption of e-learning, to the point of questioning the validity of attending online courses. *“I can see that the parents disagree with e-learning and they say that it is not useful, so they are using their kids or their family members all of them whether they are students and they are asking them to do some stuff, anything they require in the home, to, to gain anything for the house rather than giving them the opportunity to take lessons or to participate in the lessons”* (P5).

4.2. Brief Answers to Research Questions

RQ1. What benefits and drawbacks do Al-Istiqlal University ELT teachers associate with the adoption and use of e-learning as a pedagogical tool?

Primary benefits: E-learning supports continuity of education during emergency conditions, provides access to a wide range of useful materials, and offers flexibility for students.

Primary drawbacks: E-learning forces reliance on physical infrastructure (power, network connectivity) that is not dependable and reduces instructors’ capability to effectively monitor, communicate with, and evaluate students.

RQ2. What specific problems do Al-Istiqlal University ELT teachers face when transitioning from traditional F2F teaching to the use of e-learning methodologies?

Primary problems: Teachers lacked the technical and pedagogical skills needed to work efficiently and effectively in the online environment. The institution and the community at large lacked the infrastructure

of hard and soft resources needed to support an effective e-learning program.

RQ3. What are Al-Istiqlal University ELT teachers' beliefs about the use of e-learning in the Palestinian educational context?

Face-to-face learning is better in terms of fit to the general conditions in Palestine, to the needs and preferences of students and their families, and to the institutional context that teachers work in. E-learning is potentially useful as a supplement in combination with face-to-face education if the development of all levels of appropriate support infrastructure can be assumed.

RQ4. What is the current landscape of challenges and possibilities in the adoption and use of ICT as a pedagogical and professional-development tool for the ELT program at Al-Istiqlal University?

The continued integration of ICT into course delivery and instructional methodologies is inevitable and desirable. However, institutional resistance to change, budgetary restrictions, insufficient technology infrastructure, lack of adequately trained faculty, and cultural barriers are some obstacles that will need to be overcome.

RQ5. How can theories regarding effective e-learning pedagogy contribute to the development of a model for e-learning adoption and use in the Al-Istiqlal University ELT program?

The key theoretic underpinnings of effective e-learning pedagogy support deploying a social-constructivist, student-centered approach to teaching and learning, structuring expanded student autonomy and ownership into the learning process, and guiding the movement of teachers away from positioning as the sole provider of knowledge into a role of facilitator of the acquisition of knowledge and advisor of learners in their quest for knowledge. E-learning theories can serve as practical models that guide program development efforts. They can also frame and highlight changes that need to occur in both institutional and social cultures of learning if support and accommodation for effective e-learning are to be provided.

5. CONCLUSION

5.1. Summary of Findings

The findings of this research project revealed that the sudden implementation of an e-learning program in a context where an institution and its faculty are not prepared to adopt an online education model could be

shocking and stressful to teachers. It can also result in less-than-optimal learning outcomes for students.

E-learning can offer a number of useful features and advantages, but programs should be developed and launched within a complete support framework. Such an e-learning support framework begins on the macro scale with basic community infrastructures such as reliable electric service and Internet connectivity, extends through the education institution, ICT infrastructure, and staff, on to curriculum and instructor development, and finally down to the micro-scale of students in their cultural and family contexts and even personal study spaces. All factors should be in alignment with overall e-learning program requirements and objectives if 21st-century educational technologies are to be leveraged to full advantage.

5.2. Limitations of the Study

The limited number of cases and participants in this research, the conditions unique to Palestine and Palestinian education, and the unprecedented context of the emergency situation that dominated the background of this study all imply limits to the generalizability of findings from this research.

Using participant interviews as a primary data collection methodology also implies limitations. Data may show the effects of informants who are unwilling or unable to articulate important things, causing interviewers to draw assumptions that may be incorrect about issues that have not been directly observed [48]. Data collection and analysis procedures may also be limited by the effects of researcher bias [49]. To counteract the potential effects of bias, the researcher followed recommended best practices for qualitative research and case study research as proposed by respected authorities on this type of research: Yin [42], Corbin and Strauss [45], and Braun & Clarke [46].

5.3. Recommendations for Future Research

At the completion of this study, the participants had mixed feelings regarding the implementation of e-learning. They viewed online learning as an approach that has the potential to be useful and effective and considered mastery of associated technical skills to be a requirement for students and teachers going into the future. However, the difficulties and downsides of the ERT e-learning model overshadowed the potential benefits of online learning and left these teachers

hoping for a return to face-to-face teaching and learning.

A productive area for future research would be the investigation of teacher perceptions and responses to making a transition to e-learning in a context where adequate and reliable infrastructure is in place, and the institution, programs, and staff members have undertaken appropriate preparatory work.

REFERENCES

- [1] D. Cennimo, S. J. Bergman, and K. M. Olsen. "Coronavirus Disease 2019 (COVID-19)." *Medscape*. <https://tinyurl.com/vmwtr6zf> (accessed Oct. 12, 2021).
- [2] C. Jackson, E. Vynnycky, and P. Mangtani, "The relationship between school holidays and transmission of influenza in England and Wales," *Amer. J. Epidemiology*, vol. 184, no. 9, pp. 644–651, Nov. 2016, doi: <https://doi.org/10.1093/aje/kww083>
- [3] G. Marinoni, H. Van't Land, and T. Jensen, "The impact of Covid-19 on higher education around the world: IAU Global Survey Report," International Association of Universities, 2020. [Online]. Available: <https://tinyurl.com/ytyztnph>
- [4] C. E. Cochran and L. T. Benuto, "Faculty transitions to online instruction: A qualitative case study," in *Online J. Distance Educ. and e-Learning*, vol. 4, no. 3, pp. 42–54, July, 2016. [Online]. Available: <https://tinyurl.com/v8h7te3t>
- [5] J. E. Seaman, I. E. Allen, and J. Seaman, "Grade increase: Tracking distance education in the United States," Babson Survey Research Group, 2018. [Online]. Available: <http://www.onlinelearningsurvey.com/reports/gradechange.pdf>
- [6] D. Xu and Y. Xu, "The promises and limits of online higher education: Understanding how distance education affects access, cost, and quality," American Enterprise Institute, 2019. [Online] Available: <https://files.eric.ed.gov/fulltext/ED596296.pdf>
- [7] S. Baldwin, Y. H. Ching, and Y. C. Hsu, "Online course design in higher education: A review of national and state-wide evaluation instruments," *Tech Trends*, vol. 62, pp. 46–57, July 2017, doi: 10.1007/s11528-017-0215-z.
- [8] A. Bozkurt and R. C. Sharma, "Emergency remote teaching in a time of global crisis due to CoronaVirus pandemic," *Asian J. Distance Educ.*, vol. 15, no. 1, pp. i–vi, 2020. Available: <http://www.asianjde.org>
- [9] C. Ní Shé, O. Farrell, J. Brunton, E. Costello, E. Donlon, S. Trevaskis, and S. Eccles, "Teaching online is different: Critical perspectives from the literature," Dublin City University, 2019, doi: 10.5281/zenodo.3479402
- [10] C. Carrillo and M. A. Flores, "COVID-19 and teacher education: A literature review of online teaching and learning practices," *Eur. J. Teacher Educ.*, vol. 43, no. 4, pp. 466–487, Sep. 2020, doi: 10.1080/02619768.2020.1821184.
- [11] M. A. Moghli and M. Shuayb, "Education under Covid-19 lockdown: Reflections from teachers, students & parents," Center for Lebanese Studies, 2020. [Online]. Available: <https://tinyurl.com/dt56usxs>
- [12] United Nations Educational, Scientific and Cultural Organization International Institute for Higher Education in Latin America and the Caribbean (UNESCO-IESALC), "COVID-19 and higher education: Today and tomorrow. Impact analysis, policy responses and recommendations," UNESCO-IESALC, 2020. [Online]. Available: <https://tinyurl.com/ne73vphc>
- [13] M. P. Murphy, "COVID-19 and emergency eLearning: Consequences of the securitization of higher education for post-pandemic pedagogy," *Contemporary Secure. Policy*, vol. 41, no. 3, pp. 492–505, Apr. 2020, doi: 10.1080/13523260.2020.1761749.
- [14] N. Senthil. "Where does higher education go from here?" Al-Fanar Media. <https://www.al-fanarmedia.org/2020/05/future-higher-education-go-from-here/> (accessed Oct. 13, 2021).
- [15] United Nations Educational, Scientific and Cultural Organization. "Startling digital divides in distance learning emerge." UNESCO. <https://en.unesco.org/news/startling-digital-divides-distance-learning-emerge> (accessed Oct 13, 2021).
- [16] A. Jawabreh. "Palestine's universities scramble to move to online learning during coronavirus shutdown." Al Fanar Media. <https://tinyurl.com/27frrews> (accessed Oct. 13, 2021).
- [17] United Nations Educational, Scientific and Cultural Organization. "COVID-19 in Palestine: How distance learning will help student continue education." UNESCO.

- <https://tinyurl.com/yvm5sh3h> (accessed Oct 13, 2021).
- [18] T. Obaid, R. Abdaljawad, and M. Abumandil, "Higher education under quarantine: What insights Palestinian institutes can share?" SSRN, 2020. Available: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3665685
- [19] P. Sahu, "Closure of universities due to coronavirus disease 2019 (COVID-19): Impact on education and mental health of students and academic staff," *Cureus*, vol. 12, no. 4, e7541, Apr. 2020, doi: 10.7759/cureus.7541.
- [20] E. Beaunoyer, S. Dupéré, and M. J. Guitton, "COVID-19 and digital inequalities: Reciprocal impacts and mitigation strategies," *Computers in Human Behavior*, vol. 111, p. 106424, Oct. 2020, doi: 10.1016/j.chb.2020.106424.
- [21] United Nations Educational, Scientific and Cultural Organization Global Education Coalition (UNESCO-GEC), "Supporting learning recovery one year into COVID-19: The Global Education Coalition in action," UNESCO-GEC, Doc. code: ED/GEC/2021/01/REV, Mar. 2021. [Online]. Available: <https://unesdoc.unesco.org/ark:/48223/pf0000376061>
- [22] International Telecommunication Union (ITU), "Measuring digital development: Facts and figures 2020," ITU, 2020. [Online]. Available: <https://www.itu.int/en/itu-d/statistics/pages/facts/default.aspx>
- [23] Miniwatts Marketing Group. "Internet world stats: Usage and population statistics." <https://www.internetworldstats.com/asia.htm#links> (accessed Oct. 13, 2021).
- [24] G. Tam and D. El-Azar. "3 ways the coronavirus pandemic could reshape education." World Economic Forum. <https://tinyurl.com/366x59ss> (accessed Oct. 13, 2021).
- [25] M. A. Almaiah, A. Al-Khasawneh, and A. Althunibat, "Exploring the critical challenges and factors influencing the E-learning system usage during COVID-19 pandemic," *Educ. and Inf. Technol.*, vol. 25, pp. 5261–5280, May 2020, doi: 10.1007/s10639-020-10219-y
- [26] G. Muhammad, F. M. Albejaidi, and R. Akhtar, "Challenges in development of eLearning systems in higher education of the developing countries," *London J. Res. in Humanities and Social Sciences*, vol. 17, no. 2, pp. 13–32, July 2017. [Online]. Available: <https://research.journalspress.com/index.php/socialscience/article/view/91>
- [27] S. G. Huber and C. Helm, "COVID-19 and schooling: evaluation, assessment and accountability in times of crises: Reacting quickly to explore key issues for policy, practice and research with the school barometer," *Educ. Assessment, Evaluation and Accountability*, vol. 32, no. 2, pp. 237–270, June 2020, doi: 10.1007/s11092-020-09322-y. [Online]. Available: <https://link.springer.com/article/10.1007%2Fs11092-020-09322-y>
- [28] B. Philip, K. H. Tan, and W. Jandar, "Exploring teacher cognition in Malaysian ESL classrooms," *3L: Lang., Linguistics, Literature: The Southeast Asian Journal of English Language Studies*, vol. 25, no. 4, pp. 156–178, 2019, doi: 10.17576/3L-2019-2504-10. [Online]. Available: <https://ejournals.ukm.my/3l/article/view/35892>
- [29] N. A. Razak, H. Alakrash, and Y. Sahboun, "English language teachers' readiness for the application of technology towards fourth industrial revolution demands," *Asia-Pacific J. Inf. Technol. and Multimedia*, vol. 7, no. 2, pp. 89–98. [Online]. Available: <https://tinyurl.com/4rjwz69k>
- [30] R. Faek. "Coronavirus outbreak forces Arab countries to consider long-ignored online education." Al Fanar Media. <https://tinyurl.com/wr77th4w> (accessed Oct. 13, 2021).
- [31] S. Al Senaidi, L. Lin, and J. Poirot, "Barriers to adopting technology for teaching and learning in Oman," *Computers and Educ.*, vol. 53, no. 3, pp. 575-590, Nov. 2009, doi: 10.1016/j.compedu.2009.03.015. [Online]. Available: <https://doi.org/10.1016/j.compedu.2009.03.015>
- [32] B. Hamamra, N. Alawi, and A. K. Daragmeh, "Covid-19 and the decolonisation of education in Palestinian universities," *Educ. Philos. and Theory*, vol. 52, pp. 1-14, Jan, 2021, doi: 10.1080/00131857.2020.1865921. [Online]. Available: <https://doi.org/10.1080/00131857.2020.1865921>
- [33] T. Hijjawi, "Towards the autonomisation of university student: Evaluation of Palestinian university students' perception and practice of ICT in foreign languages' learning," in *Online J. Distance Educ. and E-learning*, vol. 1, no. 2, pp.

- 37–44, 2013. [Online]. Available: <https://staff-old.najah.edu/sites/default/files/v01i02-05.pdf>
- [34] Abdulla Al Ghurair Foundation for Education, “Online learning in the Arab world: An educational model that needs support,” Policy brief no. 1, Mar. 2020. [Online]. Available: <https://tinyurl.com/fkvpncp>
- [35] Gao, L. X., & Zhang, L. J. (2020). Teacher learning in difficult times: Examining foreign language teachers’ cognitions about online teaching to tide over COVID-19. *Front. Psychol.*, vol. 11, Sept. 2020, Art. No. 549653, doi: 10.3389/fpsyg.2020.549653. [Online]. Available: <https://www.frontiersin.org/articles/10.3389/fpsyg.2020.549653/full>
- [36] K. Y. K. Wen and H. T. Kim, “ESL Teachers’ intention in adopting online educational technologies during COVID-19 pandemic,” *J. of Educ. and e-Learning research*, vol. 7, no. 4, pp. 387–394, Nov. 2020, doi: 10.20448/journal.509.2020.74.387.394
- [37] S. Khatoony and M. Nezhadmehr, “EFL teachers’ challenges in integration of technology for online classrooms during Coronavirus (COVID-19) pandemic in Iran,” *Asian J. of English Lang. and Pedagogy*, vol. 8, no. 2, pp. 1–16, 2020. [Online]. Available: <https://ojs.upsi.edu.my/index.php/AJELP/article/view/3523>
- [38] S. Rixon, “British Council survey of policy and practice in primary ELT worldwide,” D120, British Council, 2013. [Online]. Available: <https://tinyurl.com/yhmn48pa>
- [39] R. N. Kayed, “Integrating e-learning into higher education,” *Palestinian J. Open Educ.*, vol. 4, no. 7, Art. No. 6. [Online]. Available: <https://tinyurl.com/24ctd6t2>
- [40] M. B. Miles and A. M. Huberman, *Qualitative data analysis: An expanded sourcebook*, (2nd ed.). Thousand Oaks, CA, USA: SAGE, 1994.
- [41] R. E. Stake, *Multiple case study analysis*. New York, NY, USA: The Guilford Press, 2006.
- [42] R. K. Yin, *Case study research and applications: Design and methods*, (6th ed.). Thousand Oaks, CA, USA: SAGE, 2018.
- [43] B. Flyvberg, “Five misunderstanding about case-study research,” *Qualitative Inquiry*, vol. 12, no. 2, pp. 219–245, April, 2006, doi: 10.1177/1077800405284363. [Online]. Available: <https://journals.sagepub.com/doi/10.1177/1077800405284363>
- [44] D. Remenyi, B. Williams, A. Money, and E. Swartz, *Doing research in business and management: An introduction to process and method*. London, UK: Sage, 1998.
- [45] J. Corbin and A. Strauss, *Basics of qualitative research*, (4th ed.). Thousand Oaks, CA, USA: SAGE, 2015.
- [46] V. Braun and V. Clarke, “Thematic analysis,” in *APA handbook of research methods in psychology, Vol. 2: Research designs: Quantitative, qualitative, neuropsychological, and biological*, H. Cooper, P. M. Camic, D. L. Long, A. T. Panter, D. Rindskopf, and K. J. Sher, Eds. Washington, DC, USA: American Psychological Association, 2012, pp. 57–71, doi: 10.1037/13620-000. [Online]. Available: <https://content.apa.org/PsycBOOKS/toc/13620>
- [47] H. R. Bernard and G. W. Ryan, “Finding themes,” in *Analyzing qualitative data: Systematic approaches*, H. R. Bernard, A. Wutich, and G. Ryan, Eds. Thousand Oaks, CA, USA: SAGE, 2016, pp. 101–124.
- [48] S. J. Taylor, R. Bogdan, and M. DeVault, *Introduction to qualitative research methods: A guidebook and resource*. Hoboken, NJ, USA: John Wiley & Sons, 2015.
- [49] E. Guba and Y. Lincoln, *Effective evaluation*. San Francisco, CA, USA: Jossey-Bass, 1981.