E-Learning Perspectives in Canadian Higher Education Through Qualitative Study Among University Teachers and Students

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Abstract

E-learning or online learning is a broad concept. The advancements in information communication technology, especially the Internet, created infrastructure to boost e-learning where it ultimately became a tool to enhance the teaching and learning experience beyond the conventional classroom peripheries. Accordingly, the current study aims to accomplish five research objectives: to explore the perceived challenges and advantages of e-learning among university teachers; to explore how university teachers experience and interpret the impact of e-learning on their teaching methodologies and student engagement; to understand the challenges and advantages of e-learning for students and to examine how students perceive the impact of e-learning on their learning experiences and academic performance. In order to achieve those objectives, this research uses ontological relativism constructionism epistemologically, uses an interpretivism theoretical lens, and adopts phenomenology as the methodology. The research sample consists of university lecturers and students who are residents of Canada and participate in online lectures. The study used the snowball sampling method to recruit participants. The researcher conducted twelve online interviews covering 344.53 minutes through Zoom and MS Teams platforms. After the thematic analysis, the research develops four main themes: e-learning experience, e-learning comes with challenges, e-learning generates benefits and methodologies that keep e-learning more productive and eventually state the matches and mismatches of in perspectives between teachers and students regarding e-learning.

Keywords: e-learning, university lecturers, students, phenomenology, interviews,

Chapter 1: Introduction

Background of the study

E-learning or online learning refers to the asynchronous transfer of knowledge through electronic modes to the learners (Sweileh, 2021; Wang et al., 2021). Turnbull et al. (2019) further explain e-learning as a mode of teaching and learning through computer software using various learning management systems like Moodle, Blackboard, and WebCT. Here, educators connect with learners to disseminate knowledge and to evaluate and track their progress via various learning tools. E-learning platforms often include tools for collaboration and communication between students and instructors (Ozornina et al., 2022). The advancements in information communication technology, especially the Internet, created infrastructure to boost e-learning. It ultimately became a tool to enhance the teaching and learning experience beyond the conventional classroom peripheries (Chugh, 2010).

The use of digital technologies in teaching and learning has become a sought-after technique in modern education. It facilitates flexible scheduling and access to resources despite physical availability (Rossett & Kendra, 2001; Masalimova et al., 2024). Although the impact of COVID-19 is critical, educational institutions have been using e-learning as a supplementary educational tool even before the pandemic. Students use e-learning to reinforce their knowledge and/ or train themselves. However, COVID-19 has substantially affected the progress of e-learning. COVID-19 has reshaped face-to-face, physical classroom education and supplemented and, in certain situations, replaced it with e-learning (Masalimova et al., 2024).

The COVID-19 pandemic was a turning point in many industries. Especially the pandemic introduced radical changes to education industries. Many universities and other academic institutions worldwide have transformed their teaching and learning models from physical on-

campus to online learning to continue their services. Thus, the COVID-19 pandemic lockdown paved the path for education establishments to move from conventional teaching mechanisms and revolutionize their education approaches. Consequently, many countries moved to e-learning, which became the primary lecture delivery method (Singh et al., 2021). In this era of new normalcy, e-learning has evolved into an indispensable educational platform and mode of lecture delivery, which universities and other academic establishments worldwide frequently use.

However, in high-income countries, the concept of online learning is not novel (Palvia et al., 2018), while low-and-medium-income countries are slowly catching up (Palvia et al., 2018; Islam et al., 2020). Regarding the Canadian context, scholars have researched e-learning and its different aspects. Accordingly, Canadian students' e-learning experience can be adversely affected by their perceived technical skill prerequisites and information overload. Moreover, minimum social interactions, class structure and imprecise communication can also impact the perceived learning of Canadian students (Conrad et al., 2022).

In order to digitalize Canadian higher education institutions, they must pay attention to methodically revamping students' learning experience and amend orthodox pedagogical practices in the online context. Canadian academic decision-makers must also use instructional communication elements in online learning systems (Farhana et al., 2019; Conrad et al., 2022). Wong and Jeganathan (2020) suggest that future researchers consider additional factors that explain Canadian students' satisfaction with and intention to use e-learning, especially personal factors such as student and lecturer motivation, values and personalities. Therefore, more studies must be conducted in the Canadian context on e-learning to deeply understand the university students' and teachers' perspectives regarding e-learning and how those perspectives match or

mismatch. Hence, the current study intends to study Canadian university teachers' and students' e-learning perspectives through a qualitative study.

Students' perspectives regarding e-learning

E-learning is a globally recognized method of creating learning contexts that enable students to engage in their studies at the chosen schedule, time, and place (Hillenburg et al., 2006; Reynolds et al., 2007). E-learning prepares students to enter the future workforce confidently as it develops students' digital skills by familiarizing them with the technology (Akcil & Bastas, 2020). Besides, compared to conventional classroom learning, e-learning is more cost-saving for students (Thapa et al., 2021) as students need not spend money on commuting, textbooks or accommodation. Consequently, e-learning gives more technology-enhanced learning experiences and makes higher education more affordable and adaptable for students (Abramova & Shishmolina, 2022; Prevalla et al., 2022).

Meanwhile, understanding students' attitudes toward e-learning has become a mandatory factor during this period of radical educational changes (Masalimova et al., 2024). Students' motivation, degree of engagement and education performance may depend on their attitudes toward e-learning (Akcil & Bastas, 2020; Thapa et al., 2021; Prakasha et al., 2022; Monib, 2024; Uyar, 2023). Moreover, as e-learning is becoming a solid mode of education, it is paramount for educators, policymakers, and researchers to understand students' attitudes toward e-learning better. They can develop appropriate guidelines and instructional programs to facilitate e-learning (Masalimova et al., 2024). Akcil and Bastas (2020) highlight that the rapid changes in technology and educational practices make conducting more ongoing research on changing students' attitudes essential.

Different studies highlight contradicting ideas regarding the students' perspectives regarding e-learning. Consequently, more research must be conducted to understand and deeply explore students' perspectives. Even in the Canadian context, few studies have been done to explore university students' perspectives on online learning. The current study aims to bridge this knowledge gap.

University teachers' perspectives regarding e-learning

Most of the teachers have not previously delivered an online course. Consequently, they naturally feel uneasy when they deal with obscure contexts, creating exorbitant stress among teachers (Gómez et al., 2022). Most of the instructors had to shift to online learning without receiving comprehensive training and required pedagogical and infrastructural facilities to conduct an e-learning course (Bozkurt & Sharma, 2020; García-Peñalvo et al., 2020; Muller & Goldenber, 2020). However, as most universities have shifted their curriculum to online platforms from face-to-face teaching and learning, university professors' feedback has changed to be more optimistic, conveying appreciation for students' performance. Professors tend to encourage students to achieve higher academic development and assist them in experiencing a better learning environment (Rodríguez-Galván et al., 2022). This indicates that e-learning affected university professors' teaching methods.

In online learning, keen attention must be given to the design of the learning platform. Accordingly, here, university teachers work on the supposition that learners have self-directed characteristics. Still, all the learning resources must be precisely articulated and organized to facilitate learning in the presence or absence of the lecturer (Cohen, 2021). Assessments also play a critical role as an indicator of the quality standard of the online program. Based on the online assessment results, E-learning facilitators assess and alter the course content and instructional

guidelines. Many academics use standard frameworks such as Bloom's Taxonomy to develop course content, how learners interact with course material and online assessment methods (Herrington et al., 2014). All the aspects of online course assessment must enhance the effectiveness of teaching and learning.

Factors affecting matches and mismatches in perspectives between teachers and students

Khoshsima et al. (2020) highlight that teachers and students have similar views about the flexibility of e-learning as both parties believe e-learning facilitates convenient scheduling. However, both students and professors consider time to be a crucial factor when developing an online course. Most students expect their online facilitator to be available 24/7. So, teachers have to spend extensive hours on online learning. In contrast to classroom lecture delivery, teachers spend many hours giving feedback on students' e-learning contributions. Students also convey similar problems about online course time commitments as they also complete many tasks in e-learning setups. Many students initially thought that online courses were more accessible to complete. Nonetheless, after taking an e-learning course, they find it excessively overwhelming, with too many tasks to complete (Collins et al., 2014). However, Liu (2023) states that only teachers perceive evaluating students' academic improvement and how they engage in online discussions as challenging.

Liu (2023) highlights that both students and teachers have similar perceptions that online lectures are more suitable for theory-based courses, online classes give more freedom for teachers and students, sharing documents is more convenient in e-learning setups, it minimizes time to transportation, and e-learning caters to larger audiences. Additionally, teachers and learners have similar perceptions regarding the disadvantages of e-learning. Accordingly, both of them agree that e-learning has changed their lifestyles and harmed their psychological well-being, making

them unsuitable for courses that require clinical training; also, the effectiveness of e-learning depends on internet speed.

Thus, teachers and students have similar or different perceptions regarding the different aspects of e-learning. Not many studies have explored how university teachers' and students' perceptions are similar or different in Canada or globally. Therefore, there is considerable room for further research in Canadian higher education to examine University Teachers' and Students' E-leaning Perspectives.

Research Gap

Many educational institutions worldwide used e-learning as their primary mode of education during the pandemic. It has its distinct benefits and challenges for students and educators. The past studies investigate how e-learning influences student engagement, academic performance, satisfaction, and challenges encountered, such as reduced social interaction and technical difficulties. Similarly, university teachers experience benefits and challenges adapting to online teaching and designing e-learning platforms. On the other hand, many past studies present sundry correspondences and discrepancies in the perspectives of university teachers and students toward e-learning. For example, professors and students have similar perceptions that online lectures are more suitable for theory-based courses (Liu, 2023) and not efficacious for specific disciplines that require practical engagement (Barbu et al., 2022). It is becoming increasingly exhausting for professors to work long hours preparing for online classes (Barbu et al., 2022). Meanwhile, students think professors put less time and effort into preparing online lessons as students learn those course materials independently (Otter et al., 2013).

When Canadian post-secondary education institutions emerge from lockdown restrictions, they hold a historically distinctive position to assess how e-learning has facilitated and hindered the education system and how the impact might be significant. According to the analysis of open-ended comments of the Canadian Digital Learning Research Association 2022 Spring National Survey, students in Canada marginalized by race, class, and location have faced challenges of access to online and hybrid learning, students' experiences and anticipations of online learning denote a need for support and flexibility, course design and pedagogy are critical factors to assure equity, diversity and inclusion in online and/or hybrid learning. These findings highlight mixed reactions: benefits and challenges of e-learning in the Canadian education system (Ikebuchi, 2023). Therefore, there is a unique need for further studies about e-learning in the Canadian context.

Additionally, in the Canadian context, few studies explore e-learning. Many studies are quantitative research; therefore, there is a definite need for more in-depth qualitative studies on e-learning in Canada. Many scholars (e.g. Abdulkareem et al., 2022; Fonseca et al., 2023; Monib, 2024; Sánchez et al., 2023) have suggested that potential researchers conduct qualitative research to understand university teachers' and students' e-learning experience, perspectives and attitudes. Past studies suggest using qualitative research with in-depth interviews, observations and snowball sampling techniques to comprehend stakeholders' e-learning perspectives better and reveal more (Tan et al., 2023; Trand, 2023). Accordingly, this research focused on exploring the factors contributing to shared and divergent perspectives between students and teachers, emphasizing the need for further studies to optimize e-learning in Canadian higher education.

Objective of the study

This research has the following research objectives;

- To explore the perceived challenges and advantages of e-learning among university teachers.
- To explore how university teachers experience and interpret the impact of e-learning on their teaching methodologies and student engagement.
- To understand the challenges and advantages of e-learning for students.
- To examine how students perceive the impact of e-learning on their learning experiences and academic performance.
- To explore the factors contributing to the matches and mismatches in perspectives between teachers and students regarding e-learning.

The structure of the thesis

The thesis starts with the introduction chapter, which discusses the background of the research, the research gap, and the study's objectives and scope. The second chapter is the literature review, which critically evaluates the existing studies done in e-learning. The third chapter focuses on the research methodology that mainly explains the study's philosophical position, sampling, data collection and analysis. The fourth chapter presents the main findings of the research, and the fifth chapter develops the discussion and presents the study's conclusion.

Chapter 2: Literature Review

The perceived challenges and advantages of e-learning among university teachers

University teachers are vital stakeholders in the e-learning process. Past studies have explored their perceived challenges and advantages in this environment. Thus, studies highlight that with the shift to e-learning, teachers are overwhelmed with work, which creates tension and confusion among them regarding their workload (Saenen et al., 2024). University teachers felt exhausted with the piling amount of work that included working long hours to prepare for online lessons one after another. They frequently suffer from headaches and back pains because they must be inundated with carefully preparing for their online classes (Barbu et al., 2022).

Moreover, teachers experienced inflated stress because they had to shift from their orthodox classroom teaching to an unknown online platform where they had to pass contents to students via virtual campus. Until university teachers had to engage in online education, they perceived ICT as only supporting teaching-learning. However, university lecturers felt it was overwhelming and stressful because the shift to an e-learning context required the entire teaching and learning process to be based on ICT platforms. University teachers had to use novel pedagogy applications such as Edmodo, Teams, Zoom, Moodle, etc., with which they were not very familiar (Gómez et al., 2022; Moldovan et al., 2024). These changes made the university lecturers' role more demanding.

University professors frequently mention logistical impediments as a perceived challenge of an e-learning environment. These barriers include internet connection issues and technological breakdowns that mitigate the effectiveness of online teaching (Palomares et al., 2021; Karasneh et al., 2021; Moldovan et al., 2024). Accordingly, the effectiveness of the pedagogical shift from physical learning to e-learning was affected by the poor infrastructure, costs and time constraints.

These perceived obstacles, coupled with university teachers' attitudes towards online teaching, willingness to embrace new technology, and prior experience, were considered predictors of perceived challenges to adapting e-learning (Karasneh et al., 2021).

Many studies (e.g. Palomares et al., 2021; Moldovan et al., 2024) highlight that professors mention that the inability or limited opportunities to interact and connect freely with students is a significant downfall of e-learning. When professors witness minimum interaction and attention from students, and students are not enthusiastic, disinterested, and absent, it adversely affects teachers' commitment to e-learning. The situation worsens when professors cannot exchange information with students because participants are reluctant to open their webcams, there is a minimum amount of audio, and teachers receive limited nonverbal feedback and cues from students (Moldovan et al., 2024). It is difficult for facilitators to monitor the students during their lessons as students' cameras are turned off (Palomares et al., 2021). Therefore, teachers perceive it hard to manage an online classroom because students suddenly leave the online lesson without staying for the entire lecture (Atashinsadaf et al., 2024). Accordingly, professors grapple to run their virtual classes smoothly, ensure delivery, and complete the syllabus appropriately (Fonseca et al., 2023).

Many professors had to revise their teaching prioritization, methods, and strategies to accommodate the online learning process. Facilitators find it challenging to modify teaching aids and materials, such as presentation slides, case studies, and others, to fit the e-learning setup (Palomares et al., 2021; Moldovan et al., 2024). Furthermore, professors perceive questionable education integrity and quality assurance as challenges in e-learning. It is difficult to evaluate if students complete tasks as instructed and whether they do them individually or in groups (Palomares et al., 2021). Additionally, growing concerns regarding plagiarism attempts among

students who connect to the exams also create stressful situations for university teachers (Gómez et al., 2022).

As reported in past studies, many university teachers had no prior experience in online teaching. Consequently, they felt it inconvenient to cope with unfamiliar circumstances in a virtual learning environment (Gómez et al., 2022). Besides, many professors need help with online deliveries because they need more training in using IT applications. Therefore, professors are reluctant to shift from conventional teaching to e-learning (Aouissi, 2024). Some studies highlight that lecturers initially face challenges as they need time to adapt to more tools. However, lecturers demonstrated higher literacy and found using the already familiar tools accessible, and they aspire to utilize e-learning even after the pandemic (Fonseca et al., 2023).

In the initial phase, university professors were imprecise as there was no idea how long teaching might continue online. They struggled to acclimate to the new work context as they engaged in e-learning scenarios at home, where their whole family was present. The family atmosphere is considered a perceived e-learning challenge (Karasneh et al., 2021; Moldovan et al., 2024). Past studies mention that professors had to face domestic misunderstandings as they spent too much time in front of their computers even after finishing a lecture as they had to prepare for the next online session, neglecting their personal and household commitments (Barbu et al., 2022). Consequently, studies state that the e-learning mode causes work-life imbalance among professors (Palomares et al., 2021).

However, some studies mention that some lecturers suggest they want to continue online learning in the future because they believe online teaching has improved their work-life balance. The instructors can be in the comfort of their homes while teaching and delivering their lessons to students. They consider online learning to be an expected standard and no longer challenging than

traditional on-campus delivery (Chesterton et al., 2022). Some professors believe e-learning reinforces human resource utilization by preventing occupational burnout among university teachers and staff. Thus, compared to the overloaded tasks faculty had to engage in, they claim that online education can offer more serenity and motivation for them (Zarifsanaiey et al., 2024).

These positive attitudes of professors towards e-learning can be recognized as advantages of virtual education practices. Many professors claim they are prepared for online teaching and are comfortable using online platforms to continue communication with students (Karasneh et al., 2021). Some professors perceive e-learning as accessible, flexible, convenient, engaging, and preserving economic resources. Accordingly, they claim that online learning provides easy access to lessons and course outlines where professors can publish their materials for students' perusal. They believe online education enhances student-teacher and student-student interactions (Palomares et al., 2021).

University teachers' experience and interpretation of the impact of e-learning on their teaching methodologies and student engagement

Past studies explain how university teachers experience and interpret the impact of e-learning on their teaching methodologies and student engagement. Accordingly, studies mention that professors understand that students are most likely to undergo a study-life imbalance (Palomares et al., 2021) that may affect their engagement in e-learning. Professors in e-learning have changing roles where they are perceived not only as instructors but also as mentors (Alexa et al., 2022). Professors believe they must play four leading roles in online teaching: facilitate students to obtain knowledge and skills, share structured expertise and skills with students, boost students' comprehension through proper and sufficient interaction, and develop students'

understanding and competencies (Nguyen & Kember, 2023). Studies mention that professors expect to maintain more approachable, authentic, and open communication with students and treat students' concerns with humility and equality (Saenen et al., 2024).

Studies have shown that pre-recorded lectures are the most common lecture delivery method in an e-learning context. Most professors believe students must independently learn at least 50 percent of the course material. Accordingly, professors use various methods to evaluate whether students have achieved the learning outcomes and their degree of engagement in e-learning. Professors use in-video quizzes, tests and assignments, peer reviews, spontaneous attendance marking, sign-in, and system-compliant statistics to check the degree of students' involvement. Studies mention that these methods are different assessment options that professors currently use in online teaching (Li et al., 2022). Studies claim that university instructors utilize learning management systems to make learning resources available to students. However, they barely use other e-learning environment tools such as communication, assessment, etc.; therefore, they cannot develop a more robust interaction with their students and promote solid student learning (Jabali, 2021). Here, regular breakdowns of the distance learning websites affect professors. Consequently, they tend not to publish any activities or scientific tests on these sites (Aouissi, 2024).

Past scholars have mentioned that university teachers lack the motivation to generate creative material and develop innovative courses for e-learning setups. Consequently, they end up delivering uniform and monotonous lectures. On the other hand, in the e-learning environment, professors have limited ability to monitor students' contributions actively and give them appropriate assignments, which results in mitigation of students' effective learning. Thus, professors must have reasonable and accurate planning, designing, implementation and constant

observation of student activities to make e-learning education more effective and productive (Zarifsanaiey et al., 2024).

Students' absence from online lectures or dropping and skipping after connecting to the lecture is a severe issue in e-learning. Therefore, past studies state that university lecturers must actively preserve students' attention during online classes. Professors must utilize novel teaching strategies like online debates and brainstorming sessions. Additionally, professors can use group projects to maintain the student-teacher and student-student interactions in the e-learning environment. Professors can use platforms, applications and tools to observe the student's progress in accomplishing given tasks and how they actively perform those assignments (Barbu et al., 2022). Studies further emphasize using more tools and methodologies to enhance interactions in virtual learning. Scholars point out the possibility of using tools such as Mentimeter, ScreenCasts, Zoom simultaneous rooms, Sway, Quizizz, Podcast, Microsoft Forms, Google Forms, URKUND, etc., to boost interaction with students and make them more satisfied with e-learning context (Fonseca et al., 2023). Though using tools is effective, professors must carefully select the tools they may use in a single session. Using more tools may be impossible because they risk losing focus on teaching and sharing knowledge. Hence, professors must carefully analyze and select the most appropriate tool(s) that best match the lecturer and accomplishment of syllabus objectives (Fonseca et al., 2023). Professors who use online sourcing have a higher impact on students' motivation and engagement (Singh, 2023).

Moreover, studies highlight that university professors must seriously consider the method of student evaluation in e-learning, and it is identified as a very susceptible topic in the e-learning setup (Fonseca et al., 2023). Evaluations can decide the quality of e-learning courses. Therefore, designing accurate and appropriate evaluation tools based on Bloom's taxonomy and adopting an

active approach to learning and teaching is crucial in virtual education. Course evaluations must create an inducing and interactive e-learning environment that motivates students to learn independently and creatively. Studies state that professors must provide constant feedback to students (Mohammed et al., 2022). However, most students claim that they refer to textbooks during their online assessments. This malpractice suggests that professors must adopt vigorous theory assessment mechanisms and consider more about the role of online proctoring in MCQ tests (Shanmugam et al., 2023).

Challenges and advantages of undergraduate students in universities associated with e-learning

Past studies emphasize the different challenges and advantages undergraduate students face related to e-learning. Many studies mention the health issues students encounter due to e-learning. In most cases, students' daily routine consists only of attending online classes where students feel overwhelmed by the situation. The longer the duration students engage in e-learning, the more they face multiple health issues (Shanmugam et al., 2023; Tan & Lin, 2023). Students' physical and psychological health starts diminishing, and most students suffer from diseases such as eye strain and cervical stiffness (Li & Che, 2022; Kumar et al., 2023). Screen time fatigue was a significant issue students faced due to spending long hours in front of computer screens (Tan & Lin, 2023). University students start showing various degrees of anxiety and depressive symptoms as side effects of their engagement in e-learning. Factors such as the tedious online lecture method, stress, students' fear of online examinations, less motivation and a significant reduction in productivity in an e-learning environment are identified as some reasons that cause depression

among students. Female students tend to experience extreme depression compared to their male counterparts (Azmi et al., 2022; Li & Che, 2022).

Another challenge past studies point out is that students perceive e-learning as limiting their interactions with others, creating social isolation for students. Studies report that some students even felt anxious to meet their friends (Abdulkareem et al., 2022; Tan & Lin, 2023; Abbas et al., 2024; Masalimova et al., 2024). Students experience a lack of motivation because they feel disconnected from their everyday student life with virtual learning (Alexa et al., 2022). Furthermore, studies mention that it demands more resources to connect to online lectures. For example, students must spend more on data, increasing their data costs. Therefore, it makes it more expensive for students (Abdulkareem et al., 2022; Monib, 2024) to actively participate in e-learning activities.

Furthermore, if students have unsatisfactory Internet and network connectivity, issues with the devices (camera/microphone), incapacity to use or connect to online platform instructed by the professor, do not have a continuous electricity supply, accessible learning devices, possess minimum technological competencies, and have an unfavourable domestic environment, their ability to productively participate in virtual lectures decreases (Bawaneh, 2021; Bharath et al., 2021; Khan et al., 2022; Mudzingiri et al., 2022; Perera & Abeysekera, 2022; Lodhi & Khalid, 2023; Tan & Lin, 2023; Abbas et al., 2024). The learning environment plays a significant role in moderating a student's academic excellence in online setups. When they have to study at home or in a dormitory, it adversely affects their capacity to reach higher academic performance (Li & Che, 2022). Studies mention that one downfall of e-learning is the decline in students' academic performance.

Past studies report that students often get demotivated and distracted while e-learning. During online classes, they find it challenging to maintain uninterrupted concentration after some time, where they easily divert their attention to other things like surfing web pages, being preoccupied with their surroundings, or playing games and spending time with social media (Alexa et al., 2022; Kumar et al., 2023; Lodhi & Kvhalid, 2023; Tan & Lin, 2023). Additionally, when there are lecture recordings, students tend to delay referring to those recorded lectures, eventually piling their study load. So, when students overuse recorded lectures in online learning, it leads students to procrastination and disengagement (Saenen et al., 2024).

Students experienced an accumulation of academic workload because they had to attend multiple online classes daily (Tan & Lin, 2023). Studies also mention that students feel overloaded with a trainload of individual homework and projects they must submit as a part of their online learning and evaluations. In certain situations, students must spend extended time and effort comprehending specific subjects (Alexa et al., 2022). Consequently, students had to undergo many hardships to shift to the e-learning context (Abdulkareem et al., 2022). Although these students have inherent digital skills, they still face complications in utilizing the advantages of e-learning and incorporating those benefits into their study routine (Alexa et al., 2022).

Though some studies report e-learning as inefficient and monotonous and deteriorates students' comprehension of lectures (Khan et al., 2022; Shanmugam et al., 2023), other studies claim e-learning is comfortable and facilitates flexible, efficient and self-directed learning (Lodhi & Khalid, 2023; Saenen et al., 2024). Accordingly, students can access course resources and lecture recordings from anywhere in the world, anytime they want, and that fits their personal/ work schedules, giving more flexibility to the students. Students consider these aspects to be the benefits of an e-learning environment. Students find it convenient to study at home and consider

it a cost-saver because it mitigates their transportation and accommodation expenditures. Plus, they embraced the additional time the e-learning setup brought them to spend with their families at home (Tan & Lin, 2023; Masalimova et al., 2024; Saenen et al., 2024). Hence, students consider e-learning a reasonable substitute for orthodox classroom learning. However, studies emphasize that e-learning cannot replace traditional practical courses, especially in medical, engineering and other courses where practical training is essential (Vražić et al., 2022).

Students' perception of the impact of e-learning on their learning experiences, academic performance, and overall satisfaction with the educational process

Studies perceive the transition to e-learning as a paradigm shift (Acheampong, 2023), where students' academic performance has declined because of e-learning (Li & Che, 2022). This shift has affected the students' involvement and engagement with learning and assessment. The instantaneous transformation to e-learning mode has changed the lecture delivery, assessment and evaluation techniques (Abed et al., 2022). Thus, students recognize the significance of videos in online learning setups. Even though they believe videos cannot be used as an alternative to text documents, they still like videos as they have a human element in this e-learning source. Students like their teacher's appearance in the videos. Many students use videos to refer to facts later to enhance their understanding, thus used to better prepare for exams (Perez-Navarro et al., 2021). Past studies emphasize the crucial role played by professors in moulding the students' perception of improvements in an e-learning environment. Social influence is another vital factor influencing the students' acceptance of online learning (Garrido-Gutiérrez et al., 2023).

They have encountered many challenges in online education that impact their academic performance (Acheampong, 2023). Additionally, studies claim that the average student's

satisfaction with e-learning is medium. Students' academic performance and success in online learning are affected by factors such as poor Internet connections, interrupting continuous access to online classes, the unfamiliarity of the e-learning setting, and an overwhelming amount of work (Bawaneh, 2021). At the same time, with challenges such as inferior electricity connections, resource shortage, below-average information technology skills, and unpropitious domestic contexts, students believed physical classroom lessons were more practical than online classes and virtual lessons negatively impacted their overall academic performance (Mudzingiri et al., 2022). Accordingly, studies identify the learning environment as a significant factor that moderates a student's academic excellence in online setups. When they have to study at home or in a dormitory, it adversely affects their capacity to reach higher academic performance (Li & Che, 2022).

Students found that the transformation to e-learning has taken away the pleasure of the learning process. Whereby their degree of enthusiasm and even sometimes academic results are affected by how the educational process evolves (Barbu et al., 2022). Societal influence, effort and performance expectancy, service and system quality, education and technical system, quality of the instructors, course content quality, and self-regulated learning are identified as factors affecting students' intention to use e-learning to complete their education and ensuring their satisfaction with the e-learning process (Mohammed et al., 2022; Perera & Abeysekera, 2022; Tran, 2023; Dai et al., 2024). Studies reveal that the positive impact and higher student satisfaction with e-learning (Maldonado et al., 2023) considerably contribute to elevated learning outcomes and academic success (Tran, 2023; Weerarathna et al., 2023). However, education practices are recognized as having the least impact on students' satisfaction with e-learning (Maldonado et al., 2023), while instructor's instructions and performance, system quality and course evaluation are considered

significant factors in ensuring students' satisfaction with e-learning (Mohammed et al., 2022; Dai et al., 2024).

Past studies also highlight that inadequate and irregular feedback students receive in virtual learning environments affects their academic performance and their willingness to complete potential assignments. Therefore, students expect constant and prompt feedback on their online assessments to ensure smooth academic progress (Saenen et al., 2024). Furthermore, students expect to develop personal connections with professors and peers. Poor interactions in the e-learning environment are considered one of the leading causes of dissatisfaction among students. When students experience minimum student-professor communication and limited support from professors, they feel dissatisfied with the e-learning process (Cole et al., 2014; Alexa et al., 2022). In addition, students find it hard to attend more than two online classes per day if a class is held for more than one hour and has an interval of less than 30 minutes between lectures (Atashinsadaf et al., 2024). Interestingly, some studies mention that the more time students engage in e-learning activities, the more they boost students' overall satisfaction (Ionescu et al., 2023).

Studies also underline that professors' online teaching patterns change significantly compared to face-to-face teaching. This style variation affects the student's ability to focus and concentrate throughout the online sessions (Alexa et al., 2022). Students mention that they prefer professors to use PowerPoint presentations, play instructional videos, and conduct interactive group discussions during online lectures (Atashinsadaf et al., 2024). When professors use e-learning tools with features that promote student interaction, it upholds students' satisfaction with the entire learning process. E-learning offers more space for students to collaborate in the learning process by adding additional learning sources that improve students' classroom participation and motivation (Singh, 2023). Students expect professors to use more examples and explanations

outside their research in their virtual classes to bring more understanding about the empirical aspects of the subject. Accordingly, students demand more practical teaching from professors when they conduct online lessons, which brings more external standpoints to dilate students' professional world perspectives (Saenen et al., 2024).

Research explains that e-learning sources have reinforced students' skills and grades (Singh, 2023). Studies also mention that students demonstrated higher grades on average for the e-learning activities during the COVID-19 crisis. Nonetheless, when shifting to sustainable online learning, there is an evident exacerbation in students' academic accomplishments (Alon et al., 2023). Research states that e-learning favours students who are less inclined to learn, putting more academically focused students at a disadvantage as e-learning requires more effort (Alexa et al., 2022). After all, the context and structure, including specific requirements, influence online learning quality (Abdullahu & Vokshi, 2023). Plus, e-learning is more suitable for specific disciplines than some other fields. For example, in a domain that demands hardware or lab equipment in the learning and teaching process, e-learning may be ineffective (Alexa et al., 2022), and in medical fields, e-learning fails to give standard clinical practices (Islam et al., 2022). Research points out that IT students are more willing to accept e-learning than students from the technology management field (Zabri et al., 2023).

While female students display more positive e-learning attitudes, male students demonstrate an avoidance e-learning attitude (Prakasha et al., 2022). Despite the various technical challenges, students' attitudes toward e-learning remain neutral, mixed or positive (Vražić et al., 2022; ElGolli-Bennour et al., 2023; Rabiei et al., 2023; Sánchez & Karaksha, 2023; Yu et al., 2023; Atashinsadaf et al., 2024; Irwanto et al., 2024; Masalimova et al., 2024). Students believe they developed problem-solving skills, increased subject knowledge, personal growth, and

positive emotions because of e-learning (Yu et al., 2023). However, studies also mention that e-learning is less effective than traditional classroom face-to-face learning in improving students' practical skills (Abdulkareem et al., 2022; Sánchez & Karaksha, 2023; Abbas et al., 2024; Masalimova et al., 2024) and they demonstrate negative attitudes and perceptions toward e-learning (Abdulkareem et al., 2022; Güllü et al., 2024). Many studies emphasize that students prefer e-learning combined with face-to-face learning methods. Thus, hybrid or blended learning satisfies students more (Cole et al., 2014; Abdulkareem et al., 2022; Joji et al., 2022; ElGolli-Bennour et al., 2023; Monib, 2024) than using only e-learning.

Factors contribute to the matches and mismatches in perspectives between teachers and students regarding e-learning

There are matching and mismatching perspectives among professors and students regarding e-learning. Studies mention that professors claim they suffer from work-life imbalance, and they think students also suffer from study-life imbalance due to their engagement in e-learning (Palomares et al., 2021). Students are expected to allocate a substantial amount of time to e-learning activities. They either feel they must work additional hours because they cannot grasp the content taught during the online lectures or lecturers give extensive homework and projects, forcing them to commit more time to the learning process. Consequently, students become exhausted and inefficient with e-learning. Professors also face similar predicaments. They tend to work significantly more hours than before the introduction of e-learning. With the transition to e-learning, teachers, too, have spent more hours preparing resources for online lecture sessions or seminars or correcting and giving feedback for students' assignments (Barbu et al., 2022). The most remarkable difference in perception between students and professors should be the effort and

amount of time professors invest in teaching online classes. Students think professors put less time and effort into preparing online lessons as students learn those course materials independently. Instead, students presume that professors spend more time and effort preparing physical lectures. Students undervalue the professors' role in e-learning (Otter et al., 2013).

Past studies highlight that compared to professors' perceptions, students tend to recognize online lectures as more self-directed, and students are ready to teach themselves. Students who follow virtual courses feel more disconnected from their peers and professors than professors think them to be. On the other hand, professors perceive their role as more crucial to the success of online courses than students do (Otter et al., 2013). Furthermore, a perception gap exists between how students perform efficiently and how professors assume students' efficiency is insufficient to comprehend the concepts taught in online classes. Professors have an entirely inaccurate impression regarding students' preferred task completion method and interactional demands during the initial emergency e-learning period (Barbu et al., 2022). Lecturers also believe that students encounter disadvantages with online learning lecture deliveries compared to physical classroom learning. However, despite their understanding that e-learning adversely impacts students' comprehension of subject matters, they are still willing to continue with some e-learning components (Chesterton et al., 2022). Meanwhile, some studies mention that even students showed interest in continuing online lectures after the COVID-19 lockdown period (Khan et al., 2022). Nonetheless, other studies mention that both students and professors prefer face-to-face lectures over e-learning, and both parties believe the blended learning format is effective for instructional delivery (Joji et al., 2022; ElGolli-Bennour et al., 2023).

Both professors and students agree that e-learning is not efficacious for specific disciplines that require practical engagement, such as laboratory tests (Barbu et al., 2022). Professors prefer

to use learning management systems (LMS) to share course materials with students, and students also agree with the professors' interest in using LMS to retrieve course resources (Jabali, 2021). Both students and professors mention that they consider video animations, virtual simulations, contests and attention-to-detail tests as the most productive teaching strategies in an online context. Students perceive that professors must provide pragmatic examples, use graphical diagrams, and give students more summaries to expedite the students' capacity to remember content learned in online lectures (Barbu et al., 2022). Both students and professors use pre-recorded lectures more often. While students gradually increase the use of online discussion forums and Q&A sessions, professors gradually decrease the use of live streaming of lectures (Li et al., 2022). More professors and less number of students perceive that recorded lectures cause procrastination and pile up more work for students. Meanwhile, more students and no professors support coherent and rightly available feedback and dynamic evaluation methods like debates to improve online learning (Saenen et al., 2024).

Chapter 3: Methodology

Ontology and Epistemology of the research

According to Creswell (2013), research philosophy means "the use of abstract ideas and beliefs that inform our research" (p. 16). Therefore, the research philosophy explains the assumptions the researchers have adopted about how they view the world (Saunders et al., 2012). Different scholars offer different paradigms that guide social research. Acknowledging paradigms is significant, as they guide the researchers' thinking and actions.

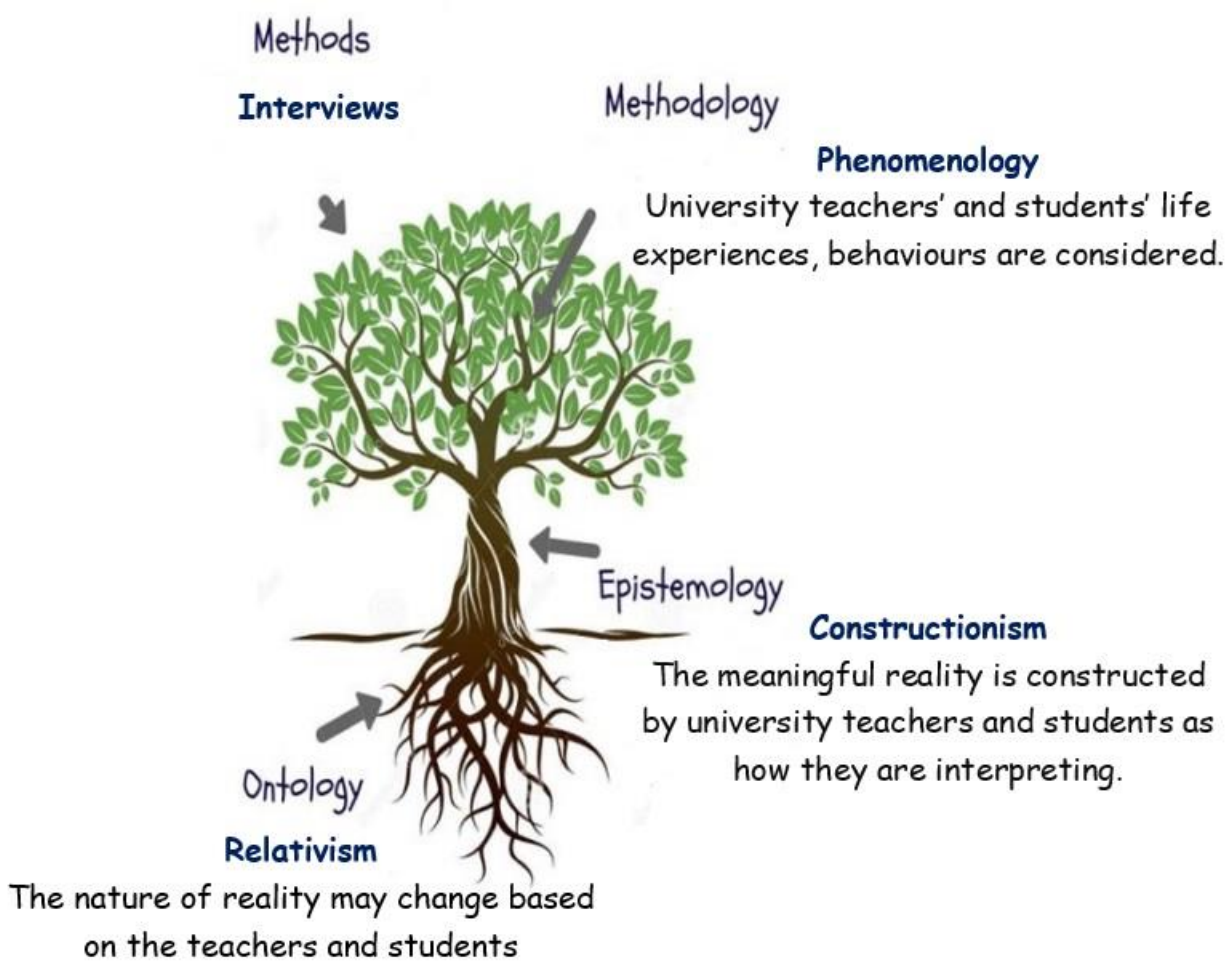
Ontology refers to the nature of reality (Creswell & Cresswell, 2018; Saunders et al., 2012; Crotty, 1998; Guba & Lincoln, 1998), whereas Epistemology explains the philosophical belief system about what is regarded as knowledge. Epistemology presents the nature of the relationship between the researcher and the participants (Guba & Lincoln, 1998). Relativists believe the world is different for different people as it depends on the experiences and perspectives of the people involved (Saunders et al., 2012). Moreover, when researchers view the world from an interpretivism lens, they tend to understand the dynamics among humans in their role as social actors, whereby people interpret their daily social roles depending on the meaning they attach to those roles (Saunders et al., 2012). Crotty (1998) explains that meaning is created out of something in constructionism.

Thus, this research develops based on the belief that the e-learning perspective depends on university teachers' and students' views, and it is interpreted using different social conditions. Therefore, the nature of reality may vary based on the university teachers and students. Accordingly, the research assumes that reality is subjective (ontological relativism), knowledge is co-created through social interaction (constructionism epistemology), and understanding requires

interpreting participants' experiences within their contexts (interpretivism). Figure 1 explains the research methodology tree of the current study.

Figure 1

Research methodology tree



Note. Developed by the author.

Sample and sampling method

The participants' inclusion/ selection criteria include the individuals who are residents of Canada, including the professors who conduct online lectures and students (local or international) who participate in online lectures. There were no gender, age, ethnicity, or other characteristics or affiliations that the researcher considered when selecting respondents to the study. The research involved no minors, as university students are all adult students.

The study used the snowball sampling method to recruit participants. Past studies (e.g. Abed et al., 2022; Chesterton et al., 2023; Sánchez & Karaksha, 2023; Yu et al., 2023) have also utilized snowball sampling techniques in similar research. Moreover, Trans (2023) suggests that future researchers utilize stratified or snowball sampling techniques in upcoming studies on similar topics. Therefore, the researcher in the present study has also used snowball sampling to select participants.

Snowball sampling is a nonprobability sampling technique that researchers can use when it is difficult to find participants. Here, one participant identifies other participants using his/ her friends, relatives or known-to (Bhardwaj, 2019). In this research, snowball sampling is used because of the difficulty of identifying participants covering the entire Canada. Since the researcher is an international student, it was challenging to identify potential participants in the study using other non-probability sampling techniques like convenience sampling because the researcher did not have a solid and vast network. Moreover, other sampling techniques, such as purposive or quota sampling, were unsuitable because the researcher had to identify every respondent directly, and the barrier of lack of connections was there to implement that practically.

Besides, those techniques were time-consuming, and the researcher could not use those sampling techniques because of the limited timeframe.

The procedure of data collection

As the initial step, the researcher has completed the course on research ethics based on the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (TCPS 2: CORE 2022). Then, the researcher applied for and received ethics approval from the Research Ethics Board of the University Canada West to continue the research. The UCW ethics agreement number is 202413 (Appendix 1).

The researcher mainly utilized personal networks, social media (LinkedIn) and participant recommendations to invite participants. Previous studies have used social media (e.g., Amoroso & Lim, 2017) and personal networks (e.g., Shi & Gordon, 2020) to identify participants and collect data. Through these modes, the researcher initially identified a few willing individuals to participate in the study. Then, the researcher requested the first participants (primary data) to provide the details of other individuals they know. Thus, the researcher collected the information and tabulated data from the primary data source and moved on to other individuals to whom the primary data source will refer. Accordingly, the researcher applied the snowball sampling technique to recruit participants to the research. Additionally, the researcher also reminded the potential participants that if they helped recruit others (snowball sampling), the researcher might reveal their potential involvement in the study to the newly recruited participants.

The researcher used email, phone calls and LinkedIn messages to communicate with potential respondents. The researcher first checked the availability and willingness of the potential respondents to participate in the research. Subsequently, depending on the respondents' wish to get

interviewed, the researcher emailed a formal invitation. The formal email explained the research's purpose and nature; the consent form was also attached. The explanatory statement summarizes the research, clarifies why the researcher selected the respondent to participate in the interview, explains how confidentiality is ensured and provides the researcher's contact details (UCW student email address and mobile phone number).

In the past, qualitative studies on similar topics (e.g. Abed et al., 2022; Barbu et al., 2022; Lodhi & Khalid, 2023) have conducted ten in-depth interviews. Accordingly, the study recruited ten respondents to conduct in-depth interviews. Lodhi and Khalid (2023) further mention that they have conducted four extra interviews after reaching the saturation point to confirm that. Thus, the study also conducted two additional interviews after it reached saturation.

Once the interviews were conducted, the recordings were saved in a password-protected folder on the researcher's personal computer, which the researcher can only access. Then, the researcher transcribed all the recordings. All the interview recordings and transcripts were given code names (e.g. R1, R2, etc). These scripts were later used in the thematic analysis.

Profile of the participants

Table 1 explains the profile of the participants. An equal number of students and university teachers were in the sample (Figure 2). The majority of the respondents were from private universities (Figure 3). Figure 4 denotes that most university teachers were from private sector universities, and an equal number of students were from public and private universities. Figure 5 shows that female respondents represented 58% of the sample. Past qualitative studies on similar topics (e.g. Moldovan et al., 2024; Li et al., 2022) also have leading female representation in their sample.

Table 1

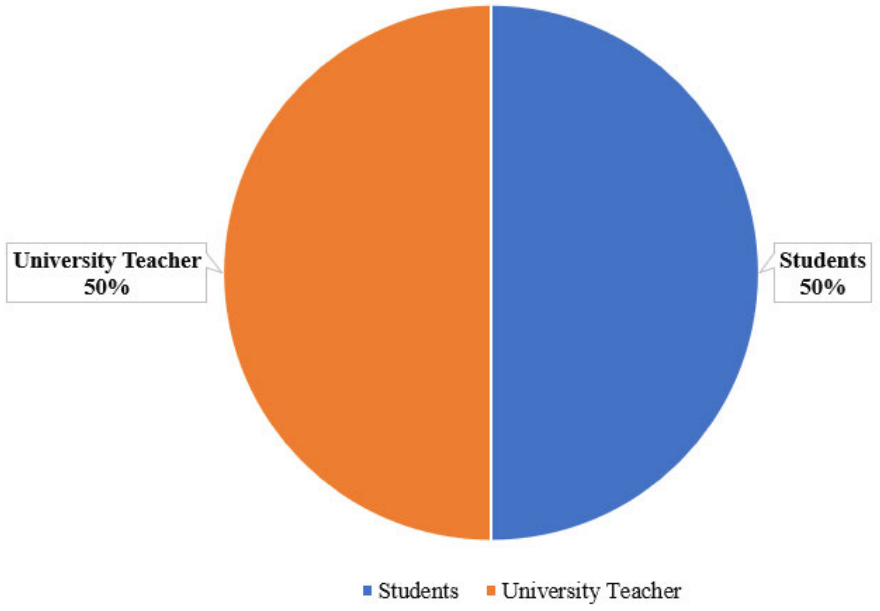
Profile of the participants

Respondent	University Type	Designation	Gender
R1	Private	Student	Male
R2	Private	Student	Female
R3	Private	Student	Female
R4	Public	Student	Female
R5	Public	Student	Male
R6	Public	Student	Male
R7	Public	Lecturer	Female
R8	Private	Lecturer	Female
R9	Private	Lecturer	Female
R10	Public	Lecturer	Female
R11	Private	Lecturer	Male
R12	Private	Lecturer	Male

Note. Developed by the author

Figure 2

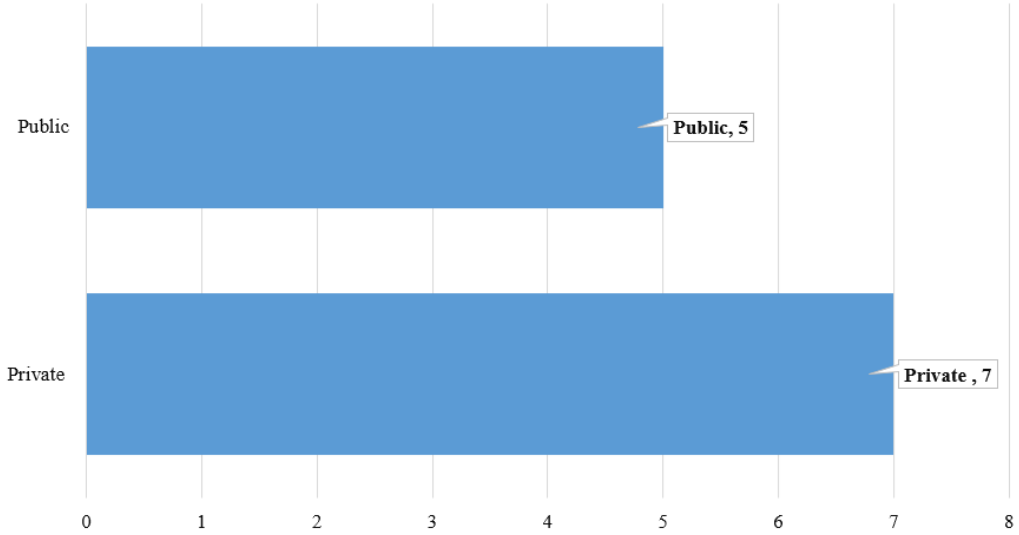
Participant composition



Note. Developed by the author

Figure 3

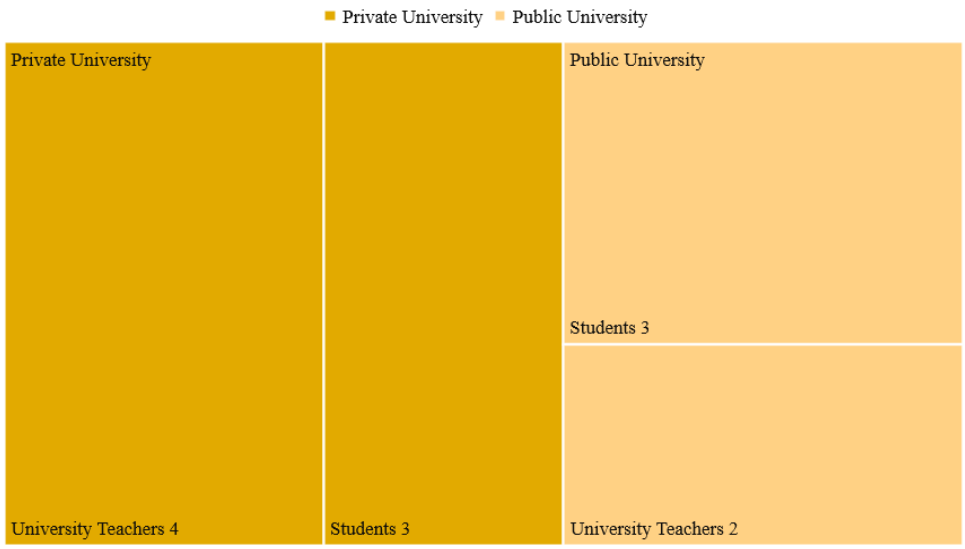
The university type



Note. Developed by the author

Figure 4

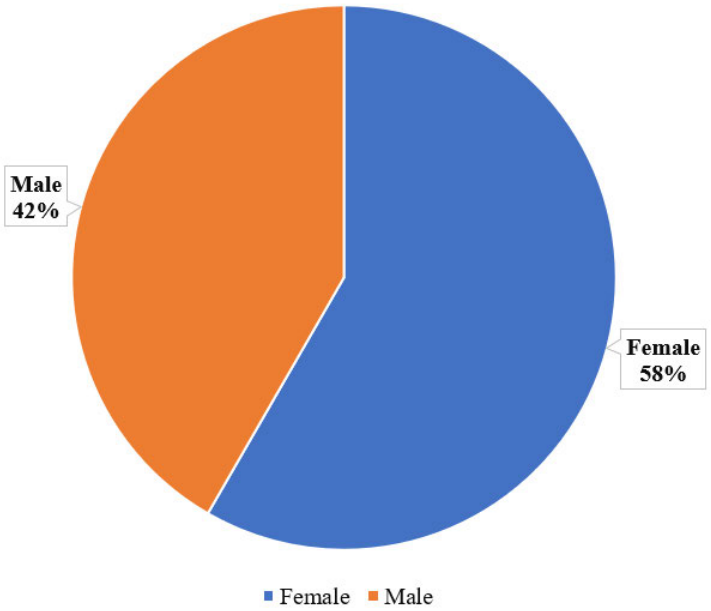
Designation of participants based on university type



Note. Developed by the author

Figure 5

Gender distribution



Note. Developed by the author

Interviews

In the past, qualitative studies on similar topics (e.g. Abed et al., 2022; Barbu et al., 2022; Lodhi & Khalid, 2023) have conducted ten in-depth interviews. Accordingly, the study recruited ten respondents to conduct in-depth interviews. Lodhi and Khalid (2023) further mention that they have conducted four extra interviews after reaching the saturation point to confirm that. However, the current study only conducted one more interview after it reached saturation.

The researcher conducted in-depth, semi-structured interviews to gather data. The researcher used the pre-designed questions in the interview protocol as a guideline and asked unscripted questions for further probing to get more clarity. The interview protocol had eleven questions (Appendix 2), and these questions were mainly based on the questions asked by past researchers (Moldovan et al., 2024; Lodhi & Khalid, 2023; Palomares et al., 2021) on the same subject. Accordingly, the interview guide included ice-breaking questions such as "Can you introduce yourself?". The researcher used these questions as a friendly approach to build rapport with the participants. The interview guide had other questions like "What differences did you feel in teaching/learning through online sessions and physical classes," "What advantages did you encounter while teaching/ learning your course using an e-learning mode," and "Are there any measures, programs, technologies, platforms, or activities that you use in your online classes? Please give an example" as well.

The researcher conducted twelve online interviews covering 344.53 minutes through Zoom and MS Teams platforms (Table 2). Past studies (e.g. Chiumento et al., 2018; Janghorban et al., 2014; Liu, 2023) have also used online interviews in qualitative research. Moreover, there were natural boundaries to conducting face-to-face interviews, as some participants were from other

provinces, such as Ontario. Therefore, the researcher used online interviews to get in touch with the participants conveniently. Participants were also pleased to have online interviews because it was easier to commit time amidst their busy schedules. The researcher was able to conduct all the interviews without any interruptions.

Table 2

Interview time durations

Respondent	Interview time duration (minutes)
R1	31.09
R2	16.05
R3	23.18
R4	25.42
R5	26.05
R6	25.36
R7	32.42
R8	47.4
R9	27.33
R10	26.22
R11	28.11
R12	35.9
Total Time	344.53
Average Time	28.71

Note. Developed by the author.

Trustworthiness of the data

In order to ensure the trustworthiness of the research, the researcher used four criteria, as suggested by Guba and Lincoln (1982): credibility, transferability, dependability, and confirmability.

Credibility

As scholars mention, qualitative research is credible when the study offers an authentic interpretation of human experience. It is crucial that individuals who undergo the same experience can immediately understand that the findings make sense and that there is methodological transparency, accuracy, and authenticity (Baillie, 2015; Krefting, 1991). In this study, the researcher ensured credibility by making a deliberate effort to recruit participants who are eligible to share their experiences in e-learning. To ensure credibility, the researcher picked respondents based on their experience and knowledge of the area (Liamputtong, 2013).

Transferability

Transferability means the potential ability of the research findings to be transferred to a different context (Baillie, 2015; Creswell & Miller, 2000). The researcher included information about the research context, research design and methods, and selected participants to ensure transferability. Moreover, the researcher intentionally selected participants from public and private sector universities to ensure the transferability of the research.

Dependability

Dependability refers to the consistency of the research findings (Amankwaa, 2016), where the researcher used a reliable method (Baillie, 2015) and pursued procedural logic throughout the study (Birks, 2014). The researcher took field notes (Appendix 3) while conducting interviews and

analyzing the research findings. The researcher documented and recorded the research design and all the related decisions made during the data collection and analysis phases. All the decisions were made based on logical thinking.

Confirmability

Confirmability means how the researcher's position shapes and impacts the study's findings (Amankwaa, 2016). No external influence was used to recruit participants to the study. The researcher maintained a reflective journal (Appendix 4) to record critical thought processes. This initiative is taken to ensure the findings are derived from the participant's point of view rather than from the researcher's assumptions.

Data analysis

The researcher employed a thorough thematic analysis to dissect the gathered data. Thematic analysis, a widely used approach in qualitative research, involves the identification of emerging themes (Bryman & Bell, 2007). In this method, the researcher scrutinizes the spoken and/ or written data to uncover common patterns and themes (Riessman, 2008), ensuring a comprehensive data exploration.

The researcher read and re-read the interview scripts in the present study to familiarize himself with the content of the interviews. This process helped to search for the meanings and patterns and thus develop the initial codes. The researcher also prepared her notes while reading the transcripts that were eventually used in the coding phase.

Initially, the researcher developed a coding framework by grouping related concepts and ideas together. Then, the researcher organized the data by assigning labels. The researcher

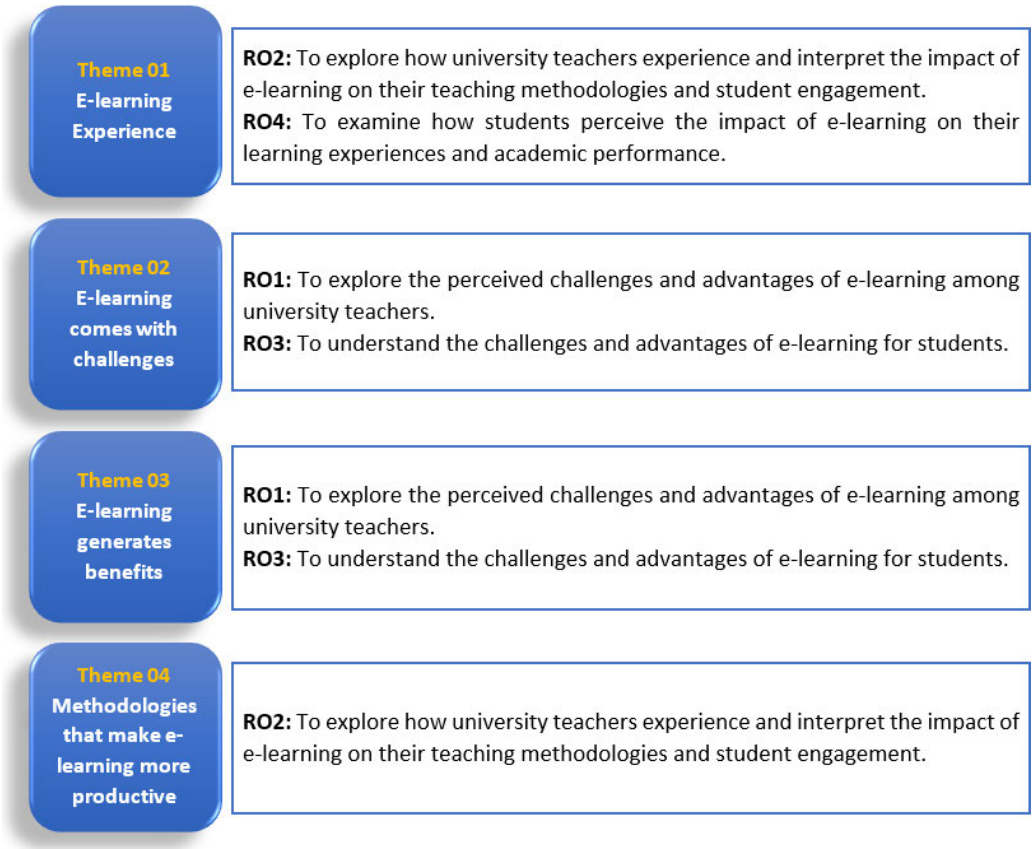
manually did this process. Once the labelling was done, the researcher tried recognizing the patterns and themes. At the final stage, the researcher interpreted the themes.

Chapter 4: Research Findings

In this chapter, the researcher discusses the findings of the five research objectives: to explore the perceived challenges and advantages of e-learning among university teachers; to explore how university teachers experience and interpret the impact of e-learning on their teaching methodologies and student engagement; to understand the challenges and advantages of e-learning for students and to examine how students perceive the impact of e-learning on their learning experiences and academic performance. The findings for the last objective are presented separately. Accordingly, the researcher has developed four themes, as explained in Figure 6.

Figure 6

The objective accomplishment



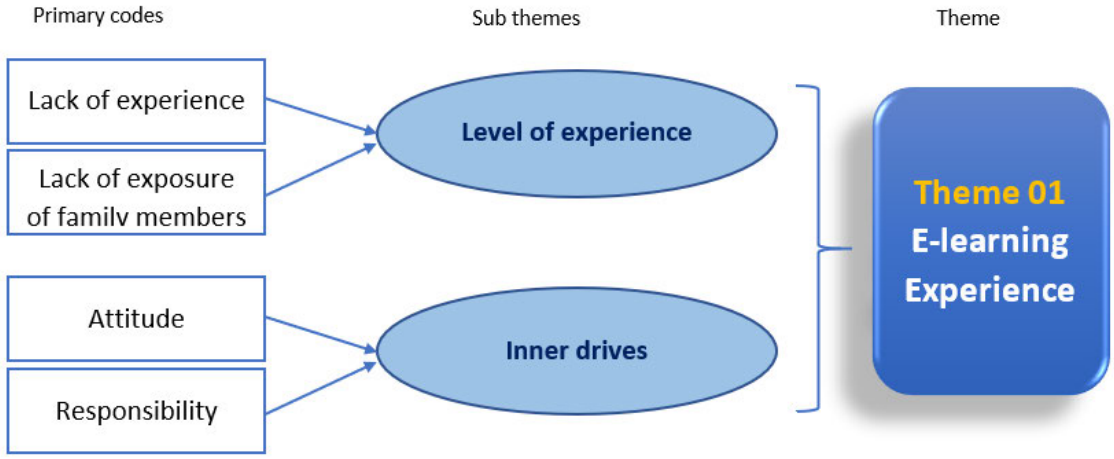
Note. Developed by the author

Theme 01: E-learning experience

Figure 7 illustrates the primary codes and sub-themes of theme one. The researcher recognizes a general pattern among students' and university teachers' experience levels.

Figure 7

Theme 01: E-learning experience



Note. Developed by the author

All the participants (students and university professors) have started online teaching and learning during the COVID-19 lockdown period. Therefore, it was their first experience of e-learning.

> *'My online learning experience began after the COVID-19 pandemic when I had to complete the final semester of my supply chain diploma through online lectures.' (R1, student)*

> *'I had to do online lectures when country suddenly locked down during pandemic. So, we were asked rather forced to do online lectures for students because university wanted to continue their studies.' (R9, university lecturer)*

However, a significant difference can be identified in how students and professors have embraced their first-time experience. Most students have struggled significantly to adjust themselves to the e-learning environment, while lecturers have conveniently and more openly adjusted and embraced the shift. Students have grappled to adjust to the new learning style, where they have to do self-study without the presence of their teachers and peers. It was overwhelming for students to get used to the e-learning environment swiftly; therefore, balancing their studies was challenging.

It can also be interpreted as the resistance to change from the students to align with the new demands of e-learning. Most students were so engrossed with the conventional classroom setup that they could directly communicate with their lecturer or peers whenever they wanted extra assistance. The e-learning compelled them to work in isolation, and students resisted this sudden change in practice. However, they gradually got used to online learning by finding alternative methods to cope with their initial concerns.

> *'I took some time to get used to online platforms because it was very new experience for me. But with time passing I got used to that. Then I could manage everything' (R3, student)*

> *'At the beginning, it was challenging to get used to it. But with time it became the new normal.' (R5, student)*

Lecturers have encountered comparatively less trouble in adhering to the e-learning setup. Tech-savvy lecturers, significantly those open to using new technological platforms, readily modify their lecture styles to match the demands of shifting from orthodox pedagogical methods to new e-learning contexts.

> *'to be honest, I had no problem changing myself. I normally like to try new things and therefore I quickly changed my style, found methods to deliver lectures and maintain student interactions.' (R10, university lecturer)*

However, lecturers with an 'old-fashioned' mindset (as stated by R11, a university lecturer) found it hard to align with the new demands.

> *'It means that the instructor also required to have the skills of using the new technology when it's adopted. The new technology, I give you an example. At that time, the pandemic. We're supposed to use the zoom link. So imagine those in instructors who with, I mean the old fashioned instructor, was a little bit challenging for them to learn the new technology at the zoom link and use it in the classroom. And for me as an updated instructor. I mean, one day for me to go and learn how to use this new technology and adopted it to the class.' (R11, university professor)*

Thus, the lecturers' e-learning experience is mostly based on their tech-savviness and openness to new technologies.

Moreover, it is noted from the students' perspectives that their inner drives, such as their attitudes and the degree to which they feel accountable for their studies, also moderate their e-learning engagement. Students who feel responsible for their actions and believe they must work hard to learn, in other words, students who are good at doing self-studies, had more exclusive and positive responses to online learning despite their initial struggles.

> *'lecturers do have a part to play. But their part is limited. In terms of how they can control the students is limited compared to physical learning. So we must be responsible to do our*

parts properly, develop note, short notes, study plans, ready extra material and prepare for lectures.' (R4, student)

Another exciting point participants highlighted was that the initial e-learning adaptation was novel for them and their family members. So, the dedication to e-learning was initially high because family members also forced students to focus on virtual lectures. With time, we all got used to online learning, and there was no external push, so e-learning became a regular practice.

Theme 02: E-learning comes with challenges

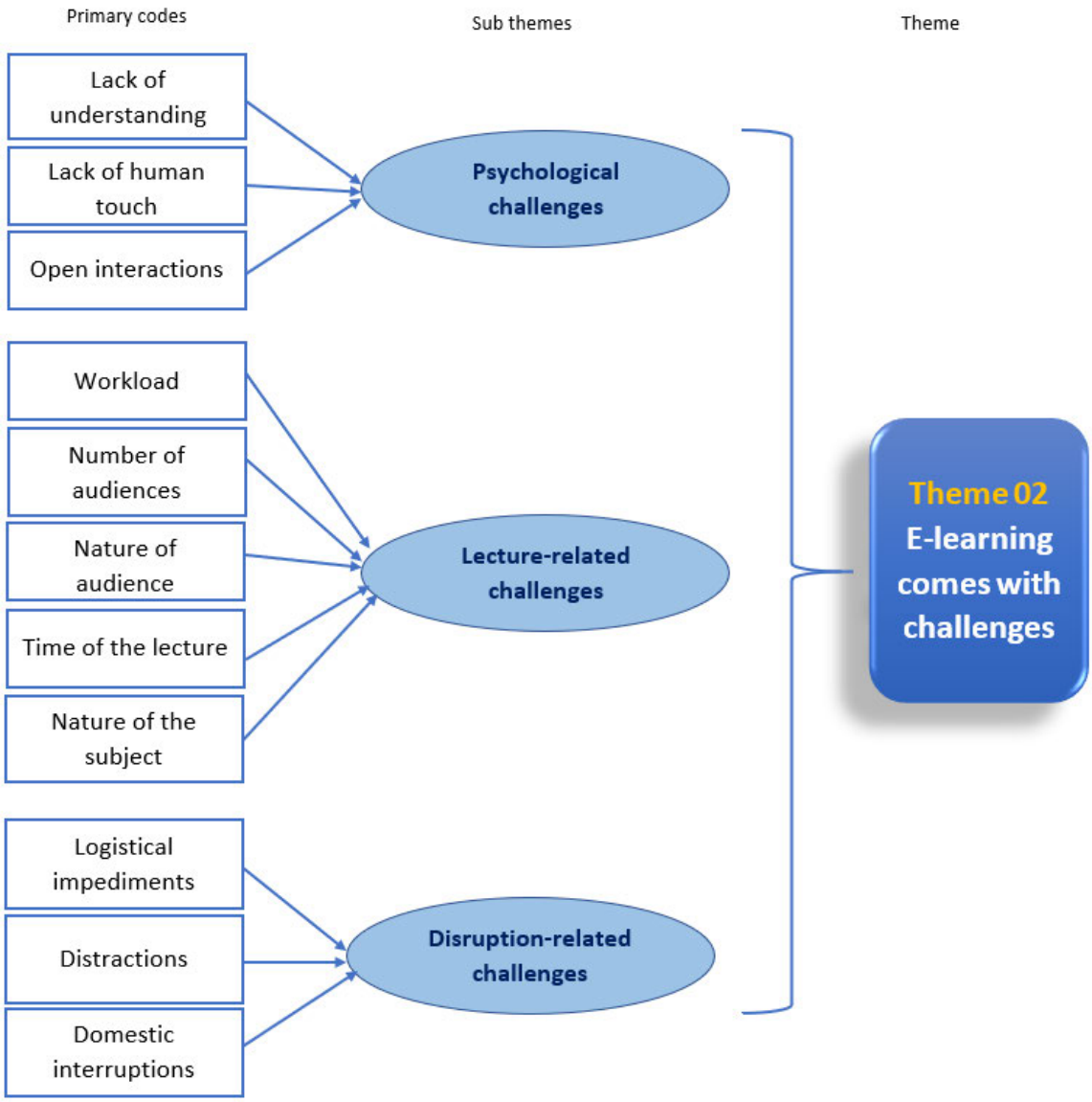
Figure 8 illustrates the primary codes and sub-themes of the theme two. The researcher recognizes some shared patterns related to the challenges students and university teachers encounter in e-learning.

Both students and teachers perceive psychological challenges as a common challenge of e-learning. Both parties recognize the lack of human touch and minimum open interaction as a direct challenge in the e-learning setup. Lack of understanding of each other is also stated as a challenge. Both students and lecturers highlight that they cannot understand what the other party behind the screen feel when they are in virtual learning. For lecturers, it is crucial to see the students' faces, facial gestures, and body language because they believe those factors signal the extent to which students have understood the content they are teaching. In the online setting, lecturers hardly believe students say 'yes' when asked whether they understood the content taught. Lecturers have the pre-notion that students say they understood the content taught in online classes without asking more questions because they want to avoid further interactions with the lecturer. Lecturers also believe that in online classes, students do not ask questions or give answers when they ask

questions from them. Some lecturers believe students select online classes merely because they want attendance marks due to institutional and governmental regulations.

Figure 8

Theme 02: E-learning comes with challenges



Note. Developed by the author

> *'So, even if they are not clear, they don't ask you many times. In the end they tell yes. When I teach something to students for me it is very important to see what their face say. Students*

say yes to you because they do not want to get into this tiring long conversation with you online. So I don't really trust when they say yes online. Because I am not sure when they say yes, if it is yes or no." (R1, university lecturer)

'they never say no I did not understand this part, please repeat that part.' (R9, university lecturer)

On the contrary, students are reluctant to ask questions in online classes because they struggle to talk to a large audience, feel too afraid to voice their opinions and have minimum confidence to ask and answer questions. Thus, for most students, it is not because they avoid it but because they lack the self-assurance to immerse in it entirely in an online setting.

'Asking questions in front of a crowd is challenging.' (R2, student)

'I lack that confidence, you know to unmute myself and answer to the question.' (R6, student)

This is interesting because both lecturers and students highlight that the sessions are more interactive in traditional classroom settings. Students face the same students in physical classes, they are open to developing more conversations, yet not in an online setting. As mentioned by the students, one possible reason for this may be that students think if they talk, ask questions, answer questions, try to clarify doubts and share their opinions, it will disturb the others in the online class or highlight them as individuals make troubles in front of others.

'I don't want to highlight myself in an online class by asking too many questions. I ask questions to some extent but then I stop though I have more doubts because I don't want to be the nuisance in the class that other students start laughing. You know what there was this guy in one of our online lessons, he asked too many questions and we felt fed up with

they guy and he because the common clown for asking too many questions. Obviously I don't want to turn out like that guy.' (R6, student)

Moreover, in a traditional learning environment, students can ask questions and clear their doubts on the spot or after a lecture. Nonetheless, students are reluctant to ask questions in an online learning context, so they either send emails or chat with their lecturers. Though the lecturer replies to their queries, it may take some time for the lecturer to get back to the student, or sometimes the lecturer may miss the inquiry entirely. Under these circumstances, students seek peer support to clarify their doubts. They post their doubts mostly in WhatsApp group chats and have their personal online discussions to help each other understand the gray areas. Accordingly, peer-to-peer interaction is happening. Only the interaction between students and lecturers faces a certain degree of barricades in the e-learning environment.

Both lecturers and students mention the lack of human touch as a leading loophole in online learning. The human touch they refer to relates to the lecturers' ability to monitor students in a physical classroom setting and their inability to do so in an e-learning environment.

'In person classes we can monitor whether students get what we are saying. At least they will get something.' (R10, university lecturer)

'in physical lectures even if you don't what to, you don't want to focus whether lecturer is making you focus on them. They will do all these things try to grab your attention and they will make you listen to them.' (R1, student)

Both lecturers and students believe that if they are in the traditional lecture room, they can continuously encourage students to focus on the lecture content. In an online setting, students are isolated, so nobody can force them to listen to the lecturer actively. After all, humans are social

animals who rely on and thrive in the presence of others. So, they naturally miss the human touch when they are not together.

Additionally, there are many lecture-related challenges in e-learning. Many lecturers believe their workload has increased in the e-learning environment compared to students. They mention that they have to put more effort into lecture preparations because they incorporate various interactive techniques, such as videos, pop-up quizzes, Kahoot, polls, etc, into lectures to keep the students' attention with the lecture. However, other that, they are comfortable with e-learning.

> *'Only online means it wants lots of effort and it's not just easy…..More effort from my side as the educator to bring them back.' (R8, university lecturer)*

> *'We must put lots of effort to find methods to keep students' attention.' (R12, university lecturer)*

University lectures also specifically mention the quantity and the nature of the audience of an e-learning session. Both students and lecturers agree that when there are many students in an online class, it is challenging to have a productive online lecture. Lecturers mention that they cannot give individual attention to students when there are many students in an online class and cannot provide more opportunities for students to discuss and present their findings. When there are many students, they merely pick one or two students randomly and ask their opinions. This, in a way, conveys the wrong message to students because they start to think it is not necessary to participate actively in online discussions because the lecturer does not ask them follow-up questions. This notion seriously mitigates the effectiveness of online education.

> *'Also amount of students, number of students has to be less. For example, your effort and the outcome with 10 students is better and way more than 20 students. Because they do 30*

students 35 students 10 12 So I can compare the outcome….But there are more than 10, 15, 20 they are saying, hey there is how many percentages they are asking me questions. It depends on the number of attendees.' (R12, university lecturer)

'If there are so many students in one class, we know we can safely hide. It is mostly likely lecturer will ask questions from us.' (R3, student)

The nature of the audience also matters. If the audience is more mature, it is easier for the lecturer to have a productive online session. Lecturers claim that conducting online sessions with young audiences is challenging unless they use various methods to retain their attention.

'…students don't listen to you. Young students. They are not anyways interested. They are there for the attendances. In online, they don't even listen to you.' (R7, university lecturer)

'Negative experience with the young students. With the mature audience it is a way of saving time and energy.' (R11, university lecturer)

Another interesting point was the nature of the subject. Both lecturers and students think learning theory-based subjects in e-learning is comparatively easier than learning more practical subjects. Most students feel comfortable learning management-related modules, and lecturers find it nearly impossible to teach subjects like mathematics, statistics, computer science, chemistry, etc, in online classes.

'Subjects like maths and statistics, you have to check all the formulas, sketches one by one. It's difficult to students as well as for the teacher.' (R8, university lecturer)

'They provided us online lab where we can make some changes and see the reactions and all. But to be honest, it was not effective at all.' (R6, student)

'It was easy to learn management module because there were mostly we have to listen to the lecturer talking about theories.' (R5, student)

Finally, there are disruption-related challenges in e-learning. Logistical impediments are a more apparent type of disruption that both lecturers and students have encountered. These obstructions include poor internet connections and power interruptions. The effectiveness of online sessions drastically depends on the internet connection. All the participants mentioned they find it challenging to continue their e-learning because of not having smooth internet connectivity.

In e-learning, students claim they encounter disruptions that deviate their focus and attention from the lecture. Because of these distractions, they cannot continue concentrating on the lecture. It was only with great self-control that the students could maintain a steady focus.

'how to deviate yourself from lecture. For example search on Facebook, watching TikTok ….you share at your screen. The lecturer does not know you are there. So if you don't have a self-control that means you are out' (R4, student)

However, lectures believe online lectures have fewer distractions compared to physical learning.

'Students divide their attention in class. They divide their attention in many ways, like outside the class room, like peers, phone, laptop and lecture. When they are doing online learning, they divide it less. There is no peers. There is only one laptop and my WhatApp and all are here. So I'm dividing less. If there is any difference in the sound voice, I will pay attention to that.' (R10, university lecturer)

Another significant finding is that it was not only for the participants but also for the family members of the participants' first experience. Family members were not used to the virtual learning setup; they had not heard of it and did not experience it when studying. Therefore, it was difficult

for the family members to adjust to the context when their child, sibling, parent or spouse engaged in the e-learning activities at home. Because of that, the family members could not understand the gravity of supporting students or university lecturers when participating in or conducting online lectures.

> *'It was something new for them as well. So no matter how many times I say I'm going to have an online lecture, you have to be little discreet not to put TV, make noise, knock the door, they tend to forget and do the same thing I ask then not to do. It was challenging for them as well.' (R5, student).*
>
> *'either my husband is calling or my kid start crying. It was hectic at my home.' (R8, university lecturer)*

The lack of experience and support from family members can also be recognized as a challenge in e-learning.

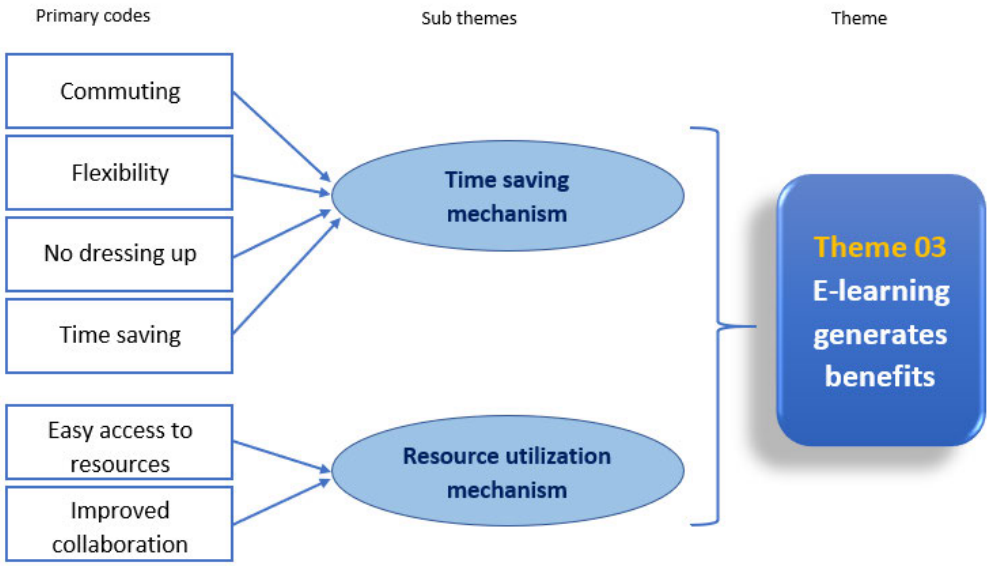
Theme 03: E-learning generates benefits

Figure 9 denotes the primary codes and sub-themes of theme three. The researcher identifies some shared patterns related to the benefits of e-learning.

The most common advantage of e-learning that lecturers and students have underlined is saving time that is consumed on commuting. They believe they can use the time saving for other professional or personal productive work. Besides, online learning saves money that they usually spend on transportation.

Figure 9

Theme 03: E-learning generates benefits



Note. Developed by the author

> *'audience it is a way of saving time and energy. The transportation is crazy right.' (R11, university lecturer)*
>
> *'I do not want to travel back and forth. It normally takes me one hour one and half hours to go to campus. If I'm getting late I call a Uber. So I have to spend money. Online lectures actually save me time and money both.' (R3, student)*

E-learning accelerates resource unitization. Many students mention that they like e-learning because they can refer to the lecture recordings. In the initial phase, students found these recordings helpful. Nonetheless, when they are more familiar with and exposed to e-learning, students focus on live online lectures without spending time again reviewing the recording. When they encounter doubt, they seek peer support to clear those doubts and improve their collaboration.

'I try to learn something when I am in online lecture because I don't feel like go through the recordings.' (R2, student)

'the biggest lie is I will go through the recording later. It just never happens. So the best thing is focus while professor explains the content.' (R4, student)

Moreover, lecturers believe students tend to listen to others' ideas more than when they are in physical lectures. Lecturers claim a different voice grabs their attention, and they tend to be curious what their fellow students say, especially if they themselves keep quiet.

'I found out that in online when one of the students asks questions. Others, they listen. But in person if one of the students ask questions, they won't listen.' (R11, university lecturer)

Theme 04: Methodologies that keep e-learning more productive

Figure 10 shows the primary codes and sub-themes of theme four. The researcher identifies shared patterns related to the methodologies students and university teachers use in e-learning.

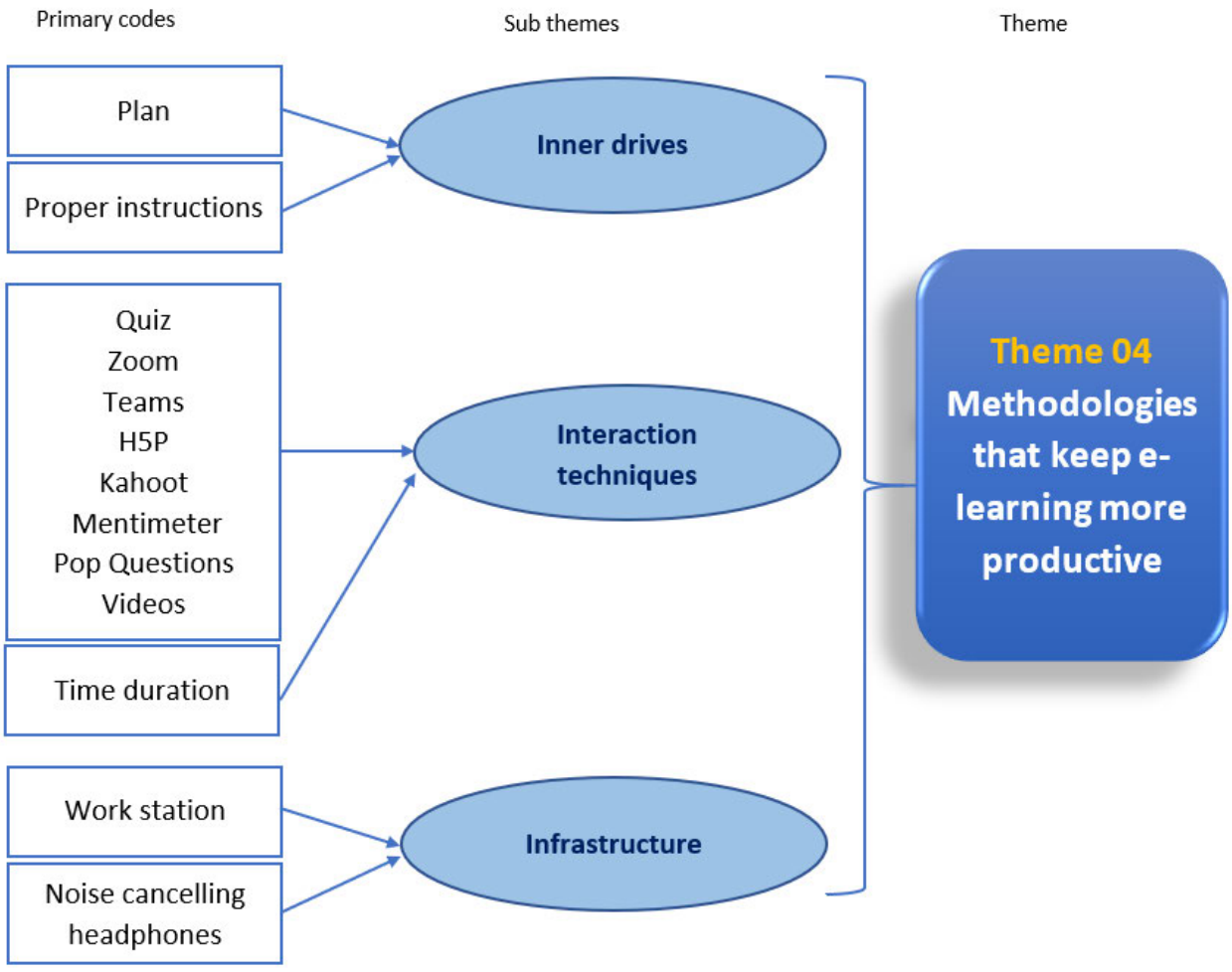
Both lectures and students use planning as a tool notwithstanding for different reasons. Compared to classroom lectures, lecturers plan how to face the contingencies in e-learning. For example, how will students cope with that situation if they do not answer questions or participate in discussions, breakout rooms or other activities? When there is a carefully crafted pre-plan, lecturers find it convenient to deal with these situations and move on. Otherwise, they feel stressed about the minimum to no reply, and it jeopardizes the effectiveness of the entire online lecture.

'In this student, you must have a plan on what you are going to do. Otherwise, you will keep thinking about it and it will deviate your focus. Getting into small loops of thoughts

and then you forget what to say next. In this type of situation, I plan if the student is not talking, I write down the name and I keep it as a note.' (R8, university lecturer).

Figure 10

Theme 04: Methodologies that keep e-learning more productive



Note. Developed by the author

Students use planning to meet deadlines and study for examinations.

The frequently used techniques in e-learning are quizzes, H5P, Kahoot, Mentimeter, pop quizzes, and Google Whiteboard, where they conduct lectures through MS Teams or Zoom. Furthermore, both lecturers and students agree that the lecture duration of virtual lectures generates

many grievances among both parties. Unless lecturers do not give frequent breaks in a three-hour lecture, conducting a practical online lecture is impossible. In an e-learning setup, students' attention spans are significantly limited.

> *'I'm trying to bring them back with Kahoot, bring them back with H5P, bring them back with the quiz, poll. Bring them back each 15 minutes 20 minutes. Because each 15 minutes they are disconnected. So imagine a scale of three hours.'*

The lecturers try to incorporate as many interactive activities as possible in their online lectures to retain students' attention. However, students have mixed reactions to these. Too many interactive activities are also distracting for students, and when lecturers force them to do too many activities, students ultimately tend to give up and not participate actively. So, too many interactive sessions and questions do not address the purpose from the student's perspective.

> *'I don't like when lecturers do too many activities during our online classes. It actually distracting. I tend to participate activities and then there are many other activities, I feel too tired to do them. I feel like I need a break.' (R6, student).*

Though initially, students did not understand the significance of the location from where they connect to the lecture on the effectiveness of e-learning, they later tend to select a place from where they can join the lecture with minimum to no external interruptions. Primarily, they move to a workstation with backup equipment to ensure their participation without dropping out of the lecture. They further use noise-cancellation headphones and other equipment. Both lecturers and students consider the money they spend on purchasing these types of equipment an investment.

Matches and mismatches in perspectives between teachers and students regarding e-learning

When the matches in perspectives are considered, students and lecturers claim they cannot understand what the other party thinks behind the screen. Students can see and hear what lecturers deliver, yet they mention they cannot understand how lecturers feel about them. Understanding how students feel is vital for lecturers to ensure that the online lecture is effective. The usual practice for lecturers is to see the students' faces, gestures and body language to recognize how they feel and to understand whether students have understood the online lecture content. Furthermore, lecturers' and students' perspectives show that traditional classroom sessions are more interactive than online lecture sessions. They also agree that when there are many participants in an online lecture, it is challenging to have a productive virtual lecture. From lecturers' and students' perspectives, e-learning is more suitable for theory-based modules than practical subjects.

When the mismatches in perspective are considered, lecturers have adjusted themselves to e-learning requirements within a shorter period than students because they are more open to new technology. Despite the initial struggles, students also gradually adjust after some time. This may be because students have more resistance to change and, thus, adopt new changes compared to lecturers. Lecturers are more experienced and mature, so their adaptation was fast. Most lecturers believe students select online options because they want to fulfill attendance criteria. Therefore, lecturers believe students do not ask questions. However, students do not ask questions mainly because they lack the confidence to ask questions in front of a large audience. When preparing for online lecturers, lecturers tend to add many interactive activities; nonetheless, from students' perspective, too many such activities can mitigate the effectiveness of an e-learning session. They believe there should be an appropriate balance.

Chapter 5: Discussion and Conclusion

Discussion of the main findings

The findings of past studies are similar to those of the current study regarding the students' initial struggles. Accordingly, past studies mention that initially, students struggled with the transformation because transitioning from in-class to online learning was extemporaneous. Therefore, they found it challenging to complete their online courses, which demanded that they study for extended periods daily. It ultimately mitigated their academic performance (Crawford & Cifuentes-Faura, 2022; Faura-Martínez et al., 2022). The current study also highlights that students perceive e-learning positively when they better understand the e-learning system and get sufficient assistance from their lecturers (Helfaya, 2019). The findings of the current study also emphasis that the flexibility of e-learning for students and social presence is crucial in determining students' satisfaction (Coldwell-Neilson et al., 2006). The acceptance of e-learning is skeptical because both lecturers and students must have the right attitudes regarding the e-learning approaches (Bolliger & Martin, 2018).

Past studies mention that when lecture recordings are available, students tend to delay referring to those lecture recordings, leading to an accumulated workload, procrastination and disengagement (Saenen et al., 2024). However, the current study explains that Canadian students no longer rely on lecture recordings. Instead, they like to focus on the live online lecture and get the content clear then and there. When they encounter doubt, they tend to ask for peers' support to clarify those doubts and improve their collaboration. Thus, this finding is novel in this study.

Past studies mention that in an e-learning setup, many interruptions can take students' concentration away. Many students tend to surf web pages, interact with their surroundings, games,

social media, and these disturb students ((Alexa et al., 2022; Kumar et al., 2023; Lodhi & Kvhalid, 2023; Tan & Lin, 2023). However, the current study finds that though these distractions minimize students' focus, students now practice more self-control to maintain a steady focus. Moreover, Canadian lecturers believe online lectures have minimal distractions compared to traditional classroom learning. Furthermore, compared to the initial phase of e-learning, at present, Canadian students and lecturers have designed dedicated places and equipment like noise-cancelling headphones they use to participate in online lectures to have minimum external distractions.

Past studies view e-learning as inefficient and monotonous (Khan et al., 2022; Shanmugam et al., 2023). Nevertheless, the current study's findings align more with those of other studies (e.g. Lodhi & Khalid, 2023; Saenen et al., 2024) that mention e-learning is comfortable and facilitates flexible, efficient and self-directed learning. Canadian students and lecturers find e-learning as a source of savings in terms of transportation and time. They use the additional time on studies. This finding is similar to the findings of past studies (e.g. Tan & Lin, 2023; Masalimova et al., 2024; Saenen et al., 2024).

Past studies mention that teachers' workload has increased significantly with the shift to e-learning (Saenen et al., 2024). However, this study's findings mention that Canadian university lecturers think they have to put more effort into online lectures because they want to ensure higher student interactions. Other than that, they are comfortable with e-learning setups.

Study limitations

In this study, the researcher could not conduct face-to-face interviews, limiting the researcher from observing the participants' gestures and body language. The researcher would be able to go more in-depth and might be able to comprehend new perspectives if observation results could also be analyzed. Moreover, the researcher had to complete the entire study within a minimal period and, therefore, could not expand the sample size as it would hinder the scale of the project.

Suggestions for future research

This study is based on a limited number of participants who are from diverse backgrounds. The future researchers can focus on recruiting more participants from different education levels but on a specific field (such as management, natural sciences, etc.) rather than recruiting participants from different fields. Since this research has minimum representation from the undergraduate level, future researchers can recruit more participants from the undergraduate level to understand the Gen Z perspective on e-learning. Moreover, this study is based in Canada. Future researchers can consider other countries and consider the matches and mismatches of students' and teachers' perspectives based on countries. Future researchers can also focus on Theme 02 of this study and conduct quantitative research to verify the Theme 02 results. The current study does not focus on the role of educational institutions in shaping e-learning and how different institutional policies and regulations can facilitate educators and students in e-learning setup. Moreover, future studies can also study how the perspective of e-learning changes depending on the gender of students and lecturers.

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Appendix

Appendix 1

REB Approval

Application ID: 202413 October 16, 2024

Liyanaarachchige Dona Anupama Dilini Dissanayake
MBAR Research Project – Fall 2024
E-mail: dilinidissanayake.dissanayake@myucwest.ca

CC: REB Chair Dr. Kaye Hare
ORS Director, Dr. Stewart Fast
Faculty Supervisor: Dr. Hamed Taherdoost

UCW REB Decision Notification

Dear Dilini,

Thank you for submitting your application titled "E-Learning Perspectives in Canadian Higher Education through Qualitative Study among University Teachers and Students" to the Research Ethics Board.

As per UCW Policy 5020, the Research Ethics Board ("REB") has reviewed your application to ensure that your proposed research project adheres to TCPS ethics standards for research involving human participants. The REB decision is that your application is **approved.** Your UCW ethics agreement number is 202413.

Thank you for your commitment to ethical research practices. We wish you the best in your project and your scholarly endeavours.

For questions, please contact reb@ucanwest.ca.

Kind regards,

Kathleen Hare

Kaye Hare, PhD
Chair, Research Ethics Board
University Canada West

Appendix 2

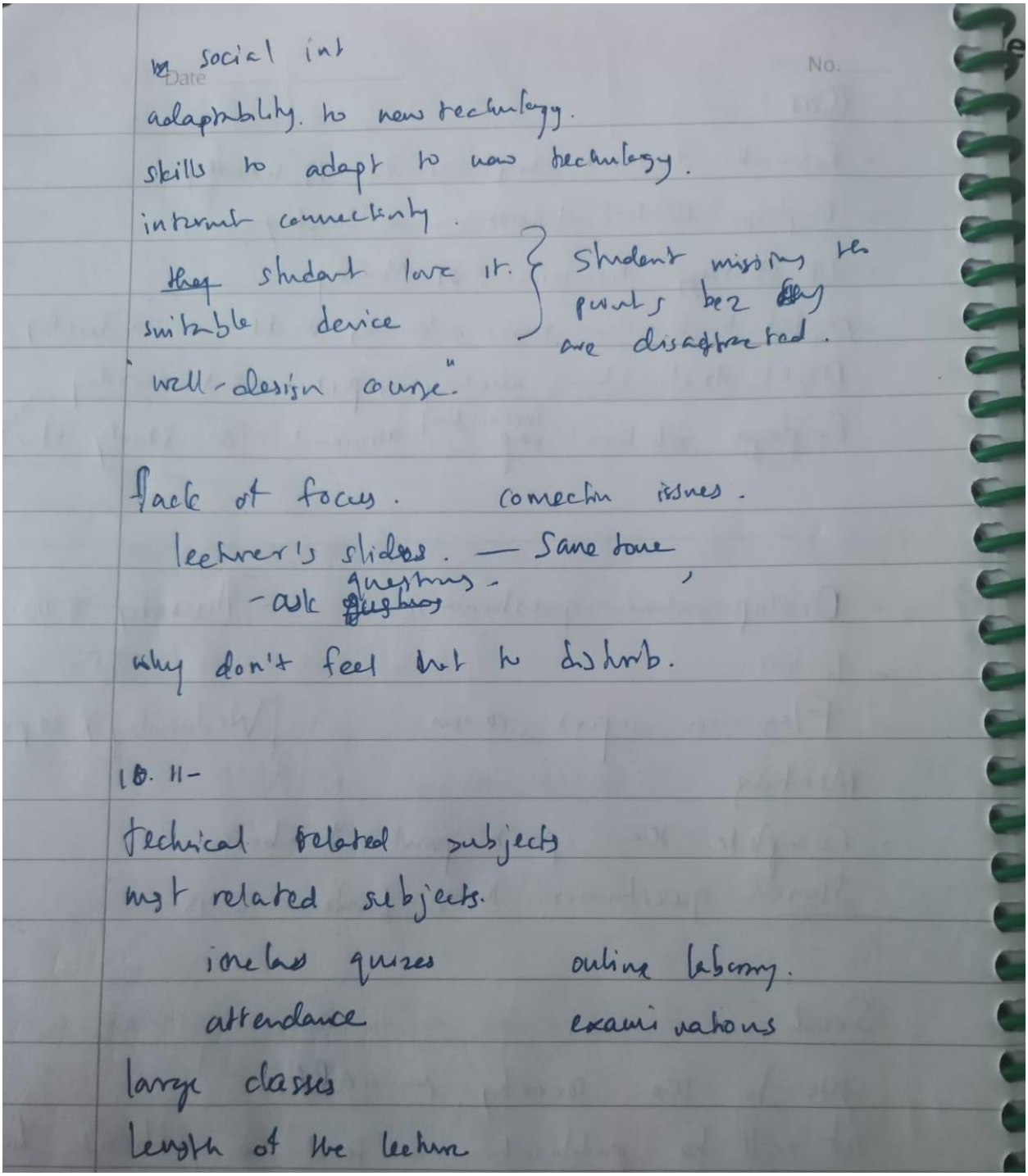
Interview Protocol

Interview Questions

1. Can you introduce yourself?
2. How long have you been engaging in online teaching/ learning?
3. Share your experience of the online classes (starting from the beginning of the pandemic till now)
4. What are the main differences between online and face-to-face education?
    a. What differences did you feel in teaching/learning through online sessions and contact classes?
5. How was communication/ interaction with the professors/ students during the online lectures? Did you do something different from other times?
    a. Have you made any revisions/ adjustments to your teaching/ learning courses because of the transition to virtual learning mode?
6. What advantages did you encounter while teaching/ learning your course using an e-learning mode?
7. What are the disadvantages of learning/ teaching your course using an e-learning mode?
8. What challenges did you encounter in delivering/receiving quality education in a virtual learning setting?
9. Do you use any measures, programs, technologies, platforms, or activities in your online classes? Please give an example
10. What were your primary measures/ transformations during the online teaching /learning to make your teaching/ learning more accessible or efficient?
11. What differences did you feel in teaching/learning through online sessions and contact classes?

Appendix 3

Sample of field notes



Appendix 4

Sample reflective journal

Session ID	R12
Mode	MS Teams
Date of the interview	October 19th 2024
Interviewer	Anupama Dissanayake
Duration of the interview	35.9 minutes

Broad takeaways

- Conducting online classes is different.
- The large number of participants in one online class makes it difficult to link with students.

Physical setting

The interview took place at 3:00 pm.

No interruptions happened during the interview.

The participant was free; therefore, we had an extended discussion.