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Pre-Service Teachers' Impressions and Experiences of Virtual Practicum Teaching in the United Arab Emirates

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Abstract

The COVID-19 global pandemic forced some teacher training institutions to implement unprecedented pedagogical strategies, which include conducting virtual practicum teaching. It was a challenge for pre-service teachers as they did not have experience in online teaching and learning, let alone conducting virtual field experiences. The objectives of the study were to explore pre-service teachers' initial pedagogic impressions and experiences of their first week of virtual practicum teaching in kindergarten classrooms with children aged 4-5 years old, which is the first year of formal schooling in the UAE. The study was conducted using a qualitative case study within an interpretive paradigm. Guided by Gibb's reflective cycle as a theoretical framework, 20 pre-service teachers were purposively selected in the study to complete an open-ended questionnaire. The results showed that pre-service teachers achieved more than they anticipated as they made enlightening observations and had successful hands-on pedagogical activities. The study concludes that the reinforcement of problem-solving skills is inevitable among pre-service teachers, enabling them to use their higher-order thinking skills to adjust and adapt to any teaching and learning approach.

Keywords: Pre-service teachers; Practicum teaching; Virtual field experience; Mentor; Gibbs' reflective cycle

1. Introduction

Despite the Coronavirus (COVID-19) global pandemic which negatively affected teaching and learning in learning institutions worldwide, the United Arab Emirates (UAE) remains committed to providing quality and equitable education for all learners [1]. The provision of quality and equitable education is part of the country's National Agenda [2] and it requires trainee teacher institutions to implement pedagogical strategies which are consistent with contemporary teaching and learning approaches. Online teaching and learning and virtual practicum teaching are some contemporary educational ways which teachers are required to adjust to and adopt. Teacher training institutions are challenged to revise their curricula to ensure that pre-service teachers are equipped with necessary knowledge and skills they need to conduct virtual field experiences and to teach using different strategies to cater for the diverse needs of children [3].

As educational advancements that do not consider teacher education programs will be perceived as useless, teacher education is one of the most significant components in increasing the quality of education' in general and should be considered one of the most crucial components overall [4]. Therefore, initial teacher education programs are the input that goes into the teaching profession, and the organization of teacher development plays a significant role in determining the quality and number of teachers in a given population [5]. In the UAE, a teacher education program will typically allocate around one-third of its total duration to student teaching experiences at early childhood educational schools [6]. Teaching practice is typically broken up into three stages throughout a five-year programme in Finland. These stages are basic practice, advanced practice, and final practice. The UAE's teacher education program is designed to simultaneously apply teaching practice to classroom sessions.

As is the case in many other countries, Arab countries place high importance on the information and virtual technology sectors within the framework of their development goals. The Arab area is quickly catching up with the spread of virtual and e-learning technologies, largely thanks to the significant emphasis placed on constructing the necessary infrastructure. The UAE has delivered outstanding results in the Level of Performance Index (NRI) as a function of its understanding of the meaning of information systems and the significant investments made in its development [7]. The UAE was first on the list and held the 24th spot globally [6]. Similarly, the UAE is widely regarded as one of the most advanced technology nations in the region. For instance, Kirikcilar and Yildiz's (2018) research about virtual learning and training by middle school teachers when constructing class activities utilizing the GeoGebra software substantiated that teachers had difficulty fitting their teaching material into the advanced technologies [8].

Furthermore, the research conducted by Kontkanen (2017) on the experiences that Finnish teachers had while using their virtual training and teaching practices for schoolwork over three years of upper secondary education revealed that teachers' technology perception was generally intolerant of change and that students' adoption is not approaching a level that is

capable of initiating change [8]. Therefore, to foster learners who will continue their education well into the 21st century, educators need to become proficient in using technology and be willing to adapt their current pedagogical approach to accommodate this shift [9] When it comes to developing educators into agents who can make positive use of technology in the classroom, accountability needs to begin from the very beginning of a teacher's career in the colleges and universities that provide teacher education. In the following passage, Finger et al. (2010) make the following argument: "Since the beginnings of computers in classrooms during the 1980s, there have been significant advancements by educational standards and schools to formulate policies and perceptions for the utilization of virtual pedagogical curriculum to improve teaching and learning" [10]. In addition, Teo (2009) remarked that to achieve greatness in schools, it is essential to make certain that teachers can use technology in the instructional process [11]. Consequently, the groundwork must be laid at the level of the trainee or pre-service teacher. If nothing is done about it, there will be a generation of future educators who are technologically illiterate. (p. 2). Because of this, educational institutions that provide teacher training play a significant part in educating future educators to become competent in incorporating pre-service pedagogical training into classroom instruction and student learning [12].

The quality and amount of pre-service technology experience offered in new teachers' teacher education programs are two important factors influencing the degree to which those new instructors utilize technology in their classrooms. Teaching in the classroom, conducting research, and finding solutions to problems are all activities that future teachers will be expected to do regularly. Pre-service teachers must have the resources and experience to make a valuable contribution in these tasks [13].

Technology allows pre-service teachers to customize their classroom environments and modify their teaching methods [14]. In addition, using technological tools within the classroom provides an excellent opportunity for combining students' enthusiasm for technology with interesting and original approaches to teaching and learning [15]. Most educators believe that they will be able to make better use of available resources if time considerations are factored into their lesson plans [16]. In their research, Ismail, Al-Awidi and Al-Mekhlafy (2010) characterized how the teachers who participated in the study believed that having an opportunity such as discounted or free machines, key in determining, release time or salary increment was essential for successfully integrating technology in teaching.

Therefore, the purpose of this study is to investigate pre-service teachers' initial pedagogic impressions and experience of their first week of virtual practicum teaching. The paper begins with this current section of introduction and background to the study. This is followed by the literature review which focused on the contextual presentation of online field experiences of pre-service teachers in three different countries [17]. A theoretical framework is presented thereafter followed by methods and discussion.

2. Literature Review

2.1 UAE Pre-Service Teachers and Pedagogical Training/Experience

In the UAE, pre-service teachers are allowed to gain self-awareness and improve their ability to solve problems in the classroom context by participating in field experience [18]. Due to this, pre-service teachers can renegotiate their demonstration of the concept with their prior experiences and comprehension, thanks to the practical experience they receive in the field [19]. In addition, female educators who gain field experience can improve their problem-solving ability and promote competence in selecting the most effective teaching methods to address challenges that may arise in the classroom [20]. It has been shown that improving the problem-solving abilities of pre-service teachers has a significant impact on students' learning and performance levels. Furthermore, this ability is a factor in determining overall classroom effectiveness [20]. Because of this, it is strongly advised that educators in the UAE focus on enhancing the quality of these practices if they want to fulfil the call for strengthening the education system in the country. Providing pre-service teachers with the opportunity to observe mentors in action, for example, assists them in promoting their teaching practices, particularly in identifying and satisfying the individual needs of students, as well as learning skills in effective teaching. It would also help to improve the overall quality of the experience in the field, which would be a positive outcome. Real-world training has emerged as the most important component of educator preparation.

Practicum is a high-impact experience that, if done the right way, can be a time of intense learning and development [21]. If it is only done on a surface level, it may result in significant unhappiness among pre-service teachers, advisors, and supervisors. The involvement of mentors in the field experience process is vital for trainees' progression into the teaching profession. Because of this, the cooperating mentor must be capable of providing the appropriate assistance and training to pre-service teachers. When the programs for teacher education are not adequately integrated, faculty supervisors tend to fail in preparing instructors to deal with the many challenges of teaching practicums [22]. Additionally, it is advised that universities continually reward and acknowledge the efforts of pre-service teachers in doing research in education programs [23].

Pre-service teachers' opinions of the impact that teacher preparation programs have had on their level of preparedness and ability to teach are one way to evaluate the effectiveness of these programs. While a recent study emphasizes the experience of pre-service teachers as a trigger to enhance their attitudes, very little is understood about this topic in the Middle East, especially in the UAE [24]. In addition, very few studies have investigated the perceptions of faculty supervisors and the difficulties they face during their practicum courses (Cuenca, 201). It is abundantly clear that additional research is required to give empirical information about the ground experiences and difficulties uniquely encountered in the UAE.

2.2 Online Field Experiences in Some Other Contexts

Schools have moved quickly to transfer numerous courses and programs from face-to-face to

online delivery mode as a result of the COVID-19 epidemic. Hojeij and Baroudi (2021) addressed this point in their study. They investigated the efficacy of virtual practicum placement and its effects on improving pre-service teachers' teaching methods, classroom management abilities, and use of online resources. A qualitative technique was used for data collection, which included interviews, diary entries, and written reflections organized into guided reflective categories of four pre-service teachers. The findings demonstrated the important role of the mentor and proposed a framework for good virtual field experience. Findings from a qualitative study conducted by Jackson and Jones (2019) about virtual field experience indicated that there was an appreciation of this experience and that the participants were made aware of different technologies available for online teaching [25].

Logic and reason, creativity and invention, connections, cooperation, self-direction, communications, and using technology as a means were listed by Meda and ElSayary (2021) as the qualities necessary for instructors to possess to instruct students in virtual learning-related courses [26]. With 21st century teaching materials, pre-service teachers were allowed to interact with various technological tools. Pre-service teachers may have access to various tools, but it does not guarantee they know how to use them effectively. To make effective use of technologies, they require pedagogically sound programs for the education of teachers, continuous professional development, and pedagogical coherence [26]. This concept was made clear in early childhood classes by distributing tablets or iPads to students, which might or might not have been pertinent to the learning outcomes targeted by the pedagogical training [26]. It was reported that pre-service teachers did not have the impression that they were preparing pedagogical training activities; rather, they had the impression that they were constructing creative activities that were connected with the instructional strategies. They discussed how they had developed specialized topics for virtual classrooms and provided various products developed within these classrooms, such as animated films, interactive stories, application packages, and games. ElSayary, Zein, and Antonio (2022) also reported that pre-service teachers' positive attitude has a significant and positive effect on the development of virtual learning technologies [27].

2.3 Pre-Service Teacher Challenges, Pedagogical Practices, and Classroom Effectiveness

From the standpoint of student teachers, gaining practical experience in the classroom is an essential component of their education [28]. This should give pre-service teachers the chance to apply their theory and understanding into practice in a classroom setting and produce new information depending on their conceptual understanding and practical experience in the field [29]. Doing so will increase the likelihood that pre-service teachers can independently analyze, evaluate, and improve their future teaching practices. Additionally, they will be capable of adapting to shifts in the surrounding environment, which are common in teaching across all nations and cultures.

Indeed, it has been discovered that there exists a gap between the conceptual coursework students take and the practice they receive in the domain. This is one of the reasons why pre-service teachers find it difficult to apply the conceptual knowledge they have gained in

the actual classroom setting [30] [31]. As a result, many people expressed their concerns to the government about the critical need to improve teaching practice [32] [31]. This is useful since research has shown that most pre-service teachers struggle to make suitable decisions about stressful situations, which presents a challenge for future educators [33]. Thus, inspiring and assisting them in understanding the challenges and enabling them to think skeptically and recognize the rationalization for alternate solution approaches to addressing their teaching practice issues. This would benefit the teachers because it would allow them to address the challenges they face in their classrooms more effectively [34].

Regarding pre-service teachers, it has also been discovered that during the intricacies of experience in the field, new teachers tend to cope, to different degrees, with the problems and difficulties of decision-making. This was shown to be the case with pre-service teachers in the pedagogy [35]. They are typically capable of handling routine tasks, making straightforward adjustments, and providing appropriate responses to a wide range of classroom conditions. In situations like this, however, pre-service teachers fail to grasp the fundamentals of effective teaching practice, which are analytical and reflective [36]. Because of this, the conventional practicum has been triggered due to the submissive position that student teachers play [37]. Students and teachers frequently wait in queue for simple input from their supervisors and are not urged to think seriously about their practice during this time [38]. This has led to criticism of the conventional practicum. Provided that "teachers of tomorrow ought to have the intellectual, spiritual, and analytical thinking capacity to face the hurdles of 21st-century school systems," it is the task of the management to motivate pre-service teachers and provide them with suitable experience in the industry to allow them to practice deeply.

3. Theoretical Framework

Gibbs' reflective cycle, developed by Graham Gibbs in 1988, serves as a valuable theoretical framework for understanding and promoting reflective learning. In essence, this framework recognizes that simply having an experience is insufficient; true learning occurs when individuals reflect upon their experiences, extracting valuable insights and lessons from them [39]. This reflective approach to learning aligns with the principles of experiential learning, a concept championed by theorists like David Kolb (1984) and further elucidated by Gibbs himself (1988).

Gibbs' reflective cycle encompasses six essential stages, each contributing to a comprehensive process of reflection and self-improvement. These stages are described as follows:

Description: The initial stage involves a straightforward account of the experience itself. It entails answering fundamental questions like what transpired, who was involved, and when it occurred. This phase serves as the foundation upon which deeper reflection is built, providing context and clarity to the subsequent stages.

Feelings: In this stage, the focus shifts to the emotional and cognitive aspects of the

experience. Individuals explore their feelings and thoughts both during and after the event, delving into the impact it had on them. Identifying and acknowledging emotions is crucial for a thorough understanding of the experience.

Evaluation: At this juncture, individuals engage in a critical appraisal of the experience. They assess and categorize it as positive or negative, successful or unsuccessful, and good or bad. This evaluative process aids in forming judgments and discerning the significance of the encounter.

Analysis: Analysis entails a deeper exploration of the "why" and "how" behind the events. Individuals dissect the sequence of occurrences, seeking to comprehend the underlying reasons and causal relationships. It involves scrutinizing elements identified in the evaluation phase and probing into their implications.

Conclusion: The conclusion stage involves synthesizing the insights gained from the reflective process. It is a summary of what has been learned from the experience. This phase often includes identifying areas for improvement and outlining strategies or actions that can be implemented differently in the future.

Action Plan: The final stage of Gibbs' reflective cycle compels individuals to translate their newfound understanding into informed action. Based on the lessons learned, individuals formulate plans and strategies for future encounters. This phase emphasizes the practical application of reflective insights to enhance future performance.

The selection of Gibbs' reflective cycle as the theoretical framework for this study was a deliberate choice. It aligns seamlessly with the focus on pre-service teachers' experiences, including their engagement in virtual practicum teaching. This framework enables the examination of these experiences through the lens of the six reflective stages, facilitating a thorough analysis and meaningful conclusions regarding the challenges and benefits of conducting practicum teaching virtually. By adopting Gibbs' reflective cycle as a guiding framework, this study not only sheds light on the experiences of pre-service teachers but also underscores the importance of reflective learning as a tool for personal and professional growth. It emphasizes the need for educators to continually engage in the reflective process, recognizing that true learning emerges from deliberate contemplation of one's experiences and a commitment to ongoing improvement.

4. Research Methodology

The Early Childhood Education (ECE) Teacher Preparation Program at a prominent public institution in the UAE is a rigorous eight-semester course of study designed to prepare pre-service teachers for their future careers. A crucial component of this program is the field experience placements, which play a pivotal role in shaping the skills and knowledge of aspiring educators. This extended discussion will delve deeper into the research conducted on the ECE program, focusing on the research process and the axes of analysis presented in the results.

The research undertaken to examine the effectiveness of the ECE program utilized a qualitative approach, aligning with an interpretative paradigm. Qualitative research was chosen for its ability to provide in-depth insights into trainee instructors' perceptions of virtual field experiences [40]. An interpretative paradigm was employed to ensure that participants' perspectives were given ample space for expression, following the tenets of Lee (2012), who emphasized the importance of eliciting participants' viewpoints in qualitative research [41].

The research took the form of an exploratory case study conducted within the context of a federal institution in the UAE. The selection of this institution as the case study subject was based on its affiliation with the researchers' university's teacher training program, ensuring relevance and accessibility of data. This case study design allowed for an in-depth investigation into the intricacies of the ECE program's field experience component. The study was comprised of 20 internship students who were chosen through purposeful sampling. In their final practicum experience, these pre-service teachers were teaching in ECE settings, specifically in kindergarten classrooms with children aged 4-5 years old, which is the first year of formal schooling in the UAE. This selection method was employed to ensure that the participants possessed a wealth of information and experience related to the field experiences within the ECE program [42]. These internship students were approaching the culmination of their studies, having completed practicums I, II, and III, and were on the cusp of graduating, making them well-suited for providing valuable insights into their overall journey.

In terms of data analysis, content analysis was the chosen method. Content analysis allows for a systematic examination of textual data, aligning with the research's qualitative nature. It facilitated the extraction of meaningful patterns and themes from the rich data collected during the study. Ethical considerations played a pivotal role in the research process. Ethical authorization was sought and obtained to ensure that the study adhered to ethical guidelines and protected the rights and well-being of the participants. All participants were explicitly informed about the study's objectives and the voluntary nature of their participation, emphasizing the importance of informed consent.

The points below highlight the axes of analysis presented in the results of the research:

Perceptions of Virtual Field Experiences: One key axis of analysis focused on understanding how internship students perceived virtual field experiences. This included their thoughts on the effectiveness of virtual placements in comparison to traditional in-person experiences.

Development of Teaching Skills: Another axis of analysis delved into the development of teaching skills throughout the ECE program. Researchers examined how students progressed from being observers (Practicum I) to teaching small groups (Practicum II) and eventually conducting whole-class instruction (Practicum III) before culminating in the 10-week internship with full-time classroom teaching.

Reflective Practices: The research also explored the role of reflective practices in the ECE program. This included an analysis of how students engaged in self-reflection and how it

contributed to their professional growth.

Ethical Considerations: An additional axis of analysis involved ethical considerations within the ECE program. Researchers examined how ethical issues related to field experiences were identified and addressed, ensuring that the program maintained ethical standards.

In conclusion, through employing a qualitative approach and purposeful sampling, the study provided a nuanced understanding of the program's impact on pre-service teachers. The axes of analysis allowed for a comprehensive examination of various aspects, shedding light on both strengths and areas for improvement within the program. Furthermore, the rigorous ethical framework ensured the protection and voluntary participation of all study participants, contributing to the integrity of the research findings.

5. Results

Pre-service teachers experience and encounter a lot during their practicum teaching. For all of them, this was their first time engaging in online teaching. As indicated earlier, for all candidates, it was their third teaching practice stint. In this section, researchers report on some of the most pertinent aspects of these student teachers' first week of teaching practice, as well as their exclusive instructional activities using the online platform. Two themes were determined from their journal data: observing the mentor and learners' pedagogical actions, and mastering important skills and competencies in their pedagogical journey [8]. The scientific analysis of the pre-service teachers' descriptions was conducted using thematic analysis, a qualitative data analysis method that involves identifying, analyzing, and reporting patterns or themes within the data [10]. The researchers carefully examined the journal entries, looking for recurring patterns, ideas, and experiences related to the pre-service teachers' observations and hands-on pedagogical activities during their first week of virtual practicum teaching. This systematic approach allowed for a rigorous and in-depth exploration of the pre-service teachers' experiences and perceptions.

5.1 Observing Mentor and Learners' Pedagogical Actions

In line with the university's policy, which directs pre-service teachers to learn from mentor teachers, trainee teachers observe their mentors teaching in their respective classes. Observation by pre-service teachers was perceived as the most dominant activity during week one, even though several activities were observed, and much of the focus was on observing the mentor teacher and how she handles the classroom routines and resources. In this regard, a pre-service teacher remarked, "I observed the teacher while she was teaching the students, what lessons they took, what teaching strategies she uses, and what online tools she uses." Pre-service teachers had to observe and, at the same time, write notes. A participant confirmed this, saying, "I wrote every single piece of information in my notebook to keep it as a reminder." Similarly, another participant who observed her mentor said, "…today I ensured to observe the lesson and student's level. I watched how the teacher started the lesson and the routine and rules that she set for the children." Another participant echoed the same sentiment saying "…I was just watching how my mentor taught the students and how to deal

with them."

The majority of pre-service teachers observed their mentors during the first week of virtual practicum teaching. A participant confirmed this saying, "I was observing all the time because it was my first time in a distance education experience." It was therefore wise for pre-service teachers to spend the first week observing their mentor teachers and learn from their experience. A participant reiterates this view saying "I will acquire new skills when I see how my mentor explains and teach students… I will take another look at my mentor teacher and how she teaches them and writes." Another participant said, "I learnt how to manage time. From my mentor teacher." Other sentiments expressed by pre-service teachers regarding their observations included: "All I did was getting to know my mentor and discussing the requirements" and "We… discussed the effective instructional strategies that could help teach math to grade four students. My mentor explained to me her teaching methods and…. the devices she is using."

Some pre-service teachers had to ask their mentor teachers questions about online learning. The purpose of this was to gain knowledge and skills about teaching and supporting learners. A participant confirmed this saying "I listed [a] couple of questions for her [mentor] to understand her own way/strategy on teaching." Based on the foregoing, pre-service teachers' reasons for observing are pedagogically sound since they were unfamiliar with the normal teaching practices, systems, and techniques, as well as the dominant classroom atmosphere. Additionally, newly initiated student teachers are not familiar with how learners are taught how learners are taught to use online platforms. Hence, getting to know the learners and teaching techniques through their mentor was perceived as the best approach.

A participant envisioned the teaching of grade one as a challenge due to the children's young age. However, she resolved to challenge herself by promising that "I'll do my best to keep the lessons going well and to make it understandable and enjoyable for them." For another participant, working with the mentor towards the realization of the education goal was critical. She promised: "I will begin planning with the teacher [mentor], the lessons that I will teach the learners." Similar sentiments were posited by a participant who boldly indicated that "the mentor teacher was very helpful and supportive because she answered all my questions regarding the content, students' information, school information and other questions."

5.2 Hands-on Pedagogical Activities

Pre-service teachers actively engaged in hands-on pedagogical activities and teaching during the first week of their field experience, going beyond mere observation. Moreover, the scientific analysis of the pre-service teachers' descriptions revealed that they engaged in various hands-on pedagogical activities, such as teaching specific subjects, developing instructional strategies for online learning, and collaborating with mentor teachers to track students' progress. Some pre-service teachers had opportunities to teach. They were thrown in at the deep end by being called upon to teach during the first week due to the absence of their mentors. A pre-service teacher said, "I had to teach English because the mentor had to leave because of medical problems." Similarly, another participant said, "I taught

Mathematics" and another said, "I taught Arabic to the students in class." The birth of online learning and teaching presented opportunities for some pre-service teachers to strategize and come up with novel instructional strategies.

Some pre-service teachers had hands-on activities such as note taking related to classroom activities which were happening. Some pre-service teachers worked collaboratively with mentor teachers by helping them with tracking students' progress. This was reiterated by a participant who said:

During attending the classes this week, I was thinking about the effective ways to manage the online class, and how to manage students' behaviour and what are new best teaching method that suit the online learning. Also, I thought about how I can track student's progress and make sure that students are in the right track.

Although pre-service teachers had interesting observations and hands-on pedagogical activities to share, they also reflected on feelings that they had. The majority of pre-service teachers reported feeling nervous and unsettled. This 'crisis of expectation' was variously captured in their narratives. Initially, some felt very nervous (three participants), less anxious (one participant), sad (one participant), and excited (one participant). One pre-service teacher said, "I am feeling very scared and confused and had no idea what to do." Another participant said, "My feelings and thoughts were overwhelming the night before my teaching….". Two other participants said, "I was too nervous but happy" and "I was a bit was sad [because] they changed my mentor teacher." Despite the feelings of fear, anxiety and curiosity, pre-service teachers were able to gather momentum and managed to conduct successful observations and provide effective teaching.

6. Discussion

The findings of this study provide valuable insights into the experiences of pre-service teachers during their first week of virtual practicum teaching. As one participant remarked, "I was observing all the time because it was my first time in a distance education experience" [Participant 3]. This statement highlights the significant impact of the virtual field experiences on the pre-service teachers. Jackson and Jones (2019) reported similar findings, noting that pre-service teachers in their study appreciated the virtual field experience and gained awareness of different technologies available for online teaching [25]. The pre-service teachers in this study reported positive experiences during their virtual practicum teaching, despite the challenges of adapting to and adopting a new pedagogical approach. As one participant noted, "It was very difficult to adapt to and adopt the new pedagogical approach, however, we had to move out of our comfort zones and work collaboratively with our mentors to succeed" [Participant 7]. This sentiment resonates with Mohebi and Meda (2022), who emphasize the importance of collaboration between pre-service teachers and their mentors for meaningful field experiences [43].

The participants emphasized the crucial role of mentor teachers in supporting their virtual practicum teaching experience. They felt that a collaborative approach with their mentors was

key to navigating the challenges and opportunities presented by the virtual format. One participant stated, "The mentor teacher was very helpful and supportive because she answered all my questions regarding the content, students' information, school information and other questions" [Participant 12]. This finding aligns with Hojeij and Baroudi's study, which underscored the importance of a collaborative relationship with mentors for a successful virtual field experience [18]. While the pre-service teachers reported positive experiences and growth during their virtual practicum teaching, it is important to note that the term "success" in this context is relative and multifaceted. Success in virtual practicum teaching can be evaluated based on various factors, such as the pre-service teachers' ability to adapt to the virtual format, effectively engage students, collaborate with mentors, and reflect on their experiences. Further research is needed to establish clear criteria for determining success in virtual practicum teaching and to explore the long-term impact of these experiences on pre-service teachers' professional development.

7. Conclusion

The purpose of this study is to investigate pre-service teachers' initial pedagogic impressions and experience of their first week of virtual practicum teaching in kindergarten classrooms with children aged 4-5 years old, which is the first year of formal schooling in the UAE. Guided by Gibbs' reflective cycle as the theoretical framework, the findings and analysis revealed that pre-service teachers engaged in a profound reflective process during their virtual practicum experience. Through insightful observations and hands-on pedagogical activities, they developed problem-solving skills and higher-order thinking abilities, aligning with the stages of description, evaluation, and analysis outlined in Gibbs' cycle. The reflective nature of the experience enabled pre-service teachers to adapt and adjust effectively to the new virtual teaching and learning approach, exemplifying the conclusion and action plan stages. Their successful collaboration with mentor teachers further facilitated this reflective journey, allowing them to navigate challenges and refine their practices in early childhood education.

The study’s findings showed that the pre-service teachers improved their ability to teach early childhood subjects by participating in an ECE program that included virtual and technological tools. After participating in the engaging technology training, there was a discernible improvement in how they utilized the technology compared to before they had received the training and pedagogical experience. The transformational realm of combining technology, pedagogy, and subject knowledge that Hirsh and Baronak (2020) address was followed in this research with the use of virtual learning technology apps. This was done to support the findings of the previous study. To reduce the number of students who withdraw from their early education courses, it is strongly suggested that the courses be redesigned to use technology-based learning in instruction and education. After the COVID-19 lockdown, when face-to-face learning and teaching were unexpectedly switched online, school programs ought to attach more weight to technology usage. This is especially important in light of recent events. In addition, it was suggested that career development training be created for teachers who teach future teachers. For teachers to effectively assist pre-service teachers and

prevent students from getting bored and dropping out of school, they must adopt the revolutionary model of technological pedagogical content knowledge.

There is a pressing need for additional research that focuses on teachers' viewpoints concerning the use of interactive technology in educational settings. Additionally, it is important to consider the findings of other studies about the application of design thinking and the integral part of learning while utilizing interactive technology. Evaluation of the pre-service teachers' blogs is an additional tool that might be added to the research to better understand the level of self-reflection that the participants attained due to having their individual learning needs and preferences met. Exploring the interplay between reflective practices, technological integration, and early childhood pedagogy could unravel valuable insights for enhancing teacher education programs. Furthermore, longitudinal studies tracking the long-term impact of virtual practicum experiences on teaching efficacy and student outcomes would shed light on the sustainable benefits of this approach.

Conflict of Interest

The researchers declare that there are no conflicts of interest to disclose regarding the research presented in this manuscript. All authors have reviewed and approved the final version of the manuscript for submission.

Data Availability Statement

The dataset used in our study is maintained by a reputable public institution in the UAE. Access to this data is restricted due to ethical considerations and is governed under the ethical clearance reference ZU20_140_F. While the data is not available for public access, it can be made available by the authors upon a well-justified request, subject to adherence to the ethical guidelines established for this research and with the necessary approval from the responsible program at the institution.

References

L. Meda and Z. Waghid. (2022). Exploring special need students' perceptions of remote learning using the multimodal model of online education. *Education and Information Technologies, 6*(27), 8111-8128. https://doi.org/10.1007/s10639-022-10962-4

Vision 2021. (2018). First-Rate education system. https://www.vision2021.ae/en/national-agenda-2021/list/first-rate-circle.

M. Jelinska, & M. B. Paradowski. (2021). Teachers' perception of students coping with emergency remote instruction during the COVID-19 pandemic: The relative impact of educator demographics and professional adaptation and adjustment. *Frontiers in Psychology, 12*, 648443. https://doi.org/10.3389/fpsyg.2021.648443

P. Santiago. (2002). Teachers Demand and Supply: Improving Teaching Quality and Addressing Teacher Shortages. *OECD Education Working Papers, No. 1.* OECD Publishing, *1*. https://doi.org/10.1787/19939019

P. Musset. (2010). Initial Teacher Education and Continuing Training Policies in a

Comparative Perspective: Current Practices in OECD Countries and a Literature Review on Potential Effects. *ECD Education Working Papers*. https://doi.org/10.1787/19939019

L. Mohebi and S. David. (2019). Pre-service teachers' perspectives on their preparedness to use technology in classrooms in the United Arab Emirates: A qualitative approach. *Social Science Research Network SSRN*. https://dx.doi.org/10.2139/ssrn.3421431

S. Dutta and I. Mia. (2011). The global information technology report 2010-2011. 10th Anniversary Edition ed., vol. 24, I. M. Soumitra Dutta, Ed., *World Economic Forum,* 331-391. https://www.ifap.ru/library/book494.pdf

S. Kontkanen, P. Dillon, T. Valtonen, L. Eronen, H. Koskela and P. Väisänen. (2017). Students' experiences of learning with iPads in upper secondary school - a base for proto-TPACK. *Education and Information Technologies, 4*(22), 1299-1326. https://doi.org/10.1007/s10639-016-9496-7

Z. Ayvaz-Tuncel. (2018). Factors supporting and preventing academics from becoming lifelong learners. *International Journal of Higher Education,* pp. 55-62. https://doi.org/10.5430/ijhe.v7n4p55

G. Finger, R. Jamieson-Proctor and P. Albion. (2010). *Beyond pedagogical content knowledge: The importance of TPACK for informing pre-service teacher education in Australia*. Springer. https://doi.org/10.1007/978-3-642-15378-5_11

T. Teo. (2009). The impact of subjective norm and facilitating conditions on pre-service teachers' attitude toward computer use: A structural equation modeling of an extended technology acceptance model. *Educational Computing Research, 40*(1), 89-109. https://doi.org/10.2190/EC.40.1.d

Y. Goktas, Yildirim and Yildirim. (2009). Main Barriers and Possible Enablers of ICTs Integration into Pre-service Teacher Education Programs. *Educational Technology & Society, 12*(1), 193-204. https://www.researchgate.net/publication/220374064_Main_Barriers_and_Possible_Enablers_of_ICTs_Integration_into_Pre-service_Teacher_Education_Programs

S. Gürşen Otacioğlu. (2008). Prospective teachers' problem-solving skills and self-confidence levels. *Educational Sciences: Theory & Practice, 8*(3), 915-923, https://files.eric.ed.gov/fulltext/EJ837771.pdf

J. Lancaster and Bain. (2019). Designing University Courses to Improve Pre-Service Teachers' Pedagogical Content Knowledge of Evidence-Based Inclusive Practice. *Australian Journal of Teacher Education, 44*(2), 51-65. https://doi.org/10.14221/ajte.2018v44n2.4

V. L. Tinio. (2003). ICT in Education", US: United Nations Library. https://digitallibrary.un.org/record/524544?ln=en

S. A. A. Ismail, A. G. Almekhlafi and M. H. Al-Mekhlafy. (2010). Teachers' perceptions of the use of technology in teaching languages in United Arab Emirates' schools. *International Journal for Research in Education, 27*(1), 37-56, https://www.uaeu.ac.ae/ar/cedu/research/journal/pdf/pdf27/7.pdf

R. Heyer. (2015). Learning through reflection: The critical role of reflection in work-based

learning. *Journal of work-Applied Management, 7*(1), 15-27. https://doi.org/10.1108/JWAM-10-2015-003

S. Baroudi, Z. Hojeij, L. Meda and J. Lottin. (2022). Examining elementary preservice teachers' selfefficacy and satisfaction in online teaching during virtual field experience. *Cogent Education, 9*(1), 2133497. https://www.tandfonline.com/doi/full/10.1080/2331186X.2022.2133497

M. Clarke and Otaky. (2006).Reflection 'on' and 'in' teacher education in the United Arab Emirates. *International Journal of Educational Development, 26*(1), 111-122. https://doi.org/10.1016/j.ijedudev.2005.07.018

J. Tondeur, D. Krug, M. Bill, M. Smulders and C. Zhu. (2015). Integrating ICT in Kenyan secondary schools: an exploratory case study of a professional development programme. *Technology, Pedagogy and Education, 24*(5), 565-584. https://doi.org/10.1080/1475939X.2015.1091786

M. Z. Altan and H. Salamel. (2015).Student teaching from the perspectives of cooperating teachers and pupils. *Cogent Education, 2,* 55. https://doi.org/10.1080/2331186X.2015.1086291

M. Clarke and D. Otaky. (2006). Reflection 'on' and 'in' teacher education in the United Arab Emirates. *International Journal of Educational Development, 26*(1), 111-122. https://doi.org/10.1016/j.ijedudev.2005.07.018

K. Zeichner. (2010). Rethinking the connections between campus courses and field experiences in college-and university-based teacher education. *Journal of Teacher Education, 61*(1-2), 89-99. https://doi.org/10.1177/0022487109347671

R. G. Kirikçilar and A. Yildiz. (2018). Technological Pedagogical Content Knowledge (Tpack) Craft: Utilization of the TPACK when Designing the Geogebra Activities. *Acta Didactica Napocensia, 11*(1), 101-116. https://doi.org/10.24193/ADN.11.1.8

B. L. Jackson and W. M. Jones. (2019). Where the rubber meets the road: Exploring the perceptions of in-service teachers in a virtual field experience. *Journal of Research on Technology in Education,* 51(1), 7-26. https://doi.org/10.1080/15391523.2018.1530622

RA. Hirsh and Baronak. (2020). Empowering Early Childhood Pre-Service Teachers with Tech Fluency. *Creative Education, 11*(12), 2730. https://doi.org/10.4236/ce.2020.1112200

A. ElSayary, R. Zein and L. S. Antonio. (2022). Using Interactive Technology to Develop Preservice Teachers' STEAM Competencies in Early Childhood Education Program. *EURASIA Journal of Mathematics, Science and Technology Education, 18*(2). https://doi.org/10.29333/ejmste/11649

O. Al-Hassan, A. Al-Barakat and Y. Al-Hassan. (2012). Pre-service teachers' reflections during field experience. *Journal of Education for Teaching, 1,* 419-434. https://doi.org/10.1080/02607476.2012.707918

M. Korkko, O. Kyrö-Ämmälä and T. Turunen. (2016). Professional development through reflection in teacher education. *Teaching and Teacher Education, 55,* 198-206. https://doi.org/10.1016/j.tate.2016.01.014

L. Al-Zarah. (2008). An investigative study of the female initial teacher preparation programme in Saudi Arabia in an Islamic context," Unpublished Ph.D. Thesis. Durham University, p. 22. http://etheses.dur.ac.uk/1893/1/1893.pdf

A. K. Hamdan. (2015).Challenges and constraints encountered by Saudi pre-service science teachers: A critical perspective. *Learning and Teaching in Higher Education: Gulf Perspective, 12*(2), 26-45. http://dx.doi.org/10.18538/lthe.v12.n1.174

N. A. A. Al-jadidi. (2012). The Professional Preparation, Knowledge and Beliefs of Kindergarten Teachers in Saudi Arabia. University of Exeter (United Kingdom) ProQuest Dissertations Publishing, 1, 72. https://www.proquest.com/docview/1414975289?pq-origsite=gscholar&fromopenview=true

B. C. White. (2015). Pre-service teachers' epistemology viewed through perspectives on problematic classroom situations. *Journal of Education for Teaching, 26*(3), 279-305, 2000. https://doi.org/10.1080/713676891

D. S. Yost, S. M. Sentner and A. Forlenza-Bailey. (2000). An examination of the construct of critical reflection: Implications for teacher education programming in the 21st century. *Journal of teacher education, 51*(1), 39-49. https://doi.org/10.1177/002248710005100 10

K. Orr. (2012). Coping, confidence and alienation: The early experience of trainee teachers in English further education. *Journal of Education for Teaching, 38*(1), 51-65. https://doi.org/10.1080/02607476.2012.643656

R. Blaik Hourani. (2013). Pre-service teachers' reflection: Perception, preparedness and challenges. *Reflective Practice, 14*(1), 12-30. https://doi.org/10.1080/14623943.2012.732947

L. Meda and A. Elsayary. (2021). Establishing Social, Cognitive and Teacher Presences During Emergency Remote Teaching: Reflections of Certified Online Instructors in the United Arab Emirates. *Contemporary Educational Technology, 13*(4), 12-30. https://doi.org/10.30935/cedtech/11073

M. Körkkö, O. Kyrö-Ämmälä and T. Turunen. (2016). Professional development through reflection in teacher education. *Teaching and teacher education, 55,* 198-206. https://doi.org/10.1016/j.tate.2016.01.014

G. Gibbs. (1988).Learning by Doing: A Guide to Teaching and Learning Methods. England: Oxford Polytechnic, Oxford. https://thoughtsmostlyaboutlearning.files.wordpress.com/2015/12/learning-by-doing-graham-gibbs.pdf

J. W.Creswell and J.D. Poth. (2018). Qualitative Inquiry and Research Design, vol. 4, J. W. Creswell, Ed., Sage. https://us.sagepub.com/en-us/nam/qualitative-inquiry-and-research-design/book246896

J. E. Lee. (2012). Prospective elementary teachers' perceptions of real-life connections reflected in posing and evaluating story problems. *Journal of Mathematics Teacher Education, 15,* 429-452. https://doi.org/10.1007/s10857-012-9220-5

JR. Fraenkel. (2011). *Wallen and Hyun, How to Design and Evaluate Research in Education, 7,* New York: McGraw-hill, 429.

http://www.johnlpryor.com/JP_Digital_Portfolio/EDU_7901_files/EDU%207901 %20Data%20Definitions.pdf

L. Mohebi and L. Meda. (2022). Meditating a new pedagogical approach in Early Childhood Education post COVID-19 in the United Arab Emirates. *Journal of Positive School Psychology,* pp. 6164-6173. https://www.researchgate.net/publication/361720484_Meditating_a_new_pedagogical_approach_in_Early_Childhood_Education_post_COVID-19_in_the_United_Arab_Emirates