Exploring Challenges and Lessons Learned in Pre-Service Teacher Online Learning Environments

Arlinda Beka¹ and Arberore Bicaj²

Abstract

The global impact of the COVID-19 pandemic has posed challenges for education systems worldwide, particularly in developing countries less accustomed to online learning. Despite difficulties, the shift to online teaching and learning for pre-service teachers has yielded unforeseen advantages, offering opportunities for valuable skills development crucial for their professional growth. This mixed-method study investigates the professional development experiences of 421 pre-service teachers from the University of Pristina during and after the pandemic. The participants, comprising bachelor’s, and master’s, students from the Faculty of Education, were selected through probability sampling. Additionally, qualitative insights were gathered post-pandemic through focus group discussions with 7 students involved in the learning process during the pandemic period.

Quantitative data underwent analysis using SPSS software, employing correlation, t-test, and regression analyses. Qualitative findings were derived through thematic analysis. The findings indicate that online learning can present challenges that hinder professional advancement, such as technology issues that impede progress. Nevertheless, collaborative efforts with peers were found to enhance students’ satisfaction with online learning, possibly attributed to the significance of social interaction and group projects. The study highlighted that despite pandemic challenges, data on emergency situations has prepared teachers and students for similar challenges in the future. This will assist educational institutions in enhancing online education quality through targeted measures.

Keywords: Education, Kosovo, Online Learning, Teaching and Learning

INTRODUCTION

The dissemination of COVID-19 constitutes a formidable threat to humanity, given its widespread impact. The pandemic has compelled the cessation of numerous global activities, notably encompassing educational pursuits (Maatuk et al., 2022).

The COVID-19 pandemic and the resulting lockdown measures have posed significant challenges for higher education institutions (HEIs) worldwide. In response, scholars and educational stakeholders have determined online learning to be the best course of action, encouraging states and educational institutions to transition to online teaching and learning (UNESCO, 2020).

Amidst the global impact of the COVID-19 pandemic, it is imperative to address the educational requirements of children and youth, ensuring their continued learning amidst the crisis (OECD, 2020). Some countries have the necessary information and communications technology (ICT) infrastructure in place, as well as previous experience with online/remote learning, whereas other countries do not have such advantages, and their transition to online learning has been a completely new experience. Therefore, not every country has switched promptly toward online learning, as their ICT development stage and the technical infrastructure of their HEIs vary (Maldonado et al., 2011). In developed countries, online learning is something that HEIs have been implementing for some time; thus, their transition to online learning has been facilitated by the “know-how” and necessary ICT equipment they had acquired before the outbreak of the pandemic. Educational institutions may need greater flexibility to assess how candidate teachers demonstrate the competencies necessary to graduate (OECD, 2020).

The incorporation of technology into the educational curriculum had evolved into an indispensable facet of pedagogical practices well preceding the onset of the COVID-19 pandemic (Beka, 2014). However, the unplanned transition to online teaching (due to pandemic-related lockdown measures) occurred suddenly

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This is highlighted by the fact that different expressions are used to describe non-on-site learning, which has been implemented by many educational institutions. “Online learning,” “distance learning,” and “remote learning” are among the terms used during the pandemic to describe this type of education (Greener, 2021). In a broader context, these terms refer to a learning process that does not include face-to-face lectures in classrooms or university auditoriums. Online learning includes the use of ICTs (apps, videos, or other technologies) as tools for teaching and learning. Further, online learning focuses on Internet-based courses that are available both synchronously and asynchronously. Synchronous learning involves direct interactions between students and teachers while also utilizing online forms of communication such as conferences and online chat. Asynchronous learning is a type of indirect (rather than concurrent) learning that employs an independent approach (Rasmitadila et al., 2020). In this paper, online learning will be considered within the broader context of its meaning, referring to learning that uses ICTs and does not include face-to-face learning.

REVIEW OF LITERATURE

COVID-19-related measures have led to the rise of e-learning on an unprecedented scale (UNESCO, 2020; WHO, 2020). In order to sustain the continuity of students’ education, traditional face-to-face classes have been transitioned to an online format, heralding a novel iteration of remote learning encompassing lectures, lessons, and all educational activities. While online learning has been an established component of the curriculum in developed societies, with students typically acquainted with various platforms such as Moodle, Blackboard, and other learning management systems, its widespread utilization is not historically prevalent in developing societies, including Kosovo (Heng & Sol, 2021). Kosovo in this case has considered teacher ICT competencies as one of the key competencies for the pre-service and in-service teacher training in Kosovo (MASHT, 2016). Saliu and Bicaj (2022), in an analysis of the study programs of different faculties of education, examined the development of teaching students’ digital competence and found an average level of general digital teaching competence.

Challenges in Implementing Online Learning in Kosovo

Kosovo’s educational institutions have acknowledged the significance of aligning with contemporary trends in digitalization and information and communication technology (ICT) utilization. This recognition underscores their commitment to effectively disseminate information and knowledge to a wider audience (Beka & Beka, 2017). However, the incorporation of ICTs remains the most sensitive part of curriculum implementation, as teachers should be prepared to use the benefits of technology to enable students to use digital platforms to enhance their professional development (Beka & Gllareva, 2016).

Regarding the previous teachers’ experience with online teaching, we noticed a high percentage of teachers (65.7%) have never had experience with online teaching. Almost one-third of them, 31.4%, have occasionally had the opportunity to be part of online learning, while only 2.9% of them have had continuous online learning experiences (Beka, 2021). Educators who have recently studied internationally tend to be more familiar with online learning and possess critical skills needed to excel in online teaching. Their own experiences as students have shaped their approach to online education, and leveraging their expertise can enhance the quality of online learning for students. Thus, the implementation of this learning mode has brought many challenges to the surface. The positive aspect of this transformation is that students see their teacher as “flexible, creative, and developing new ways to teach old things” (Keren-Kolb, 2020).

However, online learning depends entirely on technological devices and the Internet; accordingly, instructors and students with poor Internet connections are liable to lack access to online learning. The dependency of online learning on technological equipment and the provision of equipment represents significant challenges for institutions, faculty, and learners (Adedoyin & Soykan, 2020).

Within the educational framework of Kosovo, notwithstanding endeavors to digitize infrastructure services associated with internet usage and investments in information technology (IT) equipment, discernible deficiencies persist (Zylliu et al, 2023). Furthermore, the ongoing challenges in the professional development
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The universities in Kosovo, especially the faculties of education, have the teaching organized with the physical presence of the students and almost all the programs offered are regular studies, which oblige the students to follow the lessons physically in the classroom. This is the same form for all study levels. As Beka and Hitchcock (2022) state:

“The Faculty of Education at the University of Prishtina represents Kosovo’s principal institution for teacher training, with programs from Bachelor (undergraduate) to Ph.D. level, all of which aim to provide the necessary training and equipping of the pre-service teacher. Alongside those study programs, the Faculty of Education has developed in-service training programs over the years for in-service teachers’ professional development”.

Adoption Challenges in Developing Societies during the COVID-19 Pandemic

Besides the lack of equipment, many institutions lack the know-how to adapt to online learning. This underscores teachers, students, and parents’ digital literacy when using ICTs for educational purposes. The transition to online learning during the pandemic was abrupt, thereby forcing all stakeholders to rapidly adapt to maximize their circumstances. Thus, there is a need for support for all stakeholders at every level in the education process to obtain the best results under such circumstances. It is imperative to support organizational changes that provide students with time to engage in predictable and structured learning opportunities (OECD, 2020).

Further, various distance education theories have been developed in the field of education, in which numerous resources, platforms, and teaching methods have been carefully considered, developed, and curated. However, the situation created by the COVID-19 pandemic has been characterized as “emergency remote teaching” (Hodges et al., 2020) to distinguish it from high-quality online education (Yates, A., et al, 2020).

The migration to an online learning environment has the potential to augment the flexibility of both teaching and learning processes, rendering them accessible at any location and time. However, the rapidity of this transition during the pandemic has been extraordinary, unprecedented, and remarkable. While campus support personnel and teams are typically accessible to assist faculty members in acquainting themselves with and incorporating online learning methodologies, their resources and assistance are typically directed towards a limited cohort of faculty members expressing interest in online teaching. Under the current circumstances, the capacity of these individuals and teams to provide the same level of support to all faculty members is constrained within the confines of a narrow preparation window (Hodges et al., 2020).

Moreover, to support learning, a key priority for educational institutions should be students’ and staff members’ well-being. Maintaining effective social relationships between learners and educators contributes to the achievement of this goal. A protracted pandemic and its multiple effects on individual and community health, income, and well-being are likely to strain the psychological reserves of all stakeholders. Thus, educators and leaders of education systems should make their goals for well-being explicit and visible, and pursue strategies that help maintain well-being in the face of a global health event that will have a considerable toll on the lives and health of individuals, including members of the communities in which students live (OECD, 2020).

As social isolation has been encouraged during the COVID-19 pandemic, it is important to consider interpersonal relationships in virtual teamwork and find ways to ensure continuous support. In general, technical advice has prioritized the use of existing systems and simplicity. We have also learned first-hand how academics and students have experienced our current technology offerings assessing factors such as user-friendliness and usability. This firsthand knowledge enables us to contemplate and strategize for future requirements (Czerniewicz, 2020).

It is imperative to consider COVID-19 as an opportunity to envision and reconceptualize the educational landscape. Educational institutions, colloquially referred to as schools, were established during an epoch characterized by distinct perceptions of learning, learners, knowledge, skills, teaching, and teachers compared
to contemporary perspectives. During that era, access to experts and expertise, alongside societal and economic paradigms, significantly diverged from the present understanding (Zhao, 2020).

The lockdown and social distancing measures related to the COVID-19 pandemic led to the closure of schools, training institutes, and higher education facilities worldwide. Nearly all educational institutions shuttered during the initial phases of the pandemic, with variances in closure durations ranging from a few weeks to significantly extended periods. Schools attempted various methods to ensure that schooling continued. Diverse approaches were employed by educational institutions in response to the pandemic: certain entities replicated traditional schooling through online tools, others endeavored to disseminate content via broadcasting, some distributed schoolwork without mandating online check-ins for all students, a subset allowed students autonomy in selecting activities, and a distinct category empowered educators to restructure student learning experiences (Zhao, 2020).

**Impacts and Responses to Online Learning**

Transitioning from traditional face-to-face learning to online learning can be an entirely different experience for learners and educators to which they must adapt, with little or no other alternatives available (Pokhrel & Chhetri, 2021). Accordingly, the COVID-19 pandemic caused tectonic changes in the lives of many sectors of the population, including higher education students (Aristovnik et al., 2020). Therefore, a paradigm shift has occurred in how educators deliver quality education through online platforms. Online learning, distance learning, and continuing education became a panacea for this unprecedented global pandemic, despite the challenges posed to both educators and learners. Within this context, it is evident that students necessitate improved technical equipment, pertinent skills, and tools for proficiently utilizing both hardware and software, facilitating virtual interactions with their educators and peers. Moreover, students might have perceived this unique circumstance as demanding (Händel et al., 2020).

In his study, Bao (2021) underscores the significance of understanding challenges encountered by students in distance learning. This comprehension is crucial for educators seeking to augment the effectiveness of online teaching, not only in response to the present pandemic but also to strengthen preparedness for future unforeseen circumstances. His research demonstrates that synchronous online instruction can attain a level of effectiveness comparable to traditional face-to-face lectures when the course is meticulously designed and skillfully implemented.

Although universities have taken important steps to ensure the continuity of the educational process in the context of the COVID-19 pandemic, there is still a long way to go to successfully implement an effective online educational system (Radu et al, 2020). The disruption to students' lives depended not only on their level and course of study but also on how much they had advanced in their programs. Students approaching the end of one phase of their education and moving on to another (e.g., those transitioning from school to tertiary education or tertiary education to employment) faced particularly difficult challenges. They were not able to complete their school curriculum and assessments in the usual way and, in many cases, they were torn away from their social groups almost overnight (Daniel, 2020). Accordingly, this limited social exchange fostered negative emotions, concurrently contributing to a discernible decrement in overall wellbeing (Beaunoyer et al. 2020).

Several arguments have been made in favor of e-learning. Accessibility, affordability, flexibility, learning pedagogy, lifelong learning, and policy have been identified as some of its benefits. Moreover, it allows reaching even rural and remote areas through the Internet. Attaining equilibrium between the individual attributes of learners and the multifaceted considerations encompassing content, pedagogical strategies, and technological infrastructure, essential for upholding the caliber of online learning, constitutes a protracted undertaking that resists expeditious and comprehensive realization during moments of crisis. The unprecedented challenges imposed by the COVID-19 pandemic have, indeed, functioned as a stress test for the higher education system, its educators, facilitators, and the student body alike (Händel et al., 2020). Nonetheless, the assertion that e-learning surpasses face-to-face learning is not warranted. Rather, it is imperative to underscore that the utilization of digital media in educational contexts is nuanced, entailing inherent advantages and disadvantages.
Digital formats serve as a crucial conduit for certain demographic segments, enabling access to higher education independent of temporal and spatial constraints (Kerres, 2018).

In examining the preparedness of students to navigate the current situation, researchers have observed an increased demand for guidance and counseling services among students engaged in remote learning courses (Zawacki-Richter, 2020). Moreover, online education is perceived as a cost-effective alternative, minimizing expenses related to transportation, accommodation, and overall institutional costs. This crisis has prompted traditionally resistant institutions to adopt modern technologies, necessitating a swift transition to diverse online pedagogical approaches to enhance technological efficacy. Educational institutions face the primary challenge of discovering and implementing new technologies, requiring students and academic staff to seek guidance on digital literacy (Dhawan, 2020).

Technology plays an essential role in the development and expansion of online education. Accordingly, many universities have reported an increase in the use of online tools. Over the past decade, countless efforts have been made to integrate emerging Internet technologies into the teaching and learning processes of higher education (Kim & Bonk, 2006). If the quality of online education improves, as projected by this study, campuses must consider various pedagogical issues relevant to online learning. Collaboration, case learning, and problem-based learning are likely to be the preferred methods for online instructors, with some relying solely on traditional methods (Kim & Bonk, 2006). Therefore, the question is no longer whether online education can deliver the promise of quality higher education but instead how to find universities immediately and effectively and embrace the mass adoption of online learning (Liguori & Winkler, 2020).

Governments’ containment measures have imposed limitations on people’s ability to meet, thereby hindering learning opportunities, and there is a need for a framework to guide the educational response to the COVID-19 pandemic of 2020 for students to learn during the period of social distancing (OECD, 2020). To what extent do we want to leverage technology-enabled learning as the key to the future? One strategic move might be to focus on investments in staff development to improve and enhance technology-enabled learning and deepen students’ understanding of the pedagogical methods of online learning. Additionally, expanding digital capabilities, as there is a need to build resilience and agility to handle future issues, allows educational institutions to remain competitive (Lemoine & Richardson, 2020). In these circumstances, it becomes ever more critical to understand how teachers become agents who act (creatively), negotiate, and integrate pedagogical and digital resources into meaningful teaching practices under severe constraints (Damşa et al., 2021).

Nurturing students’ knowledge and skills in higher education through technology is primarily contingent on neither the specific type of technology employed nor the frequency of its use (Chien et al., 2016; Wekerle et al., 2020). Active learning strategies leveraging digital technology encompass explicit actions or the physical engagement of students with educational materials. Nevertheless, it is noteworthy that these activities do not inherently generate novel information beyond what is already embedded in the learning materials. Illustrative instances of active learning activities incorporating digital technology comprise the act of taking digital notes, employing highlighting techniques, copying and pasting relevant segments of text, and participating in online quizzes (Chi & Wylie, 2014). Despite the potential absence of an enriched array of instructional affordances for digital technology by higher education instructors, students retain the capacity to organize their own learning experiences. This may involve actively seeking established online learning resources or crafting personalized learning opportunities incorporating digital technologies. In such instances, the nature of students’ learning activities is significantly shaped by the specific type of self-arranged learning opportunity they pursue (Sailer et al., 2021).

**Research Questions**

RQ1. Is there a relationship between students’ challenges during online learning and their perceptions about the online learning process?

RQ 2. How do bachelor’s and master’s students differ in terms of opportunities (e.g., conferences, debates, webinars) for professional development?
RQ 3. Does cooperation with other students impact students’ perceptions about the online learning process?

RQ 4. Do the challenges that students face during online learning impact their opportunities for professional development through conferences, debates, and webinars?

RQ 5. Do the challenges that students face during online learning impact their opportunities for professional development through online learning?

RQ 6: How would we manage online learning, if a new pandemic were to happen, what are the lessons we have learned from this period?

MATERIALS AND METHODS

Research Design

This study during the COVID-19 Pandemic adopted a quantitative approach integrating deductive reasoning (Wilson, 2010), beginning with a research problem and explaining its empirical implications through logical reasoning (Kimberly, 2005). The research through the qualitative method was carried out after the COVID-19 pandemic lockdown, to collect information regarding the perceptions of students regarding online learning during the pandemic and what this experience has taught us for today or how this experience helps in the management of any new pandemic or similar situation.

Samples and Research Instruments

Quantitative research was conducted to examine students’ perceptions of online learning, challenges in online learning, opportunities for cooperation, and opportunities for professional development. An online survey was conducted in seven sessions. The questionnaire was administered in Kosovo to 421 students of the Faculty of Education of the University of Pristina. The selected sample of quantitative research was simply random to fulfill the research, because of the randomly selected subset of the population (Thomas, 2020). While using the qualitative method, the research was developed after the pandemic, in which an interview was conducted with a focus group, consisting of 7 students, who had online learning experiences during the pandemic. The selection of the sample for this part of the research was purposeful.

Research Instruments-Quantitative Design

Due to the pandemic circumstances, the research was carried out through the online platform of Google Forms (https://docs.google.com/forms). The questionnaire was administered in Kosovo to 421 students of the Faculty of Education of the University of Pristina and it was administered in Albanian Language and was distributed online in different groups of students.

The questionnaire contains 7 sections, and is presented as follows:

Section 1: Instructions and description of the questionnaire

Section 2: Demographic questions (consists of 9 questions)

Section 3: Student Challenges to Online Learning (student challenges while adapting to online learning) – 12 questions

Section 4: Teaching and learning through online learning (the process of teaching and learning during online learning) – 18 questions

Section 5: Cooperation with colleagues of the study group (how much they cooperated with colleagues of the group in the realization of tasks during this time) – 11 questions

Section 6: Professional development through online learning (how many opportunities have students had to develop professionally during online learning - pandemic) - 8 questions

Section 7: Professional development through conferences, debates, etc. (how many opportunities have they had to participate in such events during this time) - 6 questions
Our research has analyzed the last two sections (section 6 and section 7) by processing the questions and elaborating the data that consists of the purpose of the research. The questionnaire consisted of 61 questions while the 14 questions of section 6 and section 7 were grouped to analyze the data according to the study's purpose and RQs. The questionnaire was designed by the researchers of this study. Because that the situation of the pandemic and lockdown were new, the researchers did not manage to use a standardized questionnaire. Based on the situation, the questionnaire was designed, and the piloting was done with a small group of participants. By incorporating all the valuable feedback received during the pilot, we were able to create a comprehensive and effective questionnaire for our research. The final draft, which was developed from the suggestions and comments of the participants, ensured that the research was carried out with the utmost precision and accuracy. The questionnaire was distributed to the participants during the period April-May 2020.

Utilizing the SPSS Statistical Package for Social Sciences (SPSS, 2007), the data was thoroughly analyzed, ensuring accurate and reliable results. Based on the aim of the research, research questions, and the way the questionnaire was designed and applied, some of the questions were analyzed through descriptive analysis, Pearson's correlation, and regression analysis.

Qualitative Design

The focus group interview was conducted using semi-structured questions. The interview lasted about 1 hour and 20 minutes. With the approval of the respondents, the interview was recorded, transcribed, and the data was processed through thematic analysis. The interview protocol contained semi-structured questions, to collect as much information as possible from the respondents' perceptions of the pandemic period, but from the current perspective.

During the focus group sessions, participants were asked a series of questions related to their experience with online learning amidst the pandemic. The questions included:

1. What opportunities did you have to cooperate with the other students in the group during the online lesson?
2. How much do you think online learning has helped you in your professional development (webinars, conferences, etc.)? How much have they helped you and taught you the challenges you went through during this period?
3. What do you think would have improved/advanced the best functioning of online learning?
4. Do you continue to use training and professional development options through online platforms? If you practice this form, can you share with us the reason?
5. If there were another pandemic situation, how do you think the functioning of online learning would be? Do you think we will have it easier (why), or harder (why)?
6. What changes has the online learning period brought to us in learning?

Qualitative Results and Discussions - Main findings

This section presents the analysis of the data. Data were gathered from 421 students of the Faculty of Education in Pristina, most of whom (84%) were 20–25 years old, while the rest were 26 years old and older.

<table>
<thead>
<tr>
<th>Table 1. Sample characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
</tr>
<tr>
<td>20 to 22 years old</td>
</tr>
<tr>
<td>23 to 25 years old</td>
</tr>
</tbody>
</table>
To answer RQ1, a correlation analysis was conducted. Questions examining students’ challenges and perceptions of the online learning process were computed into two scale variables, which were then used for the analysis.

The correlation analysis in Table 2 shows a significant negative relationship between students’ challenges and perceptions of online learning ($r = -0.51$, $p < .001$). This indicates that the more challenges students reported facing during online learning, the less positive their perceptions.

Table 2. Correlation Analysis for RQ1

<table>
<thead>
<tr>
<th>1. Learning process</th>
<th>Pearson Correlation</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>420</td>
</tr>
<tr>
<td>2. Students’ challenges</td>
<td>Pearson Correlation</td>
<td>-.51**</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>420</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).

An independent samples t-test was conducted to answer RQ2. Professional development opportunities were measured based on the number of conferences, debates, and webinars available to the respondents. The results of the t-test revealed that there were no significant differences between bachelor’s ($M = 3.17$, $SD = .49$) and master’s students ($M = 3.14$, $SD = .44$) vis-à-vis their opportunities for professional development ($t (413) = .61$, $p = .54$, $g = .06$).

Table 3. T-Test Group Statistics for RQ2

<table>
<thead>
<tr>
<th>Degree</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional development opportunities (conf., deb., webinars)</td>
<td>BA</td>
<td>282</td>
<td>3.17</td>
<td>.49</td>
</tr>
<tr>
<td></td>
<td>MA</td>
<td>133</td>
<td>3.14</td>
<td>.44</td>
</tr>
</tbody>
</table>

Table 4. Independent Samples T-Test Results for RQ2

<table>
<thead>
<tr>
<th>Levene's Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>Sig.</td>
</tr>
<tr>
<td>Professional opportunities development variances assumed</td>
<td>.79</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>.63</td>
</tr>
</tbody>
</table>

Furthermore, regression analysis was conducted to answer RQ3. Initially, reliability analysis was run on 11 questions measuring cooperation and 18 questions measuring students’ perceptions of online learning. Analysis of the former showed a Cronbach’s alpha of $a=0.87$, whereas analysis of the latter showed a Cronbach’s alpha of $a=0.92$, both indicating excellent reliability. In addition, validity analysis was conducted on both sets of
questions to determine if the section measures what it is intended to measure. In both cases, questions are significantly correlated with one another (p<.05), indicating the validity of the questions.

Results depicted on Table 5 shows that cooperation with other students had a significant impact on students’ perceptions of online learning (F (1, 419) = 247.60, p < .001, R2 = .37). Moreover, 37% of the variance in students’ perceptions of the online learning process is explained by their cooperation with other students. Table 5 also shows that students’ positive perception of online learning increased by .63 units for every one-unit increase in their opportunities for cooperation with other students (p < .001).

Table 5. Regression Model Summary, Results, and Coefficients for RQ3

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.61</td>
<td>.37</td>
<td>.37</td>
<td>.39</td>
</tr>
<tr>
<td>Regression</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sum of Squares</td>
<td>37.75</td>
<td>1</td>
<td>37.75</td>
<td>247.60</td>
</tr>
<tr>
<td>Residual</td>
<td>63.88</td>
<td>419</td>
<td>.15</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>101.62</td>
<td>420</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

RQ4 was also answered through a regression analysis. Reliability analysis ran on four questions measuring students’ opportunities for professional development through conferences, debates, and webinars, and 12 questions measuring students’ challenges during online learning. Analysis of the former showed a Cronbach’s alpha of a=0.72, whereas analysis of the latter showed a Cronbach’s alpha of a=0.78, both indicating good reliability. In addition, validity analysis was conducted on both sets of questions to determine if the section measures what it is intended to measure. In both cases, questions are significantly correlated with one another (p<.05), indicating the validity of the questions.

The regression analysis indicated that opportunities for professional development were affected by students’ challenges during their online learning processes (F (1, 42) = 4.80, p < .05, R2 = .011). Moreover, 1.1% of the variance in students’ opportunities for professional development can be explained by the challenges they faced during online learning, thereby having a small effect. Yet, for every one-unit increase in students’ challenges, professional development opportunities decreased by .09 units (p < .05).

Table 6. Regression Model Summary, Results, and Coefficients for RQ4

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.11</td>
<td>.01</td>
<td>.01</td>
<td>.47</td>
<td>1.10</td>
</tr>
<tr>
<td>Regression</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sum of Squares</td>
<td>1.06</td>
<td>1</td>
<td>1.06</td>
<td>4.80</td>
<td>.03</td>
</tr>
<tr>
<td>Residual</td>
<td>92.41</td>
<td>419</td>
<td>.22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>93.47</td>
<td>420</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(Constant)</th>
<th>B</th>
<th>Std. Error</th>
<th>Beta</th>
<th>T</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3.31</td>
<td>.07</td>
<td>.4512</td>
<td>.00</td>
<td></td>
</tr>
<tr>
<td>Cooperation</td>
<td>-.09</td>
<td>.04</td>
<td>-.11</td>
<td>-2.19</td>
<td>.03</td>
</tr>
</tbody>
</table>
Lastly, another regression model was conducted to answer RQ5. Reliability analysis ran on eight questions measuring students’ opportunities for professional development through online learning, and 12 questions measuring students’ challenges during online learning. Analysis of the former showed a Cronbach’s alpha of $a=0.74$, whereas analysis of the latter showed a Cronbach’s alpha of $a=0.78$, both indicating good reliability. In addition, validity analysis was conducted on both sets of questions to determine if the section measures what it is intended to measure. In both cases, questions are significantly correlated with one another ($p<.05$), indicating the validity of the questions.

Table 7 reveals that students’ challenges during online learning had a significant impact on their opportunities for professional development ($F(1, 419) = 53.23, p < .001, R^2 = .11$). Additionally, 11% of the variance in professional development opportunities through online learning can be explained by students’ challenges during online learning. More specifically, for every one-unit increase in students’ challenges, professional development opportunities decreased by .53 units ($p < .001$).

### Table 7. Regression Model Summary, Results, and Coefficients for RQ5

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sum of Squares</td>
<td>.34</td>
<td>.11</td>
<td>.11</td>
<td>.53</td>
<td>1.86</td>
</tr>
<tr>
<td>Residual</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>132.09</td>
<td>420</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(Constant)</th>
<th>B</th>
<th>Std. Error</th>
<th>Beta</th>
<th>T</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1.55</td>
<td>.08</td>
<td>.34</td>
<td>18.74</td>
<td>.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cooperation</th>
<th>B</th>
<th>Std. Error</th>
<th>Beta</th>
<th>T</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.32</td>
<td>.04</td>
<td>.34</td>
<td>7.30</td>
<td>.00</td>
</tr>
</tbody>
</table>

Quantitative Results and Discussions - Main Findings

The following table displays the demographic information of the respondents for the focus group.

### Table 8. Sample characteristics

<table>
<thead>
<tr>
<th>No.</th>
<th>Gender</th>
<th>Study level during pandemic</th>
<th>Current study level</th>
<th>HEI</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>F</td>
<td>BA: 4th year, ECE</td>
<td>MA: Pedagogy</td>
<td>Faculty of Education-UP</td>
<td>S01</td>
</tr>
<tr>
<td>2</td>
<td>F</td>
<td>MA: 1st year, Educational</td>
<td>MA: 2nd year, Educational</td>
<td>Faculty of Education-UP</td>
<td>S02</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Leadership.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>F</td>
<td>MA: 1st year, Pedagogy</td>
<td>MA: Pedagogy, 2nd year</td>
<td>Faculty of Education-UP</td>
<td>S03</td>
</tr>
<tr>
<td>4</td>
<td>F</td>
<td>BA: 4th year, Elementary</td>
<td>MA: Pedagogy, 1st year</td>
<td>Faculty of Education-UP</td>
<td>S04</td>
</tr>
<tr>
<td>5</td>
<td>F</td>
<td>BA: 4th year, ECE</td>
<td>MA: Pedagogy</td>
<td>Faculty of Education-UP</td>
<td>S05</td>
</tr>
<tr>
<td>6</td>
<td>F</td>
<td>BA: 4th year, Elementary</td>
<td>MA: Pedagogy, 1st year</td>
<td>Faculty of Education-UP</td>
<td>S06</td>
</tr>
<tr>
<td>7</td>
<td>F</td>
<td>MA: 1st year, Pedagogy</td>
<td>MA: Pedagogy, 2nd year</td>
<td>Faculty of Education-UP</td>
<td>S07</td>
</tr>
</tbody>
</table>

| Total | 7      |          |        |       |      |

Students/Graduates' Perception of Online Learning During The Pandemic

During the focus group interview, it was noticed that the respondents presented their opinions regarding online learning during the pandemic, but all the time they reflected on the skills they developed during this time.

According to all respondents, the period of the pandemic has been very difficult. The difficulty has started with the fear of a previously unknown pandemic, the danger to life, the difficulty of staying locked up at home, and among them the difficulty of being active in their online classes. The very rapid changes that have occurred during the pandemic period have influenced all students to be afraid of the unknown and how to manage their lives in new and difficult situations, including online learning. The changes have been so fast that several students needed time to adapt to the new way of the online learning process. This happened because the
students, before the pandemic, always had their lessons in physical presence. Students, as well as professors, have not had experience with the organization of online learning. The difficulties that the students have experienced have been numerous, stressful, and alarming. Regarding this, the respondents stated:

"Dealing with the pandemic has been a difficult period. I started online learning a week late. Everything created a lot of stress for me, going to Google Classroom, online lectures and everything else was very new for me, I was inexperienced and I was very confused. It was two months until I adapted to the new system of the teaching process." S01

Similar to these statements, there was also the perception of another student who expressed that:

"For me, this period has been a bit more challenging, I think that the emotional burden from COVID has had a lot of influence because I have also been affected by this virus and it was really scary. I participated in the lectures more so as not to be absent than because I wanted to learn something, I was just very scared and my attention was not on the classes." S04.

But, during the interviews, it was noticed that there were respondents who regardless of the difficulties in the lack of experience, were happy that the teaching will continue, even though online and this form of teaching does not require students to move from one place to another. This has given them more confidence to consider themselves more protected from the pandemic. As one of the interviewer states:

"The news that the classes will be held online, I was very happy. The reason was that I wouldn't travel to attend classes and that's how I felt emotionally much better and safer for my health and my family..." S05

Similar to these statements were those of other interviewed respondents. From all this, we can understand that the attention of students during the pandemic was more in terms of health safety than in active participation in their lectures.

**Differences Between Bachelor's and Master's Students Vis-À-Vis Opportunities for Professional Development**

To understand the differences between BA and MA level students, regarding online learning, we have understood from the respondents that the beginning of online learning has been equally challenging for BA and MA students. In both cases, the students did not have enough self-confidence, they possessed enough skills to be active and successful in their professional development. Online learning, for them, was unexpected, and unplanned and this has caused great uncertainty in them. One of the respondents stated:

"At the beginning, I didn’t have the skills for these things, I was unprepared. Considering that I don’t have any experience, although I thought that I have good skills in the field of technology, I had a very difficult time adapting to the new way of having online lessons..." S04. S01, a BA student (during the pandemic period) also made an interesting statement: "...it didn't matter that I was a distinguished student before the pandemic, all I can say is that the beginning was very difficult...almost impossible..." S01.

However, during the interview, it was observed that although the difficulties were almost the same for BA and MA students, after a period, this form of teaching began to be liked by them, after gaining experience, the students began to use the period of lockdown to get as many new experiences as possible, being part of webinars, conferences and organizing various discussions, through online platforms. They had understood the importance of participating in these activities and being present, and they had gained a lot of new information, they had exchanged experiences with different people in the field, even at the international level. According to the statements during the last interview, it was clear that the students had used this period by researching for information and participating in webinars, and round table conferences where various discussions were held on relevant topics in the field of education. One of the respondents stated:

"If someone told me before the pandemic that I would participate in any online conference or webinar, I would never have believed it. Online access seemed very difficult to me, but during the pandemic, online learning became very easy and convenient. That’s why I didn’t hesitate to research different programs, and register and..."
be part of webinars and online conferences. Everything I have found, I have registered and participated...

"S06.

Similar to the statements of SO6, there was another respondent, declaring that:

"...I have also participated in webinars and this was the first time for me that I have been part of online webinars. Even the professors of the faculty, in addition to teaching, have offered as many free webinars and I have followed almost all of them. They seemed very attractive to me and I continue to research webinars even today because they are free and very valuable, for certain topics." S02.

Analyzing the answers of the students, it can be seen that even though online learning was very difficult in the beginning, for a short time, this form of learning became their favorite. Physical presence in the classroom is considered a great waste of time, compared to online learning, which has given them greater convenience. From the interviews, it was understood that the students liked online learning because they felt less responsible, they could complain about the malfunction of digital tools, so as not to be included in the discussion. While the physical presence in the class has made them more responsible, to be active, because this is then reflected in the assessment.

**Cooperation Between Students During Online Teaching and Learning**

The cooperation between the students during the interviews was seen as one of the strong points. This is due to the lack of experience of students in online learning. The only way that students have considered necessary to solve problems and to take the step of online learning, has been cooperation. They helped each other, using their skills and in this way they complemented each other, to overcome the challenges they faced. One of the respondents related to the cooperation declared:

"I was lucky to be part of a very constructive, supportive group of students and the discussions that took place were very supportive." I have learned a lot from each student and to be honest, I have enjoyed the online learning... the students have been very cooperative and we have helped each other a lot..." S02.

A third respondent pointed out that:

"...students used to meet online and work together in groups, to prepare the projects we had for assignments"

S04, with similar statements there was another respondent who declared that "Even though I did not know them, colleagues, earlier, we were very cooperative with each other. We have been in contact for a long time, we have created different groups through different applications, especially on WhatsApp." S05.

From the analysis of these statements, we notice that the students have researched different forms and have been very open to cooperation, to overcome their difficulties as easily as possible. They have been very challenged due to the created situation and cooperation with each other has given them more strength to continue with their studies under pandemic conditions.

**Lessons Learned From This Period And Management Of New Situations (If Necessary)**

Although of the fact that the period of the pandemic has been very difficult and challenging for students and teachers, the experiences of this period, now the students considered them as very important experiences:

"...when I think about that period now, I see that it gave me a very good experience which I now use in a very efficient way." S01

Almost all the respondents now work as educators and teachers, and one of the things they do with their students is the development of knowledge and skills, especially in the field of technology and the research of digital resources. They have noticed their shortcomings during the pandemic period and this has helped them to: "invest in their students the development of skills necessary for the 21st century." S06

In addition to using their skills with students, the respondents said that the use of online platforms also serves in their work to promote cooperation with parents. Nowadays, parents do not have much time to be physically present at the school, therefore, to keep them informed and to be as close as possible to the education process of their children, online meetings are also organized:
"There are cases when the meeting with the parents has become impossible, and I easily create the group and invite all the parents to an online meeting. At first, the parents were very hesitant because they felt unsure if they knew the key, but now this part is quite simple. The skills that I have acquired during the pandemic have allowed me to do this part more easily and now it seems to all of us as a very normal part of our life and profession." S07.

From all the past experiences during the pandemic, the respondents considered that they have gained a lot of necessary knowledge and skills. Now they consider that if we can face a new or similar pandemic again, they will experience it much more easily and the organization of educational activities and learning will develop more easily. Legal infrastructure has been created, teachers have been trained, parents have been trained to help their children, investments have been made in technological equipment, various study programs have been created, where technology plays a fundamental role, and in any case, the new generations are much more skilled in accessing online platforms and other digital skills. This will mobilize the whole society in a very short period and the quality of education will be much higher than during the Covid-19 pandemic.

"I hope that we will never have another pandemic, but if it happens, we will be able to mobilize within a very short time and maintain peace with our students without any trouble." S02.

Lessons Learned from Online Learning During COVID 19 Pandemic

Pandemic, the shift to online learning highlighted several critical insights. Digital literacy abilities have become critical for properly accessing internet technologies, and further education in this field is required for future disruptions. The change to online learning also revealed discrepancies in student technological access, emphasizing the importance of addressing equity issues and providing equitable educational opportunities to all (Czerniewicz et al, 2020). Online learning enabled tailored experiences and adjustable pacing, catering to individual requirements and preferences. Effective collaboration and communication skills in virtual contexts have become vital for both students and teachers. Despite the physical distance, online learning provided a sense of community and support through virtual classrooms and joint projects. The pandemic encouraged reflection and evaluation of online learning techniques, resulting in continued improvement and higher quality (Lapitan et al, 2021). Overall, the pandemic altered education by emphasizing the significance of resilience, digital literacy, equity, collaboration, innovation, community, and continual improvement in creating the future of education.

DISCUSSION/CONCLUSIONS

This study showed that the challenges students face during online learning are related to their perceptions of it, thereby hindering their online learning process (Hung et al., 2010). Therefore, students’ demand for face-to-face learning has caused dilemmas among competent personnel from the University of Pristina (Beka, 2021). After we examined students from different levels (only bachelor’s and master’s students, as the sample for doctorate students was relatively small) and the opportunities they had to participate in conferences, debates, and webinars, no differences were found (Raby & Madden, 2021). This indicates that students at both levels benefited from equal resources for professional development. The results showed that challenges during online learning inhibited opportunities for professional development (Simamora, 2020). These challenges include issues with the use of technology and online learning platforms, methods of searching for online materials, and difficulties in using English (Erlangga, 2022). The same result also emerged in the case of other opportunities for professional development during online learning, which indicates a need for mobilization of all resources to enhance the organization of various activities during the pandemic (Ali, 2020).

According to the findings, students’ satisfaction with online learning was higher when they cooperated with colleagues, which may be associated with the need for socialization and joint work (Wong & Chapman, 2023). In this case, we can assume that group learning and physical closeness while learning on campus are important to enhance productivity. Thus, various challenges have prevented students from successfully learning online (Paudel, 2021). Accordingly, the practice of online learning/teaching is uncommon in our country, and stakeholders frequently lack the relevant skills to approach online teaching and learning, which results in widespread uncertainty (Bond, 2021).
However, the qualitative study carried out with the focus group after the pandemic, highlights that the obligations that the students have been forced to fulfill have allowed them to gain new experiences through which they have gained many skills (Rahiem, 2021). They now consider online learning as process much liked by them, and much more practical compared to physical learning in the classroom. The pandemic situation has opened up many opportunities for students in the way they solve problems, manage time, plan for continuous professional development and carry out their work as teachers (Mishra et al, 2020). In addition to the challenges, the pandemic situation has influenced the education system in Kosovo to take certain steps in investments in schools, in the professional development of teachers, in the increase of demands for the development of digital competencies in young people and the management of difficult situations more easily and practically (Trilling & Fadel, 2012).

RECOMMENDATIONS

This research paper provides recommendations for improving online learning. The focus is on creating an enriching and collaborative environment.

The first recommendation is to make sure that students view online learning as an effective and viable option. This can be achieved by developing orientation programs, highlighting success stories, and dispelling misconceptions about online education.

The second recommendation suggests finding a balance between online and face-to-face learning. Institutions should cater to the diverse needs of students by offering hybrid learning options or providing additional support for those who prefer traditional classroom settings.

The third recommendation is to ensure that everyone has equal access to resources for professional development, regardless of academic level. Opportunities for participation in debates, conferences, and webinars should be expanded.

The fourth recommendation is to provide targeted support and resources to alleviate challenges encountered during online learning, such as technology issues, online platforms, language barriers, and information search methods.

The fifth recommendation is to promote collaboration and socialization among students in online learning environments. Institutions should implement group projects, peer mentoring programs, and interactive discussions to facilitate meaningful interactions among students.

The sixth recommendation is to prioritize the development of digital literacy skills among stakeholders, including students, faculty, and staff. Training programs and resources should be made available to enhance competencies related to online teaching and learning.

Finally, the seventh recommendation encourages educational institutions to learn from the pandemic-driven experiences and identify innovative teaching and learning practices. Incorporating successful elements of online learning into future educational strategies and curricula can help create an inspiring and enriching learning environment.

LIMITATIONS

Due to the pandemic, the limited number of respondents affected the representativeness of the research. To understand online learning during pandemics, we need a more comprehensive research design with a larger and diverse sample. Further research is necessary to develop effective strategies for learning during times of crisis.

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