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Student Teachers' Resilience During The COVID-19 Pandemic: Navigating Remote Teaching Practice

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ABSTRACT
This article explores student teachers' resilience during the COVID-19 pandemic and their ability to thrive in online teaching practice. Amid the pandemic's unprecedented challenges, student teachers exhibited remarkable adaptability in navigating the shift to remote teaching. Through qualitative research and thematic analysis, this article delves into student teachers' experiences, highlighting their positive encounters with online teaching methodologies and tools. The findings underscore the importance of resilience and adaptability in the dynamic field of education, emphasising the valuable skills student teachers attained through their engagement with online teaching. Furthermore, the article explores the advantages of online practical assessments, shedding light on innovative evaluation methods that may shape future educational practices. Overall, the insights gleaned from this research contribute to a deeper understanding of student teachers' experiences during times of educational transformation. Recommendations are also offered to integrate online teaching methods into teacher training programmes to enhance these students' resilience and adaptability in the face of adversity.

KEYWORDS
Online teaching; positive resilience; COVID-19 pandemic; student teachers.

INTRODUCTION

Student teachers in their final year had to transition from physical to online teaching practicals during the lockdown restrictions that were imposed due to the COVID-19 pandemic. Various stakeholders, including student teachers in higher education institutions, were academically unprepared for the sudden shift to online learning (Ogbonnaya et al., 2020). Teaching practicals had to be approached differently so that students could gain practical experience during lockdown conditions. Fokkens-Bruinsma et al. (2023) allude that online teaching practicals presented difficulties for typical teacher education programmes, impacting student teachers' learning, well-being, and resilience. These difficulties included the use of information and communication technology (ICT), inefficiencies in network coverage, maintaining academic integrity, internet access issues, power outages, availability of technological devices, time management, and interruptions from family (Maphalala et al., 2021; Mukhtar et al., 2020; Ogbonnaya et al., 2020). At a large urban university in South Africa, final-year students were exposed to both online and in-person teaching practicals in the same year. This was a unique experience for these students as they could compare both modalities and their experiences in a pandemic context.

In recent years, substantial scholarly research has been conducted on student teachers' online practical experiences (Jin, 2023; Liu et al., 2022; Aboagye & Nathanael, 2022; Tekel et al., 2022). This article particularly focuses on the strategies student teachers employed to adapt and navigate new circumstances relating to their practicals and their resilience in the context of online teaching practicals during COVID-19. Ncube (2020) defines 'resilience' as a process of adapting and thriving in the face of difficulties. In this article, resilience is conceptualised within a systems or social-ecological framework, as discussed by Masten (2001, 2014a, 2014b), Rutter (2012), and Ungar (2011). Viewing resilience through a social-ecological lens entails recognising it as an intricate, multi-tiered process that fosters positive outcomes (such as mental health) amid current or past challenges. This intricate process is influenced by the dynamic interaction of various systems, facilitated by access to diverse protective resources or support (Theron, 2023). In the context of this article, resilience refers to student teachers' overall ability to adapt to new teaching and learning approaches while engaging in their teaching practice programme.

Research question

The article explores student teachers' resilience in adapting to online practicals during the COVID-19 pandemic. The following research question guided the research:

- What were student teachers' positive experiences of online teaching practices during the lockdown period?

Scholarly discussion

Importance of the teaching practice programme

In South Africa, work-integrated learning (WIL) is recognised as a vital component of the BEd programme and future teachers' training. This recognition is underscored by the Minimum Requirements for Teacher Education Qualifications (MRTEQ) policy outlined by the Department of Higher Education and Training (DHET) (2014). The MRTEQ policy highlights the importance of WIL and practical experience for student teachers, emphasising the need to carefully plan, supervise, assess, and integrate WIL components with theoretical learning. The WIL programme's core goal is to nurture skilled and certified classroom teachers and provide them with extensive knowledge and expertise in their specific subjects and grade phases (DHET, 2014). Moreover, Koross (2016) explains that the WIL period prepares student teachers through practical training.

Typically, WIL occurs in selected collaborating schools for approximately 20 weeks, depending on the academic institution offering the course. Komba and Kira (2013) further note that student teachers actively apply various teaching skills and methods in the classroom during this period while also interacting with teachers and mentor lecturers and reflecting on their teaching experiences. Emerole (2000) adds that this phase involves student teachers taking responsibility for and instructing a specific group of learners and participating in school activities.

Teaching practice during the COVID-19 pandemic

The pandemic heightened the significance of digital skills in higher education to an unprecedented degree (Zhao et al., 2021; Syahrin et al., 2023). As mentioned, this rapid transformation necessitated substantial changes in educational practices and exposed many institutions to new approaches, with a strong emphasis on digitalisation and emergency remote teaching (ERT) (Portillo et al., 2020). According to Hodges et al. (2020), ERT refers to a temporary adaptation in educational delivery, transitioning from conventional teaching methods to online or distance learning due to an urgent crisis situation. Despite higher education institutions' use of ERT and digitalisation as primary responses to address crises, many stakeholders, including student teachers and lecturers, encountered significant challenges due to their lack of digital literacy skills (Hew et al., 2020; Erlam et al., 2021). The issue was not solely in their unfamiliarity with digital tools like WhatsApp, Zoom, and Google Classroom, but rather in their struggles with effectively utilising these tools (Syahrin et al., 2023). This phenomenon is further corroborated by this study's findings, emphasising the considerable hurdles stakeholders in higher education faced due to students' insufficient digital literacy skills.

THEORETICAL FRAMEWORK

This research is based on Bronfenbrenner's ecological five systems theory. This theory explores "how central social contexts in an individual's life interact and influence key outcomes, including social and emotional adjustment and school performance and engagement" (Bronfenbrenner & Morris, 2006, p.205). The theory is relevant in this context because the lockdown period attributed to the pandemic was a systemic issue, and the macrosystem played a major role in the phenomenon. In the context of this article, the theory explored how student teachers responded as individuals to challenges during their online practicals. The microsystem looked at how factors such as the home environment and access to technology supported student teachers' resilience. In the mesosystem, the theory examined student teachers' support systems and collaboration with their peers and supervisors. Moreover, it explored revised guidelines' impact on their practicals.

During the lockdown, the macrosystem exerted considerable pressure on educational institutions, students, and teachers alike. For instance, government policies and directives regarding remote learning and social distancing measures directly impacted student teachers' educational practices and experiences. These policies dictated shifts from traditional in-person practical sessions to online platforms, disrupting established norms and routines within educational settings (Bronfenbrenner & Vasta, 1992). Furthermore, economic disparities and resource allocation within the macrosystem influenced students' access to technology and internet connectivity, thereby affecting their ability to fully engage in online practicals (Bronfenbrenner, 2005). Societal attitudes and cultural beliefs surrounding education and technology also played a role in shaping student teachers' perceptions and responses to the challenges they faced. For example, cultural attitudes towards online learning and the perceived effectiveness of virtual practical sessions potentially influenced student teachers' motivation

and engagement levels (Bronfenbrenner, 1994). Moreover, historical events and collective experiences, such as previous instances of societal disruption or technological advancements, could have influenced educational institutions and individuals' readiness and resilience in adapting to the challenges lockdown posed (Bronfenbrenner, 1994).

METHODOLOGY

A qualitative, phenomenological approach was applied to gain an in-depth understanding of student teachers' experiences. The phenomenological study on which this article is based was associated with the interpretive paradigm so that student teachers' understanding of the world around them could be interpreted (Cohen et al., 2002). Data were collected through two focus groups (n=8). Purposive sampling was applied, and the sampling criteria specified that participants had to be registered students in the Education Faculty and in the final year of their BEd degree. They also had to have completed their teaching practicals during the pandemic and via remote teaching.

Data were collected over two months towards the end of the second semester of 2020; by this time, students already completed their teaching practicals. All participants gave informed consent and were interviewed on the campus of a large urban university in South Africa. Strict COVID-19 protocols were observed during the focus groups, including social distancing, mask-wearing, and sanitising hands, surfaces and any instruments. One question was posed to participants in the focus groups: "What were your experiences of WIL during the lockdown period?". Table 1 outlines the participants' demographic details; five female and three male students were included. The researcher's role was to foster mutual understanding with the participants and to act as a sensitive moderator who recorded their responses as accurately as possible. Throughout the study, steps were taken to prevent bias, ensuring that personal views, opinions, and beliefs did not affect the participants' responses or the research process. Clear communication was maintained with the participants about the study's purpose and focus group discussion guidelines. An understanding of group dynamics was crucial, given the diverse characteristics and personalities of the student teachers. It was also essential to acknowledge and welcome all responses throughout the discussions without pressuring any participant to speak.

Table 1.

Demographic details of the participants and focus group discussions

Focus group number	Number of student teachers	Gender identity	Time	Pseudonyms
One	Five	4 x females 1 x male	2.5 hours (20-minute break)	P1-P5
Two	Three	1 x female 2 x males	50 minutes (No break)	P1-P3

Focus group discussions (FGDs) were transcribed and coded before thematic analysis was applied to extract themes from the data. The following themes emerged: 1) Adjusting to new teaching methods for practicals; 2) Navigating new online teaching techniques and tools during the COVID-19 pandemic; and 3) Online teaching practical assessments by WIL assessors.

Ethical clearance was obtained from the University of Pretoria before the commencement of the study (EDU 004/20). Moreover, ethical practices were strictly followed during interactions with participants. The activities used in this study were developed specifically for the research and thus required participants' consent. Participation in the study was voluntary, and pseudonyms were used to safeguard participants' identities. All recordings were accessed solely by the researchers and were kept secure and confidential. Informed consent and confidentiality agreements were also obtained from the participants.

FINDINGS AND DISCUSSIONS

Experiences differed among student teachers and led to positive results. The main findings impacted the student teachers and influenced their online teaching practicals in some way.

Adjusting to new teaching methods for practicals

This theme highlights the resilience that student teachers showed in adapting to the new strategies that were being used in teaching practicals. The importance of adaptability in the dynamic field of education was underscored by participant P1 (FGD 1), who emphasised that *"Adaptation for teachers is very crucial. It's the changing world after all."*

P2 (FGD 2) echoed this sentiment, stressing the need to be adaptive, especially in transitioning from traditional classrooms to online settings: "*Every teacher should do is to be adaptive. Whatever thing has to come your way, you have to be adaptive to it. For instance, when they say we moving from the classroom to online"*.

Expanding on this view, P3 (FGD 2) highlighted the need for adaptive skills, noting, "*You need to have adaptive skills because it's not always about referring to textbooks."*

Navigating new online teaching techniques and tools during the COVID-19 pandemic

This theme focused on participants' adaptation to new online teaching methods and tools during the COVID-19 pandemic. Participants in the FGDs highlighted the benefits of incorporating various technological tools into online teaching, such as video recordings and platforms like Zoom and YouTube. They also mentioned gaining competence in navigating these tools and emphasised the value of such experiences for future teaching contexts. Participants viewed online teaching as an opportunity to enhance their technological proficiency, creativity, and preparedness for future educational scenarios where technology plays a significant role.

P3 (FGD 1) shared her perspectives on the advantages of integrating different technological tools during online teaching practicals, noting their potential for future classroom use:

> "*You can send a video, and then ask them to continue with their lesson. So, I think online teaching can become an advantage for me."*

P1 (FGD 1) concurred, emphasising online teaching's significance in preparing educators for future technological advancements:

> *"Overall, online teaching is good because it teaches you the extent of technology; how far can technology take you and how impactful technology and what to consider. Now in the case of the future, it's preparing us for the future."*

Furthermore, P5 (FGD 1), P1 (FGD 2), and P2 (FGD 1) asserted their increased competence in navigating online tools, like video recordings, and highlighted the value of using different technological apps, such as YouTube.

P5 (FGD 1) reflected on her success in creating videos and gaining familiarity with technological tools like Zoom and YouTube:

> *"One of the successes is that I was confident in the video, and I knew what I was doing. I now know how to use Zoom, what Zoom is, what YouTube is, and how to record lessons."*

P1 (FGD 2) commented on the learning experience she gained by creating videos and teaching online:

"It was also a good experience because I learnt how to make a video and to teach online."

P2 (FGD 1) mentioned that online teaching encouraged creativity and equipped them with valuable skills for online learning:

"Online teaching made me to be more creative, and maybe go out of my way. I think the online teaching practicals taught me how to use different apps, now I am really equipped with online learning."

Overall, participants saw online teaching as a chance to boost their technological skills, stimulate creativity, and better equip themselves for future educational environments heavily shaped by technology.

Online teaching practical assessments by WIL assessors

The participants perceived online teaching practicals were useful because they made it easier to correct mistakes. They also enjoyed the flexibility of recording and re-recording their lesson presentations until they were satisfied with the results. This adaptability and the opportunity to learn from mistakes showcased their resilience in overcoming challenges during their online teaching practicals.

Both P3 (FGD 1) and P4 (FGD 1) regarded online teaching practicals as more manageable than face-to-face teaching practicals. They appreciated the convenience of quickly correcting errors and the absence of anxiety, which contributed to a smoother teaching practice process.

P3 (FGD 1) expressed that:

"O*nline learning is easier if I can say so because if you did a mistake and you can start over and record it again."*

P4 (FGD 1) also commented:

"With online teaching practicals, I liked the fact that my assessor was not there like it was just me and my laptop and me presenting the lesson if I didn't like it, I would start over again until I get it right"

P5 (FGD 1) and P1 (FGD 1) reported similar sentiments, stating that assessors' evaluations were adaptive, which substantially impacted their final-year WIL grades.

"When you make a mistake, you can just correct yourself, you just record your lesson again and post it and the mentor lectures will assess on their own." P5 (FGD 1)

"*Online assessment is more advantageous and simpler in terms of getting good marks"* P1 (FGD 1)

The findings illuminated the significant themes that shaped student teachers' experiences during their online teaching practicals. The first theme underscores the commendable resilience student teachers displayed in adapting to new strategies for teaching practicals, emphasising the crucial role of adaptability in the ever-changing landscape of education. The second theme highlights the positive impact of navigating new online teaching methods and tools, with participants expressing newfound competence in leveraging technology and recognising its potential for future classroom applications. The final theme revolves around the online teaching practical assessment, revealing the perceived advantages of this approach in terms of corrective measures, adaptability, and reduced anxiety. Collectively, these themes illuminate the varied, yet positive outcomes student teachers experienced, emphasising the invaluable lessons they learnt and skills they acquired during their engagement with online teaching practicals.

DISCUSSION

The findings from the presented data shed light on several key themes related to student teachers' experiences in adapting to new teaching strategies, particularly in the context of practical teaching and the challenges posed by the COVID-19 pandemic.

1) Adjusting to new teaching methods for practicals

The theme of resilience emerged strongly as student teachers discussed their ability to adapt to new teaching strategies. Participants emphasised the importance of being adaptive in the ever-changing world of education. The acknowledgement that adaptation is crucial in the face of shifting paradigms, such as the transition from traditional classrooms to online platforms, reflects the dynamic nature of the teaching profession. The participants recognised the significance of adaptive skills, particularly when faced with circumstances guided by a set curriculum. Their views underscored the importance of resilience and adaptability in the teaching field.

The emphasis on resilience and adaptability echoes the work of Masten (2001, 2014a, 2014b), Rutter (2012), and Ungar (2011), who highlighted the importance of resilience in overcoming adversity. These findings also align with studies that emphasise the dynamic and evolving nature of the teaching profession, such as Darling-Hammond's (2017) work on teacher professionalism and adaptability. In addition, participants' acknowledgement of the changing educational landscape and the need for adaptive skills resonate with literature discussing the impact of global changes on teaching methodologies (Fullan, 2007).

2) Navigating new online teaching techniques and tools during COVID-19

The student teachers expressed positive sentiments towards online teaching, acknowledging its benefits and the opportunities it presents for future use. They also discussed the advantages of several technological tools, such as video recordings and apps like Zoom and YouTube. The participants highlighted their increased competence in navigating online teaching practicals, showcasing a newfound confidence in using technology. The experience prepared them for the future, enhanced their creativity, and equipped them with valuable skills in online learning.

The participants' positive sentiments towards online teaching and their recognition of technology's potential in education align with the growing body of literature on technology's integration in teaching (Mishra & Koehler, 2006; Puentedura, 2006). Participants' newfound competence and confidence in using various online tools resonate with studies emphasising the importance of teachers' proficiency in various technologies to promote effective integration (Ertmer et al., 2015). The idea that online teaching prepares educators for the future corresponds with the literature on technology's role in shaping the future of education (Dede, 2008).

3) Online teaching practical assessments by WIL assessors

The third theme focused on university lecturers' assessments of online teaching practicals. Student teachers perceived online teaching practicals as a more manageable approach than face-to-face teaching. The ability to record and re-record lesson presentations until they were satisfied was a key aspect participants appreciated. This adaptability in the assessment process, where mistakes could be corrected without the pressure of immediate evaluation, was seen as a positive feature. The convenience of online learning was also evident in the participants' views, contributing to a smoother teaching practice process.

The perception of online assessments being more manageable aligns with research discussing the advantages of online evaluation methods (Khan, 2017; Owusu-Fordjour et al., 2015). The ability to correct mistakes and the positive impact on final grades resonate with

studies highlighting the formative nature of online assessments, contributing to a supportive learning environment (Wang & Hsu, 2008). These findings also tie into the broader literature on innovative assessment methods and their impact on students' learning outcomes (Boud, 2000; Taras, 2005).

Additionally, the participants emphasised that online assessments were simpler, ultimately influencing their final-year WIL grades positively. The adaptability of online assessments and the ability to correct mistakes were highlighted as key factors contributing to the perceived advantages of this evaluation method.

CONCLUSION

The data showcased student teachers' resilience and adaptability in the face of changing teaching strategies, particularly with the shift to online platforms. The positive experiences and newfound skills they gained during online teaching practicals suggest that technology's incorporation in this context has not only been beneficial for the immediate circumstances but has also equipped these future educators with valuable tools for their careers. A novel finding was the depth of insight student teachers gained during a period of significant educational transformation. The emphasis on resilience and adaptability as fundamental qualities in response to evolving teaching strategies, notably the shift to online platforms, contributes to our understanding of the dynamic nature of the teaching profession. The participants' recognition of the need for adaptive skills, especially within the framework of a set curriculum, also highlights a nuanced understanding of the challenges and opportunities inherent in contemporary education.

Moreover, the positive sentiments that were expressed towards online teaching methods and tools offer a fresh perspective on the role of technology in education. The participants acknowledged the immediate benefits of online teaching and demonstrated a forward-looking attitude, recognising the long-term potential of these tools for future classroom applications. This forward-thinking approach aligns with the evolving landscape of education, emphasising the importance of preparing educators for a technologically integrated future. The exploration of online teaching practicals' assessments by WIL assessors adds another layer of novelty to the findings. The participants' perceptions of online assessments being more manageable, less anxiety-inducing, and conducive to learning challenges traditional evaluation methods. The adaptability and flexibility online assessments provide, allowing for the correction of errors without immediate scrutiny, may ultimately reshape how teaching practicals are evaluated in the future.

In summary, these findings offer a rich and nuanced understanding of student teachers' experiences in adapting to new teaching strategies, underscoring the importance of resilience, adaptability, and the integration of technology in education. The insights into online assessments of teaching practicals contribute to the ongoing discourse on innovative evaluation methods in teacher education.

Recommendations

It is imperative for universities to integrate online teaching methods as a fundamental component of their WIL programmes. Moreover, universities should prioritise ongoing professional development opportunities for student teachers, integrating online teaching pedagogy into teacher training programmes. This integration should be coupled with consistent training for educators and students to ensure they possess the requisite skills to effectively utilise technology and digital resources for teaching purposes. Additionally, creating a repository of best practices for online teaching, accessible to both faculty members and student teachers,

can serve as a valuable resource for pedagogical innovation and continuous improvements in remote teaching environments. By implementing these measures, universities can empower student teachers to adapt and thrive amid challenges such as the COVID-19 pandemic while maintaining the quality of education delivery.

Competing interests

The authors declare there are no competing interests.

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