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The practicality of long-term blended teaching and learning at a South African institution

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Background: The rapid revolutionisation of technology and other factors such as the recent COVID-19 pandemic, prompted higher education institutions to consider the possibility, necessity and implications of officially adopting a blended teaching and learning approach on a long-term basis.

Aim: This research aimed to explore the practicality of a long-term blended teaching and learning model at a South African higher education institution.

Setting: This research was conducted at a selected South African higher education institution.

Methods: The article adopted a qualitative case study approach, and one-on-one semi-structured interviews were conducted. The data collected was then analysed using thematic analysis.

Results: Although the institution was generally ready for blended teaching and learning during the pandemic, best practices such as further training and development for both lecturers and students on the pertinent systems and technology are imperative if a long-term blended teaching and learning is to be successful. There were also concerns regarding external, technological, and socio-economic issues that could hinder a successful long-term blended model.

Conclusion: While the research revealed the institution's overall ability to swiftly transition from face-to-face, to distance online and blended teaching and learning approaches during the COVID-19 pandemic, it also revealed that work still had to be done to fully prepare the institution for formalised blended teaching and learning in the future.

Contribution: This research builds on limited research on blended teaching and learning at South African contact higher education institutions and adds new theory regarding some best practices for successful blended teaching and learning.

Keywords: blended teaching and learning; distance online teaching and learning; COVID-19 pandemic; technology; human resource development.

Introduction

Orientation

On 23 March 2020, the South African President, His Excellency Cyril Ramaphosa, announced a 21-day national lockdown of the country from 26 March 2020, which was a very challenging time as only essential activities were allowed to operate (Makhoba & Reddy 2022). As a result of the rapid spreading of the coronavirus, the lockdown period ended up extending beyond the 21 days and into 2021 and 2022, at different levels of restriction from one to five, with five being the most stringent (Makhoba & Reddy 2022). This led to various strategies being employed in different sectors to ensure that the quality of work performed, and services provided were not compromised (Makhoba & Reddy 2022; Saurombe et al. 2022). To ensure that teaching and learning continued, South African universities implemented a distance online teaching and learning model where lecturers conducted lectures remotely and students also proceeded with their studies at home and a subsequent blended approach (also referred to as hybrid approach in this article) with the gradual abating of the pandemic.

Throughout the pandemic, lecturers had to restructure their learning materials and recalibrate the delivery of their lectures. In addition to this, lecturers had to be innovative in making their students engage more during online lessons because of the lack of physical interaction (Sutisna & Vonti 2020). Thus, the adoption of an online teaching and learning approach brought about many challenges (Kavak 2022) and raised many questions regarding the practicality of implementing

such an approach in the long term (Osman & Walton 2020), as well as what best practices would need to be employed to be successful in this regard. While many institutions returned primarily to contact teaching and learning, the pandemic promoted the potential for the adoption of a blended teaching and learning approach (Gamage, Gamage & Dehideniya 2022; Kavak 2022). As both contact and distance online teaching and learning models have advantages and disadvantages, using a blend of the two approaches would arguably allow the best utilisation of each (Gamage et al. 2022).

Advantages and disadvantages of blended teaching and learning

The main benefit of blended teaching and learning from a pedagogical perspective is that it has been proven to be more advantageous than traditional face-to-face learning and distance online learning (Alarabiat et al. 2023; Raes et al. 2020). Blended teaching and learning is also more appealing and advantageous as it allows students an opportunity to study, learn and qualify for their desired course at any stage in their lives and lecturers enjoy the convenience of remote work (Singh, Singh & Steele 2021). Students can also customise their learning experience in a way that appeals to them (Raes et al. 2020). Blended teaching and learning further creates opportunities for lecturers to employ multimodal approaches to evaluate students' understanding of the course material using computer-based qualitative and quantitative assessment modules (Chandra Sekhar Rao 2019). Students can more independently work on tasks assigned by their lecturers, using a combination of digital instruction and face-to-face interaction (Singh et al. 2021). This reduces educational and training expenses by conducting some of the classes and assessments online, as well as allowing for the replacement of some pricey textbooks with electronically accessible books and learning materials.

Tools that are used for the online component of blended teaching and learning can be quite intricate, especially for students and lecturers who resist change and do not want to learn anything about new technology (Chandra Sekhar Rao 2019). Other problems facing blended systems include poor technical support, poor network stability, limited access and infrastructure capacity, as well as inadequate organisation and co-ordination (Khan et al. 2021).

High technology set up and maintenance costs can be a challenge for group work because of difficulties with managing an online setting (Chandra Sekhar Rao 2019; Ghosh et al. 2019). It is also observed that providing effective feedback is more complex and time consuming for the online aspect of blended teaching and learning. The use of lecture recording technologies can result in students falling behind on their learning. Information and technology (IT) literacy can serve as a significant barrier for students attempting to get access to the course materials, making the availability of high-quality technical support of paramount importance (Alarabiat et al. 2024; Morchid 2020).

Best practices for blended teaching and learning

Singh et al. (2021) stated that the best practice for blended learning entails methods that have been established as successful and efficient in terms of pedagogical importance, the combination of teaching and learning offerings and experiences, the use of technology, delivery methods, curriculum design and relevance in terms of the learning preferences of students. The significance of technology and well-equipped teachers in connection to curriculum design is constantly discussed in the research on blended learning (Alarabiat et al. 2023; Bingwa & Ngibe 2021; Chandra Sekhar Rao 2019). Blended teaching and learning settings may employ cutting-edge technology, such as broadcasts, blackboards, computers and the online environment. Furthermore, an effective blended learning environment incorporates a variety of media, tutorial assistance, peer group discussion and practical lessons (Abdulrahaman et al. 2020; South African Department of Higher Education and Training [DHET] 2014). Moreover, the social environment for learning, cooperative learning, self-directed learning and group interaction must be considered (Liaw, Huang & Chen 2007; Raes 2022).

Research purpose and objectives

This research aimed to explore the practicality of a long-term blended teaching and learning model at a South African higher education institution (HEI).

The objectives of this research were:

- to explore university lecturers' perceptions regarding blended teaching and learning at a South African HEI
- to explore the perceived readiness of a South African HEI for blended teaching and learning
- to recommend best practices of blended teaching and learning at a South African HEI.

Research methods and design
Research approach

In-depth semi-structured one-on-one interviews were used to collect data. During each interview, the interviewee had the chance to speak freely on the subject matter that was being explored. The interviewees were allowed to independently express themselves without the researcher unduly manipulating their responses as supported by Lewis et al. (2019).

Research participants and sampling

The participants of this research were lecturers at a selected higher education institution in South Africa. These research participants had taught before, during and after the coronavirus disease 2019 (COVID-19) pandemic. Thus, they must have had a minimum of 4 years' experience in the field. As this was qualitative research, approximately 8–15 participants (as recommended by Braun & Clarke 2021) were initially targeted by the researchers. Purposive sampling was

applied, wherein the participants were selected based on their ability to meaningfully contribute to the research objectives. Unfortunately, 4 of the 15 chosen participants withdrew because of irreconcilable schedules with the researchers, and another participant's interview was not fully recorded by one of the researchers who only realised this after concluding the interview, and the participant was not willing to redo it; thus, only 10 participants were ultimately involved in the study. While the 10 participants were still sufficient to draw valid insights and conclusions for a qualitative case study, as supported by Guest, Bunce and Johnson (2006), the researchers decided to conduct another six interviews at a later stage to make up for the initial 'dropouts' and ensure a broader representation of insights regarding the research topic, ultimately bringing the sample size to 16 participants.

Data collection

The researchers used a qualitative research design to explore the research phenomenon. A qualitative approach was appropriate because of the research topic novelty in the specified context, as supported by Lewis et al. (2019). Thus, an exploratory research enquiry allowed the emergence of profound insights on the novel research topic within its setting. The in-depth semi-structured interviews were conducted either face-to-face or using Microsoft Teams software. The interviews were conducted in English and were audio recorded on an external recording device. Prior to conducting these interviews, a pilot interview was performed to ensure the accuracy of the final data collected. During this pilot interview, it was found that some of the research questions needed to be broken down as some of them required participants to share their views on more than one key concept at a time – for example, the advantages and disadvantages of blended teaching and learning. The combination of such concepts resulted in the pilot interview participant sometimes speaking about one aspect (e.g. the advantages of blended teaching and learning) then forgetting to speak about the other – which resulted in the interviewer having to probe or remind the interviewee regarding the other aspect (i.e. the disadvantages of blended teaching and learning). Splitting these concepts in the final interview guide proved helpful in the subsequent interviews. The pilot interview was nonetheless eventually included in the findings as it still presented profound insights despite the interviewer having to do some probing as described above.

The researchers considered aspects such as credibility, dependability, transferability and confirmability to ensure the trustworthiness of the research. The credibility of this research was supported by accurate and consistent methods that were used to collect data such as taking field notes, conducting member checks with participants, as well as debriefing among the researchers (Fouché & Geyer 2021). The thematic data analysis was also strengthened through the triangulation of the research findings among the researchers (Earnest 2020). To ensure dependability, the research participants who were willing (about six of them)

were requested to check whether the research findings truly represented their views, which helped to ensure reliable and replicable findings (Earnest 2020). Transferability was ensured by providing detailed information about the setting, population and sample pertaining to the research (Earnest 2020). Confirmability was ensured by outlining existing literature, which substantiated this research, as outlined in the discussion of the findings. This ensured the satisfactory substantiation of this research's findings by the work of other credible scholars despite some of the conflicting perspectives that were also delineated (Leavy 2020).

Measuring instrument

A semi-structured interview guide developed from scratch by the researchers was used to collect data. The interview guide was designed to explore the perceptions of university lecturers regarding blended teaching and learning at a selected South African HEI, the readiness of the HEI for blended teaching and learning and the best practices for blended teaching and learning at the HEI.

Data analysis

Thematic analysis was used to analyse the data. This allowed for a flexible and feasible approach in ensuring that qualitative data were analysed for drawing substantive conclusions (Clarke & Braun 2014). A combination of inductive and deductive approaches was employed during data analysis, with the inductive approach being used during the coding process, ensuring the emergence of unprecedented codes and subthemes, as is appropriate for exploratory research of a relatively novel nature such as this one (Braun & Clarke 2021; Mihas 2023). The themes were then deductively formulated according to the research objectives (Braun & Clarke 2021). The six steps in the thematic analysis by Braun and Clarke (2021) were applied accordingly. Firstly, the researchers acquainted themselves with the data; secondly, initial codes were created; thirdly, themes (and subthemes) were generated; fourthly, the themes were analysed; fifthly, the themes were described and sixthly, the findings report was written, and verbatim quotes were used to support the themes and subthemes.

Ethical considerations

Prior to the commencement of data collection, permission was sought from the selected higher education institution to conduct the research. Ethical clearance was then sought from the Research Ethics Committee (REC) of the Department of Industrial Psychology and People Management (IPPM) at the University of Johannesburg (UJ) and an ethical clearance number IPPM-2023-789(H) was obtained from the REC. The participants were protected, and confidentiality was maintained during the interview process and throughout the handling of the data. All ethical considerations applicable to doing this research were followed thoroughly to ensure integrity (Nii Laryeafio & Ogbewe 2023). Informed consent forms including the provisions of participation such as the right to withdraw at any point until just before data analysis

were signed by participants. They were also informed that they had access to the transcripts produced from their interviews to ensure that the data captured truly represented their views, as well as access to the final output of the research. The data collected was further handled and analysed in the most factual and objective manner by striving to represent participant views accurately while minimising the potential of researcher bias through the methods outlined earlier in this article regarding how the trustworthiness of the data was ensured.

Results

A total sample of 16 participants were included. The gender representation was evenly distributed, with 50% of the participants being female and 50% being male. The generation (Gen) that was mostly represented is millennial with 62.5%, followed by Gen X with 31.25% and lastly Gen Z with 6.25%. Only 6.25% of the participants had 3–5 and more than 20 years of teaching experience, respectively, while 12.5% had 16–20 years' experience, and 25% had 11–15 years' experience. Most of the participants (50%) had 6–10 years of experience. Table 1 provides insight into the characteristics of the sample consulted in this research.

Through thematic analysis, the researchers worked out patterns and trends that were hidden within the data that applicably addressed the research questions and objectives. The main themes that emerged were the overall experiences of blended teaching and learning during the pandemic, the institutional readiness for a long-term teaching and learning approach, as well as the best practices associated with blended teaching and learning. The readiness of the institution, 'theme two', was the most prevalent in the interviews. One of the key findings was the training and development that still needs to happen on the usage of technology.

To ensure confidentiality of participants' responses, code names such as Participant 1, Participant 2, Participant 3, etc. were used instead of their real names. It is important to

TABLE 1: Characteristics of the research sample.

Participant identification	Gender	Generation	Teaching experience
1	Female	Millennial (1981–1995)	6–10 years
2	Male	Millennial (1981–1995)	16–20 years
3	Male	Gen X (1965–1980)	20+ years
4	Female	Millennial (1981–1995)	6–10 years
5	Female	Millennial (1981–1995)	6–10 years
6	Female	Millennial (1981–1995)	6–10 years
7	Male	Gen Z (1996–2010)	3–5 years
8	Female	Gen X (1965–1980)	16–20 years
9	Male	Millennial (1981–1995)	6–10 years
10	Male	Millennial (1981–1995)	6–10 years
11	Female	Gen X (1965–1980)	11–15 years
12	Male	Millennial (1981–1995)	6–10 years
13	Female	Millennial (1981–1995)	6–10 years
14	Female	Gen X (1965–1980)	11–15 years
15	Male	Gen X (1965–1980)	11–15 years
16	Male	Millennial (1981–1995)	11–15 years

observe that all mentions (by the participants) of the HEI explored were replaced with "University X" in the participant quotes to further protect the identity of the institution and its employees who participated. The next subsections of the research findings in this article entail the delineation of each of the emerging themes and subthemes, which are supported by verbatim quotes from the interviews. These findings were outlined in terms of the research objectives to ensure that the emergent themes (and their subthemes) truly addressed the research objectives. Where the authors felt further clarity was required in the verbatim quotes, such insights were provided within square brackets '[]'. To ensure that the added insights provided by the researchers were credible, reference was first made to the field notes.

Research objective one: To explore university lecturers' perceptions regarding blended teaching and learning at a South African HEI

Theme 1: Overall experiences of blended teaching and learning during the pandemic

The two subthemes that emerged were the initial experiences with unconventional teaching and learning and the institutional preparation of academics for blended teaching and learning.

Most of the participants believed that the institution responded very positively and embraced the new ways of teaching and learning, which allowed some flexibility, as some students feel more comfortable coming into class while others feel more confident learning from home in their environment. The participants believed the institution can be in a better position to compete globally by making use of the technology that comes with blended teaching and learning. Some participants stated that they had mixed views about it because there are numerous pros and cons of blended learning from both the academic and student points of view.

Subtheme 1: Initial experiences with unconventional teaching and learning: There were mixed responses regarding participants' initial experiences with unconventional teaching and learning; however, most of the participants agreed that they gradually developed confidence in both distance online and blended teaching and learning methods. Below are some extracts representing the participants' overall experiences:

'I would say initially I was not [*well prepared for distance online and blended teaching and learning*], but after a little while of realising that the pandemic was not going to vanish overnight, the institution then put in effort into enhancing our capabilities, which has enhanced my confidence and that of many students who have shared the same sentiments with me in this regard.' (Participant 11, female, Gen X).

'I especially feel that many academics had a better experience with blended teaching and learning than with distance online teaching and learning because in the back of our minds we kept thinking [*that the institution is*] residential, so at least the blended approach allowed the 'best of both worlds' which I think was especially good for those of us academics who value in-person

interaction including our students as well [*who value the same*].' (Participant 14, female, Gen X)

'I wasn't aware of exactly how Blackboard works, but Doctor X [*name withheld for confidentiality purposes*] capacitated me on how to use this system, which I thought was very user-friendly. It took me some time just to get used to it. I was very nervous in the beginning, obviously, but as we moved along, I got quite attuned to how it worked.' (Participant 3, male, Gen X)

Subtheme 2: Institutional preparation of academics for blended teaching and learning: One of the subthemes that emerged under theme one was the institutional preparation of academics for blended teaching and learning. Most of the participants believed that the institution is doing a fantastic job at preparing academics for the possible future adoption of formal blended teaching and learning, and that their skills, abilities and competencies are being enhanced. Participants also believed efforts are being made by the institutions to ensure that blended teaching and learning could be implemented effectively in the long run. The following participants quotes support these views:

'The university offered us a lot of training during the height of the pandemic and even more recently in the aftermath [*post-pandemic*] they have been offering ongoing training to those who are interested, on how to use the university's online teaching and learning platform more effectively. I think this will be helpful in the long-term if blended teaching and learning is to be formal[*ly adopted*].' (Participant 15, male, Gen X)

'Yes, [*the university is*] trying its level best.' (Participant 2, male, millennial)

'I think the institution is making some efforts. So, as I said, the tools are available. There's a lot of training that is being made available, but beyond that, I think there is stuff as I said earlier, I think they need to incorporate into performance [*management at the institution*]. If it [*the university*] is that intentional [*about being better prepared for the future*], there must be a little bit more drive around blended teaching and learning.' (Participant 4, female, millennial)

'They are trying to help us and to teach us how to do assessments, how to give [*develop*] new study guides, [*and*] how to facilitate blended learning through different technologies. Yes, they are doing a great job.' (Participant 8, female, Gen X)

'The advantage is that personally for me I've got a postgraduate diploma, in education and there is a module where they talk about online embracing of digital technologies, to use these digital technologies for the purpose of teaching and learning.' (Participant, male, millennial)

Research objective two: To explore the perceived readiness of a South African HEI for blended teaching and learning

Theme 2: Institutional readiness for a long-term blended teaching and learning approach

The second theme that emerged was the institutional readiness for a long-term blended teaching and learning approach. The three subthemes that emerged under this theme were the readiness of the institution at the beginning of the COVID-19 pandemic, the advantages and disadvantages

to consider before implementing blended teaching and learning and the socio-economic challenges regarding the implementation of blended teaching and learning. According to most participants, the institution is quite ready for blended teaching and learning although some factors need to be considered for it to be successfully implemented. Other participants, however, were not convinced and felt that despite other factors being in place, broader economic challenges render such methods unfeasible.

Subtheme 1: Readiness of the institution at the beginning of the COVID-19 pandemic: One of the subthemes that came up under theme one was the readiness of the institution at the beginning of the COVID-19 pandemic. The perceptions shared by the participants helped us better understand the institution's infrastructure and manpower regarding distance online and blended teaching and learning at the onset of and during the COVID-19 pandemic. The institution explored in this study was commended for their swift efforts towards transitioning from predominantly contact teaching and learning to an initially fully distance online approach and then a blended approach as the pandemic subsided. The following quotes substantiate these views:

'At University X, particularly the department of HRM is fantastic, they had already developed an online Diploma, so the infrastructure was already there, it just made it easier for the lecturers, especially those that facilitated the online lectures before, we were already used to the setup. They were familiar with Blackboard and the system. It was conducive and convenient.' (Participant 6, female, millennial)

'I think the university was able to successfully implement the new approach [*of distance online and blended learning*] considering that the crisis [*of the Covid-19 pandemic*] hit so suddenly that no one really had time to extensively prepare.' (Participant 12, male, millennial)

'If I am not mistaken, University X was one of the first who adopted the unconventional ways [*online and blended learning*] and did not even wait until the initial three-week lock-down period to make alternative plans. I think this was also because the university had already been somewhat exposed to such flexible teaching and learning approaches on an informal scale even before the pandemic; for instance, in our department, we already had a culture of conducting online lectures when academics were away for substantial periods of time like when attending research conferences and so forth overseas.' (Participant 13, female, millennial)

'University X is known to be a leader of the fourth industrial revolution in Africa. When COVID-19 happened, it was a walk in the park for them.' (Participant 7, male, Gen Z])

While some participants felt the university was well prepared and transitioned successfully into the unconventional teaching approaches, others felt otherwise, citing various aspects, which they felt rendered the institution unprepared as outlined here:

'I think it was poorly done [*the transition from contact to distance online teaching and learning at the start of the pandemic*]. It wasn't done effectively; each lecturer was on his or her island doing his own thing.' (Participant 9, male, millennial)

'During COVID, I would say it was a complete disaster. I mean, we tried, but I mean there are so many things we are in Africa where over and above the fact that we couldn't do anything else. We also had our challenges that already existed. You've got students that come from a background where they don't have a device to begin with, that they're going to use. Students will say that they can't afford to buy data to attend online classes.' (Participant 1, female, millennial)

'No honestly, we were not ready to [*transition from contact to distance online and blended teaching and learning*], or the institutions were not ready for the system.' (Participant 2, male, millennial)

'We were not prepared at all, because even over and above the students, we as lecturers had our challenges. We do have all these blackboards, and software that we use but it's not something that we used to facilitate learning all the time. Now everything needed to be done online. Assignments had to be sent. Submitted online assignments had to be marked online. We also needed to learn how to present, because it's one thing to present when you can see the students, even the interactions are better, but it's a completely different experience when you must move your classes online, because even the students don't participate.' (Participant 4, female, millennial)

At the core of this research, it was essential for the authors to understand how ready the institution was considered to be for long-term blended teaching and learning. While some participants believe the institution could effectively sustain a fully fledged blended teaching and learning model in the near to medium term future, others believed there was still much work to be done to ensure a well-thought-out and functional system in this regard, as opposed to a more impromptu, contingency approach typically adopted during times of crises such as the recent pandemic. The following quotes summarise participants' thoughts on how ready the institution is to implement blended teaching and learning on an ongoing basis:

'Yes [*I believe the institution is ready for long-term blended teaching and learning*]. Technology has been revamped across our campuses. There's been an increase in training uptake on how to operate in the new ways of teaching. Some lessons learned during COVID [*helped*] that we were able to evolve even our infrastructure.' (Participant 1, female, millennial)

'I would say that [*working towards the long-term implementation of blended teaching and learning*] would be wise because the world is not moving backwards despite the pandemic being behind us. I think even without the pandemic, technological advancements were already steering universities in that direction [*of more flexible teaching and learning approaches*] so it would be a good idea to have this embedded in our teaching strategy; especially because no one knows when the next pandemic or similar disaster that would require such measures may happen. I think we already did so well during the pandemic and so we have a good foundation to continue.' (Participant 16, male, millennial)

'Yes, I believe so. We are leaders of the fourth industrial revolution. We are capable enough. I've seen from COVID how we [*successfully*] moved from face-to-face to online. I believe it is fully sustainable.' (Participant 7, male, Gen Z)

The dissenting views in this regard were as follows:

'I can't say we are 100% there. We are working towards this because now they're [*the institution*] busy rolling out the new

equipment so that maybe it can move [*in the right direction towards blended teaching and learning*].' (Participant 2, male, millennial)

'I don't think so because we are the developing world [*and*] with [*the*] electricity crisis that we are currently having [*"load shedding"; i.e organised or systematic power cuts in South Africa and*] data problems [*inequalities that affect connectivity access*], we will not be able to fully go blended, from both an academic perspective and student perspective.' (Participant 8, female, Gen X)

Subtheme 2: Advantages and disadvantages to consider before implementing blended teaching and learning: It was evident from the findings emanating from the data analysis that there are generally both pros and cons to adopting a fully fledged blended teaching and learning approach, particularly at the South African HEI. Most respondents outlined that blended teaching and learning largely benefits students and particularly, those who may not have the confidence to engage in a physical learning environment. On the other hand, some participants indicated that the lack of personal interaction in online learning activities often made it difficult to assess students' level of engagement with and understanding of the course content. The following quotes represent the diverse array of views, starting with the advantages of blended teaching and learning:

'Some students don't have that confidence to raise their questions and to participate [*in person*], but when we come online [*they are able to do so*]. I think it's one of the advantages of online anyway… I think online teaching is the best now because even if the students fail to attend a face-to-face class [*they can catchup online*].' (Participant 2, male, millennial)

'[*I enjoy the*] convenience in making use of online teaching, there's flexibility because even in the comfort of your home, you can teach your students.' (Participant 10, male, millennial)

'It's difficult to say but it [*blended teaching and learning*] might create more [*time*] for us to do research and create other opportunities and give more knowledge in our subject content in another subject.' (Participant 8, female, Gen X)

The participants further raised concerns and disadvantages associated with teaching online, as supported by the following quotes:

'In my opinion, we tend to conclude that because most of our students are either generation Z or millennials then this means they automatically have devices to use, which is often or let me say sometimes, not true. So, unless the university can provide devices and data for such students, online and blended teaching and learning may still be a distant reality.' (Participant 13, female, millennial)

'For students, I think the disadvantage is that they sometimes get distracted, for instance, when you are not in front of your lecturer, and you are not committed to the activity, if you are like me, I'll be like, 'I'm attending classes', meanwhile, I can also do my [*other*] assignment[*s*] or meanwhile, I can do something else, and many times that committed presence or the lack of it rather, can be a problem.' (Participant 4, female, millennial)

'I think there would have to be some regulation behind the online part of the blended teaching and learning so that both students and lecturers do not end up missing out on the benefits of the other [*face-to-face teaching and learning*].' (Participant 15, male, Gen X)

Subtheme 3: Socio-economic challenges regarding the implementation of blended teaching and learning: From the data, there was a sub-theme that emerged relating to the socio-economic challenges regarding the implementation of blended teaching and learning. Institutions were not the only entity that needed to prepare for distance online and blended teaching and learning methods at the onset of and during the COVID-19 pandemic but students as well. They already had other existing challenges, and the abrupt introduction of blended teaching and learning made their experience more challenging. The most prevalent issues that emerged were that of connectivity and a possible lack of the right technology. Participants highlighted the importance of having the right devices to effectively implement this approach of blended teaching and learning because for online classes to be successful both students and lecturers must have a stable network and properly functional devices. The participants' views on this are summarised as follows:

> 'Some students cannot afford devices that have a user-interface which allows for an unproblematic online learning experience, and I have seen this when students keep coming in and out of the online classroom which becomes a bit distracting to me as a lecturer.' (Participant 16, male, millennial)

> 'From an accessibility perspective, [*institutions*] always need to ensure your students have access to laptops, technology, and the internet. The government should intervene. Not just any laptops but effective ones that are up to date. It does dim the experience when a student does not have an up-to-date laptop. Access to Wi-Fi. The government needs to provide more free access to Wi-Fi.' (Participant 5, female, millennial)

> 'I think we underestimate how many students cannot afford the 'luxuries' that online or blended learning require.' (Participant 13, female, millennial)

Some participants further shared some direct feedback they have previously received from students regarding the limiting socio-economic conditions, which rendered the distance online and blended teaching and learning approaches challenging for them to endure, as represented by the following quotes:

> 'There was a student who would say ma'am, for example, at home there are seven of us and we live in a very small space, so even if I want to log in and attend, my sister's baby is going to be crying.' (Participant 1, female, millennial)

> 'Some students complain that they do not really get to enjoy the benefits of studying remotely because of their poor internet connections at their places of residence and sometimes [*their*] unaffordability of data or internet which forces them to travel to campus for both face-to-face and online sessions anyway, in search of better connectivity.' (Participant 12, male, millennial)

Research objective three: To recommend best practices of blended teaching and learning at a South African HEI

Theme 3: Best practices associated with blended teaching and learning

The third theme that emerged was best practices associated with blended teaching and learning, and the subthemes that emerged thereunder were the role of the lecturer and the role of the institution. What commonly emerged among participants was the issue of open communication, in other words, lecturers must have an open relationship and communication with students to enable them to ask questions when they need clarity.

Subtheme 1: The role of the lecturer: A subtheme that emerged under the best practices of blended teaching and learning main theme was the role of the lecturer in ensuring the effective adoption and application of this model. Participants believed that lecturers should use innovative ways to encourage students to be more self-driven in their quest for knowledge by particularly evoking their curiosity to explore unconventional learning methods, thus preparing them for the world of work, as supported by the following quote:

> '[*Lecturers should*] encourage independent learning for the students as well.' (Participant 1, female, millennial)

Lecturers facilitating learning communities among students was also considered good practice as this would help students not feel overwhelmed or alone when using technological platforms tools to learn. The following responses summarise the participants' perceptions in this regard:

> 'It is also important [*for lecturers*] to create opportunities for students to interact and collaborate, both online and offline, to foster a sense of community.' (Participant 8, female, Gen X)

> 'I think as lecturers [*to successfully facilitate blended teaching and learning*] we will have to be more open and forthcoming with our students when it comes to communication. Since the start of the pandemic, I have created WhatsApp groups where they can consult with me and their peers, thus forming support systems to alleviate the sense of isolation that the online teaching and learning component sometimes creates. Unfortunately, some students may take advantage of this and not respect lecturers' personal boundaries but I think it helps to establish the rules of engagement on such personal platforms from the on-set.' (Participant 14, female, Gen X)

> 'I think it is important for us to enhance our student's understanding by encouraging interactive sessions, especially when they are online. For instance, I usually encourage discussions among my students during online lectures where they can share their experiences at work, [*which are*] related to the course content. Of course, this is easier because I mostly teach postgraduate students who usually study part-time while working [*and are thus able to meaningfully contribute to the exercise of corroborating theory with practice*].' (Participant 11, female, Gen X)

Another view was regarding the importance of being prepared for classes whether online or face to face:

> 'The [*anticipated*] outcome is an authentic understanding of the learning material even when lectures are conducted online.' (Participant 5, female, millennial)

It was also found that lecturers must pay more attention to their content and how they can employ different methods to

help the students better understand the content, as substantiated by the following quotes:

> 'I started focusing on just the main ideas behind the slides [*to underpin my broader discussions and perspectives*]. It's like telling stories and the narratives behind it and made me more relaxed, and I think then the students started enjoying it more.' (Participant 3, male, Gen X)

> '[*What has worked for me is*] playing some interactive activities in between to gauge students, reading responses of students to certain questions, [*and facilitating*] activities in addition to some of the concepts we're covered.' (Participant 7, male, Gen Z)

> 'When I get to teach students right, I like showing them examples of real practical examples in the form of videos.' (Participant 10, male, millennial)

Subtheme 2: The role of the institution: Another subtheme that emerged under theme three was the role of the institution in ensuring that blended teaching and learning is implemented effectively. Most participants believed that the university has already substantially improved its infrastructure, resources and training interventions although some suggested further preparation enhancements before potentially adopting a formal blended teaching and learning model, like making related training programmes compulsory and the proposition of different solutions to various potential blended teaching and learning challenges. The following quotes depict the participants' perceptions:

> 'So, from Wi-Fi, the computers in the lab, even the actual infrastructure [*many aspects*] are being improved to ensure that students can learn.' (Participant 1, female, millennial)

> 'I think the university needs to make regular and updated training compulsory [*for blended teaching and learning related skills*] while enforcing ramifications for non-compliance.' (Participant 12, male, millennial)

> 'They need to do a lot of training to equip both students and lecturers and they need to make sure that resources are available also.' (Participant 2, male, millennial)

> 'So, [*I believe a best practice would be*] ensuring that all university [*blended or online teaching and learning*] human resources [*university lecturers and the relevant support or administrative staff*] are effectively trained and responsive [*and*] to also be available [*to assist with lectures conducted*] after hours.' (Participant 6, female, millennial)

> 'The institution could provide new [*ongoing*] strategies and sessions on how to combat issues [*related to blended teaching and learning*].' (Participant 7, male, Gen Z)

> 'I think very good communication with the students, [*availing*] excellent technology to the students to equip them and I think to have a correct policy in class [*is important when ensuring effective blended teaching and learning at an institutional level*]. Also, training is important.' (Participant 9, male, millennial)

Discussion
Outline of the results

The aim of this research was to explore the possibility of formally implementing blended teaching and learning in higher education institutions in the long run. It was evident that although the implementation of such approaches would be beneficial, this would not come without challenges. The following discussion follows the outline of the main themes, in line with the three research objectives.

Theme 1: Overall experiences of blended teaching and learning during the pandemic

Several of the participants believed that the institution responded very positively and embraced the new ways of teaching and learning, which allowed some flexibility, as some students feel more comfortable coming into class while others feel more confident learning from home in their environment. This is substantiated by Abi Raad and Odhabi (2021), as well as Alina Yeo and Moorhouse (2021), who stated that the benefits of hybrid teaching and learning cannot be ignored, and thus, a more intentional approach to its implementation should be explored. Alternatively challenges of implementing such a model are observed in the literature, as some students may find difficulty in managing their time and remaining engaged in a distance learning educational setup (Chhetru & Pokhrel 2021; Iwu et al. 2022).

Many of the participants believed that the institution did a fantastic job at preparing academics for the adoption of both distance online and blended teaching and learning, and that their skills, abilities and competencies are continuously being enhanced. Participants also believed that efforts were being made by the institution to ensure that blended teaching and learning are implemented effectively for the sake of both students and lecturers. According to Raes et al. (2020), universities need to ensure that all their technology systems and learning material are adequate to create valuable learning experiences for blended teaching and learning; therefore, this shows the similarity to the experience of blended teaching and learning as the institutions need to be prepared for the possible future formalisation of blended teaching and learning.

Theme 2: Institutional readiness for a long-term blended teaching and learning approach

According to the participants, the institution is quite ready for blended teaching and learning although some factors need to be considered for it to be successfully implemented. Other participants, however, were not convinced and felt that despite other factors being in place, broader socio-economic challenges render such methods unfeasible, as supported by Khumalo and Saurombe (2023) who highlight the detrimental effects of technology inaccessibility among specific subsects of the South African population. It was evident from the findings that there are generally both pros and cons to adopting a fully fledged blended teaching and learning approach and particularly, at the South African HEI. Most participants outlined that blended teaching and learning mostly benefits students who may not have the confidence to engage in a physical learning environment, as substantiated by Mishu et al. (2023). Fry (2020) alternatively argues the importance of catering to students who fall on the more extroverted side as they are more prone to 'drifting

away' during online lectures because of the lack of physical interaction in such lectures. According to Chandra Sekhar Rao (2019) tools that are used for online teaching and learning can be viewed unfavourably, especially for students and lecturers who resist change and do not want to learn anything about new technology. Thus, the authors of this research article argue that it would be wise for the institution to run a widespread campaign on not only the benefits but also the importance of a blended teaching and learning model in the contemporary and future educational settings.

Theme 3: Best practices associated with blended teaching and learning

What commonly emerged among participants was the issue of open communication, in other words, lecturers must have a forthcoming professional relationship and open and effective communication with students to enable them to engage accordingly and ask questions when they need clarity. According to Herliana et al. (2020), lecturers need to possess the necessary skills to implement blended learning because its successful implementation is largely dependent on them. This perspective corroborates the findings of this research. Meanwhile, Alarabiat et al. (2024) and Cleveland-Innes (2019) suggest that as long as students themselves resist conventional teaching and learning approaches such as the distance online and blended approaches, it may prove more difficult for the lecturer to make it work.

The participants also explained the importance of being prepared for classes whether online or face to face; and that it is essential for both lecturers and students to be prepared. This aligns with Alarabiat et al.'s (2023) and Shah's (2019) view that some students are more likely to engage in online lectures when they somewhat resemble the 'personal feel' of contact lectures; for instance, when the lecturer provides a clear outline of what is to be covered in the session and provides various little tasks either beforehand or during the session to encourage student contribution and participation, thus making students feel closer to the lecturer. On the contrary, Norton (2021) argues that no matter how innovative, online learning can never be a perfect substitute of face-to-face learning.

Practical implications and recommendations

There are several aspects that must be considered by the South African higher education institution for blended teaching and learning to have beneficial effects. According to the participants, the institution's management must make sure that there is technological infrastructure in place that will completely enable blended teaching and learning, such as a reliable technology and internet connection. In addition, the institution's leadership must invest in the training and development of both academics and students on an ongoing basis with the ultimate formal implementation of formal blended teaching and learning in mind. The university administration is also advised to develop pertinent policy,

outlining the standards for both lecturers and students. Task teams can be convened to determine the feasibility of a long-term blended teaching and learning approach with resources in mind such as human capital (academic and administrative), institutional infrastructure (e.g. pertinent technology equipped venues), remote/off-site infrastructure (e.g. institutional provided or personal technological devices for both lecturers and students), as well as internet access or connectivity (reliable cell, wireless and internet signal during remote access). Finally, the institutional leadership is further recommended to routinely assess the efficacy of the blended teaching and learning at the HEI once it has successfully been implemented.

Limitations

Various limitations were encountered while conducting the research. For instance, the research was conducted at only one HEI, with a limited sample size of 16 participants, thus limiting the generalisability of the findings to other South African HEIs. The use of a qualitative approach also inherently meant the forfeiture of the strengths of other approaches such as the quantitative and mixed method approaches. Setting up interviews during times convenient for both the participants and researcher was further challenging, thus some potential participants who had initially agreed to be interviewed ended up withdrawing. Another limitation was that the time required to playback and transcribe the audio recording was substantial, as opposed to what would have been the case when recording quantitative research data.

Recommendations

The researchers put forth various recommendations that were directly informed by the limitations of the research. Firstly, more South African HEIs should be included in the research sample in future, to allow for more generalisable insights. Secondly, the researchers recommend a quantitative or mixed method approach when conducting similar studies in future, as this would possibly allow different insights to be revealed. Thirdly, an allowance for longer data collection periods should further be considered and catered for in future, to avoid constricted time within which to schedule interviews (in the case of a qualitative approach). Fourthly, to avoid the time-consuming interview transcription process, future researchers may also make use of a third-party qualitative data analyst, provided the necessary ethical considerations are followed, for example, signing a non-disclosure agreement.

Conclusion

The COVID-19 pandemic evoked the possibility of adopting unconventional teaching and learning approaches alternative to the traditional, predominantly face-to-face approach. Overall, the findings presented both positive and negative experiences regarding blended teaching and learning during the pandemic. These experiences generally affected

participants' inclination towards or away from this less-predominant approach. The research findings suggest a generally positive appetite by the selected HEI to formally adopt blended teaching and learning in the future based on the perceived overall readiness; however, there is still some work to be done to ensure that this would be up to standard, such as the acquisition of appropriate infrastructure, the ongoing training of both lecturers and students and the continuous identification and implementation of best practices. Other success-determining factors may include the political landscape that influences the politics and how we operate as a country, such as the loadshedding challenges that we are currently experiencing. Also, the socio-economic factors that affect our communities such as different backgrounds and access to resources, including the relevant technology, would affect the practicality of full-time blended teaching and learning for both lecturers and students at the South African HEI. The authors of this research therefore advise that such factors must be carefully considered by the management of the HEI, before the potential implementation of a long-term blended teaching and learning model in the future.

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Competing interests

Authors' contributions

Funding information

Data availability

The original dataset from which the results of this article emanated were stored on a personal electronic database and can be made available upon reasonable request from the author, M.D.S.

Disclaimer

References

Abdulrahaman, M.D., Faruk, N., Oloyede, A.A., Surajudeen-Bakinde, N.T., Olawoyin, L.A., Mejabi, O.V. et al., 2020, 'Multimedia tools in the teaching and learning processes: A systematic review', *Heliyon* 6(11), e05312. https://doi.org/10.1016/j.heliyon.2020.e05312

Abi Raad, M.E. & Odhabi, H., 2021, 'Hybrid learning here to stay!', *Frontiers in Education Technology* 4(2), 121–131. https://doi.org/10.22158/fet.v4n2p121

Alarabiat, A., Hujran, O., Al-Fraihat, D. & Aljaafreh, A., 2024, 'Understanding students' resistance to continue using online learning', *Education and Information Technologies* 29, 5421–5446. https://doi.org/10.1007/s10639-023-12030-x

Alarabiat, A., Hujran, O., Soares, D. & Tarhini, A., 2023, 'Examining students' continuous use of online learning in the post-COVID-19 era: An application of the process virtualization theory', *Information Technology & People* 36(1), 21–47. https://doi.org/10.1108/ITP-02-2021-0142

Alina Yeo, M. & Moorhouse, B., 2021, 'Hybrid teaching: What is it? How do we do it', *RELC Journal* 52(3), 635–641. https://doi.org/10.1177/00336882211053051

Bingwa, L. & Ngibe, M., 2021, 'The impact of academic training programmes in improving teaching and learning: A case of academic staff at a selected university of technology', *South African Journal of Higher Education* 35(2), 21–41. https://doi.org/10.20853/35-2-4620

Braun, V. & Clarke, V., 2021, *Thematic analysis: A practical guide*, Sage, London.

Chandra Sekhar Rao, V., 2019, 'Blended learning: A new hybrid teaching methodology', *Journal for Research Scholars and Professionals of English Language Teaching* 13(3), viewed from https://www.jrspelt.com.

Chhetru, R. & Pokhrel, S., 2021, 'A literature review on impact of COVID-19 pandemic on teaching and learning', *Higher Education for the Future* 8, 133–141. https://doi.org/10.1177/2347631120983481

Clarke, V. & Braun, V., 2014, 'Thematic analysis', in A.C. Michalos (eds.), *Encyclopedia of quality of life and well-being research*, pp. 6626–6628, Springer, Dordrecht.

Cleveland-Innes, M., 2019, 'The community of inquiry theoretical framework: Designing collaborative online and blended learning', in H. Beetham & R. Sharpe (eds.), *Rethinking pedagogy for a digital age*, pp. 85–102, Routledge, Abingdon, Oxford.

Earnest, D., 2020, 'Quality in qualitative research: An overview', *Indian Journal of Continuing Nursing Education* 21(1), 76, viewed n.d., from https://link.gale.com/apps/doc/A635574536/HRCA?u=anon~a5e9e26f&sid=googleScholar&xid=b1a5c1a6.

Fouché, C.B. & Geyer, L.S., 2021, *Developing the research proposal. Research at grass roots: For the social sciences and human service professions*, 5th edn., Van Schaik, Pretoria.

Fry, M., 2020, *Temperament-inclusive pedagogy: Helping introverted and extraverted students thrive in a changing educational landscape*, Online Learning Consortium, viewed 01 June 2024, from https://onlinelearningconsortium.org/temperament-inclusive-pedagogy-helping-introverted-and-extraverted-students-thrive-in-a-changing-educational-landscape/.

Gamage, K.A., Gamage, A. & Dehideniya, S.C., 2022, 'Online and hybrid teaching and learning: Enhance effective student engagement and experience', *Education Sciences* 12(10), 651. https://doi.org/10.3390/educsci12100651

Guest, G., Bunce, A. & Johnson, L., 2006, 'How many interviews are enough?: An experiment with data saturation and variability', *Field Methods* 18(1), 59–82. https://doi.org/10.1177/1525822X05279903

Ghosh, A., Nafalski, A., Nedic, Z. & Wibawa, A.P., 2019, 'Learning management systems with emphasis on the Moodle at UniSA', *Bulletin of Social Informatics Theory and Application* 3(1), 13–21. https://doi.org/10.31763/businta.v3i1.160

Herliana, F., Halim, A., Farhan, A. & Elisa., 2020, 'Identification of lecture difficulties in implementation of blended learning in the Covid 19 era', *Asian Journal of Science Education* 2(2), 106–113. https://doi.org/10.24815/ajse.v2i2.18274

Iwu, C.G., Okeke-Uzodike, O.E., Anwana, E., Iwu, C.H. & Esambe, E.E., 2022, 'Experiences of academics working from home during COVID-19: A qualitative view from selected South African universities', *Challenges* 13(1), 16. https://doi.org/10.3390/challe13010016

Kavak, M., 2022, 'University students' perspectives regarding hybrid learning during the pandemic times', *Human, Technologies and Quality of Education*, 515–532. https://doi.org/10.22364/htqe.2022.37

Khan, N.B., Erasmus, T., Jali, N., Mthiyane, P. & Ronne, S., 2021, 'Is blended learning the way forward? Students' perceptions and attitudes at a South African university', *African Journal of Health Professions Education* 13(4), 218–221. https://doi.org/10.7196/AJHPE.2021.v13i4.1424

Khumalo, Z.Z. & Saurombe, M.D., 2023, 'Women taking up space: A conceptual analysis of the gender-digital divide in South Africa', *Proceedings of the 5th International Conference on Social Sciences*, New York, 6(1), 102–120. https://doi.org/10.17501/2357268X.2022.6105

Leavy, P., 2020, *Method meets art: Arts-based research practice*, Guilford Publications, New York.

Lewis, P., Mark, N., Saunders, K. & Thornhill, A., 2019, *Research methods for business students*, Pearson, London.

Liaw, S.S., Huang, H.M. & Chen, G.D., 2007, 'Surveying instructor and learner attitudes toward e-learning', *Computers & Education* 49(4), 1066–1080. https://doi.org/10.1016/j.compedu.2006.01.001

Makhoba, N.F. & Reddy, M.M., 2022, 'Covid-19 and its impact on higher education institutions: The use of online mediums to ensure the continuation of teaching and learning', *Gender and Behaviour* 20(3), 20187–20201.

Mihas, P., 2023, 'Qualitative, multimethod, and mixed methods research', in R. Tierney, F. Rizvi & K. Ercikan (eds.), *International encyclopaedia of education*, pp. 302–313, 4th edn., Elsevier Science, Amsterdam.

Mishu, A., Mohammed, H.A., Hakami, S.A.A. & Chowdhury, G., 2023, 'The impact of online presentations on reducing the introverted EFL learners' stress and anxiety', *Saudi Journal of Language Studies* 3(1), 32–46. https://doi.org/10.1108/SJLS-03-2022-0037

Morchid, N., 2020, 'The social constructivist response to educational technology', *International Journal of English, Literature and Social Sciences* 5(1), 263–270. https://doi.org/10.22161/ijels.51.46

Nii Laryeafio, M. & Ogbewe, O.C., 2023, 'Ethical consideration dilemma: Systematic review of ethics in qualitative data collection through interviews', *Journal of Ethics in Entrepreneurship and Technology* 3(2), 94–110. https://doi.org/10.1108/JEET-09-2022-0014

Norton, A., 2021, 'Online learning will never be a substitute for face-to-face', *EduResearch Matters*, viewed 02 June 2024, from https://blog.aare.edu.au/online-learning-will-never-be-a-substitute-for-face-to-face/.

Osman, R. & Walton, E., 2020, 'The long-term goal for universities – Quality blended learning', *University World News*, August 27, 2020, p. 27.

Raes, A., 2022, 'Exploring student and teacher experience in hybrid learning environments does presence matter?', *Postdigital Science and Education* 4, 138–159. https://doi.org/10.1007/s42438-021-00274-0

Raes, A., Detienne, L., Windey, I. & Depaepe, F., 2020, 'A systematic literature review on synchronous hybrid learning: Gaps identified', *Learning Environments Research* 23, 269–290. https://doi.org/10.1007/s10984-019-09303-z

Saurombe, M.D., Rayners, S.S., Mokgobu, K.A. & Manka, K., 2022, 'The perceived influence of remote working on specific human resource management outcomes during the COVID-19 pandemic', *SA Journal of Human Resource Management* 20, a2033. https://doi.org/10.4102/sajhrm.v20i0.2033

Shah, R.K., 2019, 'Effective constructivist teaching learning in the classroom', *Shanlax International Journal of Education* 7(4), 1–13. https://doi.org/10.34293/education.v7i4.600

Singh, J., Singh, K. & Steele, K., 2021, 'Combining the best of online and face-to-face learning: Hybrid and blended learning approach for COVID-19, post vaccine, & post-pandemic world', *Journal of Education Technology* 50(2), 140–171. https://doi.org/10.1177/00472395211047865

South African Department of Higher Education and Training, 2014, *Policy for the provision of distance education in South African universities in the context of an integrated post-school system*, Government Gazette, Pretoria.

Sutisna, E. & Vonti, L.H., 2020, 'Innovation development strategy for hybrid learning based English teaching and learning', *English Review: Journal of English Education* 9(1), 103–114. https://doi.org/10.25134/erjee.v9i1.3783