Speech-Language Pathology and Audiology Students' Expectations and Experiences of Academic and Clinical Experiences of Online Learning

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Abstract. In the wake of COVID-19, higher education institutions deviated towards online learning for undergraduate courses to decrease the spread of the virus and ensure that learning continues. This deviation also affected the Speech-Language Pathology and Audiology (SLPA) undergraduate degrees. This paper determines the SLPA students' academic and clinical experiences of online and blended learning. Quantitative and descriptive design methods were employed using an adapted questionnaire. Convenience sampling methods were used to select the 41 participants from a higher education institution in Tshwane, Gauteng. With online learning, the majority (51%) perceived the workload to be greater than that of contact classes, resulting in a significant number (10%) not coping. Negative aspects of online learning included lack of adequate devices and unstable internet connectivity. In contrast, positive aspects included the convenience of online learning in terms of recorded lectures and room for flexibility. Online clinicals were not preferred as students felt that they did not acquire enough clinical skills, clinical competence was taken away because they didn't partake in face-to-face clinicals. In summary, most students were in favor of blended learning as a measure of getting optimal theoretical and clinical experiences; theoretical work can be done online, whereas clinicals can be done on a face-to-face platform—consideration of students' demographics when designing blended-learning models, especially in universities serving the most previously disadvantaged students.

Keywords: Online learning, Blended Learning, Speech-Language Pathology and Audiology training and Student experience

1. Introduction

Online learning is a teaching method that was pioneered in higher education institutions that offered distance learning. This method was rarely used by institutions that offered

medical degrees. However, upon the announcements of the national and global lock-down following the Covid-19 outbreak, there was a radical transformation of this landscape. Higher education institutions were forced to abruptly shift from the traditional face-to-face teaching and learning methods to online teaching and learning to ensure that there is continuation of learning [1].

The terminology around the new teaching methods is online learning, face-to-face, hybrid learning as well as e-learning. Online learning or courses can be defined as courses whereby at least 80% of the content is purely online with no face-to-face meetings. Face-to-face, which is self-explanatory, means that all content is delivered in a conventional or traditional face-to-face setting. Hybrid learning, which is also called blended learning, is a combination of the benefits of face-to-face learning with the technology mostly used in online courses where 30-79% of the content of the course is delivered online [2]. E-learning on the other hand means that the internet is used by teachers and students to complete tasks and it is relatively different from the traditional classroom [3].

Considering the abrupt introduction of online and blended learning in speech-language pathology and audiology (SLPA) training, this paper investigates the SLPA students' experiences of this newly introduced learning method. Students' voices matter when there is an introduction of an innovation that affects their learning because they are the primary stakeholders and end-users. This is important because most teaching methods are developed and piloted at institutions where students are from well-off backgrounds. This study stands out because it was conducted at a historically disadvantaged institution that houses most students from disadvantaged backgrounds. Against this background, this study will contribute to the growing need to introduce contextually relevant and responsive teaching methods that will benefit the end-users, the students.

2.   Literature Review

Before COVID-19, most students and lecturers in higher education institutions that previously relied on conventional teaching and learning methods needed more experience with the online learning platform [4]. This is because traditional face-to-face teaching has been found to offer great assistance in helping students acquire social skills, which have significant implications for their future personal and professional growth [50]. For medical degrees, this nature of learning meant contact between lecturers, students, and patients in various training sites [40]. These interactions with teachers and other students also improve students' ability to work in groups in collaborative and productive ways.

Due to lockdown measures, online learning was inevitable and was part of the paradigm shift to ensure continuity of learning across all higher education institutions [41]. This nature of learning was deemed necessary to ensure that learning continues without compromising the safety of students and teachers [42]. Initially, the most common approach was the asynchronous approach, where lecturers prepared PowerPoint presentations

with voiceovers; these were shared with students via emails [40]. Furthermore, medical schools uploaded videos of physical examinations and quizzes to engage students in the learning management systems. However, these efforts were met with unwelcoming thoughts because as much as online learning provides an opportunity for self-study, its most significant shortfall is in the medical science fraternity in that students still require practical exposure to the theory learned [46]. Additionally, end-users who were previously used to the traditional face-to-face method of teaching and learning felt that online and distance learning resulted in a lack of interaction; it was also an unfamiliar classroom environment, which increased concerns and discomfort among students [5]. The implementation of online learning varies globally between northern and southern countries. For instance, the global north countries invested in resources necessary for OTL long before the lockdown and were thus able to cope with the transition to online learning [45]. Adopting online learning in low- and middle-income countries (LMIC) presented challenges that affected its full implementation. Some significant causes of the hindrance to an effortless implementation in SA university students are geographical location, socioeconomic factors, and race [48]. Firstly, the issue of the digital divide is paramount, where there is an evident gap between people who can access different types of information and communication technology (ICTs) and those who cannot access it [13]. For example, in 2020, in the wake of COVID-19 and the introduction of online learning, only 1.5 million households had access to stable internet connection [47]. To further illustrate the inequalities in this country, as highlighted by the World Bank in 2019 [44], 20.4% and 14.2% of households in the Western Cape and Gauteng province had access to stable internet, respectively. However, in provinces such as North West and Limpopo, only 1.0% and 1.5% of households had stable internet access. Secondly, for LMICs, there is also a lack of technological competence among instructors and students in addition to the digital divide or inequalities [46].

In addition to the student's independence, the success of online learning, especially when combined with distance learning, also depends on parental involvement or support [31]. Parental involvement, support, and attitudes toward online learning are often influenced by characteristics such as gender, age, and educational status [31]. In instances with limited support, family members were reported to be disruptive of the learning process by assigning chores to students during lecture times and being in crowded home environments, which competed for the student's attention and made it difficult to focus on learning [49]. As a result, some of the challenges faced by students from poorer backgrounds include acute anxiety and depression [4].

Implementing blended learning within the medical degree training was necessary because pure online learning is not recommended. Online learning is viewed as complementary to face-to-face education [38]. For example, it can be structured with self-paced online learning and a face-to-face session encompassing contact with peers, tutors, and patients [39]. In this way, medical students will be able to get the best of both worlds, considering that when learning is purely online, they reported challenges related to communication (59%), student assessment (57,5%), use of technology tools

(56,5%), online experience (55%), pandemic related anxiety, or stress (48%), time management (35%), and fear of using technology (17%). Research shows that areas that students felt could work best for blended learning within the medical degrees were pre-clinical and clinical topics; during the first part of every topic, follow-up tutorials, and others even reported that e-learning would be appropriate for supplementary learning material [51]. This indicates that there is space for blended and online learning within the medical degrees' teaching and learning.

Speech-language pathology and audiology (SLPA) is an undergraduate medical degree that is concerned with the rehabilitation of hearing, communication, and swallowing disorders (Health Professions Council of South Africa [6]. The undergraduate curriculum must provide students with a minimum of 400 hours of clinical practice in SLPA. The HPCSA further stipulates that 25 hours may be spent observing clinical activities, and 375 hours must be obtained in clinical contact/direct provision of services to the client/patient [6]. Understanding the experiences of SLPA students regarding online learning of theoretical and clinical work is essential in developing guidelines for medical students' learning methods in cases of a need to shift to new learning methods, especially in historically disadvantaged institutions. Therefore, this study aimed to determine the SLPA students' academic and clinical experiences of online and blended learning.

3. Rationale

Online learning was introduced many years ago, and the COVID-19 pandemic fast-tracked higher education's adoption of this nature of teaching and learning. Although this introduction was somewhat hostile because it disrupted the "normal" and traditional way of teaching, recent researchers indicate that the end-users of this modality are now becoming more receptive to the concept. Implementing blended learning is rapidly gaining momentum, especially in health-related degrees, because it aims to balance online and face-to-face teaching methods [51]. This is because online learning was found to have many pitfalls because of the need to interact with fellow students, lecturers, and patients [40]. The latter interactions are essential for developing interpersonal skills, a need for medical professionals, and pure online learning will deprive students of that opportunity. Secondly, online learning platforms such as online simulations, although without the face-to-face student-patient interaction, they have been reported to be a good alternative for clinical teaching because they improve clinical knowledge, reasoning, skills as well as clinical competence [21,22,23]

Considering that SLPA training students have theoretical and clinical competencies expected to achieve at the end of their training [6], investigating their experiences with these methods was deemed necessary. More so considering that they are from a historically disadvantaged institution, and most are from disadvantaged backgrounds. Con-

cepts such as the "digital divide" and unequal access to resources relevant to OTL further push institutions to investigate students' internal experiences and needs to ensure that teaching and learning are structured in a contextually-response manner. In as much as the global north practices may be adopted, it is essential to consider the students' voice from the global south. This will assist in ensuring that optimal learning takes place, and every student has access to education.

4. **The objective of this study**
a. To determine the SLPA students' academic and clinical experiences of online/blended learning

b. Considering the demographic profiles of most students at this institution; to determine the recommendations for considerations for structuring teaching and learning in cases of pandemics.

5. **Research methodology.**
This study employed a quantitative, descriptive research design to collect data. For this study, the sample was drawn from a group of senior (third and fourth year) students attending their undergraduate training at a historically disadvantaged higher education institution in the south of Tshwane, in Gauteng Province, South Africa. A non-probability convenience sampling strategy was used to recruit the participants. Inclusion criteria: Only senior SLPA students because they have been exposed to face-to-face and online learning. Exclusion criteria: Junior students because they had only attended lectures online, as well as students from other disciplines. For data collection, a questionnaire was adapted from a previous study which aimed to determine the impacts of the COVID-19 pandemic on the lives of higher education students [7]. The adapted questionnaire comprised the following six sections: biographic information, the impact of COVID-19 on the family structure, the impact of COVID-19 on academic performance, the impact of COVID-19 on clinical/practical work, socio-economic impact, and mental health. Before data collection, approval was obtained from the Sefako Makgatho Health Sciences University Human Research Ethics Committee (SMUHREC/H/269/2021:UG). Before recruiting participants, permission was also requested from the head of the SLPA department. Then, recruitment was done by sending e-posters with a link to the survey to all the senior SLPA students from the university. The e-poster assured participants of voluntary participation, confidentiality, and the right to withdraw from the study at any time without any consequences. Confidentiality was maintained by ensuring that at no point on the form was personal identifying information required, and reporting of the findings would not make them identifiable as participants.

6. **Theoretical Framework**

The UTAUT2 framework was used to collect information that will contribute to the growing interest in studying factors that lead to the acceptance of online learning in historically disadvantaged institutions. This framework is suitable for studies where empirical information and collected data can be studied and applied in different fields with varying angles within the technology realm [8]. From the UTAUT2, the following factors were considered:

Performance expectancy (PE), effort expectancy (EE), social influence (SI), and facilitating conditions (FC) [9]. Sebastion (2022) defines PE as the degree to which the use of technology will benefit consumers in carrying out certain activities, EE as the ease associated with using the system, FC as the participant's perceptions of the resources and support available to perform the behavior and SI as how consumers perceive that their significant others (like family and friends) believe they should use a particular technology[9].
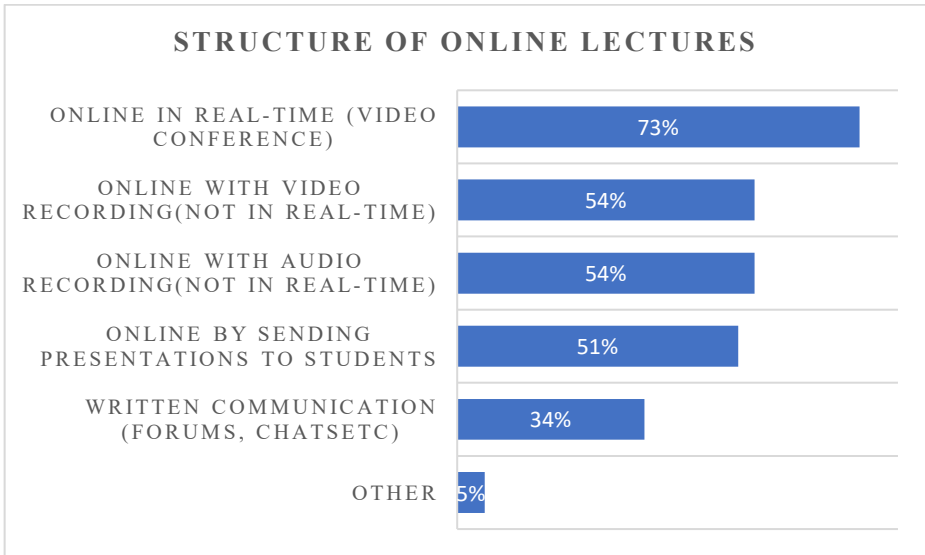
7. Results

The results will be presented in two folds; the demographic information will be presented separately from the constructs of the UTAUT2. Forty-eight out of 60 responses were received for the survey, yielding a 68% response rate.

Regarding demographic information, the mean age of the participants was 24 years (SD= 2.4), with a range of 10 years. Most participants were African (93%), and most (68%) were females. Regarding the funding for learning, the majority (78%) were funded by a bursary. In terms of residence, the majority (37%) stayed in townships (semi-urban), followed by 32% who resided in rural areas during the lockdown period, and most (97.5%) of the participants resided with their families. A significant number (44%) of students come from households where their family monthly income is less than R10,000, and 24% reported job losses in their households.

For the UTAUT2 framework, the results will be presented according to the aspects of the UTAUT2 model being performance expectancy, effect expectancy, social influence, and facilitating conditions as well as the students' recommendations :

7.1. Performance expectancy (PE)

PE can be linked to whether participants perceive online learning as helpful in facilitating learning. According to all the respondents, contact classes were replaced by structured online learning, as illustrated in Figure 1.
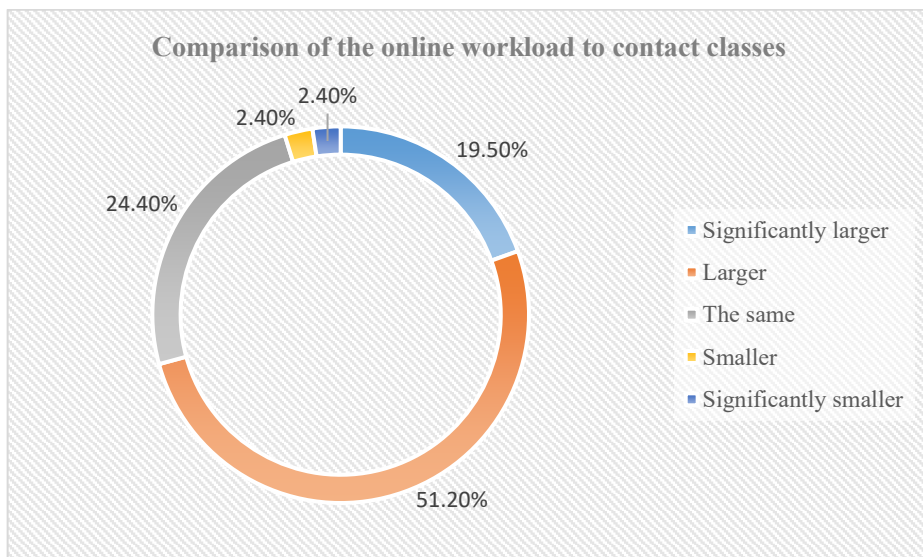
STRUCTURE OF ONLINE LECTURES

ONLINE IN REAL-TIME (VIDEO CONFERENCE)	73%
ONLINE WITH VIDEO RECORDING(NOT IN REAL-TIME)	54%
ONLINE WITH AUDIO RECORDING(NOT IN REAL-TIME)	54%
ONLINE BY SENDING PRESENTATIONS TO STUDENTS	51%
WRITTEN COMMUNICATION (FORUMS, CHATSETC)	34%
OTHER	5%

Fig. 1: Structure of online lectures.

Regarding the clinical structure, the participants reported that only a few sites permitted students to come for clinical work, even though the number of students allowed was less than the normal one for clinical rotation. Participants also stated that there were online clinics for those not permitted on sites to ensure the continuation of clinical learning.

7.2. *Effort Expectancy (EE)*

There was minimal satisfaction with the new structure for lectures and clinicals. Firstly, 78% of participants reported that they experienced challenges with online learning. This included internet connectivity (93%), no access to WIFI (49%), having no money to buy data bundles (39%), as well as a lack of devices to access the lectures (20%) and load shedding (18%). Secondly, as indicated by Figure 2, the results also indicated that there was an increase in the online workload compared to the contact classes.

Fig. 2: Comparison of online workload to contact classes.

Regarding clinical exposure or experience, most respondents (93%) expressed dissatisfaction with clinical structure and exposure during COVID-19. Firstly, the participants felt that COVID-19 affected their clinical exposure and experience. The marks and performance were among the first aspects that led to the dissatisfaction. Thirty-seven percent (37%), the majority, reported a deterioration of their clinical marks and performance. Table 1 summarizes some of the respondents' expressions of how COVID-19 affected their clinical exposure and experience, considering the clinical structure.

Table 1. Impact of Covid-19 on clinicals

Theme	Code	Participant quotes
Negative impact	Clinical structure	P5 *"Badly because mostly we had to do clinical work online which is ineffective."* P10 *"some of the clinicals were done online leading us to limited exposure to the real world."* P32 *"... we couldn't do them physically; we would watch videos and answer questions based on that"*
	Clinical sites	P13" W*e were forced to stop attending clinicals because most hospitals were packed with Covid-19 patients."*

		P15 "*Very bad, we could not physically attend some clinical sites due to the hospital having a limited number of students they allow in*"
	Clinical exposure	P41 "*Less exposed than before the pandemic*"
		P36 "*I didn't get to do my second-year hands on clinical modules*"
	Clinical hours	P24 "*I didn't get enough hours for 2020.*"
		P40 "*I didn't get enough hours and exposure and experience as clinicals were done online*"
	Clinical competence	P8 "It took away clinical competence."
		P17 "*... I sometimes feel like I'm not ready for the world of work.*"
Positive impact		P12 "*Not much, I was still exposed to clinicals either on-site or online*

The respondents were asked whether they felt the clinical knowledge acquired through the online clinical was adequate; most of the participants (39%) felt that the clinical knowledge acquired on this platform was not adequate, and a significant number (37%) of participants felt that their clinical knowledge was adequate. The reasons for the inadequacy were that they were not seeing actual patients (P6), lack of hands-on clinical experience (P9), they were struggling to adjust to the system of learning (P15), and there were reports that online clinics are helpful with clinical reasoning skills (25). For students who reported that they feel they have adequate knowledge, the following reasons were cited: the online clinical allowed for solving common medical cases (P12), there was more time to consult with the lecturers (P41), and the fact that adequate knowledge was also gained by reading articles and watching YouTube videos (P35).

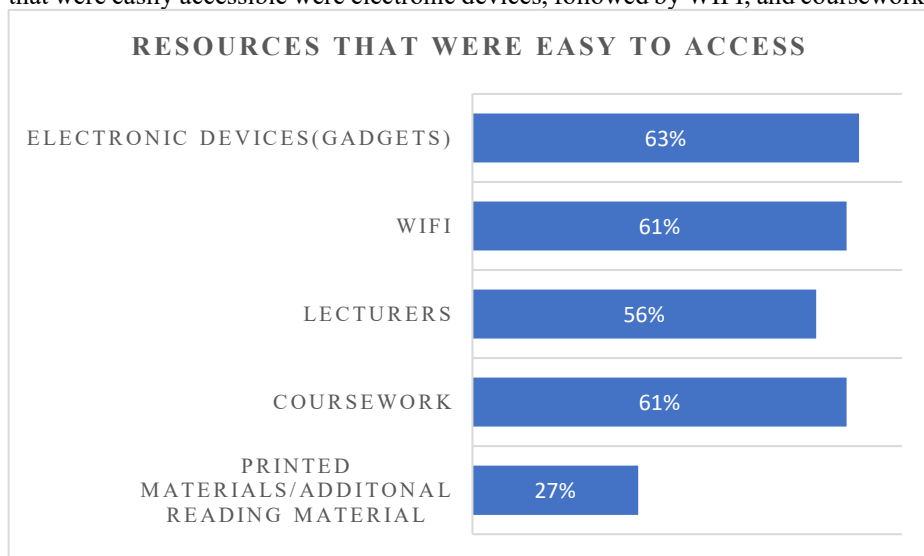### 7.3. *Facilitating Conditions*

This was investigated by asking about institutional support for online teaching and learning (OTL) and resource availability and accessibility.

Regarding institutional support for OTL, there was a reported general satisfaction among the majority (68%) of participants with how the institution organized online remote learning. Through a three-point Likert scale of satisfied, neutral, and dissatisfied, participants were asked if they were satisfied with the following: lecturing staff, technical or ICT services, financial office, student affairs office, libraries, and public relations. The highest satisfaction was expressed for lecturing staff (54%), as well as the technical support or ICT services (37%); neutral received the highest ranking for

the financial office (49%), student affairs office (44%), library (39%), and public relations (46%)

Regarding supervision or mentorship, most respondents reported that this service was primarily conducted via email communication (56%), followed by texting via social networks (39%). The participants further indicated that their preferred method of supervision or mentoring was mainly through email communication (41.5%), video call (32%), and texting via social media (32%)

Regarding resource availability and accessibility, participants were asked which resources were available and easily accessible to them during the period of the COVID-19 lockdown. Figure 3, which summarizes their responses, indicated that the resources that were easily accessible were electronic devices, followed by WIFI, and coursework.

RESOURCES THAT WERE EASY TO ACCESS

Resource	Percentage
ELECTRONIC DEVICES (GADGETS)	63%
WIFI	61%
LECTURERS	56%
COURSEWORK	61%
PRINTED MATERIALS/ADDITONAL READING MATERIAL	27%

Fig. 3: Resources that were easy to access.

7.4. *Social influence*

This aspect was investigated by investigating the students' state of mind and social support network during lockdown. In terms of the state of mind, prior to the lockdown, 63% reported that they did not have a history of mental health issues. However, after the implementation of the lockdown, a significant 46% reported that they experienced the symptoms. Table 2 highlights some of the reported symptoms of distress experienced:

Table 2: Symptoms of distress experienced by participants.

Symptoms of distress	Percentage
Anxiety	57%
Feeling of helplessness	33%
Insomnia	33%

Depression	23%
Suicidal thoughts	13%

These experiences were reportedly due to stress, struggling to cope with OTL, academic pressure, a lack of basic needs, hearing about rising cases and deaths of relatives, and a lack of socializing. A significant number (34%) reported that their close relatives had tested positive for coronavirus, and 12% of the respondents had lost a family member or a friend due to the virus. Of the 12% (n = 5), two respondents lost parents, two lost a friend, and one lost a grandparent.

Regarding adequate room space for online teaching and learning, the majority (61%) reported adequate room space, whereas 38% reported that they sometimes had adequate room space. Five further elaborated from those who did not have adequate room space; three stated that they had nowhere to go, one had to go to a friend's house, and one had to wait for everyone to fall asleep before attending schoolwork.

7.5. *Participants recommendations for learning during pandemics:*
The participants were asked to indicate their preferred learning method; the majority (41.5%) indicated that they preferred learning through a blended method, followed by physical contact (34.1%), and lastly, online remote learning (24.4%). Table 3 indicates the participants' elaborations on their preferred methods of learning.

Table 3: Participants' preferred method of learning

Method of learning	Participants quotes
Blended learning (41.5%)	P22 "*Clinicals should be face to face, but classes can be online.*" P3 "*…discussions after class can be online, integration of the two would be great.*" P1 "*They are both beneficial.*"
Face-to-face (34.1%)	P7 "*I am a contact learner; I prefer it that way.*" P17 "*I don't have to stress about buying data and having a gadget with contact.*" P37 "*can easily engage with lecturers, better for concentration, no need to struggle hearing each other*" P26 "*Basically just for the reasons given above with the difficulties of online tests and classes*"
Online (24.4%)	P9 "*we get enough time to study than moving up and down classes.*" P29 "*because online recordings to go through again… contact is a once off thing.*"

	P33 *"I get to be comfortable in my space every time I learn online."* P39 *"…. Technology makes learning easier"*

In terms of class structure, the respondents recommended that there should be provision of quality Wi-Fi connections (P1), reduction of the workload (P5), provision of the necessary resources on time (p8)

8.   Discussion

The discussion will be centered around the four aspects of the UTAUT2 framework as outlined in the results section: performance expectancy, effort expectancy, social influence, and facilitating conditions. This framework is often employed in studies related to technology adoption by users and is useful in predicting consumer technology use [10]. Thus, the framework was deemed appropriate for investigating the SLPA students' academic and clinical experiences with online and blended learning.

8.1. Performance expectancy

All the participants indicated a sudden transition to online learning during the lockdown period. This measure was implemented to ensure that there is a continuation of learning. Introducing these learning methods in educating undergraduate students has also been reported to be as effective as face-to-face learning [11]. Although literature indicated that OTL benefits the end users, in this study, most respondents reported that they experienced challenges such as lack of internet connectivity, appropriate devices, and lack of workspace, which affected their ability to learn effectively.

Additionally, the participant's demographics, such as place of residence and monthly household income, affected their acceptance and adoption of online learning [12]. The challenge of the digital divide was found to have the most significant impact on students from rural areas because they needed access to resources such as devices and internet access for OTL [13]. The most significant contributor to the digital divide is the fact that most of the population in South Africa lives below the poverty line, and affordability remains a challenge. Moreover, the findings of this section corroborate findings from a previous study [14], which found that factors such as internet connectivity and workload affect students' motivation to partake in online learning. As a result, most medical students have a negative attitude toward OTL because they feel that it is time-consuming [15]

 In addition to the difficulty with accessing appropriate tools for efficient learning, there were also reports of increased workload with the transition to online learning. Although this aspect or workload was not formally measured to compare the workload before and after online learning, it is an essential consideration in evaluating online teaching and

learning as it impacts the quality of learning. Participants in previous research expressed that OTL could add to their academic workload and impede their brainstorming efforts [15] . Additionally, these perceived increases in workload by students may cause problems for students because they may go into "survival mode," focusing purely on meeting the deadlines [16]. Thus, the transition to online learning must be done cautiously to avoid carrying over pre-pandemic practices to online learning. Additionally, according to the UTAUT2 framework, the adoption of new technology is not only influenced by the fact that it will benefit the users but factors such as time savings and improved efficiency are also considered [17].

8.2. *Effort expectancy*

Effort expectancy impacts the user's intention to adopt a new technology based on the user's perception of the ease of use of the introduced technology [10]. This is evident in the findings of the current study because, as indicated in Table 1, some of the main challenges raised were the newly introduced clinical structure, a decline in clinical sites, clinical exposure, clinical hours, and clinical competence. During the pandemic, similarly to the theoretical lectures, there was a decrease in contact clinical and an abrupt introduction of online clinical platforms such as SIMU cases. This transition was necessary to ensure that clinical education continued and that students could attain the minimum 400 clinical hours required by the Health Professions Council of South Africa [6] while curbing the spread of the virus. Some of the reasons for this transition have been highlighted, such as clinical sites permitting only a few numbers of students to curb the spread of the virus. Similarly to other institutions, clinical rotations during the pandemic were online or shortened [18]. Although the introduction of online clinicals was necessary, the participants expressed a dissatisfaction with how they were structured, and this may have a negative impact on their acceptance and behavior toward online clinicals [19].

Secondly, the volume of clinical teaching or the exposure, as expressed by participants in this study, was also reported to have declined by other researchers, and this was found to have an impact on the students' clinical competencies and skills [20]. As indicated by some of the participants (p10 and p17) in this study, there is still the need for contact or hands-on clinicals in the real world. Akers et al. [21] support this notion that online simulations are a good alternative for clinical teaching. However, they still need more precision and practicality [21]. In the context of this research, Simu cases were used as a substitute; this is a computer-based simulation that offers simulated experiences for speech-language pathology and audiology students to practice working with a client, family members, and other professionals on a virtual patient with real-life health concerns [22;23]. Previous research has highlighted the positive effects of simulation cases, such as improving clinical knowledge, reasoning, skills, and attitudes, thus making it an effective tool in continuing clinical education and training, especially when contact clinicals are interrupted [24]. The authors further highlighted that a hybrid approach should be considered concerning clinical structure as it may enhance the student's clinical competence.

8.3. *Social influence*

An essential discourse around remote online teaching and learning, especially where there are disruptions to conventional learning methods, is the students' state of mind and support networks. When introducing new teaching modalities, social influence must be considered because it directly impacts how individuals respond and adjust their beliefs toward OTL [25]. As indicated in Table 2, as an elaboration of the 46% who reported that they experienced symptoms of distress, there were various challenges experienced. Like any change, the unprecedented introduction and transition to online learning has brought uncertainties to students. Firstly, the COVID-19 pandemic in itself brought physical health threats as well as mental health threats. Due to the regulations that were implemented, such as social distancing, stay-at-homes, and increasing number of death cases, there was a reported increase of 891 calls reported by the federal crisis health hotline in 2020 [26]. The results of this study, as indicated in Table 2, indicated that the highest (57%) symptom of distress experienced was anxiety.
Similarly, in another study on medical students, 84.1% of the participants reported feeling anxious [27]. Based on the result above, some of the contributors to these symptoms of distress may be the academic pressure of adapting to the new learning modality under circumstances of digital divide, the increased workload, and the limited exposure and experience of clinicals. Secondly, the issue of losing relatives and friends, some of whom were parents, may be a contributor. Although there was no professional diagnosis of the mental health challenges reported in the current study, these findings are like those of another study where screening for mental health among medical students during the COVID-19 pandemic was conducted [28]. In the study, the results of the screening were as follows: depression (25%), anxiety (21%), burnout (19%), and thoughts of self-harm or suicide (7%).

Before COVID-19 or the abrupt transition to online learning, students within the health sciences were reported to experience considerable psychological and social stress due to the nature of their studies [29]. Understanding the availability of support and satisfaction during this period of new learning modalities and the pandemic is essential. Based on the results, the majority (66%) of students reported receiving support from their families. However, a few students reported that their families needed help understanding the concept of online learning, which required them to carry out household chores during the time they were supposed to attend. Considering the concept of the impact of social influence on the users' intention to adopt the new technology, students in this regard were less likely to be receptive to OTL because of their family's lack of understanding of OTL and residing in environments that were less suitable for OTL [19;30]. Previous literature has indicated that parental gender, age, and educational status contribute to the understanding and attitude toward online and distance learning [31].

8.4. *Facilitating conditions*

As per the definition of facilitating conditions, university support during the period of shifting to online learning is a driving factor in the participants' behavior towards and intention to adopt this modality. Institutional support in the wake of the abrupt adoption of OTL included universities issuing laptops to students purchased by universities, credited to the student's accounts, and offering free but limited data packages [32]. As a result, the majority (68%) of the participants indicated that they were satisfied with how the institution organized online remote learning. However, it is also concerning that of the support services offered by the institution, the lecturing staff is the only support component that was satisfying (54%). All the other services, such as the library, technical or ICT essential in this transition, were ranked by less than 40% of participants as satisfactory. Institutional support is essential in ensuring that students overcome hurdles to academic performance. This can include academic support and extracurricular or non-academic services to provide holistic support to students [33]. In terms of online learning, university support is through the provision of technological infrastructure, digital resources, and instructional support to ensure quality online teaching and learning [34]. These findings highlight the critical considerations and gaps when introducing online teaching and learning.

Moreover, considering that these were health sciences students, previous literature has indicated that providing academic and personal assistance is vital in helping the students succeed in their training [35]. Addressing these gaps is essential because sufficient organizational and technological support can fast-track the adaptability to OTL. The UTAUT2 framework further highlights that if support for a particular system is available, users are more likely to have a higher intention to adopt the technology [36] This is because end-users need to have relevant knowledge, support, and resources such as devices, internet connectivity, ICT, and psychological support, among others, in order to reduce- the barriers and negative behavior toward OTL.

Lastly, the participants were asked about their preferences regarding learning modalities and their recommendations for online learning. This will be discussed with hedonic motivation, which is defined as the enjoyment and pleasure that users perceive while using technology [37]. Based on the factors discussed under performance expectancy, effort expectancy, social influence, and facilitating conditions, the majority (41.5%) indicated they preferred blended or hybrid learning. In this instance, theoretical lectures could be conducted online, whereas the clinical can be done face-to-face or in person. Literature suggests that for students training within the medical field, pure online learning is not recommended but should be complementary to face-to-face learning [38]. Additionally, blended learning is generally acceptable in healthcare education because it can improve the students' clinical competencies such as clinical reasoning and documentation skills [39].

9.   Recommendations

Research about students' learning experiences is essential because they are the primary stakeholders and end-users of the teaching methods introduced. Following analysis of the results, the following recommendations were made:

1. The students' demographics, such as place of residence, socioeconomic status, and room space to allow for efficient learning, should be considered for all students. Issues of unstable and insufficient internet connections and an unsuitable learning environment have been raised. Thus, it is essential to provide suitable study spaces with stable internet, such as libraries close to their homes or returning those students to campus.
2. The workload issue has been raised, which could consequently impact the student's motivation for learning. In this regard, evaluating the workload when implementing new teaching modalities such as online or blended learning is recommended to ensure that students still receive the same amount and quality of learning.
3. There. is a need for psychological or mental support because of the students' issues that can be experienced within their homes and the academic pressures of completing the minimum undergraduate requirements necessary for graduating.
4. Considering the technological advancements in higher education institutions, these psychological support services can be provided through telephone sessions, What's App messaging, or online sessions where feasible. As per the UTAUT2 framework, the measure should be implemented to ensure that institutional support is heightened to promote buy-in from the students about migrating to OTL.

10. Conclusion

The current study has highlighted some important considerations and implications for practice when implementing remote online learning for health or medical-related studies, especially in historically disadvantaged institutions. The SLPA students had varying experiences in academic and clinical online and blended learning. Even though online learning was abruptly introduced and at its peak during the COVID-19 pandemic, some students were still open to this learning method as it complemented face-to-face learning. This is because of the authenticity and realism of contact clinicals compared to virtual clinical education. With the implementation of online learning in historically disadvantaged institutions, there is a need to conduct thorough assessments of all factors, such as the students' digital requirements and the suitability of home environments for learning, because this may hinder the student's ability to attain quality learning efficiently. In conclusion, the overall feeling towards OTL, or blended learning, is that there is room for blended learning within health education; theoretical teaching can be done online, whereas clinical education can be done face-to-face.

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