

A Shift from Traditional to Online Viva Voce Examination in Tertiary Institutions: A Hint for Advantages, Challenges and Student's Attitudes

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Abstract

The viva examination is an integral part of the final assessment process for many students. It allows students to demonstrate their knowledge and skills before a panel of experts. Therefore, exploring the advantages and challenges of the online viva voce examination and students' attitudes contributes to the existing literature. Qualitative research design was employed to answer the research questions. The findings revealed that online viva voce examinations are cost-effective as students do not need to pay for travel and accommodation costs. The online viva voce examinations allow students to present themselves through an online platform, which is a new normal and the most needed skill. Nonetheless, virtual viva examinations come with a new set of challenges. For example, the challenges faced include a choice of platform, internet accessibility, examiner training, and student training. Furthermore, the results showed that students acknowledged the assessment process despite stress and anxiety during the online viva voce examination. Accordingly, this research makes some recommendations for the successful conduct of online viva voce examinations.

Keywords: Attitudes; Benefits; Challenges; Online Viva-Voce; Tertiary Institutions.

1.0 Introduction

Due to the COVID-19 pandemic, teaching and learning activities in universities, colleges, and schools were moved online quickly. It is undeniable that online learning has become the best solution to ensure continuity in learning, particularly during COVID-19. Online learning, sometimes called e-learning, plays a critical role in blended learning, online education, and online courses (Singh & Thurman, 2019). Online learners use the internet to facilitate teaching and learning activities and to enhance interaction between teacher and student. Moreover, this type of learning enables those living far from campus and rural areas to join university courses and programs (Mohammed et al., 2021). It is a system that assists learning institutions in strengthening their distance education, online testing examinations, and online viva-voce examinations.

Viva voce examination derived from Medieval Latin and was recorded in the Shorter Oxford English Dictionary in 1815 as “an examination conducted by speech” (Pearce & Lee, 2006). Irrespective of nomenclature, the viva voce examination can be explained as assessment in which a postgraduate students’ response to the assessment task is verbal, in the sense of being expressed or conveyed by speech instead of writing (Nallaya et al., 2024). Viva-voce examinations are becoming a global practice for evaluating graduating students. The viva voce examination includes two examiners and an independent chair. The viva is one of the most stressful moments in the master and doctoral journey. But it is an important one as it allows students to defend their thesis (Samaila, 2023).

In Universities and elsewhere, where vivas are the expected end of the doctorate and master programs, they seek to determine the doctoral quality of the work. They are usually conducted face-to-face under secure, rigorous, and collegial conditions (Pearce & Lee, 2009; Samaila & Al-Samarraie, 2023). This type of examination gives examiners a chance to decide whether the student has met the requirements for their degree (Ahsan & Mallick, 2022). Students usually defend their thesis on university grounds, in the same room as their examiners. Before the COVID-19 pandemic, the traditional viva voce examination was considered the only method for evaluating a doctoral or master candidate by most institutions (Wisker et al., 2022). However, because of university closures and the need for social distancing during COVID-19, viva-voce examinations have moved online (Mohammed et al., 2021). Other reasons for conducting online viva-voce examinations include a situation where candidates have returned to their home country and are unable to travel back to school. The online viva can be fully virtual, where all participants are remote, or a blend of in-person and virtual, where two or more participants are at the same physical location.

Virtual viva voce is a typical traditional viva voce but conducted online – it is an examination or assessment conducted in which a student's response to the assessment task is verbal, in the sense of being expressed by speech instead of writing (Viral, 2022). It can be conducted at any time with a customizable schedule and from anywhere worldwide (Okada et al., 2015). Since March 2020, in response to the COVID-19 pandemic forcing the closure of university campuses, the online remote viva has become an alternative internationally. Online viva plays a crucial role in validating students' capacity to articulate and defend choices made and their knowledge and contribution to the field. Online viva allows examining if the student obtains sufficient academic capital to earn a doctorate degree. In this context, such capital includes doctorateness, contribution to knowledge, and development of research skills.

However, the online viva voce examination is not popularly known by most students and examiners, making it an even more stressful experience than the face-to-face alternative. Most of the universities, especially in developing countries, were unprepared to embrace the virtual viva voce examination as it comes with challenges such as Internet accessibility, limited ICT skills among students and teachers, and lack of competency to participate in online learning activities (Wisker et al., 2022). These issues signify a need to investigate students' attitudes toward online viva and the opportunities and challenges they face during online viva. Moreover, the study uses a semi-structured interview approach to answer the following questions:

- i. What are the students' attitudes toward online viva voce examinations?
- ii. What are the benefits of online viva voce examination?
- iii. What challenges do the students face during online viva voce examinations?

2.0 Methodology

Qualitative research design was employed in this study. This type of research design is appropriate to get sufficient data since the data were collected through semi-structured interviews. This qualitative data describes students' attitudes and the benefits and challenges of using online viva voce examinations. There is a total of twenty-two (22) students from different universities in Nigeria who had experience in virtual viva voce examination. The researchers used the purposive sampling method to select thirteen (13) participants across the universities. Table 1 below indicates the participants' profiles.

Table 1 Participants' profile

No.	Level of study	Major
Participant 1	Post-graduate	Computer Science
Participant 2	Post-graduate	Instructional Technology
Participant 3	Post-graduate	Chemistry
Participant 4	Post-graduate	Mathematics
Participant 5	Post-graduate	Computer Science
Participant 6	Post-graduate	Educational Technology
Participant 7	Post-graduate	Mathematics
Participant 8	Post-graduate	Chemistry
Participant 9	Post-graduate	Cyber Security
Participant 10	Post-graduate	Computer Science
Participant 11	Post-graduate	Organic Chemistry
Participant 12	Post-graduate	Statistics
Participant 13	Post-graduate	Computer Science

Before the interviews, the researchers have permission from the participants to record the interviews. The participants were also informed that the data would be used only for academic and research purposes. Before the data analysis, four experts validated the interview questions. Corrections and observations were affected, and a final copy was made. On the other hand, to achieve reliability, the interview questions were carefully revised to ensure consistency. The data were analyzed using thematic patterns to understand the examiners' experience and students' attitudes, opportunities, and challenges of online viva voce examination.

3.0 Results and Discussion

The findings of the study were discussed based on the research questions. The results showed that despite online VVE being novel, it enabled dialectic communication between the examiner and student and provided invaluable experience for future interviews. Though some students were worried prior to the VVE, on reflection, they acknowledged that the process was user-friendly.

3.1 Students' attitudes toward online viva voce examination

This section analyzed students' attitudes toward online viva voce examinations. The online viva process is, at first, very nerve-racking and unexpected. Having done an online viva, many students acknowledged that the process could be an alternative to the traditional way of conducting a viva voce examination. The participants believed that online viva is unique for them but allows them to comprehensively convey aspects that would not be as evident in a written examination. Participant 1 stated:

P1: "I feel comfortable while doing the online viva voce examination because it allows me to express my points and comprehensively convey aspects that would not be as evident in a written exam."

Most participants welcomed the idea of online viva voce examination, a promising tool capable of improving traditional ways of doing viva. This type of viva assists students in having a better experience and strengthens their experience in future struggles.

P2: "It is a good practice especially if you're going into the workforce next year."

The study found that most of the students had a positive attitude toward using technologies in assessment and preferred online-based assessment over the traditional form of assessment.

3.2 Advantages of online viva voce examination

The study reports that students could outline opportunities to conduct online viva voce examinations. For example, over half of the students said online viva saves time and limits traveling. Participant 5 stated that:

P5: *"I was lucky to have online viva voce examination which allow me to defend my thesis from my inner room. This saves my time from flying to a country of study and it increases my digital literacy and problem-solving skills".*

Similarly, many students applaud online viva for enabling them to defend their theses despite being absent from the university. Before adopting an online viva voce examination, a student and examiner must travel to the university and meet in the viva room for a face-to-face viva examination. Participant 3 stated that:

P3: *"Though I traveled nowhere, my supervisor was on holiday, and my external examiner was also in a different country, yet I had peaceful online viva voce examination. That saved my time and reduced the financial burden."*

Online VVEs are more integral and advanced, providing many chances that conventional VVEs cannot offer. For example, students lamented that online viva voce examination is more convenient without technical issues as it can be conducted anywhere, anytime, with a customizable schedule. Participant 8 stated that:

P8: *"I enjoy having online VVE because of its flexibility and customizability nature. This helps me have my VVE at own designated place. A part from that it assists me in improving my digital literacy and problem-solving skills"*

Most students value the conversational style of online VVEs and can feel more contented and well-informed. They were able to observe their improvement in using digital skills such as video conference video software, slides, and digital platforms. They were able to navigate minor challenges, which assist them to improve their problem-solving skills and learn how to make troubleshoots technical issues.

3.3 Challenges

The results displayed that, though students have identified several positive features of online VVEs, including flexibility, customizability of time, and cost-effectiveness, they also noted many challenges facing the successful implementation of online VVEs in such areas as digital literacy skills, the validity of the software, and security of internet connectivity. Participant 9 stated that:

P9: *Although I defended my thesis online, I prefer conventional VVE as I have limited digital literacy skills. I found it challenging to handle the technicalities, including how to share my screen and how to search for other documents. In fact, I'm not familiar with online VVEs, hence the reason for my challenges".*

Other noticeable challenges were poor electricity and poor internet connectivity. Most of the participants reported that they had some issues either with electricity or with the internet. These affect the credibility of online VVEs.

P10: *"I had a bitter experience during my online VVEs. Due to poor power supply and internet break up, my VVE was rescheduled to another week."*

On the other hand, some participants were very anxious and unconfident. Attending an online viva voce examination for the first-time worried students about various things, such as appearing online for discussion and handling technological challenges. Such anxiety affected students' psyche, especially in the first online viva voce examination. Regarding this anxiety, participant 4 stated:

P4 *"I feel worried and anxious when the school sent an email to me that my viva voce examination will be online. I had limited experience of online learning. Hence, the reason for my high anxiety toward online viva."*

Another challenge of online VVEs confirmed by most participants was technical issues such as poor video or audio quality, network disruption, and navigating the online platforms, which led to frustration and potential delays. Participant 13 said:

P13: *"I had a challenge of poor audio quality during my VVE. It took us almost an hour to rectify the problem. This issue makes me doubt the reliability of the online VVEs."*

More than a few participants acknowledge that the lack of physical demonstration during the online VVEs is one of the challenges. Non-verbal cues, such as body language and facial expression, play a significant role in communication and understanding during viva voce examinations. In an online setting, these cues are less visible or interpreted differently, making it challenging for students to understand the examiners accurately. The absence of a whiteboard to explain my equation brought unnecessary tension to me. Those of us in mathematics and engineering need a board to rewrite some equations. For example, participant 12 said:

P4: *"I felt uncomfortable during my examination because I could not physically express and demonstrate my ideas. The examiners found it difficult to understand me. I wish I could have had a board to write my equation and explain them in detail."*

The findings showed that online VVE is an alternative to conventional viva. Despite the challenges, participants expressed positive attitudes toward adopting online VVEs. There are many advantages of online VVEs, including cost-effectiveness, time-saving, flexibility, and customizability. However, poor internet connection, poor power supply, and technical issues are still the challenges affecting the implementation of online VVEs.

Though online VVE is a new concept for students, most have positive attitudes. The online VVE has allowed students to defend their theses despite being away from schools. Likewise, examiners can assess the students from their comfort zones. The findings showed that most of the participants were satisfied with the virtual viva voce examination. This is the same as Khan & Noor (2022), who reported that students had positive attitudes to online viva. They added students were happy and satisfied with the innovation of defending their theses online. Most students welcome the idea of online VVEs, which have features that accomplish the traditional ways of doing viva voce examinations. Some students further revealed that online VVEs are a playground to prepare them for future online learning and activities.

The majority of the students were found to have positive attitudes toward online viva voce examinations due to the fact that they could attend the viva voce from any location, which reduced the need for travel and allowed them to choose a comfortable environment for the examination. This study aligns with previous research by c who reported that students feel less anxious about online examinations, as they reduce the stress associated with traveling to a physical examination venue.

This study investigated the benefits of online viva voce examinations (VVEs) as most higher learning institutions are gradually considering online VVEs as an alternative to the conventional viva voce examinations. Some of the universities are familiar with the use of technology but are inexperienced in online VVEs. Many thesis vivas have been carried out virtually since the pandemic struck. There are many students who have been through the process and are willing to share their experiences. Results showed that some are pleased with the new system and find it a positive experience and enjoyable! Students could defend their theses online in their inner rooms while examiners were sitting in their offices in their own city.

The findings show that online VVEs have more advantages over conventional VVEs, such as flexibility, accessibility, and customizability. This is agreed with the findings of Boitshwarelo et al. (2017), who confirmed that flexibility and user-friendliness are the major benefits of online VVEs. This implies that students, examiners, or panel members can

attend Viva regardless of location or distance, provided the internet connectivity is good. Other benefits of online VVEs include time-saving and cost-effectiveness. These features make online VVEs more acceptable compared to conventional VVEs. Students, examiners, and even the university save more time and money associated with travel and hotel arrangements. This indicates that online VVEs will have more recognition in the future.

In addition, online viva voce examinations can potentially enhance students' digital literacy skills as participating in online viva requires students to become familiar with different digital platforms, video conference tools, screen sharing, and chat functions. This experience help students develop their technical skills and confidence in using digital technologies as reported by some the respondents. This finding is supported by Gamage et al. (2022) who argued that online VVEs provides students with opportunities to enhance their communication skills and digital literacy. It is also interesting to note that some students acknowledged the impact of online viva voce examinations (VVEs) on significantly developing their problem-solving skills as they encountered technical problems, such as connectivity issues or software anomalies. Navigating these challenges can assist students in reshaping and developing their problem-solving skills (Samaila, 2023).

For the challenges, the findings revealed that anxiety and stress are the main challenges students face during online VVEs. The students could overcome these challenges and improve their self-confidence by having an online mock viva voce examination, which aligns with previous literature (Samaila, 2023). Other challenges reported in this study are poor internet connectivity, digital literacy, and the validity of the software. Similar issues were reported by Abdulkareem et al. (2019), stating that limited ICT skills were the major barrier affecting students' experience during online examinations. These issues could be minimized by improving students' digital literacy skills. A study of Samaila (2023) reported that a student had an issue during the online VVEs; he spent probably almost 30 minutes trying to sort out the problem with the "Echo." This is related to what happened in this study, where a student experienced poor audio quality and network disruption - it took the student some time to navigate and overcome these challenges. Since students are facing some difficulties during online VVEs, it is essential to ensure that students receive adequate support and training to minimize the challenges. Institutions can provide resources and guidance to help students for success in online examinations.

It is clear from our findings that If students are not familiar with the format, online VVEs can be very stressful for students – often more so than a written exam. This could have a detrimental effect on their performance in the examination, even if they have high level of subject knowledge and understanding. Moreover, students admitted that they could access their notes or other resources more easily during online examinations, although this raises concerns about the integrity of the online examination process. This poses a significant challenge because students can collaborate with others or receive external help, thereby compromising the integrity of online VVEs.

4.0 Conclusion

Online VVE is an alternative tool that helps continue the educational process even when the physical viva is impossible. The online VVE can provide audio or video recording options, making it easier to document and reference the discussions. This enhances transparency and allows for future review or sharing of viva voce sessions. This study provides practical insight into students' attitudes toward online VVEs. The study revealed that online VVEs are cost-effective, flexible, and time-saving, which are advantages of online VVEs over traditional VVEs. On the other hand, the study concluded that the challenges students face during online VVEs include poor internet connectivity, technical issues (poor audio and video echo), anxiety, stress, and limited digital literacy skills. In conclusion, both the students and examiners can benefit from this paper as both can get hints about the challenges of having online VVEs. This study was limited to PhD students, so future research should include both undergraduates and postgraduate's students and larger population.

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Author Contributions

S. Kamaludeen: Conceptualisation, Data Collection, Data Curation, Validation, Writing; **H. Ilyasu:** Validation, Writing-Reviewing, Supervision; **A.L Ibrahim:** Reviewing and Editing. **J. Elizabeth:** Reviewing.

Conflicts of Interest

The manuscript has not been published elsewhere and is not under consideration by other journals. All authors have approved the review, agree with its Submission and declare no conflict of interest in the manuscript.

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