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Reinforcing Digital Assessment in Accounting High-Stakes Examinations

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ABSTRACT
This paper sought to document the necessity of transitioning from a paper-based assessment to a digital assessment in the Accounting examinations. The Department of Basic Education is slowly adopting technology in teaching and learning in South Africa through multiple digital tools. Currently, more intensity is on integrating Information and Communication Technology into pedagogy to transform the education system. Nevertheless, little is being said to transform high-stakes examinations using ICTs. Thus, this study points out a transitioning of digital assessment in Accounting high-stakes examinations. To deepen this discussion Technology Acceptance Theory was used to frame this study since it highlights two factors that motivate a user to accept technology: perceived usefulness and ease of use. I located this study within an interpretivist paradigm and ethnography research design. Four Accounting teachers who had Information Technology qualifications were purposively sampled using the homogeneous strategy. To collect data semi-structured interviews were conducted and data obtained was analysed using thematic analysis. I found that the digital assessment in Accounting high-stakes examinations can be reinforced through online evaluation: online tests/examinations, online simulations, and online case studies. Further integrity of the digital examinations can be ensured through stipulated rules and regulations. In light of the above finding, I conclude by maintaining that the transitioning to digital assessment in Accounting high-stake examinations is feasible and must be implemented. The study aspires to develop the level of examinations in Accounting by transitioning to digital assessment considering the current digital era, and the nature of Accounting subject.

KEYWORDS
Accounting; high-stakes examinations; TAM Theory; transitioning; digital assessment.

INTRODUCTION

The exponential growth of Information and Communication Technology (ICT) integration in teaching and learning is gradually gaining more adoption and acceptance throughout the globe. Correspondingly, the government and education sector in South Africa have designed and introduced ICT policies such as a White paper on e-education (DoE, 2004) and initiated a process of providing ICT resources in schools in all nine provinces (DBE, 2023). Even though the process of distribution of resources is still at a lower stage, it is viewed as a strategy to advance the process of teaching and learning amidst this 21st century and digital era. Research has been noted to support the advancement of pedagogy through ICT integration, nevertheless, very few studies have contributed to advancing high-stakes examinations particularly Accounting through ICT or digital assessment in South Africa.

Çetin (2018) conducted a study on the implementation of digital assessment in formative assessment and found that the students were enjoying Kahoot! Furthermore, it was an informative, useful, perfect, and not difficult assessment method. Cetin concluded that Kahoot! was an effective method of digital assessment in schools. Another study on digital assessment in primary and secondary schools was conducted by Ningsih and Mulyono (2019) who found that teachers were positive toward using Kahoot! and ZipGrade as digital assessment tools. The authors concluded by recommending Kahoot! for digital assessment. Additionally, Rytkönen and Virtakoivu (2019) evaluated the effective method of assessment and found that electronic exams were perceived by the students as more realistic and natural in programming exams than traditional pen-and-paper exams. The authors concluded that electronic exams are strongly recommended for programming courses using exams for summative assessment. Smith and Cekiso (2023) in a study about digital assessment in higher education argued that there must be a change in the mode of assessment for alignment of skills and the requirements of 4IR.

Although the above highlights some insights into digital assessment they focused on formative assessment and majority concentrated on higher education. Very few studies have focused on digital assessment in high-stakes examinations in South Africa, particularly in Accounting subject. Therefore, this study is unique in the sense that it aims to contribute to the ongoing discourse of ICT transformation in pedagogy by reinforcing digital assessments in Accounting high-stakes examinations. Furthermore, studies conducted on digital assessments are normally quantitative research, so this study adopted a qualitative method to understand the research phenomenon more deeply. The research question at hand in this study was, how transitioning to digital assessment in Accounting high-stakes examinations can be reinforced. By responding to this question, I sought to develop the level of examinations in Accounting through transitioning to digital assessment considering the current digital era, and the nature of Accounting subject. This paper commences by outlining the literature related to the research phenomenon, followed by the theory employed, then the methodology used in the study, thereafter the paper reports on the findings and discussion, and finally, the concluding thoughts were provided.

LITERATURE REVIEW

Although there are studies that have been conducted on digital assessments, they are in higher education; consequently, there is limited literature on digital assessment in secondary schools, particularly on high-stakes examinations. Thus, this qualitative study was conducted, aiming to also add to the body of literature on digital assessment in high-stakes examinations, develop examinations, add information to education stakeholders, specifically examination bodies, and benefit the education sector and learners with digital skills. Primarily, the intention of introducing ICT in education, specifically in teaching and learning, was to improve the quality of the South African education landscape in schools (Department of Education, 2004). The White Paper policy outlined that the government and the education sector intend to promote ICT capabilities in all South African learners by 2013 (DoE, 2004). These ICT capabilities include skills and knowledge on how to operate technology tools that will enhance teaching and learning. Therefore, the three broad spectrums of education, namely teaching, learning, and assessment, must involve digital. Digital assessment in Accounting examinations is a pivotal transition considering the various modes of learning in this digital era. DBE (2023) buttressed that the ultimate intention is to make schools not only sites of academic achievement but also sites of vocational and occupational skills development. Hence, digital assessment is necessary.

Significance of digital assessment in schools

In the 21st century, the importance of digital assessment cannot be overstated within pedagogy to evaluate learners. Digital assessment is imperative for all education stakeholders, including curriculum designers, facilitators, teachers, and learners. According to Çetin (2018), digital assessment in education is crucial to assist teachers in controlling and monitoring learners' learning and performance, judging and providing feedback, and evaluating the quality of learning through the assessment process. Yılmaz (2017) maintains that digital assessment tools allow teachers to provide quick feedback and make them do individual assessments in a lively and competitive environment. Balta and Türel (2013) declare that evaluation of learners' learning should be carried out in digital education to avoid problems in the aforementioned issues.

In addition to this, Eyal (2012) highlighted that the importance of digital assessment is to enhance assessment capabilities, offer teachers an opportunity to improve and diversify the evaluation of learners, and enhance written communication skills, cooperation, teamwork, and reflective thinking. Digital assessment provides teachers with technical support to create tests, deliver students' responses to test items, and allow automatic scoring and reporting (Llamas-Nistal, Fernández-Iglesias, González-Tato, & Mikic-Fonte, 2013; Simelane & Pillay, 2024). Notably, there are massive administrative duties in secondary schools in South Africa, especially during examination season; hence, digital assessment is imperative to lessen the administrative duties. Russell and Markle (2017) postulates that digital assessment includes computer-based assessment which is a significant method to promote formative assessment practices in schools.

This method allows instant individual feedback, increases student engagement, and supports self-regulated learning (Adie, van der Kleij & Cumming, 2018).

Timmis, Broadfoot, Sutherland, and Oldfield (2016) posits that the importance of technology in high-stakes examinations is growing in many countries recently and it is regarded as a tool to encourage greater competition and accountability between schools and across the education system. Further, the authors noted that through technology in high-stakes examinations, there is an increase in summative judgments of learners' performance in terms of overall grades. In schools, educational practices require the advent of interactive technologies for more engaging pedagogy and new forms of assessment. Pellegrino and Quellmalz (2010) concur that technology influences a strong integration of curriculum, instruction, and assessment.

Overview of the current high-stakes examinations in Accounting

In South African schools, assessment is guided by a variety of documents such as the Curriculum and Assessment Policy Statement (CAPS), the National Protocol for Assessment, and the National Policy Pertaining to the Programme and Promotion (DBE, 2023). These documents elaborate on the procedure for standardised assessment in schools (Blose, 2025). Further, there are exam bodies, including Umalusi Quality Council for General and Further Education and Training, which ensure quality assurance in high-stakes examinations. The council has a responsibility to ensure that all quality assurance processes are carried out effectively and efficiently. Any transformation in the high-stakes examinations must be adopted and approved by this council.

Currently, the high-stakes examinations in Accounting in South Africa unfolds as follows: Preceding the examinations sitting the Department of Basic Education and assessment bodies adhere to the clear structures and procedures in place relating to the typing, editing and printing of exam documents (question papers, answer books and memorandums). Once examinations documents are rigorously validated, they are stored for the commencement of the examinations. Accounting final examinations are conducted between November and December. Learners are obliged to sit for two papers (paper 1 & 2) and each is 2 hours long and 150 marks each. During the examinations, learners are issued with question papers and answer books to respond to. The only digital tool they are permitted to use is a calculator. Again, teachers use the traditional method of marking, which is using pens. In short, Accounting high-stakes examinations are carried out traditionally using paper-based assessments in South Africa.

The need for digital assessment in Accounting high-stakes examinations

In light of the above discussion, there is a need for transitioning to a more practical assessment that involves digital devices in Accounting. This paper-based assessment is contrary to the aims of the department and of the subject of producing technology-literate learners and educating learners through information systems (DBE, 2011c). Further, theoretical assessment does not serve the aim of producing digitally competent learners who will meet the requirements of Accounting professions. Smith and Cekiso (2023) argue that the way examinations are

conducted will shape the students' perception of the curriculum and will determine their adeptness to progress. Accounting is practical in its nature (Ngwenya, 2014) and digital assessment is a huge necessity within the subject. In Accounting linking practical and theoretical content is pivotal to equip learners with knowledge and skills of the subject and prepare them for various Accounting professions, thus digital assessment is a need. The traditional paper-based assessments in Accounting does not adequately evaluate all areas of learners' performance, particularly the skills.

Department of Basic Education (2011c, p.8), postulates that "Accounting deals with the logical, systematic and accurate selection and recording of financial information and transactions, as well as a compilation, analysis, interpretation, and communication of financial statements and managerial reports for use by the interested parties''. Such content structure requires digital learning and assessment. The nature of the Accounting subject is also technology-based, information is systematised and every piece of information in the subject requires the involvement of technology. Moreover, the Accounting subject is constantly affected by any economic or market changes thus digital assessment is necessary to amend and update information. To synthesise the above discussion theory was employed in this study.

THEORETICAL FRAMEWORK

This study is framed by the Technology Acceptance Model from the work of Davis (1986). Davis believed that there are reasons why people accept and reject Information Systems, in this regard the author designed the TAM theory. TAM theory seeks to understand the users' acceptance and usage behaviour of the information systems (Davis, 1989). For education stakeholders to utilise technology (systems) in assessment there is a massive necessity to first motivate them to accept the system. Thus, this theory is appropriate for this study's aim of reinforcing digital assessment in high-stakes examinations in Accounting subject. The initial step is to motivate curriculum designers, examination boards such as Umalusi. Accounting teachers to accept and have positive usage behaviour on the digital assessment (Motsoeneng & Moreeng, 2023; Skhepehe, 2024). Once the user's behaviour is negative on the system chances of accepting it are slim.

Davis (1989), Elwood, Changchit and Cutshall (2006) and Stols (2008) claimed that there are two determinants of a user's acceptance of the system. Firstly, Perceived Usefulness, meaning people accept and use the system when they believe it will help them perform their job better. Given the above insight, TAM highlighted that the first step was to determine how education stakeholders perceive the usefulness of digital assessment in Accounting high-stakes examinations. This step gave an idea to review previous literature on ICT adoption in education and digital assessment in schools. Through the literature reviewed, I was able to obtain a notion that education stakeholders have positive perceptions of the usefulness of systems which are digital tools in teaching and learning, and assessment. In addition, through this theory, I could stress the usefulness of digital assessment in Accounting high-stakes examinations such as

improving teachers' evaluation methods, reducing paper administration, making marking easy, instant feedback, and allowing Accounting learners an opportunity to attain some digital skills. Pima (2019) pointed out that to ensure teachers accept and use ICT in the learning environment, their beliefs and attitudes have to be verified, particularly beliefs on how the system will make them more productive.

Furthermore, TAM theory indicated a second determinant called Ease of Use which postulates that even if the user believes that the given system is useful, they may, at the same time, believe that the system is too hard to use Davis (1989). With this determinant, it was easy to answer the research question and comprehend that even though perceptions are positive about digital assessment there might be a hindering factor of difficulty in using the system. It was noted that digital assessment was not going to be easy to use for everyone. This theory gave me a picture to comprehend the possibilities of accepting the innovation of transitioning to a digital assessment in the Accounting examination.

RESEARCH METHODS

This study synthesised multiple qualitative research methods to explicitly address the research phenomenon. Qualitative research approach utilises a deep and wide-angle lens to study human behaviours and reality (Johnson & Christiansen, 2019) which is the intention of this study. The approach allowed me to study the reality of digital assessment in Accounting examinations and examiners' behaviours and narratives towards it. I was able to deeply comprehend if participants' thoughts, assumptions and state of living will have no impact on transition to digital examinations (Shanmugan, 2020). Qualitative approach is associated with the interpretive paradigm (Henning, 2005) thus I located the study within the interpretivist paradigm. Guba and Lincoln (1989) and Ugwu et al. (2021) postulate that it mainly seeks to understand the subjective world of human experience. According to Shah and Al-Bargi (2013), interpretivist is concerned with interpreting and understanding human experience, and social reality within the natural setting.

I socially engaged with participants regarding transitioning to digital assessment in Accounting high-stakes examinations. Participants shared their meaning of digital assessments, their worldview on how digital assessments should be administered in SA schools, and their experiences of using digital in assessment. After engaging with them I was able to understand and interpret their individual views and construct data for this study. Ugwu et al. (2021) advocated that in the interpretivism paradigm, the researcher commences with individuals and attempts to comprehend their interpretations of the world surrounding them, while the actual words of individuals become the evidence of realities. Through this paradigm, I noted that digital tools are used in pedagogy and the actual words of participants confirmed this. In addition, the ethnography research design was an appropriate choice to address the research phenomenon. Ethnography is recognised as the core of qualitative research because it investigates the beliefs, ideas, and practices of a particular cultural setting and its influence on people (Shah & Al-Bargi,

2013). Using this design I successfully investigated participants' beliefs, ideas, and how they have practiced digital assessment in Accounting high stakes examinations before. Further, this design encouraged me to pose the influence of digital assessment transition to education stakeholders.

Recruitment of participants

I selected participants through a purposive sampling technique (Creswell & Creswell, 2017), and under purposive sampling, I used a homogeneous sampling strategy (Nyimbili & Nyimbili, 2024). Cohen et al. (2018) declared that purposive sampling in qualitative studies is useful to attain deeper information. Obtaining in-depth data on the digital assessment transition was a fundamental aim of this study; hence, a purposive technique was employed. Homogeneous sampling assisted me in ensuring that participants had similar characteristics (Nyimbili & Nyimbili, 2024). Participants had to be full-time teachers who were teaching Accounting in the FET phase, with Information Technology qualifications and from quintiles 3 and 4. The gender was for participants were females and males, age was between 33 and 45 and all participants had more than 5 years of teaching experience. These participants were sampled from four Umlazi district schools in Durban, KwaZulu-Natal. Therefore, the total population of this study was four participants. This population was adequate to sufficiently understand the research phenomenon. Moreover, qualitative studies do not require a large sample (Merriam & Tisdell, 2016).

I commenced by submitting a research proposal to the University of KwaZulu-Natal (UKZN), Research and Ethics Committee to obtain permission to conduct the study and it was granted with ethical number HSSREC/00004068/2022. Permission was also requested from the KZN DoE (Pietermaritzburg) to conduct research in Umlazi District schools. After permission was granted to conduct my research, informed consent forms were issued via WhatsApp to principals of the schools and Accounting teachers to inform them about my study. The informed consent letters explicitly elaborated the nature of the study, that participation was voluntary, and that participants may withdraw anytime they felt pressure. Confidentiality was ensured by using synonyms namely IT 1, IT 2, IT 3, and IT 4. Principals and participants agreed to participate in the study by signing and returning the forms.

Semi-structured interviews

To collect data, semi-structured interviews were utilised (Cohen et al., 2018). Semi-structured interviews allowed me to find deep information from participants as I had time to probe questions for discussion where responses were unclear (Shanmugam, 2020). Furthermore, semi-structured interviews allowed me to use open-ended questions where the participants and I openly discussed each question, and I had full access to modify questions to suit the research problem (Cohen et al., 2018). Open-ended questions helped me as participants were very detailed and open, they even shared information I did not ask about which contributed to conceptualising the phenomenon of digital assessment. I developed five interview questions on digital assessment in Accounting high-stakes examinations through the guidance of the study's

research question, literature reviewed, and TAM theory. Some of these were, briefly describe digital assessment in your understanding, have you used any of the digital tools for assessment and how? Does your school have a computer laboratory or digital tools? How do you think digital assessment can be implemented in Accounting? How can integrity be assured in digital assessment in Accounting high-stakes examinations? What is your general view on digital assessment of digital assessment in Accounting high-stakes examinations? Interviews took place via Zoom meetings in the afternoons for two days and during the interview, I used an interview schedule for guidance with questions. The length of the interviews was 30 to 45 minutes. All interviews were recorded for later transcribing and analysis.

Analysis

In this study, I utilised a prolonged procedure to analyse data collected, thematic analysis (Jason & Glenwick, 2016). I commenced by verifying if all recordings and notes I took on the day of the interviews were available. I gave myself time to listen to each recording and read notes repeatedly, this process took me days as I wanted to familiarise myself with data collected (Shanmugam, 2020). Thereafter, I transcribed audio recordings into texts by typing on Microsoft Word for easy and clear administering of the next steps to follow (Creswell, 2016). Data was arranged according to similar information to form patterns. I then coded the transcribed data using various codes. In coding I was reducing data into smaller segments by labelling (Cohen et al., 2018). I only captured codes according to interesting features of the data relevant to the research question (Clarke & Braun, 2017). The codes included OV (online evaluation), OTE (online texts or examinations), OCS (online case studies), SES (suitable exam settings, TA (monitoring technologies) and MERR (modifying examination rules and regulations). From there, the research topic, research question and TAM theory informed the construction of codes into sentences (Clarke & Braun, 2017). For instance, digital assessment in Accounting high-stakes examinations can be reinforced through online evaluation and integrity can be ensured through proper regulations in place. The code to themes assisted me in comprehending the transitioning to digital assessment in Accounting high-stakes examinations.

Trustworthiness

Data collected was validated by a member check strategy where all the recordings, notes, transcriptions, and analysis were sent back to participants to validate the accuracy of the data they provided after it was analysed (Creswell, 2016). This strategy was appropriate to check whether what I reported was accurate and authentic. Reliability was ensured by using one interview schedule instrument with same questions for all participants and questions were asked repeatedly to validate consistency of answers (Creswell & Creswell, 2017; Shanmugam, 2020). This ensured that I obtained consistent answers on transitioning to digital assessment in Accounting high stakes examinations.

Limitations

This study's limitation was that the number was too small, it was conducted in one district in Durban, KwaZulu-Natal, and only four participants participated in the study which means it may

not be generalisable to every school in South Africa. Further, the study used only one method to collect data.

FINDINGS OF THE STUDY

This study sought to enforce transitioning to digital assessment in Accounting high-stakes examinations, bearing in mind the multiple dimensions of ICT integration in pedagogy. From the data collected, two main themes emerged: digital assessment in Accounting high-stakes examinations can be reinforced through online evaluation, and integrity can be ensured through modifying examination rules and regulations. Under these main themes, subthemes emerged, and they are reported below. Participants' voices were added for a deeper understanding of their responses.

Digital assessment in Accounting high-stakes examinations can be reinforced through online evaluation

Under this main theme, two subthemes were developed to explicitly understand how digital assessments through online evaluation will be carried out: online tests/examinations, online simulations, and case studies.

Online tests/examinations

The results outlined that digital assessment in Accounting high-stakes examinations can be reinforced through online tests which include multiple choice questions, and free quiz/forms applications like Google Forms, Kahoot!, and Menti. It was apparent that such can be carried out through utilisation of available resources for teachers and learners. Participants acknowledge that these online tests can start in the classrooms when learners are revising for examinations. Multiple-choice questions were highly recommended by participants in Accounting subject testing as it allows learners to think critically. One participant disclosed that during the pandemic he attempted to use quizzes and MCQ questions for revision and learners were cooperating as they were using smartphones. Participants felt that online tests even during the year could be a good start to introduce digital examinations for Accounting. IT 3 said:

> *"Through online tests: there are a lot of free quiz/forms applications like Google Forms, Kahoot!, Menti, etc. Also, if the school uses Microsoft some great online class apps can assist Accounting learners to prepare."*

IT 2 added by commenting:

> *"Digital Assessment in Accounting grade 12 examinations can be administered by using online examinations that will involve multiple choice questions or even the entire question paper and answer book can be online and learners just respond. This can save even cost for the department."*
>
> *"I have tried quizzes in my Accounting class and it worked. These learners have smartphones and typing skills. I am not sure whether it was through the smartphones but they did well so even though the exam can be online but questions could be advanced for me I was just creating an innovative way of assessment."* IT 4

The above reported that the online tests/examinations method can be used for transitioning to digital assessment in Accounting high stakes examinations. Participants acknowledge that they have used this on formative assessment, so it is possible.

Online simulations and case studies

Digital assessments in Accounting high-stakes examinations can be administered through online simulations and case studies. Participants disclosed that Accounting is a subject that requires learners to have the ability to solve business or economic problems through digital devices, therefore, online simulations and case studies examinations can reinforce the quality of digital assessment. The procedure for using online simulations and case studies was explained as designing high-order questions particularly case-based and placing learners in simulated (digitally accessible) environments where they can demonstrate their abilities, decision-making skills, and problem-solving capabilities. Participants felt that simulation games are a formal way of assessing the subject practically. In case studies in the exam question papers, learners can be presented with scenario questions and be requested to answer them online. Participants announced the following:

> *"I believe simulations and case studies: these are very good for higher-level cognition activities in the Accounting examination. So, a student is given a problem, and they need to use their own experience and context to investigate. These are also great for students spread around the country."* IT 1

IT 4 pointed out that:

> *"Already questions in Accounting question papers cover a lot of case-based questions, therefore when they are used in digital assessment it makes more sense to learners because they would think critically. Teachers can start by putting case study-based questions online and asking learners to respond to them."*

IT 3 mentioned that:

> *"Online simulation assessments provide an experience very close to the business reality, which is related to Accounting, this practice and knowledge would not be possible to acquire through traditional assessment hence I recommend it for examinations as well in Accounting."*

From the above it was apparent that case studies work best in evaluating learners in Accounting therefore they need to be used for high-stakes examination through digitals.

Integrity in digital assessment in Accounting high-stakes examinations can be reinforced through modifying rules and regulations

The issue of integrity within the transition to digital assessment in Accounting high-stakes examinations was pivotal, hence participants were asked how integrity will be ensured. From their responses two subthemes were developed: suitable examinations settings must be offered, and monitoring technologies must be in place.

A suitable examination setting must be offered

Findings revealed that the first rule to ensure the integrity of digital assessment in high-stakes examinations is to establish a proper examination setting where resources will be available, and learners will be in one venue just like the traditional examination where learners are highly monitored to avoid copying issues. Further, these examinations must take place in person, and exam rules must be modified to suit the digital examinations and digital environment. Participants acknowledge that high integrity shall be maintained even with the digital assessment examinations as normal procedure and regulations will apply the difference will be learners are writing innovatively. The integrity was to be also assured through disabling all other browsers in the devices so that students would not be able to copy. Participants emphasised that learners have to be taught and warned about copying in this digital assessment innovation. This is what the participants said:

> *"Since these exams are written in person integrity can be assured through organising an appropriate exam setting where learners will sit together, in fact, all the process will be exactly as the existing exam procedures the difference would be they using technologies."* IT 2
>
> *"The integrity should be ensured by modifying or adding the digital examination rules. For instance, what is expected from learners and what is prohibited."* IT 1
>
> *"There are several settings to ensure that exam integrity is kept in the technology resources it is just that people who did not specialise in IT may not know. Disabling other browsers always works best."* IT 4

Through the above findings, it was evident that appropriate examination settings with relevant digital resources were essential to ensure integrity of the Accounting high-stakes examinations.

Monitoring technologies must be in place

To guarantee integrity of the digital assessment high stakes monitoring technologies were recommended to be in place. Participants acknowledge that although standard invigilation will take place during digital examination in Accounting, monitoring technologies such as e-invigilation applications and software that can proctor online tests should be added as extra tools. Findings reported that monitoring systems such as CCTV cameras were essential tools to ensure the integrity of digital assessment in Accounting since these are high-quality examinations and they are a national activity. This is to also assist in meeting quality assurance requirements during examinations. Technology examination monitoring tools prevent students from copying during examinations. IT 3 had this to say:

> *"I would say, it is essential to purchase and utilise monitoring technologies such as the invigilation application. This assures that copying or cheating is detected."*

From what IT 3 said IT 2 claimed:

"Another method that I have observed working for integrity in examinations where digitals are used is software that can proctor online tests. It makes use of a webcam to watch the student during an online test."

The above findings revealed that there are technologies that could be used to ensure a high level of integrity with the high-stakes examinations in Accounting.

DISCUSSION

The findings revealed that that participants have an understanding of what is digital assessment, how it can be reinforced in Accounting high-stakes examinations, how integrity can be assured during the process, and its necessity in secondary schools. Penney et al. (2009) confirms the above asserting that digital assessment in high-stakes examinations in secondary schooling should go beyond the traditional formats of examinations and use various online assessments that would involve digitals such as practical tests, film, photographic, scanned, and audio-recording to enable authentic evaluation of learners' performance and markers must undertake standards-based and comparative pairs online marking. High-stakes examinations can be used extremely effectively to drive educational reforms. Department of Education (2023) supports the innovation of transitioning to digital assessment through online examination by stating that there is a need for educationally sound changes in the examination process, the paper examination is a poor or out-of-date assessment practice that will result in severe constraint in curriculum innovations. Perceived usefulness under TAM theory which is employed in this study assisted in comprehending what perceptions participants have about this digital assessment transition. This theory confirmed that participants are positive about the usefulness of the transition.

It was evident that online simulations and case studies can reinforce digital assessment in high-stakes examinations. Smalt and Selden (2013) support this by arguing that the simulation in Accounting increased understanding and positive perceptions and attitudes thus other simulations should be incorporated in all education format programs. Riley et al. (2013) also confirm the above findings by asserting that simulations in Accounting challenge students to work in unstructured situations, developing their tolerance for and appreciation of ambiguity. Further, it enhances Accounting education as well as its role in the assessment of students, course and programmatic outcomes, and assessment outcomes. Throughout the activity, Accounting students must generate defendable decisions by grounding them in financial and non-financial numbers, thoroughly analysed and properly interpreted. Agreeing with this is Barnes, Fives and Dacey (2014) who posit that digitalising assessment by involving case studies influences high-stakes examination. Penney et al. (2009) advocate that although digital assessments in high-stakes examinations could be implemented technology resources might be challenges. Using TAM determinant: perceived usefulness, I was able to note that participants believe that digital assessment innovation can enhance the examination standard, lessen administrative duties, and achieve the aims of the subject. In addition, through this theory, I

observed that although participants are positive challenges such as insufficient skills could make them find it difficult to use the innovative system.

The above discussion guarantees the level of integrity from the responses of participants. Joney et al. (2009) supports the above finding by indicating that in digital assessment in high-stakes examinations rules such as time and monitoring should be ensured. Wyn et al. (2014) also supports the above finding by postulating that in secondary schools formal testing settings have to be in a good state to give students an idea of exam-type setting. They further alluded that examination settings in schools add value to formal assessments. Digital assessments normally take place in venues where there are technological resources, meaning the examinations will be written in computer lab kind of settings. Rytkönen and Virtakoivu (2019) point out that electronic examination programming environments should be conducive to reflecting authentic exams because of the added values they provide compared to lecture hall exams. Rubin and Chisnell (2008) concurred that laboratories with digital devices are recommendable settings for digital assessments as there are digital cameras.

The above findings further reported that there are technology software to monitor and control the integrity of digital examinations. Fayomi, Amodu, Ayo, Idowu and Iyoha (2015) confirm the above findings by stating that modern technology systems of invigilation process are efficient and effective in increasing the credibility of the entire educational assessment, especially with security of examinations in mind that attracts the law of morality. These authors further supported the usage of monitoring technologies such as e-invigilation applications and CCTVs during digital to ensure proper monitoring without physically being present in the examination hall. According to Curran Middleton and Doherty (2011), The mere presence of CCTV cameras alone can scare potential malpractice candidates, since they are aware of being watched, with the possibility of recorded clips being filed as evidence of malpractice endeavours.

CONCLUSION

This study aimed at reinforcing the transitioning of digital assessment within high-stakes examinations, specifically in Accounting subject. This was due to the multitude of dimensions of technology tools in education globally and the over-emphasis on adopting ICT integration in pedagogy. I saw a gap in those few studies focusing on digital assessment in high-stakes examinations in secondary schools. Findings showed that digital assessments in Accounting high-stakes examinations can be carried out through online evaluation. Further, it was suggested that integrity can be guaranteed through modifying examination rules and regulations. The study concludes by maintaining that the transitioning to digital assessment in Accounting high-stakes examinations is feasible although constraints might be experienced. I argue that digital assessment in high-stakes assessment must be implemented and commence especially in well-resourced schools. The feasibility of this transition is assured as papers in Accounting are already spilt, content and questions according to cognitive levels are already

designed, formats and formulas are there, and protocols of exams, validity, and time already exist. What is new is the procedure for learners, exam centres or settings, and digitals which I believe learners will learn and master. This study is significant to all educational stakeholders particularly those involved in designing high-stakes examinations and ensuring quality assurance namely Umalusi council.

Recommendations

In light of the valuable insights shared above regarding the reinforcement of digital assessment in Accounting high-stakes examinations. I recommend that the examination bodies consider significant transitioning to digital assessment in Accounting high-stakes examinations. I suggest that examination bodies work with experts in Information Technology on how best to ensure the transition to digital assessment is successfully implemented. Additionally, networking with other countries that already have initiated digital assessment in high stakes examinations is suggested. For this transition to be successful examiners and exam bodies must engage with teachers and learners on their perceptions and to motivate them. The impediments such as insufficient resources and skills and inequality are expected thus this study recommends that this transition must start with those who have appropriate resources, and it will slowly grow and be fully adopted by everyone. Those without resources can continue with paper-based examinations as innovation cannot start with the entire country. Accounting is a dynamic subject that requires regular practice, financial insight, and general knowledge of current trends in the business world (DBE, 2023) hence transitioning to digital assessment in Accounting high-stakes examinations is recommended.

Author & acknowledgements

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