

Exploring students' experiences with authentic assessment in an online learning context

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Abstract

Authentic assessment brings a new dimension to assessment where learning and assessment are linked to genuine workplace environments. In this assessment, students apply knowledge and skills to solve real and felt workplace problems. Underpinned by the connectivism learning theory, this qualitative study examined students' authentic assessment experiences in an online course. It focused on the type of authentic assessment, benefits, and challenges encountered by the students during the course. The study followed a qualitative case study research design taking the short course on online teaching for educators as a case. Data were collected from twelve purposively selected participants through an open-ended questionnaire administered online, which served as a course evaluation instrument. The thematic analysis was employed to analyse data. The study found that course participants were exposed to different and multifaceted authentic assessments related to developing knowledge and skills in online teaching. The participants derived numerous benefits from authentic assessment activities, though they also encountered some challenges. The study concludes that authentic assessment should be entrenched in online professional development courses. The results are potential inputs to curriculum development that can inform the design and implementation of online professional development courses.

Keywords: *authentic assessment, online learning, online course, pedagogy, technology*

Article History:

Received: July 6, 2024

Revised: August 21, 2024

Accepted: August 23, 2024

Published online: August 27, 2024

Suggested Citation:

Maphosa, C., Mthethwa-Kunene, E.K., Rugube, T. & Dlamini, P.S. (2024). Exploring students' experiences with authentic assessment in an online learning context. *International Journal of Educational Management and Development Studies*, 5(3), 145-171. <https://doi.org/10.53378/ijemds.353092>

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1. Introduction

The education sector is undergoing fast changes, with online learning gaining more prominence. With the ongoing transition, it is more important to guarantee that assessment methods in online environments are both effective and meaningful. Authentic assessment has emerged as a viable approach to meet this requirement, specifically in the context of equipping educators for the challenges of online teaching. Authentic assessment necessitates students to utilise their knowledge and skills in practical situations that closely resemble the complexities and challenges they will encounter in their future careers (Mueller, 2014; Karaunayaka & Naidu, 2021). This approach is especially pertinent in the realm of education, where the capacity to translate theoretical knowledge into actual teaching abilities is vital. Participating in authentic assessment activities allows student educators to cultivate crucial skills such as critical thinking, problem-solving, and other higher-order abilities that are necessary for effective online teaching (Chabeli et al., 2021). According to Gunasekaraa and Gerts (2017), authentic assessments are made to attain learning outcomes that have real-world significance and mirror the tasks that students would complete while applying their knowledge in the real world.

The incorporation of authentic assessment in online learning settings offers both prospects and obstacles. One advantage is that it enables the use of creative assessment methods, such as collaborative projects utilising resources like Google Docs (Nguyen & Nguyen, 2022) and reflective blogging (Chiu, 2022). These methods can improve student involvement and facilitate the growth of essential digital skills necessary for online instruction (Borthwick & Hansen, 2017). However, in the online context, there are substantial challenges that arise, such as digital equity, time management, and the requirement for strong student support networks (Dhawan, 2020; Rotar, 2022). Although there are challenges, the potential benefits of using authentic assessment to train educators for online teaching are substantial. Authentic assessment facilitates the connection between theoretical knowledge and practical application, enabling student educators to apply what they have learned in genuine situations (Bardach et al., 2021). Additionally, it can enhance the acquisition of employability skills, which are becoming more crucial in the dynamic educational environment (Mohamad et al., 2018; Webb & Chaffer, 2016).

This study aims to explore students' experiences with authentic assessment in an online teaching course for educators. By examining the experiences, the study hopes to gain insights into the effectiveness of authentic assessment in this context, the types of authentic assessment tasks students were exposed to in the online course, the benefits, and the challenges students face, and the strategies they employ to navigate these challenges. These insights can inform the design and implementation of authentic assessment in online teacher education programmes, ultimately contributing to the preparation of more effective online educators.

2. Literature review

2.1. Defining authentic assessment

According to Mueller (2014), authentic assessment requires students to apply fundamental knowledge and abilities meaningfully by performing real-world tasks. Similarly, Karaunayaka and Naidu (2021) note that authentic assessment is characterised by "real-world" functions that provide students with opportunities to practice problem-solving in the real world. Such assessment allows students to apply the skills they developed during these learning experiences to problems and challenges they will likely encounter in the workplace after graduation. It is, therefore, important that in higher education, assessment should not be for assessment's sake or mainly to test students' knowledge retention. Instead, there is a need for a deliberate attempt to link assessment tasks to the world of work and make assessments real.

As further underscored by Shaw (2019), when compared to assessment tasks unrelated to the workplace, students are likely to find authentic assessment activities engaging, informative, and significantly less stressful or intimidating. Students are more likely to be motivated to complete assessment activities if made more realistic and relevant. When assessment assignments require students to solve specific challenges, they will be intrinsically driven to do so since they will feel a sense of accomplishment upon completing the difficulty.

According to McArthur (2023), "authenticity," which describes how closely an assessment resembles the environment of professional practice or "real life," is the foundation for the idea of authentic assessment. Accordingly, an evaluation is considered legitimate if it is consistent with what happens in the workplace or professional practice. According to Baartman and Gulikers (2017), the authenticity of the assessment tasks speaks to the

discipline's competencies. Authentic assessment designs should also guarantee that knowledge is transferred from real-world experiences to other assessment tasks that come after.

According to Sokhanvar et al. (2021), an authentic assessment task requires applying particular abilities and competencies in a novel setting. This calls for the course instructor's ability to create new or unique situations or scenarios that call for the students' application of knowledge and skills. In a way, authentic assessment addresses higher-order learning outcomes. According to Mohamed and Lebar (2017), the problem with traditional assessment techniques is that they typically measure a student's knowledge rather than their abilities. Authentic assessment addresses this issue by putting the student in a real-world setting where knowledge and skills are used. Nkhoma et al. (2018) make a similar claim, stating that authentic assessment allows students to build abilities that help them apply the formal education they receive in the classroom.

Through critical thinking and problem-solving, authentic assessment empowers students to address "real-world" difficulties (Chabeli et al., 2021). Authentic assessment plays a significant role in instilling critical thinking and problem-solving skills in graduates, which makes them relevant for employment. Employability is described by Mohamad et al. (2018) as the set of abilities graduates possess to help them get hired. Employability skills include time management, ethical awareness, flexible and practical learning, problem-solving, professionalism, resilience, delegating and visioning, negotiation, and conflict resolution, as Webb and Chaffer (2016) highlighted. These skills should be embedded in assessment tasks to realise authentic assessment.

2.2 Characteristics of authentic assessment

Authentic assessment must be realistic (Sutadji et al., 2021). Assessment tasks that enable students to apply their knowledge and abilities in meaningful and relevant ways should be available to course teachers. Ultimately, an evaluation is considered authentic if it is realistic and closely reflects a real-life scenario, issue, disciplinary standard, or study area. Course instructors should link assessment to real life, the world of work, or professional practice to make assessment realistic.

Based on constructivist concepts, authentic assessment should be performance-based and involve students in active learning processes with outcomes that centre on performance or

output likely to be encountered in a "real-world" setting (Spendlove & Best, 2018). At the centre of authentic assessment is allowing students to perform real-world tasks that demonstrate meaningful application of essential knowledge and skills (Mueller, 2008). The issue of practical tasks where students demonstrate knowledge and skills becomes an essential characteristic of authentic assessment. Tasks that demand students to produce products or exhibit behaviours that accurately represent the variety of knowledge and skills they have acquired are part of performance-based assessments (Spendlove & Best, 2018).

Authentic assessment must focus on cognitively complex issues as it assesses higher-order thinking (Messier, 2022). What marks the difference between authentic assessment and traditional forms of assessment is that the latter generally focuses on measuring students' retention while the latter emphasises critical thinking and application; hence, assessment tasks challenge the students cognitively. Innovative teaching, learning, and assessment methods in higher education are typically associated with the advancement of authentic assessment (Sambell & Brown, 2021). According to McArthur (2023), authentic assessment should be challenging since it requires pupils to do more than memorise facts; they also need to construct or produce meaning.

The fact that authentic assessment encourages students to reflect on their learning is another essential component. According to Chang (2019), reflection is the process of understanding and personalising the principles, procedures, and justifications for the knowledge students have gained. Students can see the bigger picture by connecting their particular experiences to a broader perspective through reflection. Therefore, the course instructors should utilise assessment tasks that allow students to reflect on the learning process, which could be done individually or collaboratively. Chang (2019) adds that reflection improves learning by allowing students to examine their deeds, beliefs, and presumptions critically.

Authentic assessment should provide students with opportunities to produce learning products. Page (2022) noted that Bloom's Taxonomy for Educational Objectives has been reengineered in line with digital technology. Students should apply knowledge in online environments in terms of higher-order objectives. The application of knowledge in online learning environments is evidenced by the creation of digital products (Kenney, 2020). There are several online tools that online students can utilise to work collaboratively, and Google

Docs is a new innovative tool for collaborative writing (Nguyen & Nguyen, 2022). Through Google Docs, students can work collaboratively to develop a digital product, which is the essence of knowledge production and application. With Google Docs, students can communicate with one another and instructors across time and space, as well as with other students (Hidayat, 2020).

2.3 Implementing authentic assessment in online learning environments

In implementing authentic assessment in online environments, course instructors should provide assessment activities to assess students' learning processes, learning products, and learning progress (Sutadji et al., 2021). In assessing the learning process, students may create blogs and document their learning through blogs, share the blogs and respond to each other (Chiu, 2022). As Hashem (2018) noted, blogs allow students to express their ideas and share their writing skills online. Through blogging, students will be actively engaged and autonomous in taking charge of their learning and assessment.

Students must be exposed to scenario-based learning activities to ensure authentic evaluation in the virtual learning environments. Course instructors must employ scenario-based learning, sometimes called case-based learning or problem-based learning, to introduce students to various unexpected and expected scenarios and allow them to practice their newly acquired abilities in authentic environments (Bardach et al., 2021). Online students are given specific examples relevant to their subject of study. They must apply what they have learned in scenarios that are either the actual setting or similar to real-life situations to find solutions. Online students enrolled in an online teaching course must be exposed to scenarios covering many facets of online teaching.

2.4 Benefits of authentic assessment in virtual learning environments

Online learning that incorporates authentic assessment may allow students to collaborate with others. In online learning, students should actively engage in the learning process, as participation is also a crucial component of collaborative learning (Nieuwoudt, 2018). A strong correlation exists between students' achievement and participation in online learning. According to this, students actively engaging in peer-to-peer online learning are more likely than non-participating students to meet the predetermined learning objectives. Ishtaiwa and Aburezeq (2015) have observed that collaborative tools like Google Docs can enhance

learning, encourage student involvement and active participation, and boost knowledge development.

Authentic assessment helps students become more competent in their learning and future employment by enabling them to practise newly acquired abilities actively (Sotiriadou et al., 2019). Using authentic assessment to improve student learning can significantly contribute to students becoming aware and skilled in their field of study (Raymond et al., 2013). Therefore, students can apply the skills they have learned and build their competencies in various areas of the field or profession by participating in authentic assessment activities.

Another benefit of authentic assessment is that it guarantees more realistic learning because the evaluations imitate real-life or professional settings (Mohamed & Lebar, 2017). According to Fox et al. (2017), higher education institutions' evaluation procedures should consider real-world circumstances and be consistent with the workplace. Learning becomes engaging and relevant when connected to the workplace and given a more realistic feel, as does the assessment that goes along with it. Knowledge is now obtained to solve difficulties in one's discipline rather than for knowledge's sake.

2.5 Challenges of utilising authentic assessment in virtual environments

Online students typically work alone, and as Rotar (2022) points out, one of the most critical factors in their success is support. Proactive student support systems for online distance students, as opposed to reactive ones, are becoming increasingly demanding to be institutionalised. Technology should be included in these methods since, according to Zawacki-Richter and Anderson (2014:23), "*the online world itself affords new tools for communication, knowledge and skill acquisition, and peer and group support that was not available to earlier generations of distance students.*" When a student has difficulties completing online tests, there should be a mechanism to provide the necessary assistance to continue unhindered forward.

The goal of authentic assessments is to help students attain higher-order learning objectives. They are designed to be engaging and time-consuming. The term "authentic assessment" refers to the evaluation of learning carried out through "real world" tasks requiring students to demonstrate their knowledge and skills in meaningful circumstances (Swaffield 2011: 434). In contrast to a straightforward traditional test that can be completed in class within

a set amount of time, it is the process of proving knowledge and abilities in assessment tasks that may be overly involved and demanding of the student's time.

Digital competence, as opposed to merely digital literacy, is crucial for the students' online activities, including their participation in authentic assessment (Borthwick & Hansen, 2017). Digital competence is at a higher level and encompasses more than just using devices and apps. In contrast, digital literacy only involves correctly utilising digital tools, resources, and services (Janssen et al., 2013). Digital learning tools are used in online education and are paid for by the students. Students are expected to use technology, some of which they may be unable to buy. According to Dhawan (2020), there is no digital equity in most nations, and certain teachers and students could require the right gadgets for online instruction and internet access. Some students can engage in online learning fully and, in the process, take advantage of learning opportunities like authentic assessment if they have the necessary gadgets and internet connectivity. Engagement in online authentic assessment activities could be hampered by several problems, including poor network connectivity in some places, expensive data plans, outdated technology, and some course instructors' incapacity to offer continuous online help.

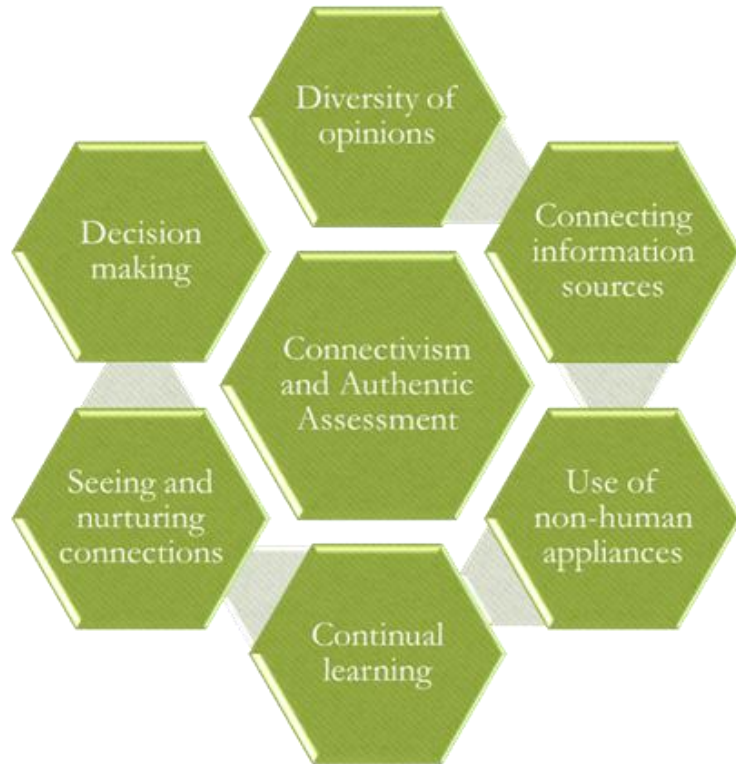
2.6 Theoretical Framework

The study is based on the connectivism theory developed by Siemens (2006). According to Siemens (2006), connectivism is a contemporary learning theory that encourages students to connect their ideas, theories, and general knowledge constructively. According to this theory, technology plays a significant role in education, and our continuous connectedness allows us to judge what we want to study (Siemens & Downes, 2009). Connectivism promotes group learning, student-to-student communication, and various viewpoints and methods for fact-based decision-making and problem-solving.

By incorporating web 2.0 apps, online databases, social media, and Internet connections, connectivism fosters a positive learning environment. By the student-teacher interaction model supported by connectivism, a student may post a question on the board if he has any queries about something he is unsure of and needs clarification on; connectivism promotes communication amongst students.

Figure 1

Elements of connectivism linked to authentic assessment



Source: Authors own adaptation based on Siemens (2006).

According to connectivism, learning occurs when people have different points of view. Students should be permitted to collaborate online by using the various online tools to generate, gather, debate, and settle upon ideas. Once the information sources are connected, students should be able to work with various online information databases, such as Open Educational Resources (OER), to find pertinent material while completing assessment assignments. When students operate non-human appliances and the various technology instruments and software used in the learning process, their technological proficiency becomes essential. Learning involves seeing, nurturing, and relearning knowledge and human interactions essential to improving learning. Making decisions is essential to both the learning and assessment processes because students are given assignments that require them to consider the directions, the work at hand, and the process of finishing it.

3. Research Methodology

3.1 The context of the study

The study is based on an online course in a professional development programme preparing teachers to teach online. All of the instruction for this six-week course was done

online using the Moodle learning management system. The students were taught four activity-based modules, including online course design, creation of digital learning material, facilitation, and evaluation. The goal of the first online course design module was to introduce students to the fundamentals of the field and involve them in the process of actually creating online course elements. Authentic assessment is a component of course design because assessments allow students to participate in certain areas.

Students gained knowledge and proficiency in generating digital learning resources for online teaching and learning from the second module on the subject. As part of this module's assessment, students created digital learning resources such as H5P products. The online facilitation skills module gave participants a theoretical foundation in the field and practical know-how in managing synchronous and asynchronous discussions, organising and carrying out live online classes, and using voice-over PowerPoint and digital whiteboard presentations. In the process of assessment, students also created lesson plans and presentations. Students were also introduced to the many forms of authentic online assessments, as well as the planning and execution of these forms of online evaluations, during the authentic online assessment module.

3.2 Research paradigm

Research paradigms come in various forms, including positivist, interpretivist, postpositivist, and pragmatic paradigms. The present study was located in the interpretivist paradigm. This paradigm was relevant to this study because it focuses on the attributes of the circumstance, the reality behind these details, personal meanings, and motivating actions (Saunders et al., 2019). Interpretivists believe that data is linked to its context. Hence, they encourage knowledge creation, origination, and construction (Denzin et al., 2017). In the context of the proposed study, the researchers sought to explore the students' experiences of authentic assessment in an online course.

3.3 Research approach

In this study, the qualitative research approach was used. Qualitative research employs various data-gathering strategies to investigate phenomena in their native habitats (Cohen et al., 2013). It looks into how people behave in social and human contexts and perceive their experiences while using storytelling to teach emergent literacy skills. Verbatim statements and

participant opinions collected in the participants' natural settings are used as data in qualitative research. Because qualitative research is very inquisitive and aims to analyse things thoroughly, it fits well with the interpretivism paradigm. Triangulation is used to collect data and generate textual and thematic analyses using descriptions and categories (Creswell & Poth, 2017).

3.4 Research design

The study employed a case study design. Marshall and Rossman (2014) note that a case study design allows a researcher to examine an issue in a particular setting. The intended study will concentrate on a specific instance of course participants' real-world evaluation experiences. Yin (2013) highlights the importance of using a case study approach to help a researcher understand entirely a phenomenon.

3.5 Data generation methods

The study used a questionnaire as a research instrument administered during the course evaluation exercise. The questionnaire consisted of open-ended questions designed to gather comprehensive data about the participants' experiences with authentic assessment in the online teaching course. It began with a section collecting demographic information including gender, age, current professional role, and years of experience in the profession. Following this, a series of open-ended questions explored participants' perceptions about the types of authentic assessments, benefits, and challenges encountered during the online course. The questions yielded rich qualitative responses.

3.6 Research participants

Twelve purposively selected course participants participated in the study. This technique uses predetermined criteria and focuses on participants with a wealth of information (Creswell & Poth, 2017). Purposive sampling targets information-rich sources, and the participants were deemed information-rich as they had participated in and completed the six-week online course. Table 1 describes the twelve participants in the short online course whose responses were selected for the study.

Table 1*Description of research participants*

Participant	Gender	Age (years)	Profession	Number of years of experience in the profession	LMS used
Participant A	Male	38	Teacher	10	4
Participant B	Female	42	Lecturer	16	2
Participant C	Female	28	Teacher	2	2
Participant D	Female	32	Lecturer	6	4
Participant E	Female	31	Teacher	7	3
Participant F	Female	41	Teacher	11	2
Participant G	Female	40	Teacher	12	4
Participant H	Female	38	Teacher	12	2
Participant I	Female	39	Teacher	13	2
Participant J	Male	40	Nurse Educator	4	2
Participant K	Male	48	Trainer	8	3
Participant L	Male	45	Nurse Educator	10	4

The study participants were predominantly female and all over twenty-seven years of age, with the oldest being 48. All the participants were involved in teaching at different levels and had at least two years of experience using a Learning Management System.

3.7 Data analysis

The qualitative data from the open-ended questionnaires were analysed using the thematic content analysis method. Detecting, analysing, organising, characterising, and reporting the recurring and frequent themes in a data set is known as thematic content analysis (Nowell et al., 2017).

3.8 Data quality

Measures such as expert opinion and debriefing were utilised to enhance data trustworthiness in the study.

3.9 Ethical considerations

The study addressed all ethical considerations, such as confidentiality, anonymity, and informed consent. Ethical considerations were addressed in this study to protect participants' rights and ensure the integrity of the research process. Informed consent was obtained through a dedicated section in the online questionnaire where participants were provided with clear

information about the purpose of the study and procedures. Participants were required to voluntarily indicate their willingness to take part in the study by selecting an option that confirmed their consent. This approach ensured that participation was entirely voluntary. Anonymity was maintained by not requiring participants to provide their names or any identifying information in the questionnaire responses. Confidentiality was upheld by restricting access to the data to only the researchers directly involved in the study and using the data solely for this study. All data was stored in a password-protected file.

4. Findings

Table 2 summarises the qualitative findings in line with the three research objectives of the study.

Table 2

Summary of the qualitative results

Theme	Sub-Themes	Related Issues
Types of authentic assessment tasks course participants were exposed to	Creating artifacts	<ul style="list-style-type: none"> assessed on creating videos created and shared H5P products
	Scenario-based tasks	<ul style="list-style-type: none"> taking up different roles in assessment demonstrating a skill in a particular role
	Designing and planning	<ul style="list-style-type: none"> planning lessons designing assessment rubrics
	Discussion forums	<ul style="list-style-type: none"> deep involvement in discussion participation in posting and responding
Benefits participants derived from undertaking the authentic assessment activities	Working collaboratively	<ul style="list-style-type: none"> working with others on a standard task online tools such as Google Docs, Wikis
	Applying skills learnt	<ul style="list-style-type: none"> putting learnt skills into practice ascertaining how learnt skills work chance to practise what is learnt
	Practising skills	<ul style="list-style-type: none"> involvement in actual online teaching situations
	Learning made more realistic	<ul style="list-style-type: none"> practical involvement working in real-life contexts
Challenges faced by the participants as they engaged in the different authentic assessment activities	Time	<ul style="list-style-type: none"> Struggle to meet tight deadlines Limited time for online tasks
	Connectivity and Internet charges	<ul style="list-style-type: none"> Erratic and slow connection High cost of data
	Support issues	<ul style="list-style-type: none"> Need for instruction clarification Assistance while working on a task
	Technical ability and appropriate devices	<ul style="list-style-type: none"> Struggle to manipulate technological devices Lack of technical know-how

4.1 Types of authentic assessments

Creating artifacts. The participants indicated that they were involved in assessment activities that allowed them to create some digital products, and the following excerpts from some of the participants support this viewpoint;

In the course on creating digital learning material, I was assessed on creating a video and posting a link to the video on the LMS. (Participant H)

Creating an H5P product and being assessed on it was exciting as it was pretty involving. (Participant A)

Developing a presentation on a digital whiteboard was one of the assessment tasks I did in the module on developing online facilitation skills. (Participant J)

The verbatim quotations show that the course participants were involved in meaningful assessment activities, creating tangible digital products.

Scenario-based tasks. The course participants also revealed that they were involved in scenario-based assessment tasks that allowed them to work on issues related to course content and apply what they had learned. The following excerpts from some of the participants provide insights into the claim.

There was an assignment in which we assumed the role of online course designers and were involved in applying what we had learnt. (Participant B)

We were tasked to be online instructors and requested to develop a five-minute presentation and present it with a PowerPoint voice-over. This entailed preparing the PPT and recording oneself presenting. (Participant G)

In the module on creating digital learning materials, I would be a material developer and develop helpful material for online teaching. (Participant D)

Developing a whiteboard presentation enabled me to assume I was teaching a group of students online and present and demonstrate while explaining a concept to students. (Participant E)

The excerpts showed that assessment tasks were realistic and linked to the application of knowledge and skills in the actual contexts in which they would be used.

Designing and planning. The course participants also indicated that they were involved in designing and planning as part of some assessments. The following verbatim quotations from their participants exemplify the point;

I was involved in designing an assessment rubric that I would utilise in assessing a particular activity. The actual rubric was presented for assessment. (Participant E)

In online course designing, we were tasked to design part of a course using the given design template. One would think of a course and design its components. (Participant G)

We designed a discussion plan to show how one would undertake online discussions with students using the discussion forum tool on the LMS. (Participant C)

In one of the courses, we had to plan for a live online lesson, showing all the steps of the lesson, from the introduction to the conclusion. (Participant D)

The examples make it abundantly evident that the assessment assignments were authentic and involved the participants in creating and organising pertinent and practical course elements.

Discussion forums. As a requirement for some of the assessments, the course participants also disclosed that they had participated in some online discussions through forums. The point of view is best illustrated by the following quotes from the participants, verbatim:

I would research the given discussion topic and post on the discussion forum, and in one of the discussion activities, we exchanged views on the role of an online instructor. (Participant J)

Discussion forums assisted me in learning how to respond to my online colleagues and engage with them in an academic and friendly manner. (Participant F)

Some participants would ask thought-provoking questions, and they would have to think through the questions before making a meaningful response. (Participant I)

Marks were allocated for posting, responding to other participants' comments, and responding to instructors' comments. It made the whole thing so accurate in terms of exchanging knowledge. (Participant B)

The quotes, taken verbatim, demonstrate how the course participants engaged in chat rooms and were assessed in authentic and significant ways to exchange information on specific topics.

4.2 Benefits participants derived from undertaking the authentic assessment activities

Working collaboratively. As they performed authentic assessment activities in the online course, the participants also mentioned that they gained from working cooperatively with others. The point of view is best illustrated by the following quotes from the participants, verbatim:

There was always a chance to work with others, especially when completing the Google Docs documents. I collaborated well online with my partners. (Participant K)

Exchanging ideas on the discussion forum allowed me to learn from other participants and contribute my thoughts. (Participant L)

Working on Wikis allowed us to collaboratively modify content and structure directly from our web browsers, and we assisted each other with changes. (Participant H)

The excerpts show that the participants' engagement in different online authentic assessment tasks enabled them to benefit from collaborative learning in numerous ways.

Applying skills learnt. The views of the course participants indicated that they benefited from engaging in authentic assessment by applying the skills learnt in the different modules. Some of the views are captured in the excerpts below;

Most of the assessment tasks enabled me to put into practice what I had learned in the course. It was not an assessment related to what had been learnt. (Participant C)

The learning theories task on Google Docs allowed me to apply the theories to online teaching and learning by providing relevant examples from the courses that I currently teach. (Participant J)

After learning an assessment rubric, I had to be assessed by developing a usable rubric. (Participant F)

In designing an H5P product, I applied knowledge and skills, which was interesting. (Participant D)

The participants in the online course confirmed that engaging in authentic assessment activities benefited them by allowing them to apply the different skills they had been exposed to. The ability to apply skills learned is the hallmark of authentic assessment.

Practising skills. The online course participants also indicated that they benefited from authentic assessment by being provided with opportunities to practise skills learnt, as captured in the following excerpts from some of the participants;

What was also good about the assessment tasks we did in all the modules was that they allowed us to practise skills learnt. (Participant B)

The module on developing digital learning materials had almost all assessment tasks on practising different skills and producing things. (Participant G)

Working on developing PowerPoint digital whiteboard presentations was much practice in teaching online. (Participant D)

After learning about online assessment and how to do it, I had a chance to plan for assessment activities. (Participant I)

The course participants confirmed that practising the skills learnt is an aspect of the benefits derived from engaging in authentic assessment tasks. Through this practice, they produced digital learning materials, teaching materials, and assessment tools.

Learning made it more meaningful and realistic. The course participants showed that they benefited from engagement with authentic assessment tasks as learning was made more meaningful and realistic. The following excerpts from some of the participants are evidence of the view;

The different assessment activities clarified that all the learning was related to teaching online. (Participant H)

Assessment activities were based on something other than theoretical issues but on more practical ones related to online teaching. (Participant F)

The assessment tasks developed specific skills required to be a competent online instructor. (Participant A)

It is clear from the excerpts that the participants benefited from engagement with authentic assessment tasks, making online learning in the course relevant to their needs with a more practical approach to issues.

4.3 Challenges faced by the participants as they engaged in the different authentic assessment activities.

Time. The course participants revealed that time was a challenge they faced as they engaged in different authentic assessment activities. The following excerpts confirm the observation;

Some of the tasks were quite challenging and required much time to complete. (Participant K)

The issue of time was a challenge as it took much work to balance between other commitments and the demands of the course. (Participant C)

Deadlines could be very tight, with many tasks to work and very little time at one's disposal, and it took much work. (Participant H)

Whilst most of the assessment tasks were very good and helpful, we needed more time to work on them effectively. (Participant L)

It was clear from the course participants that the issue of time was a challenge to their effective engagement in authentic assessment tasks in several ways.

Internet connectivity and charges. The course participants also viewed Internet connectivity and data charges as challenges faced as they engaged in the different authentic assessment activities, and this was confirmed by the following excerpts from some of the participants;

I joined the course from a remote part of the country where internet connectivity was a challenge, which affected the completion of assessment tasks. (Participant G)

Some activities required us to download materials from the Internet, and there were times when connectivity was very slow. (Participant B)

One must have much data to participate fully in assessment activities, which is very expensive. (Participant J)

This cost of data is just too much, and there was a need always to be online to participate in assessment activities. (Participant C)

The course participants reported that Internet connectivity and data charges negatively impacted their practical engagement with authentic assessment tasks in the online course. The participants had to endure slow and erratic internet connectivity and incur huge data costs as they engaged in the assessment activities as part of online learning.

Support issues. The following verbatim quotes from the course participants illustrate their confirmation of lack of support as a challenge in their engagement with authentic assessment tasks in the online course:

Instructions on some assessment tasks could have been more precise, and getting assistance on time was difficult. (Participant D)

I would get stuck on some aspects of the assessment task and would not get help even after requesting help through social media. (Participant H)

Working online can be a very lonely and frustrating exercise when one requires help to proceed with an assessment task, and there is help. (Participant F)

We worked with the assistance of e-tutors and technical staff, but assistance was only sometimes provided when required. (Participant A)

The participants' contributions demonstrated how a lack of support frequently had a detrimental impact on students' involvement with authentic assessment activities in the online course. It was essential to make sure that assistance was easily accessible when needed because participants worked remotely.

Technical ability and appropriate devices. The following quotes from the participants verbatim reflect the shared opinion of the course participants that a lack of technical proficiency and adequate devices caused difficulties in participating in authentic assessment activities in the online course;

Success in some assessment tasks depended on one's ability to use technical tools; without this ability, it was easier. (Participant E)

I took time to master different technical tools; I struggled before I had mastered them. (Participant H)

I struggled to develop my H5P because I was using an old smartphone; I would have done better and faster with a laptop. (Participant G)

Some tasks cannot be accomplished by using a smartphone, so there is a need to have the correct device. (Participant C)

The participants' contributions made it clear that their inability to use the right equipment or possess the necessary technical skills may have hindered them from participating effectively in the online course's authentic assessment activities.

5. Discussion

The study found that the course participants were engaged in authentic assessment activities that allowed them to create artefacts. The finding is consistent with views that authentic assessment promotes the attainment of higher-order learning outcomes. According to Page (2022), the new Bloom's Taxonomy places creation at the top for educational goals. Students should be able to create tangible objects or digital goods to meet higher-order objectives (Kenney, 2020). Thus, evidence of authentic assessment in action may be found in the course participants' actual design and development of digital goods as part of their assessments.

The study also established that the course participants were involved in scenario-based activities as part of the authentic assessment undertaken in the course. This result supports the opinions of Bardach et al. (2021), who argue that scenario-based learning—also known as case-based learning or problem-based learning—must be used by course instructors to expose students to a range of expected and unexpected scenarios and to give them the chance to

practice their newly learned skills in real-world settings. When given scenario-based assignments, students learn to hone their talents to function in actual job settings.

The study additionally found that cooperating with other participants allowed participants to benefit from authentic assessment. This result supports claims made by Nieuwoudt (2018) that authentic assessment-integrated online learning should allow students to work in groups. Students should actively participate in online learning because it is an essential feature of collaborative learning. Working well with others is a crucial soft skill for employment (Karimova, 2020). The results are consistent with the connectivism theory, which guides the investigation and emphasises the significance of connections in learning (Siemens, 2005).

The study revealed that the chance to put what they had learned into practice helped course participants. The result validates the idea that providing students with opportunities to practice newly acquired skills through authentic evaluation actively makes them more competent students and workers in the future (Sotiriadou et al., 2019). Moreover, authentic evaluation in learning can significantly enhance students' awareness and proficiency in their field of study (Raymond et al., 2013).

It was established in the study that course participants encountered challenges with a need for adequate support as they worked on authentic assessment tasks online. The finding confirms an assertion by Rotar (2022) that one of the most critical factors in their success is support, student support, and that effective student support systems for online distance students should be in place. Technology should be included in these methods since, according to Zawacki-Richter and Anderson (2014), technological tools and affordances should be utilised to support online students as individuals or as groups. Online students need adequate support to progress well with authentic assessment activities.

It was also established that participating in online authentic assessment presented difficulties related to technical proficiency and device ownership. The results validate the opinions of Borthwick and Hansen (2017), who stated that students' successful involvement in online activities, such as authentic assessment, was significantly influenced by digital competence rather than just digital literacy. While digital literacy entails correctly using digital tools, resources, and services, digital competence is more advanced and includes more than

just using devices and applications (Janssen et al., 2013). Students are the ones who pay for the digital learning resources that are used in online learning. Students are expected to use technology, some of which they might be unable to purchase.

This study recommends that online short courses that aim to develop participants' professional competencies should extensively utilise authentic assessment to assist participants in honing the required skills. It is crucial to implement systematic and sustainable student support systems that leverage available technologies to proactively support online students as they work online and engage in authentic assessment activities. To ensure that online students benefit from working with others, opportunities for interaction and collaboration in online learning and assessments should be enhanced. Additionally, technological support is essential for online students, as some may not possess the required levels of digital competence, which could negatively impact their performance and attainment. One limitation of this study is the use of only a questionnaire to collect data. The inability to probe and seek clarification in a questionnaire could lead to less comprehensive data. Future studies could use interviews. Mixed-methods technology-based studies could investigate the role of specific technologies in facilitating authentic assessment.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

This work was not supported by any funding.

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