

Support for Students from Different Cultures in Authentic Online Assessments: A Case of an ODeL Institution in Zimbabwe

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Abstract

The focus of the study is on how special education lecturers can support students from different cultures in authentic online assessments for improved real learning transfer at an ODeL institution in Zimbabwe. Authentic online assessment is the latest trend using different tools like electronic portfolios, to assess learners in real life scenarios which mimic the real world. Research has shown that students' cultural background determines how the students define assessment and how they use Information, Communication Technologies (ICTs), which are major components of the assessment process. This poses problems to third world students as the instruments used are foreign in design. A qualitative approach using an online open-ended questionnaire, interview guide and a document analysis generates the data. The sample includes special education lecturers and their students with and without disabilities, those from rural and urban areas from different cultures in the country's ten regional campus. The major finding is that culture influences authentic online assessments. Its recommendations are that lecturers support all students by designing and using culturally sensitive authentic assessments to enable transference of learning to their communities.

Keywords: Cultures, students with and without disabilities, authentic online assessments

Introduction

The following statement, 'If we wish to discover the truth about an educational system, we just investigate its assessment procedures' (Rowntree, 1977, p. 1) places assessment as the face of learning. Traditional assessment practices have lost their lustre as they have failed to empower some of their products. It is teacher centred rather than learner centred. This poses problems to third world students as the copied traditional assessment methods focus on foreign cultures in design and administration. This study therefore postulates that new non-traditional assessment methods should be considered. Alternative authentic assessment methods could hold the solution to this dilemma. The study assesses on authentic online assessment which is the latest trend which use different tools like electronic portfolios, to assess learners in real like scenarios which copy the real world (Openo, 2018). Culture embodies the different activities that a group of people are involved in. It thus reflects these in different ways. Culture is communication as it is the latter which helps in the knowledge of the cultural practices. It is through both verbal and non-verbal ways that culture is conveyed to recipients. Assessment is a form of communication which reflects the culture of a person. It focuses on the cultural aspects in oral, written and visual modes. Assessment is drawing inferences on a person's behaviour to make judgements. Walvoord (2010) say that it is a systematic collection of information to inform decisions that affect student learning. The systematic collection is diagnostic, formative, interim and summative. These decisions from that method are couched in a person's culture. Hence, the formation of different cultures. Learning cultures is a product of people who are endeavouring to improve themselves by acquiring knowledge and skills. They continuously seek, engage and share with each other to improve themselves. Online learning is stated as the fifth or sixth generation of distance education viewed terms of a range of percentages of activities like time spent online (Conrad and Openo, 2018). Hiltz & Turoff, (2005) view online learning as an improvement of distance learning embedding blended learning thus improving

beyond face-to-face learning. Conrad, (2002) affirms that online learning is inclusive as it is an alternative access mode for the non-traditional and marginalised. Hence, Allen & Seaman, (2015) have defined it as learning done wholly online. This was the case at the Zimbabwe Open University (ZOU) under study.

Authentic online assessment assesses learners in real like scenarios (Conrad & Openo, 2018). It endeavours to mimic real life situations in its setup. This enables students to be tested in a simulated real-life environment without leaving the classroom. The use of information communication technologies (ICTs) has created a cyber culture which is continuously growing exponentially. As their name denotes, they are a communication mode which is steeped in a particular culture. According to Gunawardena (2014) ICTs are culture directed as they represent their resident cultures. ICTs carry the assessment practices which gauge learning. Research has shown that students cultural background determines how the students view assessment (Openo,2020). Cultural background involves the student's language, traditions which play an important role in how they define assessment. This ultimately also determines their approach to assessment. For example, some cultures may view assessment as an individual or group activity. Students from cultures which view assessment as a group activity may have difficulties in doing activities which need individual responses. If this occurs under pressure to pass such students are prone to cheating resulting in failure to transfer their learning to real life situations. The major role of assessment is to prepare students for the real world which is embedded in their culture. Assessment must therefore imitate the real world to ensure transfer of knowledge, skills and attitudes to solve societal problems. Assessment must therefore reside in the students' cultures to enable authentic learning. Cultural background also influences how lecturers and students use ICTs (Gunawardena, 2014). If ICTs are part of the lectures and students' culture the development of online assessments which are sensitive to the student's culture can be implemented. Student online assessment in Zimbabwe has focussed on the traditional modes of assessment types namely essays and controlled question and answer examinations. Traditional methods of assessment usually fail to identify real learning. Research has shown that these are the standard formats used in western countries (French et al, 2023). Western culture influences most online assessments used. Consequently, there is a narrow focus of online assessment. Their failure to transfer to the real world is well documented in Zimbabwe. Issues of poor transfer of knowledge, skills and attitude to the real world; student cheating under pressure to perform for promotions or entry to institutions have blemished local assessments. Failure to address specific populations and their needs has resulted in high failure rates in certain populations. African students face challenges due to differences in sociocultural contexts, values, and expectations.

In the Zimbabwe Open University assessment is not learner largely centred. Taught courses are lecturer-centred and practical course have components of learner centredness with focus on the individual student. These are not in line with learner centred design especially the aspect of student-to-student interactions. Supporting students from different cultures in authentic online assessment in an Open and Distance Learning (ODL) university requires careful consideration of cultural differences and their impact on assessment design and implementation. The study focused on 'How special education lecturers can support students from different cultures in authentic online assessments for improved real learning transfer' at an ODeL institution in Zimbabwe.

The study was guided by the following questions:

1. What cultural practices influence students during assessment at the Zimbabwe Open University?
2. How can students' cultural aspects be supported during online authentic assessment to ensure real life learning?

Theoretical Framework

This study is based on constructivism. According to Mbatl (2013) constructivism is the main foundation of online learning. John Dewey's constructivist philosophy gave rise to many permutations to constructivism. Constructivism theory perceives learners as creators of knowledge among other learners, working together relating to their individuality and experiences (Openo, 2018). Woolfolk (1993) summarises the tenets of constructivism as follows focusing on personal and social activity.

It also draws upon Vygotsky's (1978) theory on the importance of learners' experience. Similarities are also drawn to Rose's (2013) emphasis on critical reflection. This is the critical thinking that should occur during the learning process. Critical reflection is inherent in constructivism's tenet that learning exists in the mind. It is in the mind that the learner ponders and analysis the learning experiences retaining those that link to their real world. Online learning is hinged upon those tenets to deliver both teaching and learning.

It is based on Zhang, et al.'s, (2022) Universal design for Learning (UDL) which advocates for different types of representations when assessing students from all cultures including those with disabilities to value their different abilities.

Assessment as part of learning

Student learning is a major ingredient in the development and conveyance of culture. It is through learning that students know the language, customs and all traditions. Therefore, learning as shown in Figure 1 follows a cycle which includes assessment. The cycle consists of the academic content, what should be learnt. The teaching and learning strategies outline the procedures for the participation of both lecturers and students. Learning outcomes are essential as they provide the type of knowledge, skills and attitudes needed. The assessment methods used determine the required student outcomes.

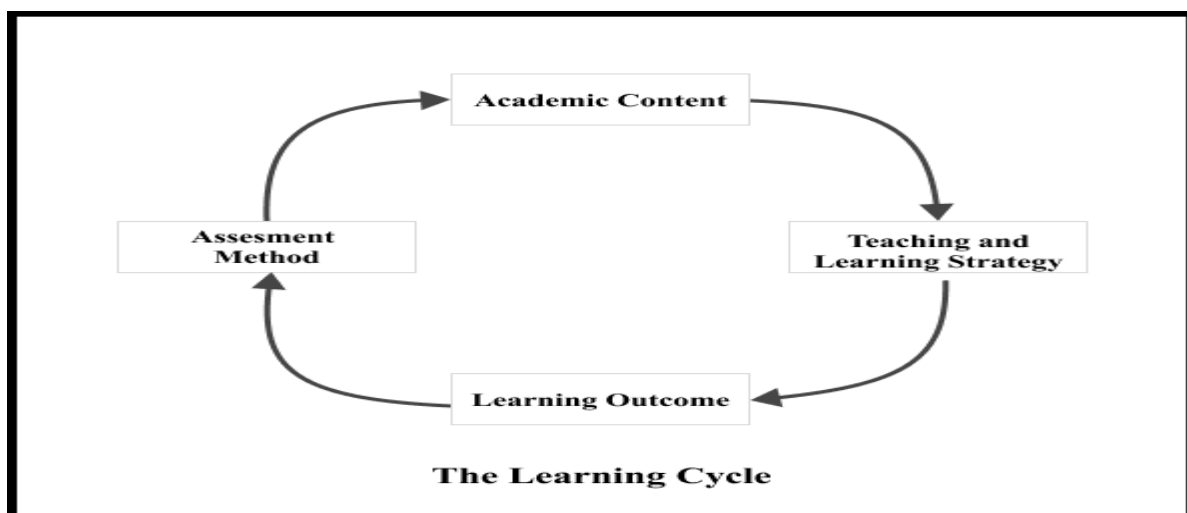


Figure 1: The Learning Cycle. Source: 2004 Teaching and Learning Services, McGill University from Openo and Conrad (2018)

Education versus learning

Education subsumes learning. Critical reflection which occurs in learning is a major component of authentic assessment. The broader context of education tends to concentrate on external aspects which are difficult to measure. Holmen's (2014) comparison of education versus learning in Figure 2 highlights this clearly. The broader context of education is passive focusing on the curriculum disclosing an extrinsic nature. On the other hand, learning results in the active participation of the learner exhibiting a curious nature denoting an intrinsic motivation. It is through learning that a student can display change on their environment. A special education teacher who focuses on assessing the student's learning ensures real transfer in the student to their environment.

Education	Learning
Passive	Active
Curriculum	Curiosity
Extrinsic	Intrinsic

Figure 2: Education versus learning, Holmen (2014).

Education or Teacher centred instruction views the teacher as the centre of learning imparting everything to the recipient who is the learner, on the other hand learner centred instruction engages the learner in a collaborative manner to solve real problems. Students are enabled to participate in the construction of knowledge and skills. Hence, teamwork is encouraged as it is naturalistic. This valuing allows them to be innovative. There is continuous formative assessment which enables students to focus on the work at hand.

Assessment in general must focus on the learning but online authentic assessment goes further to incorporate culture using a variety of assessment tools. Conscientious special education lecturers focus on their students' individual needs when carrying out assessment in their classrooms. By, cultural adaptation of assessment tools to accommodate cultural differences, such as translating items or using culturally relevant examples. The influence of the students' culture should be present in all assessments (Zhang, et al., 2022). Thus, having multilingual support to provide assessment materials and support in multiple languages to cater to linguistically diverse students.

Influence of cultural practices during assessment

Open learning has always acknowledged the role of technology. This has been evident in the delivery of content to students. Computers have been part of open learning from its inception. Peters (1983) and Keegan (1990) state that, ODeL is an industrial type of teaching and learning which consist of planning, streamlining procedures, division of labour, computerisation, controlling and checking. Although the fourth industrial revolution has been around for a while open learning did not benefit from its vast technology (Schwab, 2015). The lockdowns throughout the world disrupted all types of face-to-face learning resulting in the massive demand for the use of ICTs (Lotheta, 2022). The use of assessment using technology was not

embraced until the onset of the coronavirus pandemic (St-Onge, Ouellet, Lakhali, Dube and Marceau, 2022). The uptake of online assessment has been slow due to cost and lack of expertise among both lecturers and students. They are also demanding in terms of development and execution to both lecturers and students. However, it is now evident that cultural influences must be considered when teaching and during learning online. Cultures react differently to technology. Thus, some cultures have embraced different types of communication gadgets. Western students behave differently online as compared to those from other cultures, from Asia or Africa. Openo (2019) concludes that culture determines online behaviour. Conversely culture determines student behaviour when taking online assessments.

Studies have shown cultural influences in certain populations like in some Asian cultures where success is a group and national goal (Openo, 2019). Consequently, students from those countries are likely to collaborate with their peers during examinations. This may be viewed as cheating despite the positive intentions of the student. Western cultures view individual success more positively as compared to group success. Mporu and Nyanungo (1998) conclude that current assessment practices are Western adoptions without any significant local input. They suggest that behaviours depicted in the tests are different from the culturally accepted ones and the competences solicited are not suitable to African communities. Cultural adaptation of assessment tools to accommodate cultural differences, such as translating items or using culturally relevant examples is important. This must encompass validation of assessment results to ensure that they accurately reflect students' knowledge and skills, regardless of their cultural background.

African studies although limited depict a highly competitive propensity in examination taking by students (Yeboah, 2024). Pressure is placed on the student to outperform others to attain high grades for limited opportunities in society. Despite the above scenarios culture plays a positive role in ensuring the goodness of fit to a student's environment.

There are several African cultural practices which need to be considered during assessment. Woolman (2001: 31) states that, 'Western schooling strived to eliminate students through failure on tests whilst traditional [African] education strives to include children in their community.'

African practices are imbedded in the language and in the philosophy of Ubuntu/Unhu. Museka & Madondo, (2012:1) state that, "Ubuntu/Unhu philosophy calls for a holistic approach to education in which human character is developed and fine-tuned for sustainable lifestyle". Khomba, (2011) highlights that, "Ubuntu/Unhu philosophy is valuable in that it inculcates the spirit of oneness and brotherhood into people". This is a vehicle for African values and principles across the whole continent. Bondai and Kaputa (2013) state that, "multicultural settings are healthy as they promote respect for and tolerance towards cultural diversity and an appreciation of cultural diversity without feeling threatened by the culture of the different other". Online authentic assessment values diversity and tolerance as it is a microcosm of the real world.

Using students' cultural aspects to support online authentic assessment

Gunawardena, (2014) states that, "online assessment is culturally based". Meaningful assessment relates to the students' culture and environment to ensure real transfer to local problems. This enables lecturers to assess students in their real environment. It eliminates focus on detached foreign assessment practices and tools. It also helps to distinguish between culture and ethical issues. Gunawardena, (2014:81) observes that 'Understanding the

sociocultural context helps us to distinguish ethical from unethical behaviours given differences in cultural priorities and to develop guidelines for ethical behaviour within our courses'. Clearly a lecturer must ensure that ethical issues of integrity which are global are not mistaken for cultural practices. Anwar, et al. (n.d.) cite academic integrity like fairness, honesty, trust, respect courage and responsibility as important attributes for shaping student academic behaviour.

The Commonwealth for Learning (COL) (2022:3) points out that, at the heart of making digital assessment count is purposeful, strategic design: design that is learner centred, builds academic integrity into the fabric of the learning experience and uses authentic assessment tasks. These design features minimise the need for learners to cheat, increase relevance and encourage learners to produce their best work.

The above ensures that students support, centres on them as members of different cultural grouping. Lecturers must attend to localisation of content, practice and application of their learning (COL, 2022). Traditional assessment tends to focus on instruction disregarding the student's experience. However, online assessment should focus on the student's real world linking up with their authentic and experiential background. If lecturers are to support students realistically, they must design online learner-centred authentic assessment which comprises of the following four design components namely learning outcomes, assessment strategies, assessment types and assessment tools (COL,2022). They must have training in cultural competence, diversity and inclusion to be aware of cultural differences and their impact on assessment. Zhang, et al., (2022) further comment that in UDL the designing of authentic online assessments begins with the learning outcomes and objectives. This helps in linking up the two to come up with authentic online assessments. Authentic online assessment differs from traditional assessment as it follows the stages of backward design. COL, (2022) explains backward design as starting with what learners should be able to know and do at the end of the course and designing back from there.

Authentic online assessments use principles of Universal design for Learning (UDL) in supporting students. UDL ensures that students from all cultures including those with disabilities are given opportunities to participate in authentic assessment which values their different abilities (Zhang et al., 2022). Thus, authentic online assessment is inclusive of multiple means of engagement, representation and demonstration of learning (Zhang, et al., 2022). Multimedia assessment formats align to UDL facets by using multiple assessment formats, such as video, audio, or interactive simulations, to cater to different learning styles and cultural preferences. Electronic portfolio assessment is gaining prominence as a suitable support for all types of students as it enables feedback from both students and lectures using provided culturally sensitive rubrics and criterion.

The use of diverse assessment tools accommodates different cultural influences (Openo, 2022). The use of traditional modes of assessment does not relate learning to the students' cultures and real needs. In summary authentic assessment must include the following delivery modes if it is to support the students in response to their cultures; quizzes and examinations; written assignments; presentations; simulations (role play), projects; multimedia assessment; e-portfolio assessment; collaborative assessment and peer assessment (Zhang, et al., 2022). Reflection in each component should be a critical part of the authentic online assessments as it enables the student to dwell of their learning relating it to their real world.

Materials and Methods

A qualitative approach guided the study (Flick 2009). This constructivist approach precisely, was used for the study of online assessment. (Hancock,1998). The research design consisted of a single case study of one department as stipulated in the literature (Flick, 2009; Gall, et al., 2007; McMillan and Schumacher, 2010). It provided an in-depth look at the context and circumstances of online assessment in the department at the ZOU.

The population included all special education lecturers and students in one department at the ODeL university. Specifically, the population consisted of students with and without disabilities, who were from rural and urban areas and different cultures in the country. These students straddled different cultures from the ten different provinces of Zimbabwe.

The study used purposive sampling to identify the lecturers and the special education students. These were selected based on their culture, knowledge and experiences (McMillan, and Schumacher, 2010) methods. The sample included special education lecturers and their students with and without disabilities, who were from rural and urban areas from different cultures in the country.

Nine Special education lecturers took part in the study. Data was also generated from students with and without disabilities until data saturation was reached.

Research instruments included an online open-ended questionnaire, an interview guide and document analysis (Flick, 2009). Selected lecturers confirmed the preliminary data from the students.

Burnard, et al.'s (2008) thematic content analysis strategies were used to analyse and present the generated data from the participants. Data was read and codes allocated to meaningful segments. Thematic analysis of the patterns of the codes gave rise to the emerging themes from the generated data. Two themes emerged from the data. Students were allocated single alphabet letter code names and lecturers allocated an 'H' and a number to identify them.

Results and discussions

The themes are presented and discussed in line with the research questions.

Influence of cultural practices during assessment

The following subthemes highlight the influence of cultural practices in specific areas of the students learning. These are then generalised to all facets of learning including assessment. The findings show that culture shapes the way students learn. Culture determines the thinking of students as they learn. Student C said,

Religious and spiritual practices can influence assessment; it shapes the way people think and respond. A student with different religious and spiritual practices can be viewed as not in the right track and this might affect his or her assessment.

Language seemed to be a significant cultural influence on the participants as they felt that their languages should be used in assessment.

Culture determines how one sees themselves as individuals or a collectives or member of a group. Student F pointed out,

My culture determines the way I play and work. Thus, this enables me to transfer my character to the way I learn. the way participants work and play.

Accordingly, persons take this perception to situations like assessments. Traditional African cultures tend to view themselves as a community with their own language and religious beliefs. Ethical issues seem to cut across all the participants' cultures. This is captured by lecturer H5 who says,

The language, beliefs, educational levels, religion and nature of the home environment influence students during assessments. I have observed that language and religion have a powerful influence on the students' performance during online assessment.

Participants agreed that culture affects peoples' values. Values by nature relate to agreed standards of a society and these are imbedded in their language and religious practices. Participants agreed that culture influences participants' conformity to rules and regulations. Cultures which value conformity beget members who transfer this to other settings like assessments. Online authentic assessments are sensitive to cultural influences as they require the lectures to base them on the students' culture. Lecturer H9 summaries it as follows,

Different culture means different beliefs, perceptions, attitudes and behaviours so online authentic assessment should provide students the chance to showcase what they know, understand and live with, without any bias because what is valued in one's culture cannot be termed wrong by a person from a different culture. What is of value is collaboration and teamwork across the cultures.

The above finding concurs with Gunawardena, (2014) who asserted that the use of ICTs is influenced by culture. By deduction all online activities are mostly culture bound.

Participants agreed that culture does not promote deviance. Society does not go out to create deviant behaviour in its members. The nature of deviance is both antisocial and destructive. However, participants agreed that scarcity of resources has created drives which results in deviant behaviour. For example, the pressure for scarce jobs may entice a person to cheat to gets access to a better job.

Unrealistic expectations from family, peers have also influenced how some students behave during assessment. Some cultures view ICTs in a negative manner as mentioned by one student L,

For example, some communities have negative attitudes and perceptions of information and communication technology where ownership of gadgets like computers, smartphones, laptops are viewed as luxury. Lack of skills in ICT Knowledge (software) limited access to internet connectivity and poverty influence students during assessment.

Students from such a culture may resist online assessment as they may view them negatively.

Using students' cultural aspects to support online authentic assessment

The participants suggest that lecturers should get to know students' cultures as mentioned by Student J and Lecturer H3 respectively,

My religious belief should be included. most people believe that Christianity is the only religion that must be followed by everyone forgetting other religions. If a student is Moslem or of the African Traditional religion when the student is asked to give her or his views, the views must be taken, and none should be marked wrong because of his or her religious views.

Language used by the student can influence his or her assessment. Who said English is the only medium for communication? Whatever language used by the student as part of his or her culture must be considered.

Another student F says,

ICTs must be used to cater for the needs of students with special needs. Online learning materials should accommodate students with diverse needs and disabilities. Since culture is dynamic, there is need to revisit, revamp the online assessment means. However, some simulations are problematic due to outdated ICT technology and expertise. Online assessment must be in a student's culture and environment to enable them to transfer skills to their society.

The last statement links the participants' experiences to online assessment.

Table 1 Proposed assessment ways and learner benefits

Assessment	Online mode	Learner benefits
<ul style="list-style-type: none"> ● Online portfolios ● Essays ● open ended /essay questions ● forum posts ● peer evaluation and review ● dialogue simulations ● online interviews ● online polls ● videos ● Role plays ● Computer 	<ul style="list-style-type: none"> ● Consultation ● Engagement ● Online Group discussion ● Virtual meeting ● WhatsApp ● Facebook ● Twitter ● Teams ● Emails ● Zoom ● Online Lecture methods 	<ul style="list-style-type: none"> ● Cater for diverse learners using different software ● diverse needs can be assessed ● students will be motivated to participate ● innovative and interesting methods

Table I depicts a summary of the proposed assessment ways participants viewed as suitable in supporting students from diverse cultures including those with disabilities.

This also simulate the contexts in the workplace, in civic life and in personal life concurring with Zhang, et al. (2022). The use of cultural resources and references, such as cultural guides, language support and cultural adaptation tips, help students navigate online assessments. According to Zhang, et al., (2022) this must offer wide opportunities and methods for learning to be demonstrated by the student in a variety of ways linked to their real life. Participants pointed out that online assessment should provide opportunities to rehearse, practice, consult resources and get feedback on and refine performances and products. Student B said,

“Since the setting is no longer face to face and it is extended to a remote environment online authentic assessment should give constructive feedback since it provides the student with an opportunity to reflect and adjust their work according to the required standard.

The emphasis to ‘reflect and adjust’ resonates well with Conrad and Openo (2018) on the need for reflection in authentic online assessment by students. This is a major component missing from most traditional assessment methods. It should be part of both authentic online formative and summative assessment.

Online assessment should allow expression of ideas and knowledge freely since in this case will not mainly worry about a correct answer. There is need to use indigenous languages as a media of instruction and in online assessment as proposed by the following student D,

Language as one of the most important parts of culture must be included during online authentic assessment. Communication is done through language, so as a student if Shona is my language I must be free to use that language during my presentations for me to be able to freely express myself and assessment should be carried out without being asked to use English.

The findings have clearly shown that students cultures influence their learning in different ways. Accordingly, special education lecturers must be learner centred when designing assessments. These findings highlight two important observations; that online assessment must be entered in a student’s culture and environment to enable maximum benefit to their society. Secondly, the use of a variety of online assessment types and methods enables students from different cultures and abilities to transfer their learning and positively impact their communities. Authentic online assessments add value to students from different cultures and diversity enabling them to be contributing citizens of society.

Figure 3 provides a framework for supporting students as the answer to the main research question.

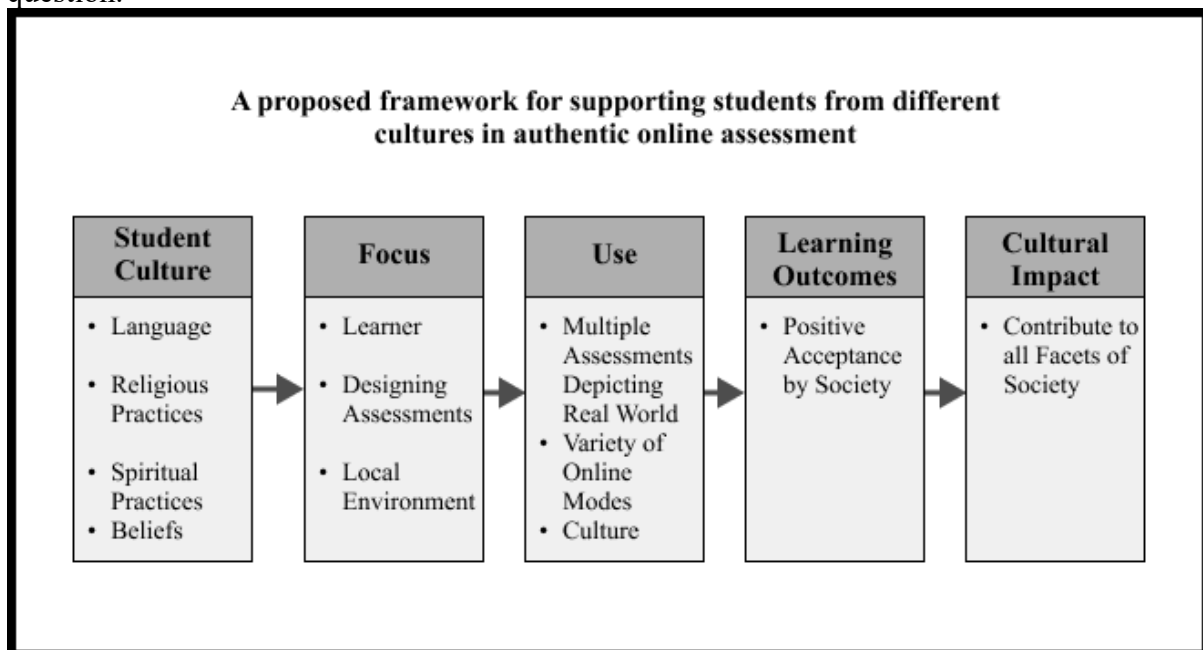


Figure 3: A proposed framework for supporting students from different cultures in authentic online assessment (Source: Authors findings 2022)

Information collated from the participants provide a proposal for supporting students from different cultures when authentic online assessment is implemented.

Conclusion

The study made the following conclusions for each research question:

Question 1

- Culture shapes the way participants work and play. Culture determines the work ethics of students as they learn. Student from different cultures experience varying ICT deficiencies ranging from lack of expertise to resources.

- Language and religion have a significant cultural influence on the participants' performance in online assessment.
- All online activities are mostly culture bound. Collaboration and teamwork are a result of culture. Africans tend to rely more on group work than individual work.
- ICTs simulate various contexts. However, some simulations are problematic due to outdated ICT technology and expertise.

Question 2

- Online assessment must be entered in a student's culture and environment to enable maximum benefit to their society
- The use of a variety of online assessment types and methods enables students from different cultures and abilities to transfer their learning and positively impact their communities
- Authentic online assessment involves more student participation resulting in transference of knowledge and skills to real situations in their lives.
- Authentic online assessments add value to students from different cultures and diversity enabling them to be meaningful contributing citizens of society.

The study made the following recommendations for the special education lecturers and students and the university:

Special education lecturers must:

- be learner centred when designing assessments by using the proposed framework
- design varied formative and summative assessment activities that value students' cultures and diversity replicating authentic, real-world scenarios
- involve all students by using varied online activities respecting their cultures. They should in cooperate workplace-relevant knowledge and skills in online assessment
- develop both low stakes and high stakes online assessments which use teamwork and collaboration skills to address all cultures.

Students:

- should be oriented and trained in online authentic assessment requirements as they are more demanding than the traditional methods.

The department in the ODeL University must:

- develop lecturers in authentic online assessment methods to reach students from different cultures
- Focus on culturally sensitive item development
- Do further research in all university departments.

References

- Anwar, R., Kalra, J., Ross, M., Smith, D. & Vogel, V. (n.d.). *Encouraging academic integrity through a preventative framework*.
- Beukes-Amiss, M (2022) *Making digital assessment count: Design for engagement, integrity and authenticity*. Kingsway: Commonwealth of Learning.
- Bondai, B. & Kaputa, T. M. (2016). Reaffirming: Ubuntu/Unhu mainstreaming in the education curricula: Panacea for sustainable educational change in Southern Africa. *Journal of Academic Research and Reflection*, 4(6), 37-41.
- Burnard, P., Gill, P., Stewart, K., Treasure, E. & Chadwick, B. (2008). Analysing and Presenting Qualitative Data. *British Dental Journal*, 204, 429-432. <https://doi.org/10.1038/sj.bdj.2008.292>
- Conrad, D. & Openo, J. (2018). *Assessment strategies for online learning engagement and authenticity*. Athabasca University Press. https://www.aupress.ca/app/uploads/120279_99Z_Conrad_Openo_2018-Assessment_Strategies_for_Online_Learning.pdf
- Hancock, B. (2002). *Trent Focus for Research and Development in Primary Health Care: An Introduction to Qualitative Research*. Trent Focus Group, 1998.
- Holmen, M. (2014). Education vs. learning—What exactly is the difference? *EdTech Review*. <http://edtechreview.in/trends-insights/insights/1417-education-vs-learning-what-exactly-is-the-difference>.
- Flick, U. (2009). *An introduction to qualitative research (4th ed.)*. London: Sage Publications Ltd.
- French, S., Dickerson, A. & Mulder, R.A. (2024). A review of the benefits and drawbacks of high-stakes final examinations in higher education. *High Education*, 88, 893–918. <https://doi.org/10.1007/s10734-023-01148-z>
- Gall, M.D., Gall, J.P. & Borg, (2007) *Educational research: An introduction (8th ed.)*. Pearson.
- Gunawardena, C. N. (2014). Globalisation, culture and online distance learning In O. Zawacki-Richter & T. Anderson (Eds) *Online Distance Education: Towards a Research Agenda*. Edmonton: Athabasca University Press.
- Keegan, D.A. (1990). Theory for distance education. In M. Moore (ed.) *Contemporary issues in American, distance education*. Pergamon Press.
- Khan, J.A. (2008). *Research Methodology*. A.P.H. Publishing Corporation.
- Khomba, J.K. (2011). *The African Ubuntu Philosophy* repository.up.ac.za/bitstream/handle/2263/28706/04chapter4.pdf?sequence
- Lotheta, A. (2022). Role of ICT in education during covid pandemic. *International Journal of Humanities Social Science and Management (IJHSSM)*, 2(1), 70-73. <https://ijhssm.org>.
- Hiltz, S. R. & Turoff, M. (2005). Education goes digital: The evolution of online learning and the revolution in higher education. *Communications of the ACM*, 48(10), 59–64.
- Mbati, L. (2013). Online social media applications for constructivism and observational learning. *International Review of Research in Open and Distributed Learning*, 14(5). Retrieved from <http://www.irrodl.org/index.php/irrodl/article/view/1579>.
- Museka, G. & Madondo, M.M. (2012). ‘The quest for a relevant environmental pedagogy in the African context: Insights from Unhu/Ubuntu Philosophy’. In *Journal of Ecology and the Natural Environment*, 4(10), 258-265.
- Woolfolk, A.E. (1993). *Educational psychology*. Allyn and Bacon.
- Peters, O. (1983) Distance Teaching and Industrial Production. In Sewart, D, Keegan, D and Holmberg, B (Eds) *Distance Education: International Perspectives*. London Croom: Helm.
- Rowntree, D. (1977). *Assessing students: How shall we know them*.

- Harper & Row. Walvoord, B.E. (2010). *Assessment clear and simple: A practical guide for institutions, departments and general education*. Jossey-Bass.
- Schwab, K. (2015) The Fourth Industrial Revolution: What it means how to respond. *Foreign Affairs*.
- Shizha, E. (2009). ‘Chara chimwe hachitswanyi Inda: Indigenising science education in Zimbabwe’. In D. Kapoor & S. Jordan (Eds.), *Education, Participatory Action Research and Social Change: International Perspectives*, 139-154, Palgrave Macmillan.
- St-Onge, C., Ouellet, K., Lakhali, S., Dube, T. & Marceau, M. (2022). COVID-19 as the tipping point for integrating e-assessment in higher education practices. *British Journal of Educational Technology*, 53, 349–366. 10.1111/bjet.13169
- Rose, E. (2013). *On reflection: An essay on technology, education, and the status of thought in the twenty-first century*. Canadian Scholars’ Press.
- Vygotsky, L. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.
- Whiting G. & Ford, D. (n.d.) Cultural Bias In Testing: Non-Discriminatory Assessment: Some Recommendations For Reducing Bias
[Http://www.education.com/Reference/Article/Cultural-Bias-In-Testing/](http://www.education.com/Reference/Article/Cultural-Bias-In-Testing/)
- Woolman, D.C. (2001). Educational reconstruction and post-colonial curriculum development: A comparative study of four African countries. *International Education Journal*, 2(5), WCCES Commission 6, Special 2001 Congress Issue.
- Yeboah A. (2024). A survey of examination malpractice in the West African Senior School Certificate Examination (WASSCE) in the Central Region of Ghana. *International Journal of Education and Cognitive Sciences*, 5(4), 1-8.
<https://doi.org/10.61838/kman.ijecs.5.4.1>.
- Zhang, J., Takacs, S., Truong L., Smulders, D., Lee, H. (2021). *Assessment design: Perspectives and examples informed by universal design for learning*. Centre for Teaching, Learning and Innovation. Justice Institute of British Columbia