IJEDE International Journal of E-Learning & Distance Education
La Revue internationale de l'apprentissage en ligne et de l'enseignement à distance

ISSN: 2292-8588 **Volume 40, No. 1, 2025**

Socio-Demographic Factors Predicting Botho/Ubuntu in Online Education at an Open University Context

Dr. Ishmael Magare, Dr. Shikha Trivedi, and Dr. Joseph Amooti Kasozi

Abstract: In this study, we investigated the impact of socio-demographic factors on the manifestation of botho/ubuntu philosophy in online education. We used Albert Bandura's social cognitive theory to understand how botho/ubuntu influences stakeholders' attitudes and actions. We employed a quantitative approach with a cross-sectional design and gathered data through a survey. The respondents in the study included staff, tutors, and students associated with an open university. We conveniently selected a sample of 263 respondents from the Open University's five regional campuses and headquarters. The findings indicated that age, marital status, and tenure with the university significantly influenced stakeholders' perceptions of botho/ubuntu principles in online teaching and learning. This study highlights the importance of incorporating botho/ubuntu principles in online education to establish inclusive and supportive virtual learning environments. Educators can utilise these findings to promote student engagement and academic success. However, further research is necessary to comprehensively understand the effect of botho/ubuntu principles on

https://doi.org/10.55667/10.55667/ijede.2025.v40.i1.1374

student outcomes and explore stakeholders' perspectives on their effectiveness.

Keywords: botho, ubuntu, online environment, e-teaching and learning (e-TL), socio-demographic factors

Facteurs sociodémographiques prédictifs de la philosophie Botho/Ubuntu dans l'enseignement en ligne dans un contexte d'université ouverte

Résumé : Cette étude examine l'influence des facteurs sociodémographiques sur la manifestation de la philosophie **botho/ubuntu** dans l'enseignement en ligne. En s'appuyant sur la **théorie sociale cognitive d'Albert** Bandura, les auteurs analysent comment botho/ubuntu influence les attitudes et actions des acteurs éducatifs. À partir d'une enquête menée auprès de 263 répondants (personnel, tuteurs et étudiants) dans une université ouverte, les résultats révèlent que **l'âge, le statut marital et l'ancienneté** influencent significativement les perceptions de botho/ubuntu dans les pratiques pédagogiques numériques. L'étude souligne l'intérêt d'intégrer cette philosophie pour mettre en place des environnements d'apprentissage virtuels inclusifs et solidaires. Les enseignants peuvent utiliser ces résultats pour promouvoir l'engagement des étudiants et leur réussite scolaire. Cependant, des recherches supplémentaires sont nécessaires pour comprendre de manière exhaustive l'effet des principes botho/ubuntu sur les résultats des étudiants et explorer le point de vue des parties prenantes sur leur efficacité.

Mots-clés : botho, ubuntu, environnement en ligne, e-enseignement et e-apprentissage, facteurs sociodémographiques

Background

With its transformative potential, the concept of *botho/ubuntu* has gained relevance in Open and Distance e-Learning (ODeL). It aligns seamlessly with the core values emphasised by Open Distance Learning (ODL) institutions, such as accessibility, flexibility, affordability, openness, and support (Letseka, 2016). The botho/ubuntu philosophy justifies actions that prioritise the well-being of the learner community (Nworu, 2023). This aligns with the principles of botho/ubuntu, which emphasise the importance of communal relationships and harmony within the learning environment (Nxumalo & Mncube, 2018). Therefore, by incorporating a botho/ubuntu ethical framework, ODeL can address academic rigour and social engagement challenges while prioritising the well-being of the learner community (Ngubane & Makua, 2021). To ensure respectful and inclusive practices in the ODeL context, it is essential to approach the integration of botho/ubuntu with cultural sensitivity and ongoing ethical reflection (Omodan, 2022).

Molefe and Muade (2023) illustrates the transformative potential of botho by presenting it as a concept with the power to revolutionise online learning. This is because it highlights the learners' pivotal role in actively participating, forming meaningful connections, and fostering positive relationships with their peers and tutors (Dewi et al., 2023). By integrating the principles of botho/ubuntu into online learning environments, educational institutions can

enrich students' overall learning experience and actively contribute to their holistic personal and professional development.

ODeL is crucial for the successful development and implementation of online learning platforms. Letseka (2016) argues that a thorough understanding of the factors contributing to botho in the context of ODeL is crucial for successfully developing and implementing online learning platforms. Sefotho (2016) further suggests incorporating botho in mainstream teaching and learning theories to enhance social connectedness in ODL. According to Ewuoso and Hall (2019), integrating botho principles in ODeL practices can foster communal relationships and promote harmony among learners. This can help overcome challenges in maintaining academic rigour and promoting social engagement.

Botho and ubuntu are terms often used interchangeably in this study due to their shared roots in Bantu Afrocentric discourse, highlighting solidarity, cooperation, respect, compassion, inclusivity, and social cohesion. Botho, at its core, emphasises the relational aspect of human beings, underscoring the importance of interdependence, fellowship, and reconciliation. The link between ODeL and botho lies in the shared emphasis on community, interconnectedness, and access to education. Both concepts promote inclusivity, mutual support, and learning as a collective, transformative process (Shandu-Phetla et al., 2023).

ODeL contexts can embrace the botho philosophy by fostering a sense of responsibility towards safeguarding the online environment and protecting it for sustainable utilisation among learners (Molefe & Muade, 2023). By integrating

botho philosophy into ODeL practices, institutions contribute to an ethical framework that aligns with African moral values while addressing academic, social, online space, and clinical challenges (Chigangaidze, 2022; Letseka, 2013).

For the current study, e-teaching and learning refer to teaching and learning through electronic technologies, specifically in an online or virtual environment. This includes using digital platforms, online resources, and communication tools to deliver educational content, facilitate interaction between instructors and learners, and support the learning process. E-teaching and learning can include online lectures, virtual discussions, collaborative projects, digital assessments, and online educational materials and resources.

According to Marovah and Mutanga (2023), research has indicated that botho encompasses the psychological and social dimensions of online learning, emphasising the need for participants to foster meaningful interactions, empathy, respect, and overall well-being. While these aspects of ODeL are well-articulated in the literature, a gap remains in appreciating which ones are most pertinent.

Statement of the Problem

The lack of physical interaction in online learning environments challenges fostering a sense of belonging, community, and connectedness, referred to as *botho*, in an Open University context. The lack of understanding about the factors that contribute to botho in online education often impedes the creation of a sense of community in virtual platforms. Addressing this issue is crucial to

enhancing learner engagement and satisfaction in online learning. Existing literature primarily focuses on pedagogical approaches or technological integration, leaving a significant gap regarding how these socio-demographic variables influence student and stakeholder perceptions of botho in digital learning environments. Addressing this gap is crucial for developing inclusive educational strategies that resonate with diverse student populations to ultimately foster a more equitable online learning experience (Ngubane-Mokiwa, 2016; Kasozi et al., 2024).

The Research Aims and Objectives of the Study

To reiterate, this study aimed to investigate which socio-demographic factors predict botho in online learning at an Open University. The specific objectives of the study were to investigate:

- *What socio-demographic variables influenced the uptake of botho in an ODeL environment?*
- *What are the challenges of implementing botho in ODEL environments?*

Theoretical Framework

The study was grounded in the social cognitive theory, as explained by Albert Bandura in the 1970s. The theory highlights the interplay of cognitive processes, social learning, and behaviour (Bandura, 1988). Social cognitive theory suggests that individuals learn and develop their behaviour through observation, imitation, and reinforcement. The theory emphasises self-efficacy, observational

learning, and reciprocal determinism (Bandura, 1991, 1998). In the current study's context, social cognitive theory provides a framework for understanding stakeholders' perceptions and behaviour, considering how experiences and cognitive processes shape their perceptions of botho. This framework recognises the influence of contextual factors, like technological infrastructure and organisational support, in the online learning environment (Ghazali et al., 2021; Middleton et al., 2019). Bandura's concept of reciprocal determinism suggests that individuals, their environment, and their behaviour all influence each other. This aligns with botho, which promotes mutual responsibility of various stakeholders in shaping students' learning experiences. Social cognitive theory and botho share a connection through their emphasis on the importance of social interaction, cultural context, and collective well-being in shaping individuals' behaviour and cognitive development.

This framework enables the exploration of how stakeholders' perceptions of botho influence their attitudes and actions in online education. However, the theory is not without criticisms. These include its overemphasis on cognitive factors to the neglect of environmental influences (Flamand, 2017). Also, some argue that social cognitive theory oversimplifies the complex relationship between individuals and their social context (Flamand, 2017; Middleton et al., 2019; Rezabeigi Davarani et al., 2023). Despite its limitations, social cognitive theory remains suitable for examining stakeholder perceptions of botho in the online learning setting.

Related Literature Review

The literature guiding this study was anchored in the socio-demographic variables that influenced uptake of botho and the challenges of implementing botho in ODeL environments.

Socio-Demographic Variables Predicting Uptake of Botho in ODeL Environments

Research has shown that online learners' performance is strongly associated with their demographic characteristics, such as regional belonging, socio-economic standing, education level, age, gender, and disability status (Firat & Bozkurt, 2020; Rizvi et al., 2019). This motivated the writers to probe further into how these factors as they relate to botho influence the perception of students, tutors, and student support staff at the ODeL institution.

To date, online learners are diverse in age, largely due to the increasing number of adult and mature students who continue their higher education while working. Understanding of the influence of a learner's age on their online learning experience is limited. Morin et al. (2019) conducted a study focused on returning students aged 20 to 30 at a Canadian business school, revealing that those over the age of thirty exhibited greater confidence in their computer proficiency and learning competencies compared to their younger counterparts. The students also showed more motivation and a better attitude and were less anxious.

Rafique et al. (2021) conducted a study evaluating Pakistani students' online learning readiness. The study revealed that gender significantly shaped students' perceptions of computer/internet literacy and online communication self-efficacy. Male students demonstrated more excellent proficiency in these areas than their female counterparts. The researchers also identified notable differences in these dimensions among students, with higher-degree candidates exhibiting higher proficiency levels than undergraduate and master's students. These findings are consistent with a previous study (Asif Naveed & Mahmood, 2019), which suggests that students engaged in research activities and extensive information-seeking possess higher digital skills. The results also align with the conclusions of Kay (2009), who reported gender disparities in online and interactive classroom communication systems. However, the findings contrast with those of Bhadgaonkar (2023), and Mathew and Chung (2020), who did not find substantial gender differences across all dimensions of online learning readiness. These inconsistencies may be attributed to socio-cultural and socio-economic disparities.

Rafique et al. (2021) and Cheng et al. (2023) discovered that online learning readiness among mature students was higher, indicating that age significantly predicted preparedness for online learning. This suggests that older students might have had more experience with technology and online learning platforms, contributing to their increased preparedness. Furthermore, the researchers observed a positive relationship between students' grades, self-directed learning readiness, and learning motivation. These findings support

prior research by Hung et al. (2010), suggesting that academic achievement is crucial in cultivating students' confidence and goal setting.

Regarding gender, Rafique et al. (2021) found that it had no significant impact on students' readiness for online learning across the five dimensions of the Online Learning Readiness Scale (OLRS). However, higher-grade students outperformed lower-grade students in self-directed learning, online communication, self-efficacy, motivation for learning, and learner control. These findings imply that higher academic achievement may contribute to a broader range of skills and capabilities necessary for successful online learning.

Sanpanich (2021) studied how prior experience with hybrid learning influences students' attitudes. The researcher recommended emphasising the necessity for institutions to offer students opportunities to gain familiarity and confidence with online learning tools and platforms. Providing introductory courses or orientations to online learning can help students acquire essential skills and alleviate their concerns about the virtual learning environment. Lee et al. (2016) examined the influence of personal factors on self-directed learning and technology adoption in online learning at the university level. The researchers explored how age, gender, language learning anxiety, and language learning style influenced students' readiness for online education. They found that neither gender nor age significantly affected the use of computers for self-directed learning.

However, it was observed that older students tended to have higher levels of both the desire for learning and anxiety. This suggests that age may still play a role in shaping personal characteristics related to self-directed learning. The study highlights the importance of considering personal factors when implementing online learning initiatives. Understanding how these factors influence students' readiness and engagement can help educators better support their students' learning needs and improve the effectiveness of online education.

Challenges of Implementing Botho in Online Learning and Teaching Environments

Various technological, pedagogical, and infrastructural barriers hinder the adoption of botho in online learning. Key technological challenges include poor internet connectivity and limited access to necessary hardware, especially in developing regions, which complicate the interactive nature central to the botho philosophy (Asiri et al., 2015; Nagunwa & Lwoga, 2012). Furthermore, the need for ongoing technical support and maintenance exacerbate these issues (Ramamoorthy et al., 2024). Pedagogically, resistance to collaborative learning and cultural barriers complicate the transition to a shared learning experience, demanding the localisation of digital resources and additional training for educators to adapt to new roles as facilitators rather than merely knowledge transmitters (Constantino & Raffaghelli, 2020).

Infrastructure-related challenges are also prominent, as many educational institutions lack adequate hardware and software to support collaborative online environments, particularly in regions like Tanzania and Lesotho (Makafane & Chere-Masopha, 2021). Financial constraints further limit the resources necessary for successfully implementing online learning (Ramamoorthy et al., 2024). Administrative support is crucial for motivating educators and facilitating the successful adoption of digital tools. Nevertheless, many institutions struggle with insufficient teacher training and inadequate student support systems, such as mentorship and technical assistance (Ramamoorthy et al., 2024).

Lastly, aspects concerning student engagement, curriculum flexibility, assessment practices, and the educational policy landscape also pose significant challenges. The shift to online learning may foster isolation among students, potentially diminishing interaction, which is crucial for the botho philosophy (Makafane & Chere-Masopha, 2021). Additionally, rigid curricular frameworks often conflict with the flexibility needed for botho principles, while conventional assessment methods fail to align with collaborative learning ideals, emphasising individual performance instead (Constantino & Raffaghelli, 2020). For the potential of botho to be realised in online learning environments, a holistic approach is essential, focusing on investments in infrastructure, professional development, inclusive practices, and sound educational policies (Nagunwa & Lwoga, 2012; Ramamoorthy et al., 2024).

Integration of Ubuntu Philosophy into ODeL

Integrating ubuntu philosophy into ODeL creates a collaborative and inclusive educational environment that emphasises the interconnectedness of learners. Facilitators can employ online discussions, group projects, and collaborative platforms like Google Docs to foster meaningful interactions. These approaches encourage individual achievement, which is necessary for personal growth, and strengthen communal ties, allowing students to share knowledge and support one another in achieving common goals (Pocze, 2023). Additionally, incorporating flexible learning structures catering to diverse student backgrounds and experiences fosters a sense of belonging, which is essential for effective collaboration in ODeL settings (Mthimkhulu, 2024). Culturally relevant content, which reflects students' values and histories, can enhance engagement, creating an environment grounded in mutual respect and understanding—vital tenets of ubuntu (Setlhodi, 2023).

The principles underlying ubuntu pedagogy, such as communal responsibility, profoundly enhance teaching capacity within ODeL institutions. By fostering mentorship and stressing collective effort, educators can better support adult learners in their unique educational journeys (Ndwambi et al., 2022). For instance, incorporating assessment strategies that focus on peer feedback and group assignments reinforces the essence of ubuntu, as they promote growth and mutual support over competition. This collective approach aligns with the notion that learning should enhance individual competencies and

contribute positively to the shared learning community, embodying the spirit of "I am because we are" (Mthimkhulu, 2024).

However, integrating the ubuntu philosophy into ODeL presents challenges. Resistance to change and deeply ingrained individualistic approaches can hinder the realisation of this collaborative framework (Ndwambi et al., 2022). To address these challenges, educators, students, administrative bodies, and other stakeholders must embrace a paradigm shift, recognising the importance of community and collective responsibility in the learning experience. By cultivating a culture of empathy and a sense of belonging, ODeL institutions can effectively integrate the ubuntu philosophy. This ensures that education is not solely an individual pursuit but a shared journey toward knowledge and personal growth (Setlhodi, 2023).

Methodology

Our study employed a quantitative approach with a cross-sectional design, gathering data through a survey. The study employed descriptive statistics and multiple linear regression analysis to assess stakeholder perceptions. While descriptive statistics revealed attitudes toward botho principles, multiple linear regression analysis identified key demographic predictors such as gender, age, and marital status that influence these perceptions. Multilinear regression analysis, employing hypothesis testing with t-tests and F-tests, identified key demographic predictors, such as age and marital status, that influence these perceptions (Wang, 2019; Ziemann, 2021). The

adjusted R^2 indicated how effectively these factors explained variations in understanding botho. Spearman correlations were used to explore monotonic relationships, particularly when data normality assumptions were violated (Navarro & Foxcroft, 2025; Hazra & Gogtay, 2016).

These statistical tests confirmed the significance of demographic predictors and reinforced the study's validity, linking perceptions of botho to measurable demographic variables. This connection enhances comprehension of stakeholders' perspectives and informs strategies for integrating botho principles within Botswana Open University's (BOU's) e-learning framework. However, we are mindful of the limitations of these methods, and the results can only be generalised to the population under study (Hazra & Gogtay, 2016).

Data Collection Procedures and Statistical Analysis

In our study, we obtained ethical clearance from the Botswana Open University Ethics Committee. We collected data through a web-based questionnaire and recruited participants from headquarters and Botswana Open University's five regional campuses via email. We subsequently analysed the data using IBM SPSS V26 software at a significance level of 5%. We used forced response options to ensure complete responses and checked for missing values. Since the data did not meet the normality assumption, we used the Spearman correlation test for validity testing. We analysed the data using descriptive, bivariate, and inferential statistics. Due to the non-normality of the data, non-parametric statistical methods were employed for correlation analysis. The

Spearman correlation coefficient was utilised to assess relationships among variables. This approach is particularly suitable for ordinal data or data that do not meet the assumptions of parametric tests.

Instrumentation, Reliability, and Validity Measures

We conducted a reliability test for the perceived botho on an e-teaching and learning (PBeTL) variable, which consisted of six items. The test yielded a Cronbach's Alpha coefficient (α) of 0.82, indicating a high level of internal consistency among the items. These findings suggest that students perceive Botswana Open University as embracing botho principles positively in its e-teaching and learning practices.

The reliability requirement of internal consistency with all six items of the scale was > .70. We assessed the instrument's validity using convergent validity. According to theory, items belonging to the same construct should correlate more strongly than those belonging to different constructs. The results (shown in Table 1) meet the acceptable threshold for items measuring a single construct (ranging from > .3 to < .9), as suggested by Field (2018). For instance, all items demonstrate correlations within the acceptable threshold, except for Items 1 and 5 (r_s =.292), 6 (r_s =.264), and Items 6 and 3 (r_s = .275).

***Table 1**. Convergent Validity Matrix – Perceived Botho on Teaching and Learning in the ODeL Context*

Items	1	2	3	4	5	6
1. BOU embraces botho to ensure the continuity of students' academic learning experiences.	1.000	.				
2. BOU embraces botho to ensure the integrity of the assessment of student learning.	.643**	1.000				
3. BOU has revised the transition policy to allow student progress.	.352**	.348**	1.000			
4. BOU embraces botho in utilising instructional technology platforms to support students' academic experience.	.487**	.494**	.505**	1.000		
5. BOU uses the Moodle platform for self-directed learning.	.292**	.300**	.309**	.416**	1.000	
6. BOU has introduced Google Meet for the virtual learning process.	.264**	.312**	.275**	.308**	.524**	1.000

***Note**. Values are Spearman's correlation coefficients (rs). *p < .05 statistically significant*

Results of the Study

The results of this study focus on understanding stakeholders' perceptions regarding the botho principles in e-teaching and learning at the Botswana Open University. The analysis is structured around two main components:

- Descriptive statistics detailing respondents' perceptions of botho principles; and
- A multiple linear regression analysis that identifies demographic predictors of these perceptions (Table 7).

Respondents' Descriptive Characteristics

Table 2 summarises the distribution of respondents across the regional campuses and headquarters. This data provides insight into the geographical representation of the study participants.

***Table 2**. Distribution of Respondents by Regional Campus and Headquarters*

Regional Campus/Headquarters	Number of Respondents	Percentage (%)
Gaborone	125	47.5
Palapye	43	16.3
Maun	38	14.4
Francistown	32	12.2
Kang	13	4.9
Headquarters	12	4.6
Total	**263**	**100.0**

The data in Table 2 indicates that the Gaborone regional campus had the highest number of respondents, reinforcing its position as the largest campus in the university network. Conversely, Kang was the smallest campus in terms of responses. Additionally, the headquarters showed limited participation, suggesting that administrative staff were less involved in the study.

Occupational Characteristics of Respondents

Table 3 details the occupational distribution of the respondents. This categorisation provides a clearer understanding of the participants' professional backgrounds, which is crucial for contextualising the study's findings.

***Table 3**. Occupational Characteristics of Respondents*

Occupational Role	Number of Respondents	Percentage (%)
Staff	8	3.0
Tutors	28	10.6
Students	227	86.3
Total	**263**	**100.0**

The data in Table 3 highlight a strong student presence in the sample, with limited representation from tutors and staff. Most respondents were students, suggesting that the findings may primarily reflect student perspectives and needs. This may influence any recommendations or conclusions from the study, prioritising aspects relevant to the student experience.

Demographic Characteristics of Respondents

The demographic characteristics of the respondents, including age and gender distribution, were analysed. The findings are summarised in Table 4.

***Table 4**. Demographic Characteristics of Respondents*

Characteristic	Value
Mean Age (M)	38.86 years
Median Age (Md)	38 years
Standard Deviation (SD)	8.67 years
Interquartile Range (IQR)	11 years
Female Participants	209 (79.5%)
Male Participants	54 (20.5%)

Table 4 presents demographic information about the respondents, indicating a predominantly female sample with a mean age in the late thirties. Conceptually, we report the *Md* and *IQR* because the data did not meet normality assumption criteria; therefore, we used non-parametric correlations (Spearman) to analyse the data. The predominance of female respondents may influence the study's results and interpretations, potentially reflecting gender-specific issues or preferences relevant to the target population. Furthermore, the age range indicates a mature demographic with distinct views or experiences compared to younger participants. This could suggest the need for targeted outreach or considerations when generalising findings beyond this specific group.

Marital Status of Respondents

The marital status of respondents was also examined and is presented in Table 5. This information can provide insights into the participants' circumstances, which may influence their educational experiences.

***Table 5**. Marital Status of Respondents*

Marital Status	Number of Respondents	Percentage (%)
Married	135	51.3
Single	119	45.2
Widowed	4	1.5
Co-habiting	3	1.1
Divorced	2	0.8
Total	**263**	**100.0**

Analysis of marital status (Table 5) reveals that married individuals were the most significant respondents, followed closely by single individuals. The remaining categories of widowed, co-habiting, and divorced comprised a small fraction of the sample, indicating that most participants were either in committed relationships or single. The predominance of married and single respondents suggests that the study may capture insights primarily relevant to these groups, which may shape the findings concerning family dynamics, lifestyle choices, and social support systems.

The respondents' demographic and occupational characteristics provide a comprehensive overview of the study's sample. The predominance of students,

the significant representation of female participants, and the distribution of marital status are all critical factors that may influence the research's outcomes. The results underscore the importance of understanding the diverse backgrounds of participants in educational research. We observed limitations in our convenience sampling, mainly due to the underrepresentation of participants from specific regional campuses and population groups. This lack of representation could result in outlier effects and biased outcomes. However, it is important to note that some regions and population groups have larger populations and admit more students. The data patterns align with the expected trends, which helps to mitigate potential biases in the results.

***Table 6**. Descriptive Statistics for the Perceived Botho on e-Teaching and Learning in the ODeL Context*

Items	SA% (n)	A% (n)	D% (n)	SD% (n)
1. BOU embraces botho to ensure the continuity of students' academic learning experiences.	26.6 (70)	66.5 (175)	5.3 (14)	1.5 (4)
2. BOU embraces botho to ensure the integrity of the assessment of student learning.	20.5 (54)	66.9 (176)	8.7 (23)	3.8 (10)
3. BOU has revised the transition policy to allow student progress.	18.6 (49)	66.9 (176)	10.3 (27)	4.2 (11)
4. BOU embraces botho in utilising instructional technology platforms to support students' academic experience.	25.9 (68)	62 (163)	9.1 (24)	3.0 (8)

Items	SA% (n)	A% (n)	D% (n)	SD% (n)
5. BOU uses the Moodle platform for self-directed learning	44.9 (118)	49.8 (131)	3.4 (9)	1.9 (5)
6. BOU has introduced Google Meet for the virtual learning process.	50.2 (132)	46.4 (122)	2.3 (6)	1.1 (3)

Table 6 shows that these results demonstrate that many stakeholders actively perceive Botswana Open University as embracing botho principles in its e-teaching and learning practices, ensuring the continuity of learning experiences, maintaining assessment integrity, revising transition policies, and effectively utilising instructional technology platforms. Based on the descriptive characteristics of the sample, the positive perception of botho in e-teaching and learning signifies a strong alignment between educational practices at Botswana Open University and culturally relevant principles emphasising respect, community, and holistic development. By embracing botho principles in instructional technology, Botswana Open University acknowledges the importance of ethical and inclusive approaches in education. This commitment fosters a supportive learning environment that values collaborative engagement and personal growth, enhancing student experiences and outcomes. Ultimately, this focus on botho principles contributes to the development of more effective e-learning strategies that resonate with the needs and values of students.

***Table 7**. Demographic Predictors of Botho in e-Teaching and Learning*

Demographic Variables	*B*	SE_B	β	*t*	*P*
Intercept	18.579	1.759	—	10.560	.000
Age (years)	.062	.024	.192	2.573	.011
Gender	.158	.446	.023	.354	.723
Qualification	-.149	.127	-.092	-1.168	.244
Marital Status	-.629	.262	-.151	-2.404	.017
Employment Status	.108	.543	.015	.199	.843
Status of Employment	-.217	.264	-.060	-.822	.412
Number of Years with BOU	-.169	.086	-.136	-1.981	.049
Status at BOU	.356	.509	.046	.698	.486
Were you exposed to any instructional technology before joining BOU?	-.527	.360	-.091	-1.463	.145

***Note**. *Significant 0.05; B = unstandardised regression coefficient; SE_B = standard error of B; β = standardised coefficient; t = t-test statistic*

We conducted a multilinear regression analysis to investigate whether stakeholders' demographic variables could predict both in e-teaching and learning at Botswana Open University against the null hypothesis (see Table 7). The adjusted R^2 indicated that the predictor variables accounted for 4.7% of the variance in the perceived botho in e-teaching and learning at Botswana Open

University. The result of the variance demonstrated that the regression model was a good fit for the data (f ($_{9,251}$) =2.412, p=0.012) and indicated that demographic variables predicted stakeholders' perceptions towards botho in e-teaching and learning at Botswana Open University. The regression analysis conducted provides valuable insights. However, the low adjusted R^2 value of 4.7% indicates that socio-demographic variables alone offer a limited understanding of perceptions of botho in e-teaching and learning. While these demographic factors are statistically significant, the results point to the complexity of the concept of botho, which integrates cultural values and ethical considerations that transcend mere categorisations such as age, gender, or socioeconomic status. This limitation underscores the notion that individual experiences and broader contextual factors may play a more pivotal role in shaping perceptions than the demographic variables included in the model.

However, the coefficient analysis revealed that age (β=0.192, t=2.573, p =.011), marital Status (β = -.151, t = -2.404, p =.017), and the number of years at Botswana Open University (β=-1.981, p =.049) predicted stakeholders' perceptions on botho in e-teaching and learning in an Open University context. The null hypothesis was not supported. The results from the regression analysis indicate that certain socio-demographic variables, such as age and marital status, are significant predictors of stakeholders' perceptions of botho in e-teaching and learning at the Botswana Open University. Age may influence perceptions due to generational differences in the understanding of botho, with younger individuals potentially having varying exposure to traditional values compared to older

stakeholders who might embody more conventional views. This difference can lead to divergence in how botho is interpreted, especially in a contemporary e-learning environment that emphasises adaptability to new educational paradigms. Marital status might also impact perceptions, as individuals in different stages of life may prioritise different values and responsibilities, shaping their view on community engagement and ethical considerations in education. For instance, married individuals may commit more to collaborative and familial values, which could influence their interpretation of botho.

The results of this study reveal a noteworthy relationship between an individual's tenure at the Botswana Open University and their perceptions of e-teaching practices, particularly about the botho philosophy. Specifically, the observation that longer tenure correlates with a more critical view of these practices suggests a possible disconnect between longstanding staff members and contemporary educational approaches. This disconnect could stem from various factors, such as exposure to evolving teaching technologies or pedagogical innovations that may not have been readily embraced by those who have spent many years in the institution.

These findings further emphasise the complexity of stakeholder experiences over time. As individuals spend more time in the educational environment, their perspectives may shift, influenced by their own experiences, the institutional culture, and changes in the external educational landscape. The stark contrast between fresh perspectives and those with a more established

history at Botswana Open University highlights the multifaceted nature of how botho is perceived within the institution.

Moreover, while socio-demographic variables were examined in this study, their limited ability to explain variations in perceptions about the botho/ubuntu philosophy signals that other influences are at play. Factors such as institutional policies, teaching methodologies, technology integration, student engagement, and the quality of interactions among stakeholders may have a more substantial impact on how the botho philosophy is conceptualised and enacted in an online learning context.

Therefore, it is crucial to acknowledge that although the demographic factors surveyed in this study did not yield significant insights, they still play a role in shaping the broader understanding of educational philosophies at Botswana Open University. This highlights the need for a more nuanced examination of additional factors that can provide a deeper understanding of the influences affecting perceptions within the university's educational framework. Ultimately, a collaborative effort that considers varying experiences, backgrounds, and opinions will be essential for cultivating a more holistic approach to e-teaching practices grounded in the values of botho.

Discussion

This study aimed to investigate the concept of botho/ubuntu in an online tutoring and learning environment and to explore stakeholders' perceptions of botho in online education based on socio-demographic factors. In this section,

we discuss the implications of the study's findings, highlight potential future research directions, and present the overall conclusions drawn from this study.

Socio-Demographic Factors and Stakeholders' Perceptions of Botho in Online Learning

The multilinear regression analysis results provide valuable insights into the relationship between demographic factors and stakeholders' perceptions of botho in an online teaching and learning environment within the ODeL context. These results are consistent with previous research on the impact of age, marital status, and years of experience on individuals' perceptions and attitudes in educational settings. These findings align with prior studies demonstrating a positive correlation between age and online communication behaviours. For example, a study by Cheng et al. (2023) illustrated that older individuals tend to engage in more polite and considerate online communication than younger individuals. This may be attributed to older adults having more socialisation experiences and understanding the importance of maintaining harmonious relationships in their interactions. One possible explanation for the positive association between age and botho in e-teaching and learning, as observed in our study, could be that older adults have more experience with face-to-face communication and, consequently, possess a stronger sense of social etiquette and consideration for others. This understanding translates into their online interactions, where they demonstrate more botho in their communication.

In our study, we explored the impact of gender on botho in e-teaching and learning. However, our findings did not indicate any significant effect of gender on botho's behaviour ($p > 0.05$). This is consistent with several prior studies. For example, Bhadgaonkar (2023) and Chung et al. (2020) all found no significant gender differences in online learning readiness, which is closely related to botho behaviour. This suggests that online communication platforms provide an equitable environment where individuals of all genders have equal opportunities to engage in botho behaviours. Dewi et al. (2023) also found no significant variations in prosocial behaviour based on gender in their study on college students. These findings highlight the influence of societal conditions and individual traits in shaping prosocial behaviours, rather than relying solely on gender as a determining factor. However, previous studies have indicated that attitudes towards study management, technology use, online interaction, and online learning might be influenced by gender.

Sanpanich (2021) reported that male students score higher in these domains than female students. Birbal et al. (2018) have also found similar results. These findings suggest that gender can impact attitudes towards technology and online learning, with male students potentially possessing more experience and confidence in using technology for educational purposes. However, it is essential to note that there are also studies that have found contrasting results. Kay (2009) has identified gender disparities in online and interactive classroom communication systems. These findings suggest that attitudes towards technology and online learning may not be solely determined by gender but

also influenced by socio-cultural and socio-economic factors that vary across different populations and contexts. Thus, further research is needed to fully understand the impact of gender on attitudes towards technology and online learning in e-teaching and learning, also known as educational technology.

The negative and statistically significant coefficient for marital status (see Table 7) in our study implies that unmarried individuals have higher levels of botho in e-teaching and learning than married individuals. The results challenge previous research (Kör et al., 2016), which found that married individuals exhibited less self-disclosure and more inhibited communication online. One possible explanation for this unexpected result could be that unmarried individuals feel more freedom and anonymity in online interactions, contributing to a greater expression of botho. Conversely, married individuals may have concerns about privacy and the need to maintain their marital relationships online, potentially inhibiting their expression of botho.

The unexpected outcome of our study suggests that students at the Botswana Open University may face challenges as they progress in their studies, which results in a decline in their sense of botho in e-teaching and learning, especially when they spend more time at the university due to academic issues. These results contradict previous research, consistently showing a positive relationship between prior online education experience and positive online communication behaviours. Researchers such as Birbal et al. (2018), Haverila (2011), and Sanpanich (2021) found that previous hybrid learning experiences significantly influence technology and online learning. They observed that

students with prior experience generally had higher mean scores in these areas than those without experience. They were also more engaged, active participants who demonstrated collaborative behaviours.

Although exposure to instructional technology may not be a significant predictor of botho in e-teaching and learning (see Table 7), it is still essential to recognise the value of technology in education. Technology can enhance teaching and learning experiences in ODL environments by providing educators and students with the necessary skills and familiarising them with digital tools. It can also promote community and mutual respect, aligning with the philosophy of botho. Additionally, technology equips learners with essential skills for future endeavours, aligning with the philosophy's goal of empowering individuals. Therefore, while exposure to instructional technology may not significantly predict levels of botho in e-teaching and learning, it still plays a significant role in enhancing education and should not be undermined. Further research is needed to explore the complex interplay between instructional technology, personal beliefs, and values in fostering a sense of botho in e-teaching and learning.

The significance of the botho/ubuntu philosophy in the context of this study lies in its potential to contribute to the understanding and improvement of online education at Botswana Open University. By studying the factors that influence botho/ubuntu in e-teaching and learning, this research aimed to shed light on how to create a more inclusive and supportive online learning environment. While the socio-demographic variables examined in this study

were found to have limited explanatory power, it is essential to consider other factors, such as institutional policies, teaching practices, technology, student motivation, and quality of interactions, which may play a more significant role in implementing Botho in e-teaching and learning.

Significance of the Study and Future Research

This study is significant because it explores botho principles in online education. By analysing stakeholders' perspectives at Botswana Open University, the study provided insight into the advantages and difficulties of integrating botho principles into online distance education. This research contributes to the existing literature on online education, highlighting the importance of creating inclusive and supportive learning environments, even in digital spaces.

The implications of these findings call for a more expansive research agenda that delves deeper into the cultural and psychological dimensions influencing perceptions of botho. Future studies should aim to incorporate qualitative research methods, allowing for the exploration of individual beliefs, values, and experiences in greater depth. By understanding how cultural backgrounds and personal interactions shape educational experiences, researchers and educators can gain more nuanced insights into fostering an environment that embodies the principles of botho. Such an approach may also reveal the impact of institutional support and pedagogical strategies, vital in driving engagement and enhancing student experiences in e-learning contexts.

Future research should also consider expanding the scope of the study by including a more diverse sample and incorporating objective measures. Exploring the impact of botho principles on student outcomes such as engagement, satisfaction, and academic success would be valuable in understanding the effectiveness of implementing these principles in online education. Additionally, investigating the experiences and perspectives of instructors in implementing botho/ubuntu in online education can provide insights into best practices and support strategies.

Limitations of the Study

The limitations identified in the analysis highlight the necessity for educational administrators at Botswana Open University to adopt a comprehensive pedagogical framework that addresses both the statistical results and the qualitative aspects of learning experiences. By recognising that socio-demographic factors cannot singularly predict perceptions of botho, there is an opportunity to design inclusive and culturally responsive learning environments. Strategies may include training instructors to facilitate discussions that reflect ethical considerations and fostering a community that celebrates diversity. Ultimately, this holistic approach is essential for improving educational practices and actively embodying the essence of botho, thus enriching the learning journey for all stakeholders involved.

This study's limitations include potential sampling bias and reliance on self-report measures. To address these limitations, future research could employ

more representative sampling methods and incorporate objective measures to gain a comprehensive understanding of stakeholders' perspectives. By considering the botho philosophy, educational institutions can enhance online learning experiences and outcomes. Future research that builds upon these findings through more diverse samples, objective measures, and exploration of additional perspectives can further contribute to developing effective strategies for promoting botho/ubuntu principles in online education. Ultimately, the value of this study lies in its potential to inform practices that create inclusive and supportive learning environments in online education.

Recommendations and Conclusion

Socio-demographic variables, such as age, gender, and marital status, play a crucial role in shaping ODeL policies and instructional design. The institution can ensure equitable access to education by creating policies that are tailored to the demographics of its learners. The institution can also utilise demographic insights to develop various delivery modes, such as multimedia and interactive tools for young learners, as well as structured readings and discussion forums for older learners. Similarly, knowledge of socio-demographic factors can inform instructional design, allowing course materials to be adapted to reflect linguistic diversity and cultural contexts, thereby making learning more relatable and compelling.

This study also proposes integrating ubuntugogy to promote botho in ODeL, incorporating it as a theory of ethical behaviour and social

connectedness, recognising and embracing Indigenous ways of knowing (Omodan & Diko, 2021). By integrating ubuntugogy into the mainstream teaching and learning theories, ODeL can establish a solid foundation for fostering botho among learners. In conclusion, socio-demographic factors are highly relevant to theory, research, and practice in ODeL. Understanding how these factors shape individual experiences and collective behaviours, as indicated in this study, is essential if ODeL institutions are to develop robust, all-inclusive policies that promote collective learning, empathy, creativity, and inclusivity. As indicated in this study, the ubuntu theory aligns well with traditional theories of learning, such as constructivism, social cognitive theory, the community of inquiry framework, and the affect theory of learning.

References

Asif Naveed, M., & Mahmood, M. (2019). Information literacy self-efficacy of business students in Pakistan. *Libri*, *69*(4), 303–314. https://doi.org/10.1515/libri-2018-0123

Asiri, M. J. S., Mahmud, R., Bakar, K. A., Ayub, A. F. M., & Bakadam, E. S. (2015). Barriers to using Jusur Learning Management System in Saudi Arabia Universities. *Journal of Research in Curriculum Instruction*, *1*(4), 49–62. http://dx.doi.org/10.21608/jrciet.2015.24539

Bandura, A. (1988). Organisational applications of social cognitive theory. *Australian Journal of Management*, *13*(2), 275–302. https://doi.org/10.1177/031289628801300210

Bandura, A. (1991). Social cognitive theory of self-regulation. *Organizational Behavior and Human Decision Processes*, *50*(2), 248–287. https://doi.org/10.1016/0749-5978(91)90022-L

Bandura, A. (1998). Health promotion from the perspective of social cognitive theory. *Psychology and Health*, *13*(4), 623–649. https://doi.org/10.1080/08870449808407422

Bhadgaonkar, P. (2023). Relationship between prosocial behaviour and aggression among college students. *International Journal of Interdisciplinary Research and Innovations*, *11*(1), 5–10. https://doi.org/10.5281/zenodo.7520289

Birbal, R., Ramdass, M., & Harripaul, C. (2018). Student teachers' attitudes towards blended learning. *Journal of Education and Human Development, 7*(2), 9–26. https://doi.org/10.15640/jehd.v7n2a2

Cheng, X., Qiao, L., Yang, B., & Han, R. (2023). To trust or not to trust: a qualitative study of older adults' online communication during the COVID-19 pandemic. *Electronic Commerce Research, 25*, 849–878. https://doi.org/10.1007/s10660-023-09679-4

Chiang, C. L. (2003). *Statistical methods of analysis*. World Scientific Connect. https://www.worldscientific.com/worldscibooks/10.1142/5224

Chigangaidze, R. K. (2022). Utilising ubuntu in social work practice: ubuntu in the eyes of the multimodal approach. *Journal of Social Work Practice*, *36*(3). https://doi.org/10.1080/02650533.2021.1981276

Chung, E., Subramaniam, G., & Dass, L. C. (2020). Online learning readiness among university students in Malaysia amidst Covid-19. *Asian Journal of University Education*, *16*(2), 46–58. https://doi.org/10.24191/AJUE.V16I2.10294

Constantino, G. D., & Raffaghelli, J. E. (2020). *Online teaching and learning: going beyond the information given.* In M. G. Di Gesu, & M. F. Gonzalez (Eds.), *Cultural views on online learning in higher education*, pp. 3–28. Springer. https://doi.org/10.1007/978-3-030-63157-4_1

Dewi, E. K., Santosa, T. T., & Rusmawati, D. (2023). The relationship between gender, age, and prosocial behavior in college students. *Proceedings of International Conference on Psychological Studies (ICPsyche)*, *4(1)*, 87–95. https://doi.org/10.58959/icpsyche.v4i1.27

Ewuoso, C., & Hall, S. (2019). Core aspects of ubuntu: a systematic review. *South African Journal of Bioethics and Law*, *12*(2), 93–103. https://doi.org/10.7196/SAJBL.2019.v12i2.679

Field, A. P. (2018). *Discovering statistics using IBM SPSS statistics* (5th ed.). Sage.

Firat, M., & Bozkurt, A. (2020). Variables affecting online learning readiness in an open and distance learning university. *Educational Media International*, *57*(2), 112–127. http://dx.doi.org/10.1080/09523987.2020.1786772

Flamand, L. (2017). *Limitations of social cognitive theory*. The Classroom. https://www.theclassroom.com/limitations-of-social-cognitive-theory-12215528.html

Ghazali, A. F., Othman, A. K., Sokman, Y., Zainuddin, N. A., Suhaimi, A., Mokhtar, N. A., & Yusoff, R. M. (2021). Investigating social cognitive theory in online distance and learning for decision support: the case for community of inquiry. *International Journal of Asian Social Science*, *11*(11), 522–538. https://doi.org/10.18488/journal.1.2021.1111.522.538

Haverila, M. (2011). Prior e-learning experience and perceived learning outcomes in an undergraduate e-learning course. *Journal of Online Learning and Teaching, 7*(2), 206–218.

Hazra, A., & Gogtay, N. J. (2016). Biostatistics Series Module 6: Correlation and linear Regression. *Indian Journal of Dermatology*, *61*(6), 593–601. http://dx.doi.org/10.4103/0019-5154.193662

Hung, M. L., Chou, C., Chen, C. H., & Own, Z. Y. (2010). Learner readiness for online learning: scale development and student perceptions. *Computers & Education*, *55*(3), 1080–1090. https://doi.org/10.1016/J.COMPEDU.2010.05.004

Kasozi, J. A., Gaotlhobogwe, M., & Mogalakwe, M. (2024). Developing an Indigenous graduate research supervision culture in open and distance e-learning environments using as a framework. In *Global perspectives on decolonizing postgraduate education,* pp. 82-94. IGI Global. http://dx.doi.org/10.4018/979-8-3693-1289-6.ch006

Kay, R. H. (2009). Examining gender differences in attitudes toward interactive classroom communications systems (ICCS). *Computers & Education, 52*(4), 730–740. https://doi.org/10.1016/J.COMPEDU.2008.11.015

Kör, H., Erbay, H., Demir, E., & Akmeşe, Ö. F. (2016). A study on the factors affecting the academic performance of distance education students and formal students. *Hitit Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, 9*(2). https://doi.org/10.17218/hititsosbil.280829

Lee, C., Yeung, A. S., & Ip, T. (2016). Use of computer technology for English language learning: do learning styles, gender, and age matter? *Computer Assisted Language Learning*, *29*(5). https://doi.org/10.1080/09588221.2016.1140655

Letseka, M. (2013). Anchoring ubuntu morality. *Mediterranean Journal of Social Sciences*, *4*(3), 351–359. https://doi.org/10.5901/mjss.2013.v4n3p351

Letseka, M. M. (2016). Introduction: Open Distance Learning (ODL) and the philosophy of ubuntu. In *Open Distance Learning (ODL) through the philosophy of ubuntu*. Nova Science Publishers.

Makafane, D. T., & Chere-Masopha, J. (2021). COVID-19 crisis: challenges of online learning in one university in Lesotho. *African Perspectives of Research in Teaching & Learning, 5*(1). https://conf.ul.ac.za/aportal/application/downloads/Article_5_6_2021.pdf

Marovah, T., & Mutanga, O. (2023). Decolonising participatory research: can ubuntu philosophy contribute something? *International Journal of Social Research Methodology, 27*(5), 501–516. https://doi.org/10.1080/13645579.2023.2214022

Mathew, V. N., & Chung, E. (2020). University students' perspectives on Open and Distance Learning (ODL) implementation amidst COVID-19. *Asian Journal of University Education*, *16*(4), 152–160. https://doi.org/10.24191/ajue.v16i4.11964

Middleton, L., Hall, H., & Raeside, R. (2019). Applications and applicability of social cognitive theory in information science research. *Journal of Librarianship and Information Science*, *51*(4). https://doi.org/10.1177/0961000618769985

Molefe, M., & Muade, E. (2023). Ubuntu ethics, ubuntu, and moral status. In *African Ethics and Death*. Routledge. https://doi.org/10.4324/9781032658490-4

Morin, D., Fard, H. S., & Saadé, R. G. (2019). Understanding online learning based on different age categories. *Issues in Informing Science and Information Technology*, *16*(1), 307–317. https://doi.org/10.28945/4313

Mthimkhulu, S. (2024). Ubuntugogy as a viable pedagogical construct in African education: a literature review. *Journal of Culture and Values in Education, 7*(1), 83–98. https://doi.org/10.46303/jcve.2024.6

Nagunwa, T., & Lwoga, E. T. (2012). Developing an eLearning strategy to implement medical competency based curricula: experiences from Muhimbili University of Health and Allied Sciences. *International Conference on Education and E-Learning Innovations*, 1–6. https://doi.org/10.1109/ICEELI.2012.6360589

Navarro, D., & Foxcroft, D. (2025). 12. Correlation and linear regression. In *Learning statistics with jamovi: a tutorial for beginners in statistical analysis*, pp. 255–294. https://doi.org/10.11647/obp.0333.12

Ndwambi, M., Hlabane, S., Motlhabane, D., & Malgas, A. (2022). Incorporating ubuntu principles in a tutor training programme to promote academic success and wellbeing. *SOTL in the South*, *6*(1), 138–147. https://doi.org/10.36615/sotls.v6i1.206

Ngubane, N., & Makua, M. (2021). Ubuntu pedagogy – transforming educational practices in South Africa through an African philosophy: from theory to practice. *Inkanyiso*, *13*(1). https://doi.org/10.4102/ink.v13i1.9

Ngubane-Mokiwa, S. A. (2016). Chapter 12: Delivering open distance e-learning through ubuntu values. In M. Letseka (Ed.), *Open Distance Learning (ODL) through the philosophy of ubuntu*, pp. 147-162. Nova Science Publishers.

Nworu, N. F. (2023). The ubuntu philosophy in community development in Iyowa community, Edo state, Nigeria. *International Journal of Philosophy*, *2*(1), 26–44. https://doi.org/10.47941/ijp.1280

Nxumalo, S. A., & Mncube, D. W. (2018). Using Indigenous games and knowledge to decolonise the school curriculum: ubuntu perspectives. *Perspectives in Education*, *36*(2), 103–118. https://doi.org/10.18820/2519593X/pie.v36i2.9

Omodan, B. I. (2022). Deconstructing psychological implications of student unrest among university students through ubuntu. *International Journal of Educational Research Open*, *3*. https://doi.org/10.1016/j.ijedro.2022.100211

Omodan, B. I., & Diko, N. (2021). Conceptualisation of ubuntugogy as a decolonial pedagogy in Africa. *Journal of Culture and Values in Education*, *4*(2), 95–104. https://doi.org/10.46303/jcve.2021.8

Pocze, Z. (2023). Self-directed learning and the collective approach of ubuntu pedagogy: enhancing the self among others. In *Advancing self-directed learning in higher education*, pp. 25–42. IGI Global Scientific Publishing. https://doi.org/10.4018/978-1-6684-6772-5.ch003

Rafique, G. M., Mahmood, K., Warraich, N. F., & Rehman, S. U. (2021). Readiness for online learning during COVID-19 pandemic: a survey of Pakistani LIS students. *Journal of Academic Librarianship, 47*(3). https://doi.org/10.1016/j.acalib.2021.102346

Ramamoorthy, S., Ramamoorthy, P., & Samayan, K. V. S. J. (2024). Exploring challenges and satisfaction from e- learning in higher secondary grade school students in rural Tamil Nadu. *International Journal for Multidisciplinary Research, 6*(2). https://doi.org/10.36948/ijfmr.2024.v06i02.19256

Ramose, M. B. (2003). The philosophy of ubuntu and ubuntu as a philosophy. In P. H. Coetzee, & A. P. J. Roux (Eds.), *The African Philosophy Reader (2nd ed.), 230–238*. Routledge.

Rezabeigi Davarani, E., Nekoei-Moghadam, M., Khanjani, N., Iranpour, A., Chashmyazdan, M., & Farahmandnia, H. (2023). Factors related to earthquake preparedness of households based on social-cognitive theory constructs: a systematic review. *Frontiers in Public Health, 11*, 987418. https://doi.org/10.3389/fpubh.2023.987418

Rizvi, S., Rienties, B., & Khoja, S. A. (2019). The role of demographics in online learning: a decision tree-based approach. *Computers & Education, 137*(2), 32–47. http://dx.doi.org/10.1016/j.compedu.2019.04.001

Sanpanich, N. (2021). Investigating factors affecting students' attitudes toward hybrid learning. *Reflections, 28*(2), 208–227. http://dx.doi.org/10.61508/refl.v28i2.253093

Sefotho, M. M. (2016). Chapter 7: Perspectives on ODL: teaching and learning through ubuntu. In M. Letseka (Ed.), *Open Distance Learning (ODL) through the philosophy of ubuntu,* pp. 77–92. Nova Science Publishers.

Setlhodi, I. I. (2023). Increasing teaching capacity for supporting students in an ODeL institution. In S. Tawiah, & I. I. Setlhodi (Eds.), *Promoting the socio-economic wellbeing of marginalized individuals through adult education*, pp. 53–72. IGI Global Scientific Publishing. https://doi.org/10.4018/978-1-6684-6625-4.ch004

Shandu-Phetla, T., Ngubane, S. A., & Adigun, O. T. (2023). Injecting ubuntu in designing accessible virtual learning for students with disabilities. In O. Mutanga (Ed.), *Ubuntu philosophy and disabilities in Sub-Saharan Africa,* pp. 88–108. Routledge.

Wang, W. (2019). Hypothesis tests, analysis and discussion. In *Institutional activism in corporate governance*, pp. 211–237. Palgrave Macmillan. https://doi.org/10.1007/978-3-030-19577-9_9

Ziemann, V. (2021). Regression models and hypothesis testing. In *Physics and finance: undergraduate lecture notes in physics*, pp. 69–90. Springer. https://doi.org/10.1007/978-3-030-63643-2_7

Authors

Dr. Ishmael Magare is currently a lecturer and Head of the Teacher Education Department at Botswana Open University He is an experienced educator with thirty-three years in education. He holds a PhD in Educational Psychology from the University of Pretoria, South Africa. He has published a

number of articles in high-impact refereed journals.

Dr. Shikha Trivedi is currently the Head of the Early Childhood Department at Botswana Open University. She holds a PhD in Education, specialising in Childhood Development and Family Relations from Chaudhary Charan Singh Meerut University, India. With 15 years of experience in tertiary education, she is a seasoned educator who has published articles in high-impact, peer-reviewed journals and presented research papers at both national and international conferences. Dr. Trivedi is also a curriculum developer, teacher trainer, and adjudicator in the field of Early Childhood Development. Her research interests include Child Advocacy and Children's rights, Language and Literacy, Early Childhood Pedagogies, Family Relations, and Early Childhood Public Policy Development.

Dr. Joseph Amooti Kasozi is currently the Head of the Department of Educational Management and Leadership in the School of Education at Botswana Open University. He holds a PhD in Education from the University of Fort Hare in South Africa; an MEd (Tertiary Didactics) plus a Post-Graduate Diploma in Tertiary Education from UNISA; a Post-Graduate Diploma in Educational Management and Administration from IDM (Botswana, Lesotho, and Swaziland); an MSc from Reading University in the UK; and a BSc and a Post-Graduate Diploma in Education from Makerere University. He is widely published and has presented papers at local and international conferences, symposia, and workshops. His research interests include teacher and educator professional development, distance and adult education, quality assurance in higher education, and graduate research supervision.