Stakeholders' perspectives towards open and distance learning: The Case of Higher Education in Cameroon.

Abstract

Rapidly growing youth populations and improved high school completion rates have presented challenges to Cameroon Higher Education Institutions (HEIs) in recent years. A growing number of learners are seeking higher education, but the infrastructure is limited, often resulting in overcrowded lecture halls. In-depth research on how to resolve the issue points to Open and Distance Learning (ODL) as an alternative viable, cost-effective and flexible learning mode capable of widening access to education. This study entitled *"Stakeholders' Perspectives Towards Open and Distance Learning: The Case of Higher Education in Cameroon"* was designed to explore their views towards the adoption of ODL in the higher education sector. Owing to the novelty of ODL in Cameroon, the Diffusion of Innovation Theory was used as the framework to guide the research. Ten stakeholders purposefully selected from public and private HEIs comprised of faculty, learners, institutional leaders, ministry officials, and IT personnel took part in the study. Using a qualitative phenomenological research design approach, data were collected from them based on five key dimensions of innovation diffusion, notably relative advantage, compatibility, complexity, trialability, and observability, using open-ended questions. Thematic analysis of the data revealed that pilot programmes conducted during the COVID-19 pandemic demonstrated the potential of trialability to foster ODL adoption. Success stories from local and international institutions enhanced observability and stakeholder confidence. Based on these, learners and institutional leaders acknowledge the benefits of ODL in promoting access and flexibility. However, inadequate digital infrastructure, limited digital skills, and resistance to change undermine its compatibility with campus-based educational practices and ease of use of learning management systems. The study concludes that a successful implementation of ODL in Cameroon's HEIs requires investment in digital infrastructure, structured capacity building, pilot testing of ODL programmes, and the development of a clear institutional policy aligned with national education goals. Such an initiative should be phased out and adopt an all-inclusive stakeholder approach for an enhanced transformation of higher education.

Keywords: open and distance learning, higher education, stakeholders, Cameroon, diffusion of innovation, digital education.

Introduction

One of the factors undermining the quality of higher education in Cameroon is overcrowded lecture halls, where it is very common to see a lecturer tutoring up to 1000 students in an amphitheatre. The growing number of students pursuing higher education has not kept pace with the expansion of human resources, infrastructure, and equipment (Fonjong, 2004). According to 2022 data from the Cameroon National Institute of Statistics, 42.5% of the total population of Cameroon is under the age of 15. The same report projects that the growth in youth within the age range of 19–24 years old will increase from 3.06 million in 2022 to 4.10 million by 2040 (Cameroon National Institute of Statistics, 2022). This school-age group reflects the common population strata in Cameroon's higher education institutions. While the population is relatively young, data from the Ministry of Higher Education (MINESUP) indicated that more and more students are graduating from secondary school annually. Over the last ten years, graduation rates have increased from 44% in 2000 to 65% in 2020, which necessitates that Higher Education Institutions (HEIs) increase their accommodation capacity (MINESUP, 2021a). Despite these, Cameroon's traditional universities lack the capacity to accommodate them. While the quest for higher education in Cameroon is on the upsurge, reports on higher education enrolment in Sub-Saharan Africa reveal that only 17% of the youth population expected to be enrolled in the HEIs were effectively enrolled. The report remarked that this was very far below Africa's average of 32% (UNESCO, 2022).

Aware of this, the recently enacted Education and Training Sector Strategic Plan for 2023-2030 requires the MINESUP to step up enrolment in higher education institutions from 1529 in 2021 to at least 1,700 per 100,000 inhabitants by 2030; ensure that private HEIs increase their provision from 20% in 2021 to 25% by 2030; and increase the provision of vocational and technical training from 18% in 2021 to 35% by 2030 (MINEPAT, 2023). These recommendations aim to ensure equitable access for all learners and foster an entrepreneurial and voluntary spirit among students. Although the Education and Training Sector Strategic Plan lays emphasis on increasing access, Law N° 2023/007 of July 25, 2023, and the 2030 National Development Strategy paper published in 2020 highlight the need to digitally transform and professionalise education in the subsector while ensuring that graduates arrive at the workplace ready to perform.

While the recommendations highlighted in the different documents are ambitious, Cameroon, like many countries around the world, is still struggling to recover financially from the COVID-19 pandemic and the multiple socio-political crises affecting its economy (Tchamyou, 2020). In the midst of these issues, there is a pressing need to find a cost-effective mode for continuous learning. Open and Distance Learning (ODL) has the potential to provide flexible, accessible, and cost-effective quality education (Abbad, Morris, & de Nahlik, 2009). Efforts to introduce ODL into the Cameroonian higher education landscape began in 1967. Despite the political will expressed through various regulatory documents governing higher education, progress has been relatively slow in mainstreaming ODL into academic programs (Bervell & Umar, 2018).

Open and Distance Learning in Higher Education

Within the Commonwealth, ODL has been largely embraced as a form of education delivery that removes geographical and financial barriers, allowing learners, especially those in remote areas, to access quality education without relocating (Zozie & Chawinga, 2018). This mode of learning positions itself as a viable solution that reduces costs, expands access, and improves the quality of learning outcomes (Nkwenti, 2023). ODL is thus a strategic response to issues surrounding access, flexibility and cost-effectiveness, especially for underserved populations. Prominent examples in the use of ODL could be seen in institutions such as the University of South Africa, National Open University Nigeria, the African Virtual University and the Open University of Malaysia, which offer benchmarks for scalable ODL systems (Jegede, 2019). While there is a long history of failed attempts to introduce ODL in Cameroonian HEIs, its need was highly felt in the wake of the COVID-19 pandemic, which disrupted traditional face-to-face teaching and exposed gaps in digital learning readiness (Ndongfack, 2016; Njie & Ngum, 2022). Owing to the proven potential of ODL, MINESUP recommended HEIs to embrace a blended learning approach with the use of digital platforms (MINESUP, 2021). While this has been the case, its implementation and acceptance among stakeholders across the country remain varied. To understand the factors contributing to the slow pace of ODL implementation in higher education in Cameroon, this study interrogates the following research question: ***What are stakeholders' perspectives towards embracing open and distance learning in Cameroon?***

Literature Review

To understand factors underpinning the perspectives in the adoption of ODL as an innovative learning model in the Cameroon higher education system, the Diffusion of Innovation (DOI) Theory guided the process (Rogers, 2003). DOI provides a framework for understanding how new ideas and technologies spread within a society. Rogers upholds that five key factors – *relative advantage, compatibility, complexity, trialability, and observability* – underpin the spread of an innovation across a population. Within the context of ODL, relative advantage refers to whether stakeholders see ODL as more beneficial compared to traditional methods; compatibility refers to how this mode of learning aligns with the existing values and needs of the current education system; and complexity, on the other hand, is about stakeholders' perceived ease or difficulty in implementing ODL. *Trialability* focuses on opportunities to experiment with ODL before full implementation, while *observability* is the extent to which outcomes of ODL are visible to stakeholders.

Researchers have used these factors to further understand the demand for higher education and the use of ODL as a response strategy. From a global perspective researchers argue that ODL has a *relative advantage* over campus-based learning, which serves as a primary motivator for its proponents (Daniel, 2012; Nkwenti, 2023). Moreover, limited spaces in HEIs and low tuition fees make ODL an attractive alternative (Tchamyou, 2020). The alignment of ODL with the current education system in settings with low ICT penetration rates and low digital literacy poses a problem of *compatibility* (Ngwacho, 2021). Improving infrastructure and digital skills training could further drive ODL adoption in Cameroon. Some

researchers reported in their study that ODL learners perceived complexity in using ODL platforms because they were not user-friendly systems and engagement. This adversely affected the adoption rates (Zawacki-Richter & Koumba, 2022; Ekanem & Nkeng, 2023). Other researchers reported that pilot programmes or *trialability* are paramount in the effective implementation of ODL. Pilot programmes reduce uncertainty and increase user confidence. Moreover, institutions and faculty will embrace ODL platforms and instructional practices when they have the opportunity to run a pilot whereby, they can test the tools, assess their functionality, and make adjustments before committing to the institution (Rogers, 2003; Moore & Kearsley, 2012). What works well is a phased approach whereby stakeholders evaluate the engagement of learners, adaptability of faculty, and the effectiveness of deployed technology, all of which contribute to informed decision-making before the full adoption of ODL (Zawacki-Richter & Koumba, 2022).

Observability, or visible success stories as demonstrated by institutions practising ODL on its part, influences adoption (Fongwa, 2021). Rogers (2003) remarked that visible indicators that illustrate improved access, an increase in learner enrolment or satisfactory success stories positively influence wider adoption of ODL. In the same perspectives, the documentation of ODL success stories in institutional reports and its sharing in communities of practice strengthen the legitimacy and perceived value of ODL (Bates, 2015). Hence, the need for institutions and practitioners to keep track, conduct research and share ODL best practices.

In the midst of these, learners, faculty, institutional leaders, and policymakers as stakeholders have diverse perspectives of ODL (Tchoumbou & Nchinda, 2020). Learners appreciate the self-paced and flexible nature of ODL because it offers them the opportunity to pursue their studies while working and also living in the family (Bozkurt et al., 2015). This notwithstanding, research holds that limited interaction, self-motivation and digital access are key concerns. Furthermore, learners in marginalised communities often suffer from unstable electricity supply and little internet access (Means et al., 2014). While learners' perspectives align with how beneficial they see ODL, faculty views depend on institutional support and digital competence. However, a majority of them see ODL as a pathway to innovate pedagogically, even though others express concerns about increased workload and inadequate training (Al-Fraihat et al., 2020). On the other end, institutional leaders perceive ODL as a source of income and also as a strategy to widen access to education. Conversely, they see quality assurance and learner retention as major issues underpinning the implementation of ODL (Zawacki-Richter et al., 2020). Policymakers on their part are noted for championing ODL as a viable pathway for the democratisation of education, especially in under-resourced areas or communities. Sustaining ODL implementation requires each institution to formulate a clear regulatory framework, invest in ICT infrastructure, develop faculty digital skills and align its strategic plan with national education goals (UNESCO, 2020).

Methodology

Research design and target population

This study adopts the qualitative research approach to explore participants' perceptions, attitudes, and experiences. In order to understand how stakeholders experience and interpret the ODL transformation in their contexts, a phenomenological design was adopted. The purposefully selected participants were 10, made up of 3 faculty from public and private HEIs, 2 higher education learners, 2 institutional leaders, 2 Ministry of Higher Education officials, and 1 Information Technology support staff involved in the implementation of ODL.

Data collection instruments

The data were collected; instruments were made up of two sections: the first section was made up of items designed to collect participants' demographic information. The second part was made up of five open-ended questions formulated based on the five key factors highlighted in Roger's Diffusion of Innovation Theory, notably relative advantage, compatibility, complexity, trialability, and observability, which underpin the spread of an innovation across a population. Open-ended questions based on the five key factors were formulated to probe participants' perspectives towards embracing open and distance learning in Cameroon.

Data Analysis

The qualitative data collected was analysed using the thematic approach (Braun & Clarke, 2006). To do this, five steps guided the process: data transcription, familiarisation with data, coding of transcripts using a word processor, identification of emerging themes, and review and refinement of themes. After the five-step process, the data were also cross-referenced using the word processor lists in order to organise key stakeholder responses and create visual dashboards for thematic comparison.

Findings

Based on stakeholder questionnaires and the thematic analysis approach, the following findings were arrived at:

Theme	Open ended question	**Emerging Subthemes**	**Stakeholder** perspectives
Relative Advantage	What are the benefits of adopting ODL compared to traditional face-to-face, campus-based education?	Cost-effectiveness, Flexible learning model, widen access	Learners valued ODL's because it provides them the opportunity to study anywhere, anytime or while working. Institutional leaders saw cost benefits.
Compatibility	How well do you think ODL fits with the current values, goals, and infrastructure of your institution?	Lack of digital infrastructure, slow internet connectivity unstable electricity, low digital literacy, existing institutional policy does not make provision for ODL	Faculty and institutional leaders cited mismatch with traditional instructional practices and unstable electricity, slow and unstable internet connectivity, low ICT capacity.

Complexity	What challenges have you experienced or do you anticipate in the implementation or use of ODL systems?	Unfriendly LMS user interface, inadequate training on the use of digital tools, increased workload	Faculty found ODL platforms difficult to master and time-consuming.
Trialability	Have you, as an individual or institution, experimented with the use of ODL? If so, what are your impressions of ODL?	Pilot projects improve understanding of ODL, it increased buy-in, it is often limited in scope	Ministry officials noted that the perception of ODL improved during COVID-19 and this has encouraged some HEIs to foster trial rollouts.
Observability	Which institution or country have you observed any positive or negative outcomes from ODL initiatives?	ODL success stories comes from small ODL pilot programmes from Universities Buea and Dschang Cameroon, the University of South Africa (UNISA), National Open University of Nigeria (NOUN), Open University Malaysia. These, influenced support	Information Technology staff and policymakers recognised the impact of visible ODL success stories.

Discussion

The findings reveal alignment with Rogers' five key factors, notably *relative advantage, compatibility, complexity, trialability, and observability,* which underpins the spread of an innovation across a population (Rogers, 2003). *Relative advantage* was well acknowledged by learners who valued ODL's ability to provide them with the opportunity to study anywhere, anytime or while working. Institutional leaders perceive the cost-effectiveness of ODL and its ability to widen access to learning as an innovation to campus-based education. These findings corroborate with the works of other scholars who argued that ODL has a *relative advantage* over campus-based learning and thus serves as a primary motivator for its proponents (Daniel, 2012; Nkwenti, 2023). In the same perspectives, limited spaces in HEIs and low tuition fees make ODL an attractive alternative (Tchamyou, 2020). Thus, ODL provides an opportunity, especially for those in rural communities, those from low-income families and those who want to stay at their jobs while fostering their education.

While ODL has a relative advantage over campus-based learning, faculty and institutional leaders perceive *compatibility* as an issue. They argued that ODL does not match with traditional instructional practices. They also cited unstable electricity, low internet bandwidth or unstable connectivity, especially in rural areas, and low ICT skills as pre-empting them from tapping the full potential of ODL. This is so because contemporary ODL delivery practices rely more on the use of digital technology to widen access and reduce delivery cost. These findings are in line with other research findings that argue that aligning ODL with traditional education practices largely characterised by low ICT penetration rates and low

digital literacy poses a problem of c*ompatibility* (Ngwacho, 2021). In order to make ODL compatible with campus-based education, the improvement of digital infrastructure and skills training is of utmost importance in the process of ODL adoption in Cameroon.

In the same perspective, faculty reported that they found ODL platforms difficult to master and time-consuming. An indication that the *complexity* of learning management systems is generally seen as a significant barrier to ODL adoption since such platforms are not user-friendly and training is inadequate to empower users to embrace it with relative ease (Zawacki-Richter & Koumba, 2022). To mitigate this issue, there is a need for faculty to undergo adequate training to upgrade their competences with digital skills and instructional design. Additionally, repurpose the intuitional learning management system to make it user-friendly and easy to use. While these are being done, advocacy for ODL among faculty is an imperative to enable them to see the relevance and potential of this learning delivery mode often characterised by flexibility and cost-effectiveness.

The potential of ODL cannot be underestimated because during COVID-19, its trialability**,** particularly in short-term pilot programmes, left so much to be desired. Ministry officials noted that the perception of ODL improved during COVID-19, and this has encouraged some HEIs to foster trial rollouts. This finding corroborates with other research that highlighted the potential of trialability as strategic in the adoption of an innovation (Rogers, 2003; Moore & Kearsley, 2012). These authors uphold that it is always good to embrace innovation through small pilot projects, as it offers the opportunity to identify and mitigate factors that could impede the effective implementation of ODL. By these, institutions willing to transform instructional delivery through ODL could explore a phased approach in the implementation process while closely monitoring and reporting every aspect of the process (Zawacki-Richter & Koumba, 2022).

While reporting on ODL pilot projects is critical, information technology staff and policymakers in our study recognised the impact of visible ODL success stories. An indication that *observability* is a critical factor in the adoption of ODL (Fongwa, 2021). Besides learning from local pilots' programmes, there exist a whole lot of best practices that are documented in the COL, UNISA, NOUN and OUM repositories (Commonwealth of Learning [COL], n.d.; University of South Africa [Unisa], n.d.; National Open University of Nigeria [NOUN], n.d.; Open University Malaysia [OUM], n.d.). Sharing of best practices in professional communities strengthens the potential of ODL and projects it as a viable pathway for the delivery of higher education (Bates, 2015).

Recommendations

Based on findings, these researchers made the following recommendation: firstly, that HEIs invest more in the development of digital infrastructure as compared to brick-and-mortar facilities. While doing so, emphasis should be laid on the provision of reliable internet access, devices, and uninterruptible power supply, especially for institutions in rural communities; secondly, institutions should also prioritise professional development in digital literacy by providing structured training for faculty, learners, and institutional leaders on how to use the ODL platform; and thirdly, HEIs should pilot and evaluate ODL

initiatives before scaling up to avoid pitfalls. Such trials should be ODL programmes with measurable outcomes to build confidence among sceptical stakeholders; fourthly, that HEIs showcase the success stories of their ODL initiatives both locally and internationally, as this is critical in building credibility and influencing adoption; and fifthly, that each HEI should develop a clear institutional ODL policy framework. This strategic document should be aligned with national strategies and institutional goals. Include mechanisms to incentivise faculty adoption and quality benchmarks.

Conclusion

Using the Rogers Diffusion of Innovation theory provided a structured understanding of stakeholder concerns and motivations in the adoption of ODL in Cameroon's HEIs. The study identified inadequate infrastructure, insufficient training in digital literacy, and perceptions of complexity as factors that could hinder the effective adoption of ODL in Cameroon. While stakeholders are optimistic, they are encouraged to invest not only in technology but in building a culture of digital transformation. An ODL initiative in any HEI must be phased out and strategically led. This entails incrementally implementing the initiative and transparently evaluating it to ensure both quality and equity in the instructional delivery process.

References

- Abbad, M. M., Morris, D., & de Nahlik, C. (2009). Looking under the bonnet: Factors affecting student adoption of e-learning systems in Jordan. *International Review of Research in Open and Distributed Learning*, 10(2), 1–25. https://doi.org/10.19173/irrodl.v10i2.596
- Al-Fraihat, D., Joy, M., & Sinclair, J. (2020). Evaluating E-learning systems success: An empirical study. *Computers in Human Behaviour*, 102, 67–86. https://doi.org/10.1016/j.chb.2019.08.004
- Bates, T. (2015). *Teaching in a Digital Age: Guidelines for Designing Teaching and Learning*. Vancouver, BC: Tony Bates Associates Ltd.
- Bervell, B., & Umar, I. N. (2018). Utilization decision towards LMS for blended learning in distance education: Modelling the effects of personality traits with the Technology Acceptance Model. *Contemporary Educational Technology*, 9(3), 256–274.
- Bozkurt, A., Akgün-Özbek, E., & Zawacki-Richter, O. (2015). Trends and patterns in distance education (2014–2015): A content analysis of research articles. *International Review of Research in Open and Distributed Learning*, 16(5), 330–363.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101.
- Cameroon National Institute of Statistics. (2022). *Demographic and Statistical Report*. Yaoundé, Cameroon.
- Commonwealth of Learning. (n.d.). *Open Educational Resources Policy*. Retrieved May 18, 2025, from https://www.col.org/about/values/cols-policy-open-educational-resources/(Commonwealth of Learning)
- Daniel, J. (2012). Making sense of MOOCs: Musings in a maze of myth, paradox and possibility. *Journal of Interactive Media in Education*, 2012(3), 18.
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319–340.
- Fongwa, S. (2021). Higher education expansion in Cameroon: The role of digital learning. *African Journal of Higher Education Studies, 7*(1), 54-72.
- Fonjong, L. N. (2004). The challenges of access to university education in Cameroon. *Journal of Social Science*, 1(1), 45–52.
- Ekanem, M., & Nkeng, G. (2023). Digital learning adoption in Cameroon: A DOI perspective. *African Journal of Education and Technology, 5*(2), 112-130.
- Jegede, O. (2019). Open and Distance Learning Practices in Africa: Issues and Challenges. *International Review of Research in Open and Distributed Learning, 20*(4), 94–112.
- Means, B., Bakia, M., & Murphy, R. (2014). *Learning online: What research tells us about whether, when and how*. Routledge.
- Ministry of the Economy, Planning and Regional Development [MINEPAT]. (2020). *Cameroon National Development Strategy 2020-2030 (NDS30): For Structural Transformation and Inclusive Development.* Government of Cameroon.

- Ministry of the Economy, Planning and Regional Development [MINEPAT]. (2023). Education and Training Sector Strategic Plan 2023 -2030. Government of Cameroon.
- MINESUP (2021a). *Annual Report on Higher Education in Cameroon*. Ministry of Higher Education.
- MINESUP (2021). *Annual Report on Higher Education and Digital Transformation in Cameroon*. Ministry of Higher Education.
- Moore, M. G., & Kearsley, G. (2012). *Distance Education: A Systems View of Online Learning* (3rd ed.). Belmont, CA: Wadsworth.
- National Open University of Nigeria. (n.d.). *Open Educational Resources Unit*. Retrieved May 18, 2025, from https://nou.edu.ng/open-educational-resources-unit/(nou.edu.ng)
- Ndongfack, M. N. (2016). *Baseline study on the current state of open and distance learning in Cameroon*. Commonwealth of Learning. https://oasis.col.org/bitstreams/5fd86142-9cbd-4270-95f1-7a77edf377a8/download
- Nkengafac, D., & Fonyuy, K. (2022). Integrating Microsoft Teams for Learning in Cameroonian Universities: Experiences from COVID-19 Disruptions. *African Journal of Educational Technology, 7*(1), 33–45.
- Nkwenti, M. N. (2023). Distance Education Research Trends in Cameroon. In Aluko, F.R. and Coetzee, D. (Ed.), Does Distance Education in the Developing Context Need More Research? Building Practice into Theory (Volume Two) (pp. 17-29). ESI Press. Retrieved from https://www.oerafrica.org/content/book-publication-does-distance-education-developing-context-need-more-research
- Ngwacho, A. (2021). E-learning challenges and opportunities in Cameroon's higher education system. *International Journal of Educational Research, 9*(1), 45-60.
- Njie, M., & Ngum, R. M. (2022). Online learning in sub-Saharan Africa: A review of the challenges and opportunities in Cameroon's higher education sector. *International Journal of Education and Development using ICT*, *18*(1), 45–60.
- Open University Malaysia. (n.d.). *OER.OUM – Open Educational Resources*. Retrieved May 18, 2025, from https://myoer.oum.edu.my/(OER.OUM)
- Republic of Cameroon (2023). Law No 2023/007 to Lay Down Guidelines on the Organisation and Functioning of Higher Education in Cameroon. Retrieved from https://www.prc.cm/en/news/the-acts/laws/6651-law-no-2023-007-of-25-july-2023-on-higher-education-policy-in-cameroon
- Rogers, E. M. (2003). *Diffusion of innovations* (5th ed.). Free Press.
- Tchoumbou, N. R., & Nchinda, J. M. (2020). E-learning adoption in Cameroonian universities: A case study of the University of Buea. *Journal of Education and Information Technologies, 25*(5), 4123–4142.
- Tchamyou, V. S. (2020). Education, lifelong learning, inequality and financial access: Evidence from African countries. *Contemporary Social Science*, 15(1), 7–25.
- UNESCO. (2020). *COVID-19 and higher education: Today and tomorrow – Impact analysis, policy responses and recommendations*. https://unesdoc.unesco.org/ark:/48223/pf0000375693
- UNESCO. (2022). *Education Sector Analysis: Cameroon*. UNESCO Institute for Statistics.

- University of South Africa. (n.d.). *Unisa Open Educational Resources (OERs)*. Retrieved May 18, 2025, from https://www.unisa.ac.za/sites/corporate/default/Unisa-Open(unisa.ac.za)
- Zawacki-Richter, O., Qayyum, A., Bozkurt, A., Jung, I., & Xiao, J. (2020). *Open and distance education in Asia, Africa and the Middle East: National perspectives in a digital age* (Vol. 2). Springer
- Zawacki-Richter, O., & Koumba, P. (2022). Open and distance learning in Cameroon: Adoption and challenges. *Distance Education Review, 12*(1), 78-95.
- Zozie, P. A., & Chawinga, W. D. (2018). University students' use of mobile devices for learning and their effects on academic performance: A case of Mzuzu University, Malawi. *South African Journal of Information Management, 20*(1), 1–9. https://doi.org/10.4102/sajim.v20i1.915