

Development and Validation of Open Distance e-Learning Student Engagement Scale (ODeL-SES)

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ABSTRACT

Open Distance e-Learning (ODeL) is expanding rapidly, making student engagement a central concern for persistence, performance, and satisfaction. However, existing scales often overlook the unique realities of Nigerian ODeL, which includes 32 distance learning institutions. This study developed and validated the Open Distance e-Learning Student Engagement Scale (ODeL-SES), tailored to the University of Ibadan Distance Learning Centre (UI-DLC). Guided by a multidimensional model of engagement, 29 items were initially generated with input from facilitators and e-

tutors. A pilot electronic survey of 102 students underwent exploratory factor analysis and content validation. Findings supported a three-factor structure: behavioural, emotional, and cognitive engagement, with Cronbach alpha values between 0.78 and 0.85, indicating strong reliability. Expert review confirmed content validity (0.96), resulting in 21 refined items. The ODeL-SES provides a reliable, context-sensitive tool to assess engagement, inform policy, and strengthen quality assurance across Nigeria's growing ODeL sector.

1.0 INTRODUCTION

Open and Distance e-Learning (ODeL) has become a significant force in the transformation of higher education globally, particularly in Nigeria. ODeL refers to a teaching and learning arrangement in which educators and learners are physically separated but engaged in interactive learning through telecommunication and digital media. It combines the principles of both open learning and distance learning. Open learning is a form of education that is not restricted by age, gender, time or location while distant learning involves situations where the teacher and the student are physically apart but communicate with the use of media and technology like Google Classroom, pre-recorded videos and audio materials, Zoom and e-libraries (Wordu, 2020). ODeL incorporates policies and practices that provide access to education with minimal or no barriers (Tabe et al., 2025).

ODeL emerged primarily to expand access to education and to address barriers that prevent many people from attending conventional face-to-face educational institutions (Farid, 2022). The conventional system of education often excludes certain groups such as the fully employed individuals, the aged, religiously segregated women, school dropouts, and economically disadvantaged persons. Additionally, Nigeria's rapidly growing population makes it difficult for conventional institutions to meet the increasing demands for higher education (Ekwu & Ogu, 2025; Muftahu & Jamil, 2020). Currently, there are about 270 universities in Nigeria catering to roughly 2.1 million students, while approximately 1.8 million candidates seek admission each year (Business Day, 2025). ODeL has helped to absorb this overflow which has eased the pressure of admission while also offering flexible, accessible and scalable learning opportunities.

According to the National Universities Commission (NUC, 2023), there are now 32 approved Open and Distance e-Learning (ODeL) centres in Nigeria (As shown in table 10, Appendix B), demonstrating the expanding role of ODeL in bridging educational access gaps. ODeL provides opportunities for all citizens to acquire education irrespective of age, gender or economic status. Beyond access, ODeL plays a crucial role in developing human capital, creating employment opportunities,

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