



Exploring Universal Design for Learning as a Tool for Fostering Equity and Inclusion in Teacher Education: The Case of Ghana

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Abstract

This study explored how Universal Design for Learning (UDL) can be leveraged to promote equity and inclusion in teacher education in Ghana. Using a qualitative exploratory design, data were collected through semi-structured interviews with college of education lecturers, focus group discussions with student teachers, classroom observations, and document analysis of curriculum and policy frameworks. Thematic analysis revealed that while inclusive practices were occasionally employed, UDL as a structured pedagogical framework was poorly understood and inconsistently applied. Major barriers included rigid curricula, large class sizes, limited resources, and entrenched cultural attitudes toward teaching and learning. Nevertheless, enabling conditions such as Ghana's Inclusive Education Policy (2015), the National Teacher Education Curriculum Framework (2018), growing enthusiasm among trainees, and increasing access to information and communication technologies present significant opportunities for UDL integration. The findings suggest that although UDL is not yet systematically embedded in teacher education, it holds strong potential to enhance inclusive teacher preparation in Ghana if explicitly integrated into curricula, aligned with practicum assessment, and supported through targeted capacity building and resource provision.

Keywords: *Universal Design for Learning, Equity, Inclusion, Teacher Education, Teacher Educators*

Introduction

Globally, inclusive education is increasingly recognized as a cornerstone of equitable and quality education systems (UNESCO, 2020). In Ghana, policy initiatives such as the Inclusive Education Policy (2015) and the National Teacher Education Curriculum Framework (NTECF) (2018) demonstrate a strong commitment to preparing teachers capable of addressing learner diversity. Despite these policy advances, persistent challenges—particularly large class sizes, limited instructional resources, rigid curricula, and examination-driven teaching—continue to constrain effective classroom implementation (Ofori-Addo, 2021).

Universal Design for Learning offers a proactive framework for addressing these challenges by promoting flexible approaches to engagement, representation, and action and expression that anticipate learner variability rather than reacting to it (CAST, 2018; Meyer, Rose, & Gordon, 2014). While UDL has been widely studied and applied in high-income contexts, evidence from Sub-Saharan Africa remains sparse. This study therefore examines how UDL is understood, represented, and practiced within Ghanaian teacher education, with particular attention to perceived barriers and contextual opportunities for implementation.

Universal Design for Learning is a research-based framework grounded in cognitive neuroscience that advocates for flexible curriculum design to support diverse learners (Meyer et al., 2014). By offering multiple means of engagement, representation, and action and expression, UDL shifts education away from a “one-size-fits-all” approach toward inclusive learning environments that remove barriers before they impede participation.

Empirical studies demonstrate that UDL enhances accessibility, motivation, and learner participation across diverse contexts (Rao, Ok, & Bryant, 2014; Capp, 2017). Katz and Sokal (2016), for instance, found that learners in UDL-informed classrooms reported stronger engagement and a greater sense of belonging. Collectively, these findings position UDL as a viable pathway toward achieving Sustainable Development Goal 4 on inclusive and equitable quality education (UNESCO, 2020).

However, UDL adoption remains uneven in low- and middle-income countries due to limited professional development, inadequate resources, and weak institutional support (Dalton, McKenzie, & Kahonde, 2012; Al-



Azawei, Serenelli, & Lundqvist, 2017). In Sub-Saharan Africa, the absence of localized implementation models further complicates translation from policy to practice.

In Ghana, inclusive education is strongly emphasized in national policy documents, yet UDL is not explicitly referenced in either the Inclusive Education Policy (2015) or the NTECF (2018). This omission suggests a policy–practice gap in operationalizing inclusive pedagogy. Studies by Boateng (2020) and Gyimah (2022) highlight that while inclusive ideals are promoted, many educators rely on traditional teacher-centered methods due to limited training and contextual constraints.

Importantly, the literature underscores the need for contextually appropriate and low-tech UDL strategies in resource-constrained settings. These include the use of storytelling, peer tutoring, flexible grouping, oral presentations, think-pair-share activities, visual organizers on chalkboards, and formative questioning—approaches that do not rely heavily on advanced technology but align strongly with UDL principles (Dalton et al., 2012; Kendall, 2018). Without such contextualization, UDL risks being perceived as an imported, technology-intensive framework disconnected from local realities.

This study responds to the limited empirical evidence on UDL in Ghana by examining how teacher educators and trainees perceive and enact UDL principles within existing institutional and cultural constraints.

Methodology

Research Design

A qualitative exploratory design was employed to gain in-depth insights into participants’ perceptions, practices, and institutional contexts surrounding UDL in teacher education.

Population and Sample

The target population comprised lecturers in colleges of education in Ghana’s Bono and Eastern Regions. Ten lecturers (five from each region) were selected through convenience sampling. Although the sample size is modest, it enabled the collection of rich, contextualized data and aligns with qualitative research objectives focused on depth rather than statistical generalization. The findings therefore offer analytical insights relevant to similar teacher education contexts in Ghana.

Data Collection

Data were gathered through:

1. Semi-structured interviews with ten lecturers
2. Four focus group discussions with student teachers (6–8 participants each)
3. Analysis of curriculum and policy documents
4. Classroom observations of teaching practices

Data Analysis

Thematic analysis was conducted using both inductive coding and deductive categories drawn from UDL principles (Braun & Clarke, 2013). Credibility was enhanced through triangulation across data sources.

Findings And Discussion

Awareness and Understanding of Universal Design for Learning



Both lecturers and student teachers demonstrated limited explicit knowledge of UDL. Inclusive strategies were sometimes used intuitively but were rarely linked to UDL principles, echoing findings from Boateng (2020) and Ofori-Addo (2021).

Representation of UDL in Teacher Education

Document analysis revealed minimal explicit integration of UDL in curricula. Assessment practices remained largely examination-driven, limiting flexibility in demonstrating learning. Embedding UDL explicitly within the NTECF would strengthen coherence between policy and practice.

Practices and Strategies for Inclusive Teaching

Lecturers employed group discussions, visual aids, and occasional ICT tools, indicating some attention to representation and engagement. However, action and expression were weakly developed. Student teachers were rarely given opportunities to demonstrate learning through alternative formats such as projects, oral explanations, peer teaching, portfolios, or creative outputs. Most assessments relied on written tests, restricting learner expression and agency.

Barriers to UDL Adoption

Key barriers included large class sizes, rigid curricula, limited resources, and cultural attitudes toward teaching and learning. These cultural attitudes manifested as strong expectations of teacher authority, reliance on rote learning, and perceptions that quiet compliance equates to effective learning. Such norms discourage learner choice, active participation, and alternative forms of expression—core elements of UDL.

Opportunities and Enablers

Supportive policy frameworks, growing trainee enthusiasm, and increasing ICT adoption present strong opportunities for UDL integration. These findings align with UNESCO (2020), which emphasizes policy alignment and technology as drivers of inclusive education.

Outcomes and Future Directions

Learners were more involved when inclusive practices were used. However, trainees were not confident enough to use UDL in a systematic way. This supports the assertion made by Florian and Black-Hawkins (2011) that teacher education must completely incorporate inclusive pedagogy.

Conclusion

Universal Design for Learning is not yet systematically embedded in Ghanaian teacher education, although elements of inclusive practice exist informally. Given supportive policy conditions, UDL provides a practical and adaptable framework for strengthening equity and inclusion if intentionally localized and embedded within teacher preparation systems.

Recommendations

1. Explicitly integrate Universal Design for Learning into the National Teacher Education Curriculum Framework.
2. Provide sustained professional development on UDL for teacher educators.
3. Promote low-tech UDL strategies suited to Ghanaian classrooms.
4. Invest in accessible instructional and assistive resources.
5. Model UDL-aligned teaching practices in colleges of education.
6. Embed UDL principles into practicum assessment and evaluation, ensuring that inclusive pedagogy is assessed where policy meets classroom practice.
7. Strengthen peer mentoring and collaborative learning among trainees.
8. Conduct longitudinal research on UDL-informed teacher preparation.



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