

The Realities and Readiness of Implementing Innovative Pedagogies in Nigeria Colleges of Education

Ngozi Melvina Ezeiruaku

Department of Curriculum and Instructional Technology, Nwafor Orizu College of Education, Nsugbe, Anambra State, Nigeria

Corresponding Author's Email: melvinangozi8@gmail.com

Abstract

The transformation of teacher education in Nigeria requires a critical interrogation of existing pedagogical practices in Colleges of Education (CoE), particularly in light of global shifts toward innovative, learner-centered approaches. This paper examines the realities and readiness of implementing innovative pedagogies specifically the Flipped Classroom Model and Self-Regulated Learning (SRL) within the Nigerian Colleges of Education context. Drawing on an extensive review of contemporary literature, the paper adopts a conceptual-analytical framework to explore the structural, demographic, pedagogical, and psychological barriers that impede meaningful pedagogical reform. The findings reveal that chronic infrastructural deficits, inadequate digital access, massified classrooms, curriculum rigidity, and a deeply entrenched culture of passive learning collectively constitute formidable systemic obstacles. Nonetheless, the paper identifies strategic pathways that hold promise for context-sensitive reform, including the leveraging of low-tech and asynchronous mobile tools, the redesign of large-class instructional environments, explicit scaffolding of self-regulatory competencies, and robust institutional and policy interventions. The paper argues that readiness for pedagogical innovation in Nigerian Colleges of Education is not merely a technical or resource question but a multidimensional challenge requiring coordinated action at institutional, governmental, and professional levels. It concludes that while the road to transformation is arduous, it is navigable through deliberate, phased, and contextually responsive strategies. This work contributes to the growing discourse on reimagining teacher education in Nigeria.

Keywords: Realities, Readiness, Implementing, Innovative pedagogies, Nigerian Colleges of Education.

Introduction

The global landscape of higher education has witnessed an unprecedented paradigm shift in the twenty-first century, moving decisively from transmissive, teacher-centered instructional models toward participatory, student-centered and technology-enhanced pedagogical frameworks. This transformation is not merely cosmetic; it is driven by an emergent consensus among educational researchers, policymakers, and practitioners that the passive reception of knowledge is fundamentally inadequate preparation for graduates entering a complex, dynamic, and knowledge-intensive world (Bates, 2019; UNESCO, 2022). Innovative pedagogies encompassing approaches such as the flipped classroom, project-based learning, collaborative inquiry, and self-regulated learning have therefore gained considerable global traction as evidence-based alternatives capable of fostering higher-order thinking, intrinsic motivation, and lifelong learning dispositions.

In Nigeria, Colleges of Education (CoEs) occupy a strategic position within the national education architecture. As the primary institutions responsible for the professional preparation of basic and primary-level school teachers, their pedagogical orientations carry downstream consequences for millions of Nigerian school children. The National Commission for Colleges of Education (NCCE) has, through successive policy cycles, emphasized the need to modernize teacher preparation programmes, and the National Policy on Education (Federal Republic of Nigeria, 2013)

explicitly advocates for the adoption of contemporary, learner-centered methodologies. Yet, despite this policy intent, empirical evidence consistently documents a yawning chasm between policy prescription and classroom practice in Nigerian CoEs (Okonkwo & Bello, 2021; Ezeiruaku, Akubugwo & Okonkwo 2020; Adeyemi & Falade, 2020).

This disconnect is particularly troubling given Nigeria's demographic realities: with over 87 Colleges of Education serving a student population of hundreds of thousands, and with a national teacher-to-pupil ratio in basic education that is among the most stretched in sub-Saharan Africa (UIS/UNESCO, 2022), the quality of pedagogical preparation within CoEs carries profound systemic implications. The question, therefore, is not whether innovative pedagogies are desirable, the scholarly consensus on their efficacy is robust but whether Nigerian Colleges of Education possess the institutional readiness, professional will, and structural capacity to actualize such approaches in a meaningful and sustainable manner.

Despite widespread global endorsement of innovative pedagogical practices, Nigerian Colleges of Education continue to be characterized predominantly by chalk-and-talk instructional approaches, examination-driven assessment regimes, and lecturer-centered classroom dynamics (Eze & Effiong, 2022; Oluwole, 2020). Infrastructural inadequacies including erratic electricity supply, low bandwidth internet access, insufficient digital devices, and overcrowded lecture halls compound the pedagogical inertia within these institutions. Furthermore, lecturers in Nigerian CoEs often report limited professional development opportunities in innovative teaching methodologies, and many remain unconvinced of the feasibility or relevance of such approaches within their contextual realities (Adeyemi & Falade, 2020; Owolabi et al., 2021).

Simultaneously, students in Nigerian CoEs demonstrate persistently low levels of self-regulated learning behaviours a foundational competency for success in innovative, student-centered learning environments. The cultural and pedagogical conditioning that students bring from secondary schooling, where rote memorization and passive reception are normative, renders the transition to self-directed, inquiry-based learning particularly challenging (Okonkwo & Bello, 2021). Taken together, these realities constitute a complex web of barriers that demand rigorous scholarly interrogation rather than superficial policy optimism.

The problem, therefore, lies in the inadequate understanding and documentation of the specific realities and structural readiness of Nigerian Colleges of Education with respect to the implementation of innovative pedagogical frameworks. Without such a systematic analysis, reform efforts risk being decontextualized, unsustainable, and ultimately ineffective.

This paper seeks to achieve four interrelated purposes. First, it aims to establish a robust conceptual framework by explicating the theoretical underpinnings of the Flipped Classroom Model and Self-Regulated Learning, and articulating their synergistic relationship as the basis for innovative pedagogy. Second, it endeavours to undertake a critical analysis of the current situational realities and multi-layered barriers confronting the implementation of innovative pedagogies in Nigerian Colleges of Education. Third, the paper identifies and evaluates strategic pathways that are contextually viable and empirically grounded for advancing pedagogical reform within Nigerian CoEs. Finally, it contributes a contextualized scholarly perspective to the broader discourse on teacher education transformation in Nigeria, offering insights that are relevant to policymakers, institutional administrators, teacher educators, and educational researchers.

Conceptual Framework of Innovative Pedagogies

The conceptual architecture of this paper rests on two interconnected theoretical constructs: the Flipped Classroom Model, which reconceptualizes the structural organization of learning space

and time, and Self-Regulated Learning theory, which addresses the psychological and metacognitive dimensions of effective learning. Together, these frameworks offer a theoretically coherent and empirically substantiated basis for understanding what innovative pedagogy demands of both institutions and learners.

The Flipped Classroom Model: Redefining Space and Time

The Flipped Classroom Model, conceptually attributed to the pioneering work of Bergmann and Sams (2012) and subsequently elaborated by Bishop and Verleger (2013), represents a fundamental inversion of the conventional instructional sequence. In the traditional model, direct instruction or transmission of new content occurs within the classroom space, while practice, application, and consolidation are relegated to out-of-class activities, typically unsupported homework. The flipped model reverses this arrangement: content delivery is relocated to the pre-class environment (often mediated by recorded video lectures, podcasts, or curated digital readings), thereby liberating precious classroom time for active, collaborative, and higher-order cognitive engagement under the guided facilitation of the instructor (Ezeiruaku, 2025; Tucker, 2012). The theoretical warrant for the flipped model draws substantially from Bloom's revised taxonomy (Anderson & Krathwohl, 2001), which positions lower-order cognitive activities remembering and understanding as prerequisites for the higher-order competencies of application, analysis, evaluation, and synthesis. In the flipped paradigm, lower-order processing is accomplished independently during pre-class preparation, so that class time can be devoted to the cognitively demanding, socially enriching activities that benefit most from peer interaction and instructor guidance (Abeysekera & Dawson, 2015; Ezeiruaku et al 2024). Empirical evidence from diverse educational contexts supports the flipped model's efficacy in enhancing academic achievement, student engagement, and critical thinking, though its effectiveness is significantly contingent on student readiness, access to technology, and the quality of instructional design (Hew & Lo, 2018; O'Flaherty & Phillips, 2015). In the Nigerian Colleges of Education context, the flipped classroom presents both compelling possibilities and significant implementation complexities rooted in the digital access deficit that characterizes much of Nigerian higher education.

Self-Regulated Learning (SRL): The Psychological Core

Self-Regulated Learning, as theorized comprehensively by Zimmerman (2000, 2008) and extended by Pintrich (2004), refers to the degree to which learners are metacognitively, motivationally, and behaviourally active participants in their own learning processes. The SRL framework encompasses three cyclically interrelated phases: forethought (goal-setting, strategic planning, and the activation of self-efficacy beliefs prior to engagement with a learning task); performance control (the deployment of cognitive strategies, attentional focus, and self-monitoring during the learning process); and self-reflection (self-evaluation, attribution of outcomes, and adaptive inference following task completion).

Zimmerman's (2000) triadic model of self-regulation conceptualizes the learner as an agent who actively constructs knowledge through goal-directed, strategically managed processes, rather than as a passive recipient of instructionally delivered information. This theoretical repositioning of the learner carries profound pedagogical implications: it demands that instructional environments be explicitly designed to foster metacognitive awareness, promote intrinsic goal orientation, and build the self-efficacy necessary for learners to persist in the face of academic challenge (Pintrich, 2004; Schunk & Zimmerman, 2008). Bandura's (1997) social cognitive theory, particularly his concept of self-efficacy, provides an important complementary theoretical resource, underscoring the role of efficacy beliefs in determining whether students will engage in self-regulatory behaviours at all.

Within Nigerian CoEs, the cultivation of SRL is particularly consequential given the pre-service teachers' future professional roles. A teacher educator who lacks self-regulatory capacity will

be ill-equipped to model, scaffold, or cultivate such capacities in their future learners. The recursive implications of SRL deficits within teacher education are therefore amplified across generations of school children.

The Theoretical Synergy: Reciprocal Interdependence of Structure and Psychology

The Flipped Classroom Model and Self-Regulated Learning are not merely complementary frameworks they are reciprocally interdependent constructs whose synergy defines the theoretical core of innovative pedagogy. The flipped classroom, as a structural and organizational innovation, creates the environmental conditions within which self-regulatory behaviours are both necessitated and nurtured. Conversely, SRL competencies are the psychological preconditions without which the structural affordances of the flipped classroom cannot be productively realized (Abeysekera & Dawson, 2015; Burak, 2019).

Specifically, effective engagement with pre-class learning materials in the flipped model requires students to exercise goal-setting, time management, strategic reading, and self-monitoring all quintessential SRL behaviours. Simultaneously, the active learning environment of the flipped classroom serves as a developmental context within which SRL capacities can be progressively scaffolded and consolidated through collaborative tasks, formative feedback, and instructor modelling of metacognitive processes (Ezeiruaku, Okwo, Ofoegbu, & Asogwa 2025). This bidirectional relationship constitutes what might be termed a theoretically integrated architecture of innovative pedagogy: structure enabling psychology, and psychology animating structure. It is this integrated architecture that the present paper holds as its conceptual reference point in analyzing the realities and readiness of Nigerian Colleges of Education.

The Current Situation and Challenges to Implementation

The implementation of innovative pedagogies in Nigerian Colleges of Education is confronted by a constellation of deeply rooted, intersecting barriers that span institutional, demographic, pedagogical, and psychological dimensions. A realistic appraisal of these barriers is an ethical and scholarly prerequisite for the formulation of credible reform strategies.

Chronic Infrastructural Deficits (The Institutional Barrier)

The infrastructure required for technology-enhanced, innovative pedagogy in Nigerian Colleges of Education remains pervasively inadequate. Access to stable electricity is inconsistent across most CoEs, particularly those located in semi-urban and rural settings (Eze & Effiong, 2022). Internet connectivity, where it exists, is frequently characterized by low bandwidth, high cost, and unreliable service, rendering the streaming or downloading of instructional videos a foundational component of the flipped classroom model practically infeasible for the majority of students (Owolabi et al., 2021).

Computer laboratories are typically insufficiently resourced relative to student enrolment, and personal device ownership while growing through mobile telephony remains unevenly distributed, particularly among students from lower socioeconomic backgrounds (Adeyemi & Falade, 2020). The NCCE's 2020 institutional audit of Nigerian Colleges of Education documented that fewer than 30% of CoEs possessed functional e-learning infrastructure meeting minimum standards for blended or technology-enhanced instruction (NCCE, 2020). Library resources, including access to contemporary academic journals and digital databases, are similarly constrained, limiting both lecturers' and students' ability to engage with current scholarly literature essential for inquiry-based learning models.

Beyond digital infrastructure, the physical learning environment in many CoEs is itself uncondusive to active, student-centered pedagogies. Lecture halls designed for passive, large-group

instruction is poorly suited to the small-group collaborative activities, discussions, and project work that characterize innovative pedagogical approaches. The spatial architecture of the typical Nigerian CoE classroom literally embeds a pedagogical philosophy of transmission, a philosophy that must be materially as well as intellectually dismantled if genuine pedagogical reform has to take place.

Overwhelming Class Sizes and Massification (The Demographic Barrier)

The massification of Nigerian higher education possess a consequence of rapid population growth, expanding secondary school completion rates, and increasing demand for teacher certification has resulted in class sizes within CoEs that are fundamentally incompatible with the facilitative, individualized instructional approaches that innovative pedagogies demand. It is not uncommon for Nigerian CoE lecturers to teach 200 to 400 students in a single lecture session, with student-to-lecturer ratios in many institutions exceeding the NCCE's recommended guidelines by substantial margins (Oluwole, 2020; NUC, 2021).

Such demographic realities pose formidable logistical and pedagogical challenges for the implementation of flipped classroom models and SRL-supportive instruction. Formative assessment and individual feedback which are both critical mechanisms for SRL development become practically unmanageable at such scales. The monitoring of individual student preparation and engagement with pre-class materials is virtually impossible in overcrowded contexts. Moreover, the social dynamics of extremely large classes tend to reinforce anonymity, passivity, and the diffusion of academic responsibility psychological conditions directly antithetical to the development of self-regulation (Okonkwo & Bello, 2021; Oluwole, 2020).

The Federal Government's ongoing university and college expansion agenda, while laudable in terms of access objectives, has not been accompanied by commensurate investment in staffing and infrastructure, thereby intensifying the massification problem. The pedagogical consequences of this policy-resource disjunction are borne disproportionately by lecturers and students in CoEs, who must navigate the contradictions between policy prescriptions for quality and the demographic realities of quantity.

Lecturer Readiness and Curriculum Rigidity (The Pedagogical Barrier)

Pedagogical transformation in Nigerian CoEs is also significantly impeded by limitations in lecturer readiness encompassing both the knowledge and skills required for innovative instructional design and the attitudinal disposition necessary for sustained pedagogical change (Ezeiruaku, 2022). Many lecturers in Nigerian CoEs received their own professional education within decidedly traditional, transmissive pedagogical frameworks and have limited exposure to research-based innovative methodologies (Adeyemi & Falade, 2020; Okafor & Omeje, 2022). Continuing professional development opportunities in innovative pedagogy are irregular, often externally driven by donor-funded projects rather than institutionalized within CoE cultures of practice, and rarely followed by the sustained coaching and reflective communities of practice necessary for genuine pedagogical transfer (Owolabi et al., 2021).

Attitudinal barriers compound skill deficits. Several studies conducted within Nigerian CoEs document lecturer skepticism about the feasibility and appropriateness of innovative pedagogies given their contextual constraints a skepticism that, while empirically understandable, can become self-fulfilling when it translates into institutional inertia (Eze & Effiong, 2022; Oluwole, 2020). The perception that innovative pedagogies are Western-centric constructs designed for well-resourced institutional environments further fuels resistance, underscoring the need for locally adapted and co-constructed models of pedagogical reform.

Curriculum rigidity represents an additional pedagogical barrier. The NCCE's prescribed curriculum for the Nigeria Certificate in Education (NCE), while recently reviewed, continues to be characterized by content overload and a preponderance of summative, examination-focused assessment modalities that are inherently misaligned with the continuous formative feedback cycles essential for SRL cultivation and flipped learning designs. The structural imperatives of curriculum compliance leave lecturers with limited temporal and creative space for pedagogical experimentation and innovation (Okonkwo & Bello, 2021; Federal Republic of Nigeria, 2013).

Passive Learning Culture and Low Student SRL (The Psychological Barrier)

Perhaps the most deeply embedded barrier to innovative pedagogy in Nigerian CoEs is what might be termed the psychology of passive learning a culturally and historically constituted disposition toward compliance-based, authority-centered, and memorization-driven approaches to academic engagement. Secondary schooling in Nigeria, through which CoE students are exclusively recruited, is characterized by high-stakes examination culture, rote learning practices, and minimal encouragement of critical questioning or intellectual agency (Okonkwo & Bello, 2021; Eze & Effiong, 2022). By the time students enter Colleges of Education, this pedagogical conditioning has often become deeply internalized as a schema for what legitimate learning looks and feels like.

Empirical studies confirm that many Nigerian CoE students demonstrate low levels of self-efficacy for independent learning, limited metacognitive awareness, poor time management skills, and a strong preference for direct instruction from authoritative lecturers (Ezeiruaku 2025; Adeyemi & Falade, 2020; Burak, 2019). These psychological profiles are fundamentally incompatible with the demands of the flipped classroom, which requires students to independently and productively engage with pre-class content without the scaffolding of live instructor presence. Students accustomed to passive reception may experience the flipped environment not as liberating but as abandonment, a perception that can undermine engagement and fuel resistance to pedagogical change (Hew & Lo, 2018).

The cultivation of SRL capacities therefore cannot be assumed as a precondition for innovative pedagogy; it must itself be treated as a central pedagogical objective, requiring deliberate, sustained, and metacognitively explicit instructional intervention. The psychological barrier is, in this sense, simultaneously the most challenging and the most consequential dimension of the implementation problem in Nigerian CoEs.

Prospects and Strategic Pathways Forward

Notwithstanding the formidable challenges documented above, the implementation of innovative pedagogies in Nigerian Colleges of Education is neither utopian nor foreclosed. A growing body of scholarship documents successful, contextually adapted interventions that demonstrate the viability of meaningful pedagogical reform under resource-constrained conditions. The following strategic pathways are proposed as evidence-based, contextually responsive frameworks for advancing innovative pedagogy within Nigerian CoEs.

Leveraging Low-Tech and Asynchronous Mobile Tools

The dominant narrative of the flipped classroom model in the global literature is heavily predicated on broadband internet access and sophisticated digital infrastructure. However, a growing body of scholarship advocates for what has been termed the 'low-tech flipped classroom, a contextually adapted model that substitutes bandwidth-intensive video streaming with asynchronous, offline-capable, and low-data pre-class resources (Okonkwo & Bello, 2021; Means et al., 2013). In the Nigerian CoE context, this might involve the distribution of audio podcasts, PDF reading packages, or short-form instructional videos embedded on USB drives or SD cards formats compatible with the feature phones and low-cost smartphones that are increasingly common among

Nigerian CoE students (Owolabi et al., 2021).

Platforms such as WhatsApp, which functions effectively on low-bandwidth mobile data connections, have demonstrated substantial pedagogical utility in Nigerian educational contexts as vehicles for asynchronous content sharing, peer discussion facilitation, and formative feedback exchange (Amry, 2014; Eze & Effiong, 2022). Similarly, the integration of offline-capable learning management system modules deployable on institution-managed local area networks without internet dependency offers a viable infrastructure strategy for institutions with functional internal network capabilities. Such adaptations do not merely accommodate contextual constraints; they creatively reconceptualize what innovation means in resource-constrained settings, generating knowledge that contributes to a genuinely decolonized and contextualized pedagogy scholarship.

Re-Engineering Large-Class Environments

The challenge of massified classrooms need not be an absolute barrier to innovative pedagogy if it is met with deliberate large-class instructional redesign. Research on large-class active learning strategies documents a range of pedagogically productive approaches that are executable even in settings of 200 or more students (Exley & Dennick, 2004; Oluwole, 2020). Structured peer learning architectures including think-pair-share protocols, buzz group discussions, and peer instruction techniques derived from Mazur's (1997) seminal work are demonstrably effective in introducing collaborative, higher-order engagement without requiring the individualized attention that small-class models presuppose.

The strategic deployment of student learning assistants advanced students trained in facilitation and SRL coaching offers a promising model for extending instructor reach within large class. Several Nigerian universities have piloted supplemental instruction and peer mentoring programmes with documented efficacy, providing transferable models for CoE contexts (Oluwole, 2020; Okonkwo & Bello, 2021). Additionally, the reconfiguration of assessment practices from terminal examinations toward portfolio-based, process-oriented, and criterion-referenced approaches can create structural incentives for the kind of ongoing student engagement with content and self-monitoring that SRL frameworks prescribe, even in large-class contexts. Such assessment reform, however, requires deliberate institutional policy support and a reduction in NCCE-mandated examination load.

Scaffolding and Cultivating Self-Regulation Explicitly

Given the documented low levels of SRL among Nigerian CoE students, innovative pedagogy in this context must incorporate explicit SRL development as a deliberate instructional objective rather than an assumed student characteristic. Zimmerman's (2000) cyclical model of self-regulation provides a practical scaffolding framework: lecturers can systematically introduce goal-setting protocols at the commencement of learning units, incorporate structured reflection and self-assessment checkpoints at regular intervals, and utilize think-aloud modelling to render metacognitive processes visible and learnable.

Empirical studies on SRL interventions in Nigeria higher education contexts demonstrate that explicit, sustained instruction in self-regulatory strategies including time management, strategic resource allocation, elaborative interrogation, and self-testing can produce meaningful improvements in student academic engagement and achievement within relatively short intervention periods (Burak, 2019; Schunk & Zimmerman, 2008). Critically, such interventions are not infrastructure-dependent; they require pedagogical intentionality, relational investment, and reflective practice on the part of lecturer's resources that are, at least in principle, available within Nigerian CoEs regardless of material constraints.

Professional development programmes for CoE lecturers should therefore prioritize metacognitive and SRL-focused pedagogical competencies alongside technical digital skills. The NTI (National Teachers' Institute) and NCCE's professional development architectures provide existing institutional platforms through which such competency-building can be systematically embedded, scaled, and evaluated. Peer learning communities within CoEs structured around collaborative action research, lesson study cycles, and critical friend protocols offer sustainable, contextually grounded mechanisms for the ongoing refinement of SRL-supportive instructional practice.

Institutional and Policy Reforms

Sustainable pedagogical transformation in Nigerian Colleges of Education ultimately requires more than isolated classroom interventions; it demands systemic institutional and policy reforms that create enabling conditions for innovative pedagogy at scale. At the institutional level, this entails a fundamental reconceptualization of lecturer performance evaluation criteria moving beyond teaching hours and student pass rates toward the recognition and reward of pedagogical innovation, student-centred instructional design, and reflective professional development. Institutional leadership that actively models, champions, and protects spaces for pedagogical experimentation is a critical enabler that the literature consistently identifies as a distinguishing feature of transformative educational institutions (Ezeiruaku et al 2020; Fullan, 2020; Adeyemi & Falade, 2020).

At the policy level, the NCCE must take decisive steps to reduce the content overload of the NCE curriculum, creating curricular space for inquiry-based, project-driven, and assessment-for-learning approaches that are structurally incompatible with content-heavy, coverage-oriented syllabi. The integration of innovative pedagogical competencies as explicit accreditation criteria for CoE programmes would create powerful institutional incentives for change that currently do not exist (Ezeiruaku 2022). Federal and state government investment in CoE infrastructure particularly sustainable electricity solutions, institutional broadband connectivity, and device access programmes must be significantly scaled up and more equitably distributed to bridge the digital divide between urban and rural CoEs.

Regional and international partnerships with universities, development organizations, and technology providers can supplement public investment and provide technical assistance for pedagogical reform. Critically, however, such partnerships must be framed around locally driven priorities and co-constructed solutions rather than the transplantation of decontextualized Western models. The goal is not mimicry of pedagogical practices designed for radically different institutional contexts, but the creative adaptation and indigenization of innovative principles within distinctively Nigerian educational realities.

Conclusion

This paper has undertaken a systematic conceptual analysis of the realities and readiness of implementing innovative pedagogies specifically the Flipped Classroom Model and Self-Regulated Learning in Nigerian Colleges of Education. The analysis reveals a complex and sobering picture: CoEs in Nigeria face a formidable quadrilateral of barrier: institutional, demographic, pedagogical, and psychological that collectively constitute a system of pedagogical inertia deeply resistant to surface-level reform. Yet the paper has equally demonstrated that these barriers, while substantial, are not insurmountable.

The strategic pathways identified contextually adapted low-tech instructional models, deliberate large-class redesign, explicit SRL scaffolding, and coherent institutional and policy reform offer a practically viable and theoretically grounded roadmap for progressive pedagogical transformation. What is required is not a single revolutionary moment of wholesale change but a disciplined, phased, and contextually responsive reform agenda sustained by institutional

commitment, professional conviction, and evidence-based practice. The stakes of this transformation are immense: the quality of teacher preparation within Nigeria's Colleges of Education shapes the educational experiences of millions of Nigerian children and bears directly on the nation's capacity to cultivate the human capital required for equitable and sustainable development.

However, readiness for innovative pedagogy in Nigerian CoEs is not a binary state but a continuum, and the movement along that continuum requires simultaneous and coordinated action across multiple levels classroom, institution, policy, and culture. The flipped classroom and self-regulated learning frameworks, properly adapted and contextualized, offer not merely instructional techniques but a theoretically coherent vision of what transformative teacher education can and should aspire to in twenty-first-century Nigeria. The work of realizing this vision belongs not to scholars alone, but to the full ecosystem of lecturers, students, administrators, policymakers, and communities whose collective agency constitutes the most essential resource that Nigerian Colleges of Education possessed.

References

- Abeysekera, L., & Dawson, P. (2015). Motivation and cognitive load in the flipped classroom: Definition, rationale and a call for research. *Higher Education Research & Development*, 34(1), 1–14. <https://doi.org/10.1080/07294360.2014.934336>
- Adeyemi, B. A., & Falade, D. A. (2020). Teacher education reform in Nigeria: Challenges and prospects for 21st century teacher preparation. *African Journal of Education and Practice*, 6(2), 45–62.
- Amry, A. B. (2014). The impact of WhatsApp mobile social learning activities facilitated by a reverse instructional design on the writing skills of university students. *Universal Journal of Educational Research*, 2(9), 616–626. <https://doi.org/10.13189/ujer.2014.020911>
- Anderson, L. W., & Krathwohl, D. R. (Eds.). (2001). A taxonomy for learning, teaching, and assessing: A revision of Bloom's taxonomy of educational objectives. Longman.
- Bandura, A. (1997). Self-efficacy: The exercise of control. W. H. Freeman.
- Bates, A. W. (2019). Teaching in a digital age: Guidelines for designing teaching and learning (2nd ed.). Tony Bates Associates Ltd.
- Bergmann, J., & Sams, A. (2012). Flip your classroom: Reach every student in every class every day. International Society for Technology in Education.
- Bishop, J. L., & Verleger, M. A. (2013). The flipped classroom: A survey of the research. Paper presented at the ASEE Annual Conference & Exposition, Atlanta, Georgia.
- Burak, S. (2019). Self-regulation in learning: A qualitative study. *International Journal of Educational Methodology*, 5(1), 53–64. <https://doi.org/10.12973/ijem.5.1.53>
- Eze, T. I., & Effiong, A. E. (2022). Digital infrastructure and innovative pedagogy in Nigerian colleges of education: Challenges, prospects and policy implications. *Journal of Education and Practice*, 13(8), 24–35. <https://doi.org/10.7176/JEP/13-8-03>
- Ezeiruaku, M.N., Okwo, F.A., Ofoegbu, T.O., & Asogwa O. (2025). Effects of two modes of flipped classroom on academic achievement of senior secondary schools' biology students in Onitsha South Local Government Area of Anambra State. *International Journal of Arts and Technology Education (IJATE)*, 14, 1-9.
- Ezeiruaku, M.N. (2025). Integrating flipped classroom in colleges of education to improve student enrollment in Nigeria. *Journal of Science Education*, 15(2), 218-225
- Ezeiruaku, M.N., Okwo, F.A., Ofoegbu, T.O., & Asogwa O. (2024). Effects of two modes of flipped classroom on students' interest in biology in colleges of education in South-East, Nigeria. *AJSTME* 10(5), 775- 783. <https://www.ajstme.com.ng>
- Ezeiruaku, M.N. (2022). Implementation of TPACK framework as an effective technology integration in teacher preparation in Nigeria. *International Journal on Education and Inter-disciplinary studies*, (IJEIS). 104-112.

- Ezeiruaku, M.N., Akubugwo. I.G. & Okonkwo.N.M. (2020). Digitalization in teacher education: Implication for policy and curriculum reforms. Lagos Education Secretariat. *Journal of Education Research & Studies*, 1 (1), 10-18. Gbadura Prints. <https://www.researchgate.net/publication/388421742>
- Exley, K., & Dennick, R. (2004). *Small group teaching: Seminars, tutorials and beyond*. Routledge Falmer.
- Federal Republic of Nigeria. (2013). *National policy on education* (6th ed.). Nigerian Educational Research and Development Council (NERDC).
- Fullan, M. (2020). *Leading in a culture of change* (2nd ed.). Jossey-Bass.
- Hew, K. F., & Lo, C. K. (2018). Flipped classroom improves student learning in health professions education: A meta-analysis. *BMC Medical Education*, 18(1), 38. <https://doi.org/10.1186/s12909-018-1144-z>
- Mazur, E. (1997). *Peer instruction: A user's manual*. Prentice Hall.
- Means, B., Toyama, Y., Murphy, R., & Baki, M. (2013). The effectiveness of online and blended learning: A meta-analysis of the empirical literature. *Teachers College Record*, 115(3), 1–47.
- National Commission for Colleges of Education (NCCE). (2020). *Institutional audit and accreditation report: A summary of findings from Nigerian Colleges of Education*. NCCE Publications.
- National Universities Commission (NUC). (2021). *Statistical digest of Nigerian higher education statistics*. NUC Press.
- O'Flaherty, J., & Phillips, C. (2015). The use of flipped classrooms in higher education: A scoping review. *Internet and Higher Education*, 25, 85–95. <https://doi.org/10.1016/j.iheduc.2015.02.002>
- Okafor, C., & Omeje, H. O. (2022). Lecturers' perceptions of innovative teaching strategies in Nigerian colleges of education. *International Journal of Higher Education Management*, 9(1), 12–29.
- Okonkwo, U., & Bello, A. (2021). Self-regulated learning and academic achievement among college of education students in Nigeria: A structural equation modelling approach. *Journal of Nigerian Educational Research Association*, 18(1), 98–116.
- Oluwole, O. T. (2020). Large class management strategies and learning outcomes in Nigerian higher education. *Journal of Applied Educational Research*, 4(2), 55–70.
- Owolabi, T., Agbede, C. O., & Olaleye, F. O. (2021). Technology integration in teacher education: Barriers and enablers in Nigerian Colleges of Education. *African Educational Research Journal*, 9(3), 512–523. <https://doi.org/10.30918/AERJ.93.21.057>
- Pintrich, P. R. (2004). A conceptual framework for assessing motivation and self-regulated learning in college students. *Educational Psychology Review*, 16(4), 385–407. <https://doi.org/10.1023/B:EDPR.0000045.02.08.34>
- Schunk, D. H., & Zimmerman, B. J. (Eds.). (2008). *Motivation and self-regulated learning: Theory, research, and applications*. Lawrence Erlbaum Associates.
- Tucker, B. (2012). The flipped classroom. *Education Next*, 12(1), 82–83.
- UNESCO. (2022). *Reimagining our futures together: A new social contract for education*. UNESCO Publishing.
- UNESCO Institute for Statistics (UIS). (2022). *Global education monitoring: Nigeria country profile*. UNESCO.
- Zimmerman, B. J. (2000). Attaining self-regulation: A social cognitive perspective. In M. Boekaerts, P. R. Pintrich, & M. Zeidner (Eds.), *Handbook of self-regulation* (pp. 13–39). Academic Press. <https://doi.org/10.1016/B978-012109890-2/50031-7>
- Zimmerman, B. J. (2008). Investigating self-regulation and motivation: Historical background, methodological developments, and future prospects. *American Educational Research Journal*, 45(1), 166–183. <https://doi.org/10.3102/0002831207312909>