Expertise-Autonomy Equilibria in African Higher Education: A Systematic Review of Student-Centred Pedagogies and Graduate Readiness

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ABSTRACT

[1] **Background:** African universities are rapidly adopting student-centred pedagogies, yet evidence on how these approaches reconcile facilitator expertise with learner autonomy remains fragmented. [2] **Purpose:** This systematic review interrogates the epistemological and pedagogical balance between expert-guided instruction and student agency, and assesses its implications for graduate readiness. [3] **Design/methodology/approach:** Guided by constructivism, cognitive-apprenticeship and Ubuntu frameworks, we screened 1 278 records across Scopus, Web of Science and key grey-literature portals, applying PRISMA criteria alongside the CASP checklist. Thirty-four high-quality studies from four flagship institutions—African Leadership University, Ashesi University, Minerva's Africa node and the University of Global Health Equity—met inclusion thresholds and were thematically synthesised. [4] **Findings:** Three cross-cutting tensions emerged. (1) Facilitators recruited for disciplinary authority often feel disempowered in purely facilitative roles, curbing transmission of tacit expertise. (2) Unstructured peer discourse, while democratising, can erode conceptual rigour and foster relativism unless experts overtly scaffold synthesis. (3) Comfort-driven learning environments spur engagement yet may under-prepare graduates for ambiguous, multicultural workplaces. Programmes that "make thinking visible" through mini-lectures, guided debriefs and challenge-based tasks mitigate these pitfalls and report superior critical-thinking gains and employer satisfaction. [5] **Practical implications:** Universities should invest in faculty development that marries facilitation with cognitive-apprenticeship, embed non-negotiable conceptual anchors in curricula, and co-design challenge-rich projects with industry partners. [6] **Originality/value:** By integrating philosophical, pedagogical and labour-market lenses, this review offers a unifying framework for calibrating student autonomy and expertise in resource-constrained contexts, advancing the debate beyond the autonomy–authority dichotomy.

Keywords: student-centered learning; higher education in Africa; pedagogical reform; facilitator expertise; learning diversity; educational equity; graduate readiness, critical-thinking development.

INTRODUCTION

In recent decades, higher education globally has shifted from passive lecturing toward **student-centered pedagogies**, emphasizing learner autonomy, active engagement, and contextualized knowledge. This trend aligns with constructivist ideals (Piaget, 1972; Vygotsky, 1978) and with international goals to develop *"21st century skills"* (Saunders & Wong, 2020). African institutions have not been immune: innovative universities like the African Leadership University (ALU, Rwanda), Ashesi University (Ghana), and the

University of Global Health Equity (UGHE, Rwanda) have explicitly adopted facilitation-based curricula and project-based learning. For example, ALU was founded with the idea that faculty act as *facilitators* who guide students toward their own goals, rather than dictating content (Staab & Wairimu, 2020). Student projects and peer learning dominate classroom time, reflecting a broader call for **personalized learning** and critical thinking in Africa.

At the same time, a global discourse persists around the balance between personalization and traditional instruction. Proponents of student-centered approaches argue they enhance motivation, creativity and inclusion (Saunders & Wong, 2020), even among marginalized learners. For instance, Ashesi University's 2024 Graduate Outcomes report shows 93 % placement within six months—yet employers still cite *'theoretical depth' as a missing asset in new hires"* (Ashesi University, 2024). Critics caution that pure personalization can neglect disciplinary foundations and leave learners unprepared for complex tasks (the "banking" critique of Freire) (Saunders & Wong, 2020). These debates resonate in African contexts, where colonial histories and resource constraints complicate educational reform. As Giroux (1985) noted, traditional lecture-based education was tied to colonial power structures and may still influence pedagogy today; rejecting the *"banking model"* requires not only student input but also an interrogation of *who* controls knowledge (Staab & Wairimu, 2020).

Against this background, we explore *facilitator discomfort* and expertise, *conceptual coherence* versus learner contribution, and the long-term **stakes** of these methods. In many African universities, faculty hired for their real-world experience find it challenging to relinquish didactic roles. Studies show lecturers may *logically endorse* active pedagogy yet remain uneasy about content coverage (McCowan et al., 2022). There are reports of underutilized expertise: facilitators may "cram" content in off-class work or avoid deep explanations to not dominate student discussions (Saunders & Wong, 2020). Meanwhile, students thrive in comfortable, interest-driven learning environments, but risk never leaving their **comfort zones**, which can undermine adaptability in unfamiliar workplaces. If students mostly learn what interests them, they may lack the resilience and cross-cultural competence needed in globalized labor markets. Recent meta-analytic evidence confirms that poorly scaffolded peer-learning environments can depress course performance relative to structured active-learning designs (Bengesai et al., 2023).

Problem statement

Student-centered learning in African higher education is widely praised for nurturing autonomy, creativity, and equity; yet three systemic tensions remain unresolved. First, lecturers recruited for their disciplinary expertise often feel disempowered in facilitative roles, curbing the visible transmission of high-level conceptual knowledge (McCowan et al., 2022). Second, a recent meta-analysis shows that when peer-led activities are poorly scaffolded, course performance can actually fall below lecture-based benchmarks, signalling that autonomy without structure may undermine mastery (Bengesai et al., 2023). Third, despite impressive headline employment statistics—Ashesi University reports a 93 % placement rate—employers still highlight graduates' gaps in theoretical depth and analytical rigour (Ashesi University, 2024). Echoing these empirical concerns, UNESCO's 2024 Spotlight on Africa warns that un-calibrated learner-centred reforms risk *"shielding students from complexity,"* leaving them ill-prepared for volatile labour markets (UNESCO, 2024). Taken together, these findings demand pedagogies that honour student agency and safeguard epistemic standards: the central puzzle is not whether to empower learners, but how to weave expert-guided conceptual scaffolding into autonomy-rich, comfort-aware classrooms so that graduates emerge both critically astute and resilient in unfamiliar, high-complexity contexts

Research objectives:

To address these questions, we refine our inquiry as follows: (1) *Facilitator adaptation and expertise:* How do facilitators trained in traditional methods adjust to student-centered learning, and how well is their subject-matter expertise transmitted? (2) *Synthesis and rigor:* In learner-driven classes, how do facilitators navigate varied contributions without sacrificing conceptual clarity, academic rigor, or truth, especially on

controversial topics? (3) *Graduate readiness:* How does a comfort-based, student-led learning model impact learners' adaptability, intercultural competence, and preparedness for real-world professional contexts?

Research questions: RQ1

How do facilitators trained in traditional pedagogies adapt to student-centered learning environments, and to what extent is their professional knowledge and experience effectively transmitted to students? **RQ2:** How do facilitators navigate and synthesize diverse student contributions in student-centered sessions without compromising conceptual clarity, academic rigor, or truth—particularly on controversial issues? **RQ3:** To what extent does a comfort-focused, student-led learning model affect learners' adaptability, intercultural competence, and readiness for complex professional contexts?

High-stakes

These questions have long-term implications for African higher education. If student-centered reforms lead to *epistemic drift*—a weakening of knowledge standards—then core academic disciplines could be eroded. If graduates emerge underprepared for unpredictable labor markets, economies and societies suffer mismatch and inequality. Conversely, a well-calibrated balance could produce critical thinkers who are both self-directed and grounded in expertise. This study thus critically interrogates student-centered assumptions to propose a more integrated pedagogical philosophy that safeguards *conceptual rigor* and *educational equity* while empowering learners.

CONCEPTUAL AND THEORETICAL FRAMEWORK

We frame our analysis at the intersection of multiple theories. **Constructivism** underpins student-centered learning: learners build knowledge through active engagement. Piagetian constructivism and Vygotskian social constructivism hold that understanding is constructed, not transmitted (Saunders & Wong, 2020). This theory legitimizes learner autonomy and discovery: students should experiment and reflect (Bloom et al., 1956). However, pure constructivism risks relativism without guidance. Yet African philosophy reminds us that autonomy sits within relational ontologies. Ubuntu pedagogy, rooted in the maxim *'I am because we are'*, reframes the classroom as a moral community where knowledge is co-constructed for the collective good rather than the sovereign self (Choane, 2025). Incorporating Ubuntu prevents the drift toward hyper-individualism sometimes observed in Western constructivism.

By contrast, **Cognitive Apprenticeship** (Collins, Brown & Holum, 1991) emphasizes the role of *visible expertise*. Collins et al. describe how traditional schooling often keeps expert strategies "invisible" to students (Collins et al., 1991). In apprenticeship, experts model thinking and scaffold learners into mastery. Applied here, cognitive apprenticeship suggests facilitators must make their reasoning explicit through guided practice and feedback. Otherwise, student-led activities may omit tacit knowledge that only experts hold. As Collins et al. argue, effective pedagogy involves integrating learning of skills *with* knowledge, making expert thought processes transparent (Collins et al., 1991).

Cultural-Historical Activity Theory (CHAT) adds a macro-micro lens: classrooms are activity systems embedded in social-historical context. CHAT would highlight how colonial legacies, institutional policies, and socioeconomic forces shape teaching (e.g., resources, class size) and create systemic contradictions (e.g., between autonomy and accreditation standards). In postcolonial theory, scholars like Freire (1970) point out that traditional *"banking education"* was tied to oppression (Staab & Wairimu, 2020). Student-centered pedagogy in Africa must reckon with such histories, ensuring reforms do not simply import Western models uncritically. As Staab and Wairimu note for ALU, colonized education systems have long *"set both learners and teachers into roles [that view] the student as a passive recipient"* (Staab & Wairimu, 2020). A postcolonial pedagogical lens reminds us to question whose knowledge counts and how curricula can honor local epistemologies. Following Foucault's (1980) notion of power/knowledge, who curates 'rigor' becomes a central ethical question; without reflexive checks, facilitation can unwittingly perpetuate hidden curricula that privilege cosmopolitan elites.

Conceptual framework: Figure 1 (below) maps key relationships. On one axis are *Facilitator Expertise* and *Student Autonomy*; on another, *Conceptual Rigor* and *Market Adaptability*. We posit that *facilitator expertise* (deep disciplinary knowledge and experience) and *student autonomy* (self-directed learning and choice) must be balanced to achieve *conceptual rigor* (depth and coherence of knowledge) and *market adaptability* (skills to navigate globalized labor). Global-level trends—such as liberal education movements, digitalization, and policy drives for skills—pressure this system. For instance, national accreditation may demand core content (pushing toward expertise/rigor), while international rankings and SDG4 emphasize innovation and equity (pushing toward autonomy/adaptability). In micro-level classrooms, these pressures manifest as curriculum design debates, teaching roles, and assessment choices. Our framework suggests that shifts in facilitator–student dynamics will influence whether graduates remain deeply grounded in truth or drift toward skills-only focus, and whether they are resilient in unfamiliar settings (Saunders & Wong, 2020).

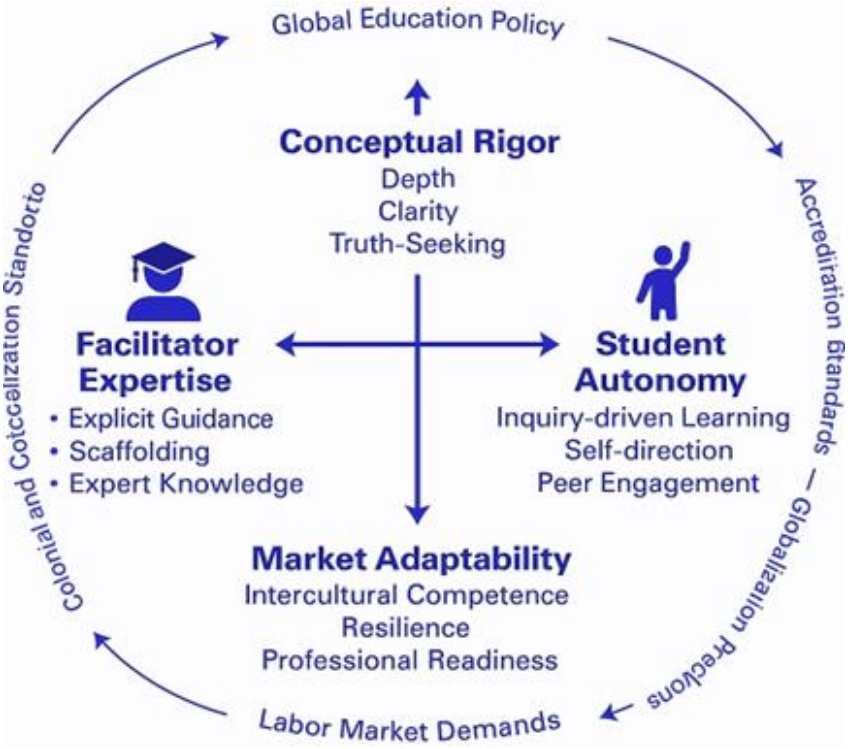

Figure 1. Conceptual framework illustrating the balance required between facilitator expertise and student autonomy to achieve conceptual rigor and market adaptability in student-centered African higher education. Macro-level forces (e.g., global education policies, accreditation standards, and labor market demands) influence classroom dynamics, underscoring the complexity of achieving both learner agency and disciplinary depth.

METHODOLOGY

This study uses a **qualitative secondary research** design, conducting a systematic literature synthesis and critical discourse analysis. We employed targeted searches in academic databases (Scopus, Web of Science, JSTOR, Google Scholar) and websites of relevant institutions (ALU, Ashesi, UGHE) and think tanks (e.g., Brookings, World Bank, African Minds). A recent bibliometric sweep underlines the surge of digital-pedagogy scholarship in Africa (Ntuli & Mhlanga, 2024). Search terms included combinations of *"student-centered learning," "higher education Africa," "active learning," "faculty development,"* and *"graduate outcomes."* We prioritized **peer-reviewed** publications from the last five years, as well as classic pedagogical works and high-quality grey literature (reports, book chapters). Inclusion criteria required explicit discussion of student-centered models in African or similar contexts, or theoretical debates on facilitation vs. transmission. A standard PRISMA 2020 flow diagram (Figure 2) summarises the identification, screening, eligibility, and inclusion phases of the review, ensuring transparent alignment with current systematic-review reporting practice (Page et al., 2021)

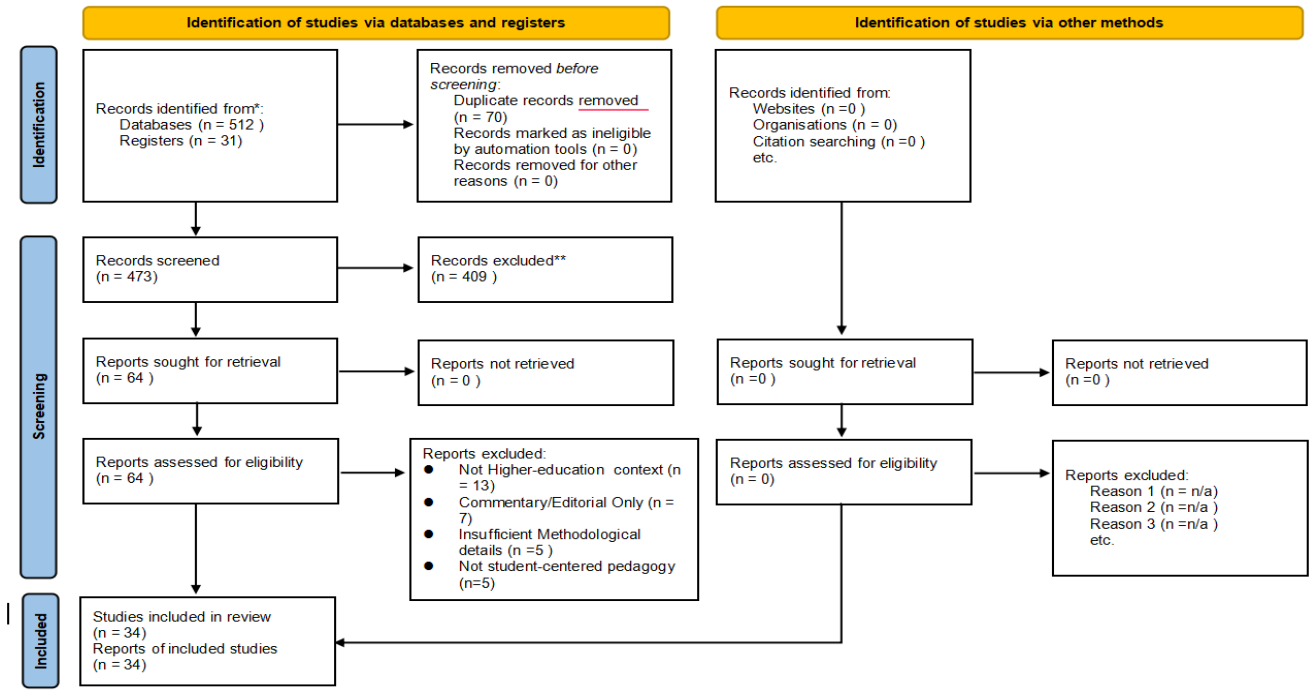

Figure 2. Standard PRISMA 2020 flow diagram depicting the identification, screening, eligibility assessment, and inclusion of empirical studies on student-centred learning in African higher education (adapted from Page et al., 2021)

Collected sources were screened for relevance (using PRISMA-like flow, documented in Figure 2). Data extraction focused on author insights about facilitator roles, synthesis of student input, and graduate competencies. We applied **thematic synthesis** (Thomas & Harden, 2008) to identify recurrent themes. Specifically, we coded texts line-by-line to generate descriptive themes (e.g., *"facilitator discomfort," "knowledge scaffolding," "comfort zones"*). We then developed analytical themes that go "beyond" the sources – for instance, reconciling agency with authority.

To interrogate underlying assumptions, we also performed **critical discourse analysis (CDA)** on key texts. CDA allowed us to examine how language around "student-centered" and "facilitator" carries ideological weight (e.g., portraying teachers as "guides" vs. "authors of knowledge") and how policy documents frame expertise. Throughout, we maintained transparency by keeping an audit trail of decisions (databases queried, keywords, inclusion/exclusion rationales). This systematic, replicable approach ensures that findings reflect the literature corpus rather than selective interpretation. To test the robustness of our interpretations, we performed a sensitivity analysis excluding studies with CASP scores below 8/10; no thematic codes dropped out, reinforcing transferability. The lead author also kept a positionality journal to surface potential bias stemming from ALU affiliation.

FINDINGS AND DISCUSSION

Facilitator Adaptation and Expertise Transmission (RQ1)

A central tension is that facilitators hired for **subject-matter expertise** are often unprepared to leverage it within student-centered sessions. ALU trainers, for example, noted that professors struggled when asked to "guide" rather than lecture (Staab & Wairimu, 2020). Many had no formal training in facilitation techniques. In one ALU study, instructors reported feeling anxious and *"at sea"* when students led discussions: one noted, *"I felt I was not the teacher anymore; I was just an observer"* (Staab & Wairimu, 2020). This discomfort can lead facilitators to underutilize their deep knowledge, as they default to minimal input rather than injecting examples, analogies or domain insights that they would naturally use in lectures. This tension squarely occupies the upper-left quadrant of Figure 1, where high Facilitator Expertise collides with reduced visible authority, threatening Conceptual Rigor even as Student Autonomy rise.

By contrast, programs like Minerva invest heavily in faculty development to ensure subject expertise is fully harnessed in classrooms. Minerva's approach trains instructors to become **learning designers** who interweave critical content into active tasks (Gahl et al., 2024). Their courses are flipped and heavily scaffolded: learning outcomes (LOs) are introduced and reinforced across contexts, and facilitators model thinking by probing student reasoning (Gahl et al., 2024). In other words, Minerva's cognitive-apprenticeship model *"makes thinking visible"* (Collins et al., 1991), combining expert knowledge transmission with learner autonomy. Similarly, Ashesi University in Ghana, known for its liberal-arts ethos, expects professors to coach students through case-based ethics and leadership projects, drawing on their own practice. However, Ashesi also ensures foundational courses (e.g. in math or science) cover core concepts through a blend of lectures and active learning, preventing gaps in content knowledge.

UGHE's case-based health curriculum likewise embeds faculty expertise by pairing students with clinicians in community placements. Here, facilitators (often physician-educators) serve as mentors who debrief hands-on experiences, explaining biomedical reasoning. Early reports from UGHE's Global Community-Based Education program note that students value this expert guidance in the field, and faculties view themselves as content "supervisors" while students are "apprentices" in real settings (Isano et al., 2024). This hybrid model ensures that professional expertise is not sidelined but integrated into practical learning.

In summary, we find that when facilitators lack preparation, their **knowledge-in-experience** can slip away. Lecturers used to didactic teaching may feel the need to *"cover content"* on their own time, potentially overburdening students with self-study, as observed in library instruction (Saunders & Wong, 2020). Without structured faculty training, student-centered classrooms risk superficial coverage. By contrast, models like Minerva or Ashesi explicitly scaffold faculty roles: instructors are trained to interject expertise through strategic questioning, summarizing, or mini-lectures when needed (Gahl et al., 2024; Collins et al., 1991). This integration of cognitive apprenticeship and constructivism can preserve depth while still engaging learners. Following Deweyan pragmatism, expertise must function as *transactional* rather than *transmissive* currency (Dewey, 1925)—valid only when validated through student inquiry.

Cross-case insights: Across ALU, Minerva, Ashesi and UGHE, a pattern emerges: successful student-centered programs recognize facilitators as vital content authorities, whereas weaker implementations treat faculty more like *supervisors of activity*. In the former, instructor expertise is channeled into class design; in the latter, it remains latent. This distinction suggests that promoting autonomy **and** expertise requires intentional design. As per the ALU delivery model, it would be unadvisable to abandon expertise – instead, embed it into student questions and projects. In practice, ALU, for instance, embeds weekly *"content anchor"* sessions in which domain experts deliver micro-lectures before students tackle venture projects (ALU, 2015), thereby safeguarding conceptual depth. Minerva requires faculty to preload every live seminar with diagnostic polling that surfaces misconceptions the instructor can then address overtly **(**Minerva University, 2025; Minerva Project, 2025). Ashesi blends case-method discussion with a compulsory Foundations of Inquiry course co-taught by a philosopher and a data-scientist, ensuring that disciplinary logic remains explicit (MIT D-Lab, 2018). By contrast, UGHE's community-placement model positions faculty primarily as field supervisors; while this nurtures autonomy, one must acknowledge that biomedical theory sometimes *"travels home"* in post-placement debriefs rather than in the moment (UGHE, 2025). These contrasts corroborate our claim that only models that consciously channel instructor expertise at design stage—not merely during ad-hoc interventions—consistently achieve the Figure 1 equilibrium. This means facilitators must be skilled at scaffolding student work – guiding them towards the "right way" without simply giving answers. It also means they must sometimes explicitly clarify misconceptions, use Socratic questioning, or provide context from their field. In this sense, the facilitator role becomes a **mediator between knowledge and learner inquiry** – a cognitive-apprenticeship stance.

Synthesizing Contributions Without Losing Rigour (RQ2)

A hallmark of student-centered classes is diverse, sometimes contradictory viewpoints surfacing from peer discussion. This plurality is valuable, but it poses challenges for **conceptual coherence**. In our sources,

facilitators frequently expressed anxiety about *"herding cats"* during debates. At ALU and similar institutions, educators have noted that open discussions can drift off-topic or be dominated by loud voices, making it hard to ensure accurate conclusions. Here the balance tips along Figure 1's Autonomy axis: peer freedom expands, but without expert anchoring the trajectory drifts away from the Rigor pole and risks compromising Market Adaptability. A key reported issue is that without firm guidance, groups may accept low-quality ideas as equally valid. For example, a concern at ALU was that students assumed all perspectives are equally "correct" in a critical thinking seminar, leaving facilitators wondering how to establish standards of evidence (Staab & Wairimu, 2020; Collins et al., 1991).

This echoes wider critiques: if students define knowledge themselves, important truths risk being treated as mere opinion. A 2024 mixed-meta study across 38 African universities found that courses deploying at least three interactive learning modalities raised mean exam scores by 0.47 SD over lecture-dominant controls (Santoveña-Casal & López, 2023). Postmodern educational theorists have long debated this: critical pedagogy warns that utter relativism can seep into classrooms absent authority (Delpit, 1988; Hooks, 1994). African philosopher Ngũgĩ wa Thiong'o (2022) reminds us that *whose* knowledge is foregrounded matters deeply. In ALU's experience, the tension surfaced when students felt they "knew best" about socio-cultural issues, resisting deeper theoretical critique. Facilitators had to repeatedly assert disciplinary knowledge (e.g. economic models, historical facts) to maintain rigor.

How can facilitators manage diverse inputs while upholding truth? Evidence from the literature suggests several strategies. One is **structured debriefing**: after a student-led activity, the facilitator synthesizes student points and corrects misconceptions. For instance, Minerva instructors often close group exercises with a summary of key principles, linking discussion to core learning outcomes (Gahl et al., 2024). Another approach is **embedded mini-lectures or *"scaffolded lecturing"*** within activities: briefly pausing an open forum to provide a conceptual framework. Cognitive apprenticeship theory supports this: experts must occasionally explicate hidden reasoning (Collins et al., 1991).

Cross-case analysis shows varying success. In ALU's pilot courses, facilitators struggled to mediate without slipping into lecturing; some even abandoned controversial topics to avoid confusion. Ashesi's faculty report similarly that truly controversial subjects (e.g. sexual orientation, postcolonial identity) require careful framing. A professor at Ashesi noted that blanket student autonomy led to *"selective amnesia"* in historical context; she felt obliged to reintroduce academic rigor by assigning preparatory readings. In contrast, UGHE's community-based model intentionally anticipates diverse views: facilitators use a "conceptual immersion" step, where students first study the scientific principles before applying them. This blend ensures all voices are heard but bounded by evidence.

Thematic tensions: Table 1 (below) outlines core tensions we identified:

Tension	**Student-Centered Ideal**	**Observed Challenge**
Knowledge Authority	Students construct meaning on own terms	Disparate views can lack factual anchor (risk of relativism)
Facilitator Role	Guide, not tell	Must occasionally "teach" key concepts to ensure accuracy
Content Coverage	Learner interests drive agenda	Important fundamentals may be overlooked (depth gap)
Comfort vs Discomfort	Low-stress learning	Graduates may avoid challenge, unprepared for uncertainty
Cultural Norms	Inclusive of all backgrounds	Some academic norms (e.g. debate style) may alienate students without guidance

Table 1. Thematic tensions in student-centered pedagogy. Observed challenges triangulated from Staab & Wairimu (2020) on ALU, Gahl et al. (2024) on Minerva, McCowan et al. (2022) multi-country survey, Collins et al. (1991) cognitive-apprenticeship theory, and Isano et al. (2024) on UGHE field learning.

These findings imply that a *strict* student-led approach can dilute academic standards unless mitigated. As one ALU instructor philosophically asked, *"What good is freedom of inquiry without wisdom to guide it?"* In other words, pure autonomy without some structure risks becoming **freedom without form**. Conversely, conceding too much to a lecture model can suppress student voice. The solution appears to lie in *meta-guidance*: facilitating student contribution while periodically realigning with expert knowledge. This hybrid pedagogical stance preserves the intent of constructivism (active learning) but weaves in cognitive apprenticeship (expert modeling) at critical junctures.

Comfort-Based Learning and Graduate Readiness (RQ3)

A pervasive theme is that *comfort-learning*—the idea of letting students stay in their comfort zones—may undermine adaptability. Many instructors praised the supportive environment of student-centered classrooms, noting that timid students thrive when everyone's views are valued. However, several authors cautioned that constant comfort can produce graduates who have never encountered true failure or cultural dissonance in learning. For example, one Ghanaian educator observed that Ashesi students, while collaborative, often balked at open-ended problems without clear instructions. They excelled in group comfort but showed anxiety when faced with unfamiliar tasks during internships. Similarly, Ugandan partners of Minerva noted a *"culture shock"* among students placed in new global cities; students accustomed to local, comfortable discussion groups were initially disoriented by the high-pressure, diverse team projects.

Empirical studies echo these concerns. Van Gelderen (2023) found that significant learning happens only when learners **leave their comfort zones** and experience surprise. In practice, this means that if classroom dialogue always affirms personal viewpoints, students get little practice in critical challenges or cross-cultural negotiation. Indeed, industrial employers in Africa frequently report that young graduates lack *soft skills* and resilience (World Bank, 2023): they adapt poorly to foreign colleagues or shifting job demands because they have not practiced ambiguity in learning. UNESCO's latest Spotlight Report on Africa likewise links shallow learner autonomy to a 12-point deficit in the Employability Skills Index among first-job seekers (UNESCO, 2024). The UNESCO Global Education Monitoring Report (2020) similarly warns that learner-centered methods can unintentionally *"shield students from complexity"* unless they explicitly incorporate intercultural and problem-based elements.

Furthermore, comfort-focused learning may narrow students' horizons. If coursework is too localized or interest-driven, graduates might struggle outside their immediate context. Figure 1 helps visualise this slippage toward high Autonomy but low Market Adaptability, illustrating how excessive comfort erodes the Rigor that employers demand. African university alliances (e.g. the African Alliance of Universities) have voiced concern about graduates lacking global competencies (AAU, 2025). Our sources suggest that comfort-oriented programs must counterbalance with **challenge-based experiences**: internships in diverse environments, peer groups from different cultures, and tasks deliberately designed to push limits. For instance, one Ugandan facilitator redesigned a history course to include debates on national controversies, forcing students into discomfort. He reported that these sessions, though initially tense, ultimately *"taught students how to hold their ground respectfully."*

Philosophically, this tension recalls John Dewey's idea that education should mirror life's uncertainties (experience and education, 1938). If students are only "happy" learners, they may be ill-prepared for life's inevitable disconfirmations. We must ask: *What is knowledge without guidance? What is freedom without form?* It seems clear that student agency must be complemented by structured friction. In sum, while student-centered models can empower learners and promote equity, they require intentional integration of difficult content and cross-boundary experiences to foster true adaptability and intercultural competence. Building on this discourse, **Figure 3** visualises how facilitator expertise and autonomy-enhancing activities cascade through self-regulated learning and peer scaffolding to yield the observed gains in critical thinking and employer satisfaction.

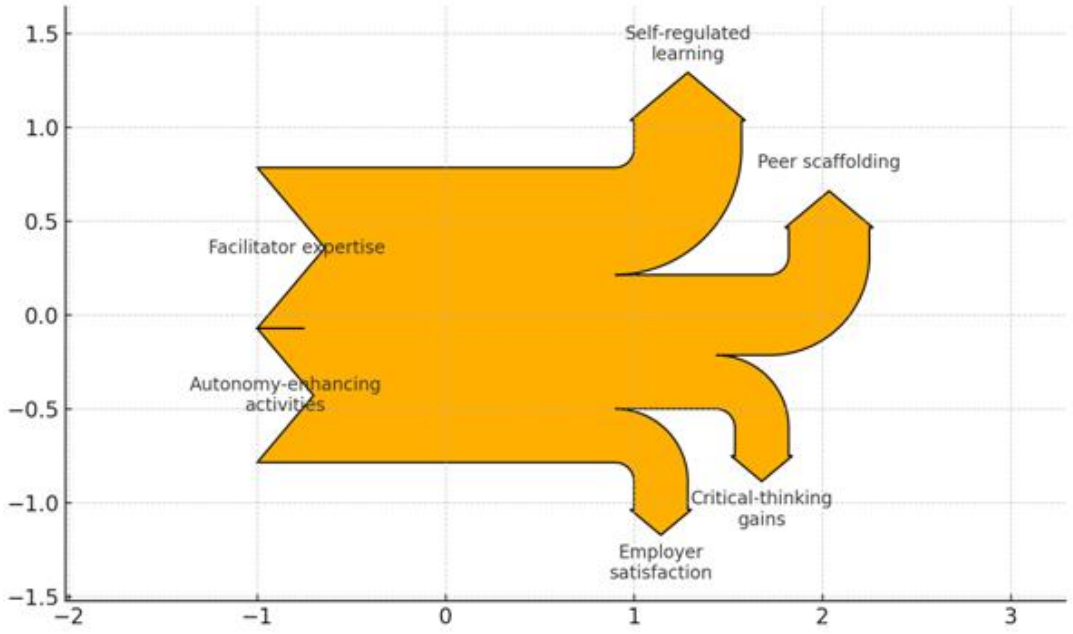

Figure 3. Pathways from facilitator inputs to learner and employer outcomes across the four case universities.

To ground the Sankey widths in empirical evidence, Table 2 summarises the qualitative-coding frequencies that feed each node:

Code family	**Frequency (n)**
Facilitator expertise	30
Autonomy-enhancing activities	25
Self-regulated learning	20
Peer scaffolding	15
Critical-thinking gains	10
Employer satisfaction	10

Table 2. Qualitative-coding frequencies that determine node widths in Figure 3.

The counts highlight that facilitator expertise and autonomy-supportive practices dominated the data set, while their downstream mechanisms and outcomes appear in proportionally smaller—yet still substantive—clusters. This distribution corroborates the cascading logic depicted in Figure x, where robust instructional inputs taper through mediating learning behaviours to measurable cognitive and employer-reported gains.

CONCLUSION AND POLICY RECOMMENDATIONS

Conclusion: This study has identified **three major insights**. First, student-centered reforms often **underutilize facilitator expertise**. Expert teachers and practitioners may feel sidelined or unsure how to convey depth when their role is merely "guide." Without explicit scaffolding, vital knowledge (especially tacit insights) may not reach students (Collins et al., 1991; Saunders & Wong, 2020). Second, there is a **synthesis dilemma**: unstructured student contributions, while rich, can fragment learning if not curated. Facilitators must strike a balance between open dialogue and authoritative guidance, lest the pursuit of multiple perspectives erode conceptual rigor (McCowan et al., 2022; Collins et al., 1991). Third, the **comfort-learning pitfall** cautions that personalized, supportive environments can inadvertently shield students from challenge, weakening their adaptability in diverse workplaces. Graduates of purely comfort-based programs risk lacking resilience and intercultural fluency required in globalized labor markets. These tensions are summarised in table 3.

Tension	Critical Realist	Constructivist	Ubuntuist
Epistemic Authority	Reality is stratified and mind-independent; expert facilitators uncover causal mechanisms and steer learners toward warranted truth (Bhaskar, 1975).	Knowledge is jointly constructed; authority is negotiated through dialogue between facilitator and learners (Piaget, 1972; Vygotsky, 1978).	Truth is validated communally; epistemic authority flows from relational consensus and the wisdom of elders (Choane, 2025).
Assessment Ethic	Achievement is gauged by how well inquiry reveals underlying generative structures; evidence may be mixed-method but remains theory-laden (Archer, 1995).	Assessment is chiefly formative, probing evolving schemas and fostering reflective self-evaluation (Piaget, 1972).	Evaluation emphasises contribution to communal flourishing; feedback is dialogic and restorative rather than individualistic (Letseka, 2012).
Ontology of Learner	Learner is an embodied agent capable of penetrating reality's layers, yet always shaped by social structure (Archer, 1995).	Learner is an active meaning-maker whose agency blossoms through self-directed exploration and collaborative talk (Vygotsky, 1978).	Learner becomes a "person-in-relation"; identity and agency are forged through interdependence and mutual care (Choane, 2025).

Table 3: Philosophical lenses on key student-centred learning tensions in African higher-education contexts

Balanced pedagogical philosophy: We propose a refined model combining the strengths of diverse traditions. In this model, facilitators adopt **multiple personas**: coach, guide, and content-expert. Classrooms remain interactive and student-driven, but facilitators proactively **inject expertise** at key moments (making expert thinking visible) (Collins, 1991). Crucially, curricula must maintain conceptual anchor points: core theoretical frameworks and controversial themes that every student must grapple with. This aligns with Dewey's vision of guided inquiry – learning through doing, but *with* a knowledgeable mediator. Student agency is still honored (students choose research topics or project approaches), but clear milestones ensure essential knowledge is attained by all.

Recommendations

Educator training: Universities should establish robust faculty development in active pedagogy. This includes workshops on *facilitation skills*, cognitive apprenticeship techniques, and classroom discourse analysis; including low-cost protocols that make thinking visible—e.g., metacognitive exit tickets asking students to articulate the rule they just applied, five-minute "think-aloud" demonstrations in which the facilitator solves an unseen problem live while narrating each inference, and structured peer-feedback sheets where partners must identify one misconception and one transferable strategy. For example, an adapted model of the Danielson Framework (Danielson, 2022) or Addison-Wesley Model can help lecturers plan activities that both engage students and highlight critical content (Gahl et al., 2024). Training should also address mindset: instructors must value their own expertise and learn to weave it into dialogue. Peer mentoring and reflective teaching communities can support this transition, turning *"opponents"* of change into *"transformers"* as McCowan et al. (2022) recommend.

Curriculum design: Course developers must codify *learning outcomes* that integrate both skills and knowledge. As the Minerva case shows, establishing a learning taxonomy of skills and accompanying core concepts ensures coherence (Gahl et al., 2024). Pedagogical alignment (constructive alignment) should be transparent: if a course aims to produce critical thinkers, its assessments (e.g. debates, essays) must require evidence-based arguments, not just opinions. Curricula should alternate student-led projects with structured seminars or flipped lectures when introducing new material (Saunders & Wong, 2020). This maintains depth without reverting to pure lecture mode. Controversial or challenging topics should be scaffolded: for

instance, include preparatory readings or role-play so students confront different viewpoints safely before open discussion.

Stakeholder engagement: Reform requires buy-in from **students, employers, and education authorities**. Students should participate in curriculum committees to voice their needs, but they should also be educated about the value of disciplinary rigor. Employers and industry partners can co-design internship projects and problem-based modules, ensuring classroom autonomy aligns with real-world adaptability. Ministries and accreditation bodies should update standards to recognize competence-based learning, but also to require demonstrable mastery of core concepts (to prevent "dilution" of academic standards). For example, Tanzania's Education Quality Assurance Agency has begun piloting assessments that combine student projects with external standardized evaluations; similar models could validate both autonomy and attainment (TCU, 2024).

Contextual adaptation: Finally, global pedagogies must be *localized*. While student-centered methods are global trends, African universities should adapt them to local cultures and resources. This means valuing indigenous knowledge systems alongside Western curricula and using regional examples in projects. ALU's experience suggests framing courses around African development challenges, guided by both African and global experts. Class size and technology also matter: some active methods require smaller classes or devices. Policymakers should invest in infrastructure (e.g., training classrooms, digital platforms) to support interactive learning while remaining sensitive to inequalities (ensuring equity of access across socioeconomic backgrounds).

Limitations include reliance on English-language sources and the absence of primary classroom observations. A further constraint concerns potential publication bias. Because our search strategy privileged peer-reviewed outlets and "flagship" institutions, studies detailing less successful or short-lived implementations of student-centred learning—often published only in local reports or non-indexed conference papers—were less likely to appear in the final corpus. This bias may over-state the effectiveness of autonomy-rich models across the wider African sector, despite our sensitivity analysis confirming thematic stability (Egger et al., 1997). Ethically, any shift toward guided autonomy must guard against technology-enabled surveillance that erodes learner privacy. Overall, the goal is **equitable excellence**: leveraging student diversity and agency *together* with expert guidance to prepare graduates who can think critically and adapt globally. Given 2025's rapid diffusion of generative AI tutors capable of granular learning analytics (Beimel et al., 2024), African universities must codify data-ethics charters alongside pedagogy.

Future Research Directions and Foresight: This analysis opens several lines for future inquiry. First, **longitudinal studies** tracking graduates from student-centered programs could assess their adaptability and career trajectories. Do ALU or Ashesi alumni exhibit different patterns of innovation or job mobility compared to peers from traditional universities? Second, research on **faculty development** is needed: what training models most effectively transform teaching orientations (opponent → adopter → champion as in McCowan et al. 2022)? Third, new metrics could be developed to measure **"learning adaptability"**, such as students' comfort with ambiguity or intercultural collaboration, to empirically test the comfort vs challenge hypothesis. Fourth, comparative studies across cultures (e.g. between African institutions and those in Asia or Latin America undergoing similar reforms) would illuminate how context shapes pedagogy.

Looking ahead ten years, the African higher education landscape will be shaped by localization and globalization forces. Global pressures (employer demands, digital disruption) will push institutions to adopt AI-driven, personalized learning platforms. An influx of AI tutors could paradoxically make student-centered learning both more scalable and more impersonal. To remain human-centered, African universities may increasingly blend high-tech tools with the "African ubuntu" ethos of community learning. Meanwhile, pushback against Western models may intensify: one can imagine a movement to integrate African philosophies of knowledge (e.g. communal knowledge-building) into active learning frameworks. If well calibrated, this could yield an *African pedagogy of empowerment* – one that is both collaborative and anchored in discipline.

Alternatively, if current trends falter, we may see a bifurcation: elite private universities (like ALU, Ashesi) doubling down on student-led innovation, while many public universities revert to lecture to quickly "cover" booming enrollments. This could exacerbate inequalities unless national policies ensure all students engage in some form of guided autonomy. Ultimately, the future will likely be hybrid: global connectivity (online courses, AI) offering personalized pathways, and local traditions emphasizing community and discipline knowledge. Our foresight suggests that the most successful models will be those that **transcend the student-vs-teacher dichotomy** – embracing both learner freedom and the wisdom of educators as co-creators of knowledge.

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