

Ground-Up Innovation in Blended Learning: Faculty Experiences Toward Digital Transformation at Makerere University

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Keywords	Abstract
blended learning, collaborative course design, faculty engagement, digital pedagogy, Uganda	This article examines the experiences of Makerere University faculty members in Uganda, specifically their involvement in the co-design of blended courses and how these experiences influenced their adoption of technology-enhanced learning. Through a phenomenological approach and in-depth interviews with 12 faculty members across diverse disciplines, this article explains how faculty members brokered collaborative course design processes, navigated institutional pressures, and facilitated pedagogical transformation in a resource-constrained setting. The study reveals that peer mentorship, interdisciplinarity, and observable student interaction were among the key drivers of faculty commitment, whereas limited time, a lack of recognition, and entrenched hierarchies can deter long-term commitment. Faculty resilience and adaptive strategies were found to be key drivers of innovation, despite these challenges. The study recommends an institutional policy that is sensitive to academic agency, recognises blended learning as a component of formal workload allocation, and encourages the relational aspects of digital pedagogy. These are concerned with the creation of sustainable, locally enacted blended learning environments within the architecture of higher education within the Global South.

Introduction

As higher education institutions worldwide adopt digital technologies to expand access and enhance the quality of teaching and learning, blended learning (face-to-face with online components) has emerged as an appealing model for curriculum delivery. Blended learning promises even greater potential in developing countries, where institutions are compelled to accommodate rising student numbers, limited physical space, and demands for more flexible and inclusive pedagogies (Sanders & Mukhari, 2024; Watuleke et al., 2024). However, the success of blended learning approaches is not only a matter of technological capacity but, most significantly, of faculty engagement, especially in the collaborative building of high-quality learning experiences (Olatunbosun et al., 2024; Panda et al., 2024).

For most African universities, including Makerere University in Uganda, blended learning has been a strategic priority in higher education reform. At Makerere, efforts to



institutionalise blended learning have included staff training workshops, the development of digital platforms, and the promotion of team-based course design (Makerere University News, 2024a). Despite such initiatives, faculty members' reactions remain mixed: while some have adopted collaborative practices, others continue to face challenges such as heavy workloads, insufficient time, weak incentives, and unfamiliar pedagogical demands (Watuleke et al., 2024).

This study investigated Makerere University lecturers' experience as they worked in groups to create blended courses. It explains how they were shaped by experiences in engagement, motivation, and innovation in teaching within the limitations of existing institutional arrangements and available resources. By foregrounding the voices of academics, the study contributes to the literature on digital transformation in African higher education by offering essential lessons on cultivating sustainable and inclusive blended learning strategies in resource-constrained contexts (Olatunbosun et al., 2024).

Research Objectives

The primary objective of this study was to investigate the experiences of faculty members at Makerere University, particularly their participation in the co-design of blended courses, and to gain a deeper understanding of how these experiences impacted their motivation and professionalism as teachers. The study specifically sought to accomplish the following secondary objectives:

1. To identify the most powerful institutional and structural enablers and obstacles to faculty members' involvement in developing blended courses.
2. To investigate the effect of co-design processes on knowledge sharing between departments and teacher professional development.
3. To generate practical, actionable results that inform institutional policy and strategy, supporting faculty agency, collaboration, and context-responsive blended learning in resource-poor contexts.

In these objectives, the study explicitly states its scope. It makes a double contribution: to inform a theoretical conceptualisation of faculty experience with pedagogical innovation using digital technology and to develop evidence-based recommendations for institutional policy that can support successful, collaborative blended learning initiatives in African higher education (Makerere University News, 2024b).

Within the broader research context, this discussion examines prominent themes in blended learning implementation, including shifting faculty roles, team-based course development, and faculty engagement in environments with limited resources. These themes provide the foundation for presenting the lived experiences of Makerere University staff engaged in blended course development initiatives.

Literature Review

Blended Learning and Evolving Faculty Roles

Blended learning—carefully integrating face-to-face and online instruction—has been widely praised for its potential to expand access, improve student engagement, and enable flexible, student-centred pedagogies (Alammary, 2019; Garrison & Vaughan, 2008). However, in higher education, this pedagogical shift necessitates that faculty members move beyond their traditional lecturing roles to take on new roles in instructional design, technology integration, and the facilitation of online learning communities (Laurillard, 2013; McConnell, 2006; Stein & Graham, 2020).

Research consistently finds that the efficacy of blended learning depends as much on institutional support for teachers' new roles as on technological support (Owston et al., 2013; Porter et al., 2016). Campus faculty, however, are often faced with conflicting expectations: new pedagogies are in tension with traditional disciplinary expectations, workload requirements, and reward systems that might undervalue teaching innovation (Johnson et al., 2016). Moreover, institutional cultures that prioritise teaching excellence can also foster resistance or scepticism regarding the adoption of blended approaches (Rienties et al., 2013).

These tensions are further exacerbated in resource-constrained environments—such as most African universities—where policy climates can enable digital transformation, yet recurring challenges like the absence of training opportunities, substandard access to technology, and limited administrative support erode teachers' ability to utilise blended pedagogies (Kasse et al., 2015; Nkuyubwatsi, 2016). In these contexts, faculty agency—teachers' ability to make pedagogically sound, locally contingent decisions—emerges as a critical, yet often overlooked, driver of successful blended learning adoption.

Collaborative Course Design in Higher Education

Collaborative course design has been promoted as a solution to efficiently address the pedagogical and emotional challenges of implementing blended learning. Students and staff working together can share diverse perspectives, develop pedagogical knowledge, and disseminate the cognitive and affective burdens of curriculum development (Bennett et al., 2017; Hanstedt, 2023). According to Wenger's (1998) theory of communities of practice, research has demonstrated that collaborative design facilitates the co-construction of curricula, encourages the sharing of pedagogies, and fosters collective ownership of teaching innovations (Sorcinelli et al., 2006; Bond & Buntins, 2018).

This co-construction was not only undertaken to enable experimentation but also to offer substantive emotional and professional backup during episodes of pedagogical uncertainty (Patton et al., 2012). These partnerships are consistent with social constructivist models of teacher education, which emphasise dialogue and reflective practice as central to practical teaching innovation (Vangrieken et al., 2017).

Yet, empirical studies also identify long-standing challenges to sustained collaboration: it is difficult to coordinate interpersonal interactions, broker across incompatible disciplinary assumptions, negotiate leadership structures, and maintain motivation over time, especially for inexperienced faculty (Gregory & Salmon, 2013; Kali et al., 2011). Without institutional supports conducive to coordination, recognition of contribution, and incentives, collaborative design work will tend to become dispersed or superficial (Roxa & Martensson, 2009).

Faculty Participation in Resource-Limited Environments

A complex overlapping of individual, interpersonal, and structural elements determines faculty participation in blended learning in resource-limited environments. Although the majority of instructors are interested in instructional innovations that can improve student performance, research highlights enduring challenges: inconsistent internet connections, scarce technical support, and limited opportunities for ongoing professional development (Makokha & Mutisya, 2016; Nkuyubwatsi, 2016).

However, research also highlights factors that enable effective participation despite resource constraints. Institutional worth attached to faculty work, peer mentoring opportunities, alignment of blended learning initiatives with precise student needs, and explicit leadership

support can strongly enhance motivation and resilience (Baran & Correia, 2014). Further, faculty in resource-poor contexts demonstrate remarkable levels of creativity and resourcefulness in devising locally relevant solutions to structural problems (Czerniewicz & Brown, 2014).

But this is not sustainable without systemic institutional investment. Studies indicate that a settled policy, equal access to digital resources, and incentives for teaching and research are necessary for sustained faculty engagement and the effective adoption of blended learning (Mtebe & Raisamo, 2014).

Overall, the literature attests that high-quality faculty engagement in blended learning—and team-based course design—requires more than individual dedication: it relies upon institutionally enabling cultures to support pedagogical innovation, invites reflective practice, and provides teachers with resources. These dynamics are especially vital in resource-constrained environments, where blended learning challenges appear the most significant to date.

Methods

Research Methodology

A qualitative phenomenological research approach was employed in this study to explore lecturers' experiences of collaborative blended course design at Makerere University, Uganda. Phenomenology was used to gather rich, contextually relevant descriptions of how lecturers experience collaboration, motivation, and challenges during course co-design (Creswell & Poth, 2018; Kvale & Brinkmann, 2009).

The research drew on Activity Theory (Engeström, 1987), which conceptualises human activity—such as collaborative course design—as formed by the interaction between people, tools or technology, social norms, community structure, and divisions of labour. Activity Theory focuses on how tensions or conflicts within an activity system can drive learning and change.

This theoretical framework informed the formulation of research questions, guiding the investigation of how faculty actions are mediated by tools (e.g., online platforms), rules (e.g., university policies), and community (e.g., peers, administrators) in collaborative design.

Population and Sampling

The sample comprised approximately 56 lecturers across various Colleges at Makerere University who engaged in blended course design activities between 2020 and 2022. Twelve lecturers were purposefully chosen to yield a range of perspectives. Sampling was sensitive to gender (six males, six females), years of teaching experience (2 to 25 years), disciplinary background (e.g., humanities, sciences, health professionals), and was consistent with best practice in purposeful sampling to optimise sample richness (Patton, 2015).

In the findings, participant quotations were accompanied by identifying characteristics—e.g., gender, years of experience, and college affiliation (e.g., “a female lecturer with 5 years of experience in the College of Education said...”)—to illustrate how these factors influenced their perceptions and experiences.

Instruments

The primary data collection tool was semi-structured, in-depth interviews, with an interview protocol covering collaborative practice, institutional support, perceived barriers, personal motivations, and professional role change. The protocol was reviewed for content validity by two qualitative research specialists, and piloting with two faculty members (not part of the final sample) led to further refinement.

Reliability was enhanced through the consistent use of the interview guide with participants, audio-taping sessions, verbatim transcription, and the use of inter-coder reliability checks for thematic analysis (Lincoln & Guba, 1985).

Data Collection and Analysis

Data were collected through in-person and online interviews, each lasting 60 to 90 minutes, based on participant availability and Covid-19 regulations. Interviews were conducted in English, audio-recorded with full informed consent, and transcribed verbatim.

Data were analysed thematically based on Braun and Clarke's (2006) six-step procedure: (1) familiarisation with data, (2) generating initial codes, (3) searching for themes, (4) reviewing themes, (5) defining and naming themes, and (6) producing a report. Coding employed a combination of inductive and deductive strategies: inductively allowing new ideas to emerge from the data, and deductively utilising Activity Theory concepts (e.g., mediating tools, communal dynamics, rules, contradictions) to reveal systemic influences on participants' experiences.

A reflexive journal was maintained throughout analysis to document analytic decisions, ensure transparency, and acknowledge the research team's positionalities (Nowell et al., 2017).

Ethical Clearance

Ethical clearance was obtained from the Makerere University Institutional Review Board (IRB) before data collection commenced. Participants received detailed informed consent forms that explained the study's aim, procedures, potential risks, and benefits. Consent was obtained before each interview.

To ensure confidentiality, pseudonyms were assigned to each participant and were used in reports and transcripts. All data were encrypted on password-protected devices that were accessible only to the research team. Participants were also reminded that they were entitled to withdraw from the study at any time without penalty, following the ethical guidelines for research involving human subjects (Israel & Hay, 2006).

Findings and Discussion

Following Braun and Clarke's (2006) six-step thematic analysis approach to familiarisation, initial coding, theme development, reviewing themes, defining and naming themes, and producing a report, the data were scrutinised to note the richness of faculty experiences. The transcripts were coded independently by two researchers with extensive qualitative experience; intercoder reliability was achieved through iterative discussions until consensus was reached on the boundaries of the themes. The analytical work was informed by Activity Theory (Engeström, 1987), which made the researchers aware of the contradictions and systemic tensions that influence faculty practices. Thematic saturation was achieved when no new information emerged from successive interviews, typically after the tenth interview, but two additional interviews were conducted to ensure the stability of the findings. However, analytical limitations remain: the specific strains of the Covid-19 pandemic might have influenced participants' judgments, and the interviewer's insider status as a faculty colleague might have affected candour or self-presentation during the interviews.

Four interrelated themes that emerged were significant in conveying dimensions of faculty engagement in collaborative blended course design. They are outlined below, ranging from descriptive patterns of participants' self-reports to interpretive commentary informed by applicable theoretical and empirical literature.

Faculty as Designers: Redefining Academic Roles

Faculty reported that their interactions with the blended course design led to a complete reconsideration of their professional identity. Rather than simply transmitting information, they found themselves tasked with reconsidering pedagogy and creating learner-focused, interactive content. As one participant observed, “You don’t just post slides—you think about what will engage them without you being there.”

To others, the design process opened new pedagogical debates that had not existed before or were not usual in their departments: “We had to explain why we were doing something in the course. That kind of conversation never happened in our department before.” These accounts captured the shift toward what Andrade (2016, p. 85) calls “pedagogical retooling,” where staff abandon implicit teaching tendencies in favour of explicit, intentional instructional choices. Engagement with this shift was extremely uneven: “I was just trying to make it through—I didn’t think about teaching differently.” We uncovered a spectrum ranging from profound pedagogical change to routine compliance. This spectrum aligns with Porter et al.’s (2014) faculty adoption model, which posits that faculty members’ readiness for pedagogical change is variable and requires responsive support.

This theme indicates contradictions in the rules and division of labour within the activity system (Engeström, 1987) conflicting with the requirements of blended learning design. Tensions can either inhibit or provoke professional development, depending on how they are managed.

Collaboration as Learning: Mentorship, Peer Support, and Friction

Staff described co-design as both a rich knowledge source and a field of interpersonal tension. Some praised co-designing as an opportunity to share ideas, receive constructive feedback, and re-examine teaching strategies. One lecturer likened the process to an ongoing peer workshop: “We questioned one another: Does this activity make sense? Will students understand this?” Others derived ideas from other colleagues, “Sometimes I would just borrow someone’s structure because it made so much sense for my topic.” But teamwork was not always helpful. Several participants expressed annoyance with uneven effort, noting, “Somebody put up a PowerPoint and considered that to be their contribution.” Others noted that team hierarchies sometimes inhibited open dialogue, particularly when higher-level faculty dominated discussions or overruled junior colleagues’ suggestions.

These events are consistent with Wenger’s (1998) theory of community of practice, which posits that learning occurs through social engagement. They also raise to the surface, however, that collaboration is not merely about shared tasks—it requires trust, respect, and well-defined norms. Without facilitation, collaborative work can become a site of turf wars and power struggles, rather than a platform for shared development, as noted by Capdeferro and Romero (2012) in their examination of collaborative online learning contexts.

Community conflicts and labour division dimensions of the activity system emerged as contradictions, illustrating how differences in participation, status, and expectations can both damage and benefit collaborative learning relationships.

Structural Constraints—Time, Incentives, and Institutional Culture

Nearly every faculty member cited an over-bloated workload and a lack of formal time allocations as significant challenges to substantive participation. One member encapsulated a pervasive sentiment, “We are expected to design a new course, teach, supervise, and do research—when is that possible?” Moreover, contributions to blended course design were

frequently perceived as invisible in institutional evaluation systems: “There’s no tick for blended course design when I’m being evaluated. It’s invisible work.”

These constraints are reiterated by Adedoyin and Soykan (2020), who remind us that a passion for digital transformation must be accompanied by institutional initiatives on time, incentives, and honours. Some lecturers demonstrated creativity by establishing unofficial coalitions, developing design work in pieces over several semesters, or utilising readily available digital software outside institutional infrastructure. While such bottom-up improvisations do reflect agency, they typically entail personal costs and prove unsustainable in the absence of an enabling institutional architecture.

This theme invokes contradictions between rules (e.g., performance measures, promotion standards) and the outcome of high-quality blended learning. Without alignment, these contradictions undermine faculty motivation and risk making innovation dependent on individuals’ goodwill rather than systemic support.

Student Engagement as Faculty Motivation

Rather than training or external expectations, educators most often reported student interest as their primary motivator. They used expressions of a sense of reward when students critically engaged with online materials: “When a student posts a critical question on the forum, it tells me they are thinking. That gives me energy.” Some reported that formerly quiet or struggling students flourished in online spaces: “Some students who never spoke in class became stars on the platform.”

These accounts suggest that faculty-student relationships in online settings can create an affective dimension of pedagogy that is underemphasised in discussions of blended learning. Faculty were eliciting greater commitment by serving as witnesses to students’ development and excitement, establishing a positive feedback system in which engagement encouraged further pedagogical investment. This finding supports Nagy’s (2018) contention that emotional labour is inherent to effective online teaching and warrants explicit acknowledgement in professional development initiatives.

These findings indicate how outcomes (visible student engagement) can support teachers’ agency and shift blended learning from a compliance practice to a personally fulfilling practice deeply rooted in the activity system.

Overall, these themes illustrate how Activity Theory offers a valuable frame of reference for analysing staff lives as arising from dynamic processes of interaction between tools (virtual environments), rules (regulations), community (colleague relations), and the division of labour (team arrangements). Contradictions within and between these components operated as both problems and opportunities: left unresolved, they limited participation and innovation; resolved, they enabled professional growth and pedagogical transformation.

While data collection achieved thematic saturation, the unique stresses of the Covid-19 period might have heightened faculty members’ self-reported challenges and opportunities, thereby limiting the generalisability of the results to non-crisis environments. Additionally, as peer faculty members, researchers’ positionalities could have skewed participant responses, thereby fostering social desirability bias. Future research is needed to consider triangulating perspectives among students, administrators, and external observers to build a more textured understanding of blended learning implementation.

Conclusion, Implications and Recommendations

Conclusion

This study examined the experiences of academic staff of Makerere University in co-designing blended courses and how these experiences impacted their professional practice, academic identities, and pedagogical orientations. There were four interwoven themes: reconfiguring academic roles, learning through peer collaboration, negotiating structural constraints, and being motivated by student engagement. These themes collectively reflect a situated understanding of blended learning innovation in resource-constrained contexts.

The findings highlight the fact that faculty learning in blended spaces is both an individual process and a collective experience. Despite structural barriers—such as time limitations, institutional incentives, and the absence of official sanction—collaborative design generated rich professional development, critical pedagogical reflection, and inter-departmental learning. Most significant was that faculty involvement was less driven by administrative necessity and more spurred by a sense of internal motivation to improve student learning, and also further enabled by an appreciation of the relational and practical dimensions of teaching with digital tools.

As blended learning enters the mainstream of university pedagogy across the Global South, faculty experiences must be prioritised in these digital transformation processes. Inclusive and sustainable innovation will require institutional policies and practices that acknowledge not only the technical and intellectual work of blended learning but also the emotional, relational, and creative labour of teaching staff. Underlying this integrated work is the development of strong, context-sensitive, and people-centred blended learning ecosystems.

Implications for Practitioners

For instructional designers or instructors developing or designing blended courses, these findings suggest that intentional collaboration with other faculty members can be an excellent source of both professional development and peer support. Teachers should make a point of forming or joining cross-disciplinary design teams, where different perspectives can enrich pedagogical practice and promote a sense of community. Instructors also need to reflect on how their own evolving academic identities shape their practice with digital technologies, recognising that discomfort or uncertainty is part of pedagogical change. An emphasis on honest communication with students and on the interpersonal nature of teaching in mixed environments could further enhance motivation and instructional quality.

Recommendations

Based on these findings, the guidelines below are intended to create caring and sustaining environments for blended course teachers:

1. *Adopt intentional and adaptive models of collaborative design.* While highly valued by faculty, cross-disciplinary collaboration was challenged by uneven participation and unclear expectations. Institutions should codify support by clarifying team roles, offering design facilitation, and formally recognising collaborative effort in evaluation and reward systems.
2. *Integrate blended learning into workload and promotion structures.* Despite high intrinsic motivation, the lack of institutional reward demotivated sustained participation. Universities need to incorporate the responsibilities of blended course

- design into formal workload allocations and promotion structures—e.g., teaching load credits or performance appraisals—to motivate participation and prevent burnout.
3. *Formalise peer mentorship and reflective design communities.* Peer learning had a significant impact on faculty development compared to formal training. Institutions should establish mentorship programmes that pair novice designers with experienced colleagues, enable reflective practice groups, and foster cross-disciplinary communities of practice in blended pedagogy.
 4. *Strengthen faculty-student feedback cycles to ensure continued motivation.* Evidence of student learning gains and engagement excites faculty the most. Institutions must capitalise on this enthusiasm by providing tools to track student interaction, facilitate timely course revisions, and incorporate student feedback into course and teaching evaluations. Recognising the emotional labour of online teaching is key to promoting long-term faculty buy-in.

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