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BLENDED LEARNING IN KENYAN HIGHER EDUCATION: EXPLORING EDUCATORS' BELIEFS AND PRACTICES

A qualitative study of educators' beliefs at Jaramogi Oginga Odinga University of Science and Technology

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Table of contents

Abstract 7

Introduction 8

Background 8

- Beliefs 8
- Educators' beliefs about blended learning 9
- Blended learning practice and its challenges 10
- Motivation as a bridge between beliefs and practice 10

Problem statement 11

Purpose of the study 12

Methods 12

- Participants 12
- Data collection 14
- Ethical considerations 15
- Interview guideline 15
- Data analysis 16

Results 17

- Perceptions and views 17
- Influence of students 25
- Blended environment 29
- Pedagogical choices and teaching practices 31
- Way forward 33
- Perfect situation 36

Discussion 38

Conclusion 49

References 50

Abstract

This qualitative study explores the pedagogical beliefs of educators regarding blended learning at Jaramogi Oginga Odinga University of Science and Technology (JOOUST) in Kenya. Blended learning, a combination of face-to-face and online instruction, is increasingly adopted in higher education worldwide. However, in resource-constrained contexts such as Kenya, the implementation of blended learning remains a complex process shaped by educators' beliefs, institutional infrastructure, and contextual challenges.

Through 21 semi-structured interviews with educators from diverse academic backgrounds, this study investigates how educators define and experience blended learning, and how their beliefs influence their teaching practices. Drawing on the Self-Determination Theory (SDT) as a conceptual lens, the research also considers how factors such as autonomy, competence, and relatedness affect the belief–practice relationship, and vice-versa.

Findings reveal that while many educators express social constructivist beliefs and hold positive attitudes toward blended learning, practical constraints (particularly infrastructural challenges) can hinder their ability to fully translate these beliefs into practice. Nevertheless, educators also recognize the practical and pedagogical advantages of blended learning, such as increased flexibility, inclusivity, and the potential to enhance student engagement. The study concludes by identifying areas for institutional support and professional development to enable more intentional and sustainable blended learning integration in Kenyan higher education.

Introduction

The learning environment has undergone significant transformation in recent years, largely accelerated by the COVID-19 pandemic. In less than half a decade, traditional face-to-face classrooms have given way to digital alternatives, leading to the rise of online learning (García-Morales et al., 2021). While the most immediate effects of the pandemic have subsided, the education landscape continues to evolve. We are now witnessing a hybrid approach that blends face-to-face and online learning; a model known as blended learning.

Blended learning is widely recognized as an approach that integrates both face-to-face instruction and online learning. Graham (2006) defines it as "the combination of face-to-face instruction with computer-mediated instruction" (p. 5), while Garrison and Kanuka (2004) describe it as "the thoughtful integration of classroom face-to-face learning experiences with online learning experiences" (p. 96). These definitions emphasize that both face-to-face and online elements are essential in a blended learning environment.

Many universities and higher education institutions have also acknowledged the importance of this approach, since they are "designing strategic plans and taking diverse actions to implement and spread the use of blended learning methodologies" (Sánchez-Gómez et al., 2019, p. 177). However, although it is ever more being used in higher education, blended learning remains challenging, due to factors such as institutional challenges (like access to technology), design issues (like balancing online and face-to-face learning), and, not the least important (as this study will further develop), the educators' beliefs about blended learning (Bruggeman et al., 2022).

Background

Beliefs

As just mentioned above, the success of blended learning depends not only on institutional policies and technological infrastructure but also on how educators interpret and integrate it into their daily practice. Without a clear understanding of these beliefs, efforts to enhance blended learning may fail to address their actual needs and expectations, leading to ineffective interventions.

In essence, educators' beliefs shape their teaching behaviour, and vice versa. Drawing on an early study about teachers' thought processes, Clark and Peterson (1986) distinguished three categories: planning (1), interactive decision making (2), and theories and beliefs (3).

This last category, which this study focusses on, “represents the rich store of knowledge teachers have that affects their planning and their interactive thoughts and decisions” (p. 11). This kind of knowledge is also called ‘propositional knowledge’, has been defined even earlier by Rokeach (1969) as “any simple proposition, conscious or unconscious, inferred from what a person says or does, capable of being preceded by the phrase ‘I believe that…’” (p. 113).

Apparent from other literature, the concept of ‘beliefs’ is actually not easily defined. However, four key aspects on which there is sufficient consensus can still be identified among researchers. Skott (2014, p. 19) sums it up as follows: “… there is a common core to the concept of teachers’ beliefs in the literature. The term is used to designate individual, subjectively true (1), value-laden (2) mental constructs that are the relatively stable results of substantial social experiences (3) and that have significant impact on one’s interpretations of and contributions to classroom practice (4).”

Given the present study’s focus on higher education, the scope will be refined from teachers’ beliefs in general to the beliefs of educators. Unlike primary or secondary school teachers, higher educators often have less formal pedagogical training, which may shape their beliefs about teaching and learning. The educators typically specialize in their academic disciplines rather than in teaching methodologies, which can impact their instructional beliefs and practices (Postareff et al., 2007).

Educators’ beliefs about blended learning

A review of previous studies on educators’ beliefs about blended learning reveals several noteworthy insights. Sanchez-Gomez et al. (2019) found that educators identified beliefs about both advantages and disadvantages of blended learning. They noted benefits such as improved management of information, greater accessibility to practical case studies, and the strengthening of digital competences. At the same time, they pointed out challenges like the absence of face-to-face contact, low student motivation, and high dropout rates. Furthermore, Culbertson (2018) found that educators believed the transition to blended learning could be more effective if students had better access to technology during and after school hours. A lack of technological innovation was seen as a significant obstacle to successful implementation. Culbertson also concluded that when students are more engaged with their learning, an outcome that can be supported by the effective implementation of blended learning as a tool, they are more likely to stay in school through to graduation, highlighting the evaluative potential of blended learning.

This said, as the blended learning approach gains prominence, understanding educators' beliefs regarding blended learning and their motivation to implement it in their classroom practices becomes crucial to its successful adoption (Sánchez-Gómez et al., 2019).

Blended learning practice and its challenges

As mentioned above, the implementation of blended learning presents both opportunities and challenges for educators worldwide. While it offers flexibility, increased access to learning resources, and the potential for more student-centered instruction, it also comes with technological, pedagogical, and institutional hurdles. Educators often face difficulties in adapting their teaching strategies, ensuring student engagement, and navigating digital infrastructure limitations (Graham, 2018). Additionally, disparities in internet connectivity, access to digital devices, and institutional support can hinder the effective integration of blended learning, particularly in resource-constrained settings (Cleveland-Innes & Wilton, 2018), which remains also true in several East-African contexts. Research conducted in Tanzania, for example, has highlighted key barriers such as inadequate digital infrastructure, limited internet connectivity, and a shortage of faculty training programs to support blended learning implementation (Mtebe & Raphael, 2018).

Although recent initiatives aimed at improving digital access, as research at Makerere University in Uganda suggests (Omedo et al., 2024), persistent infrastructural and technological challenges continue to affect educators' motivation and ability to implement blended learning effectively. As a result, there may be a misalignment between educators' teaching practices and their underlying pedagogical beliefs.

Motivation as a bridge between beliefs and practice

Other research suggests that beliefs not only shape educators' perceptions of teaching practices but also influence their motivation to implement them (Fives & Buehl, 2011). In other words, while beliefs provide a cognitive framework for evaluating blended learning, motivation determines the extent to which educators act on these beliefs. To explore this connection, this study draws on the Self-Determination Theory (SDT), a framework developed by Richard Ryan and Edward Deci. In their work on intrinsic motivation and self-determination in human behaviour (Ryan & Deci, 1985), they identified three fundamental components that drive intrinsic motivation (O'Hara, 2017). The first component, autonomy, reflects an individual's capacity to take initiative and regulate their own behaviour in pursuit of personal goals. Competence, the second component, highlights the importance of developing new skills and mastering tasks, which fosters a sense of accomplishment and motivation. Finally, relatedness

underscores the intrinsic motivation derived from meaningful connections and a sense of belonging with others. Understanding these components offers valuable insights into the interplay between educators' beliefs, their motivation, and therefore their willingness to embrace blended learning environments in practice.

By examining educators' motivation through the lens of Self-Determination Theory (SDT), this study aims to establish a connection between educators' belief and the ways in which these beliefs are implemented in teaching practices. Specifically, the three core components of SDT (autonomy, competence, and relatedness) will provide insight into the underlying reasons and factors that drive educators to translate their beliefs into these concrete classroom actions. Many existing studies, including those by Orsini et al. (2015) and Chen and Jang (2010), primarily focus on examining the intrinsic motivation of students, with limited attention given to the perspectives of educators. This highlights a significant gap in the literature, as most research centres on student motivation while overlooking the critical role of educators' motivation and how this is related to the implementation of blended learning in practice. Given that educators' motivation, as previously discussed, has a direct and significant impact on student motivation, this study aims to further explore this perspective.

Problem statement

Despite growing global interest in blended learning and its pedagogical potential, little is known about how educators in East African higher education settings, particularly in Kenya, perceive and engage with it. While previous studies, such as Bruggeman et al. (2021) in the Belgian context, have examined the relationship between educators' beliefs and their use of blended learning, the actual implementation of blended learning in resource-constrained settings, like East Africa, remains understudied.

Infrastructural and technological constraints in these settings not only hinder practical implementation but also influence educators' motivation, an essential factor in translating pedagogical beliefs into practice (Ryan & Deci, 2000; Orsini et al., 2015). Additionally, most research in this domain focuses on students rather than educators, overlooking the complex interplay between educators' beliefs, motivation, and teaching strategies in under-resourced contexts. This study addresses these gaps by focusing on educators' experiences with blended learning in Kenyan higher education.

Purpose of the study

The purpose of this study is to explore educators' pedagogical beliefs about blended learning in the Kenyan higher education context. It investigates how educators perceive, interpret, and negotiate their use of blended learning within environments marked by infrastructural and technological limitations.

As part of this exploration, Self-Determination Theory (SDT) is used as a lens to help explain how motivation may influence the extent to which educators implement their beliefs in practice. Rather than being a central focus, motivation serves as a useful conceptual tool to understand the belief–practice relationship in resource-constrained settings.

To guide this purpose, the following research questions have been formulated: (1) What are Kenian educators' beliefs about blended learning? (2) How are the Kenian educators' beliefs and practice related to one another (through an SDT-approach)? (3) What are the future perspectives for blended learning in East-African context?

Methods

This study aims to gain deeper insight into educators' beliefs about blended learning. To explore these beliefs thoroughly, a method was chosen that allows for an in-depth examination of educators' thought processes concerning this specific subject. Therefore, a qualitative research design is employed. Qualitative research is particularly well-suited for accessing individuals' internal experiences, including their beliefs, motivations, and thought processes (Corner et al., 2019). As Oranga and Matere (2023, p.8) explain: "qualitative research helps gain a complex and rich understanding of a specific context or phenomenon."

Additionally, the study will consider the role of motivation as a secondary factor, using Self-Determination Theory (SDT) as a theoretical lens. SDT provides a valuable framework for understanding the intrinsic drivers, such as autonomy, competence, and relatedness, that may shape educators' beliefs about blended learning and help explain potential variations in their perspectives.

Participants

This study employed a non-random purposive sampling strategy, selecting educators from Jaramogi Oginga Odinga University of Science and Technology (JOOUST), a public university located in Bondo, Kenya. JOOUST is known for its progressive approach to technology within

the Kenyan context, making it a suitable institution for conducting this study. All participants were actively engaged in blended learning practices within their teaching. In purposive sampling, participant selection is guided by the researcher's understanding of who can provide the most relevant and meaningful insights for the research objectives (Oranga & Matere, 2023). The primary criterion for inclusion in the study was that participants were currently implementing blended learning in their educational practice. To ensure a broad representation of perspectives, efforts were made to include diversity in gender, age, educational role, and field of expertise.

A total of 21 educators participated in the study, comprising 11 men and 10 women. Their ages ranged from 26 to 75 years, with one participant in the 26–35 age group, six in the 36–45 group, six in the 46–55 group, seven in the 56–65 group, and one participant in the 66–75 age range. The sample also reflected a variety of academic roles, including educators, educator/deans, educator/directors, and one blended learning trainer.

The participants' fields of expertise were equally diverse. Seven educators specialized in IT and ICT (including health IT), two in agriculture, two in engineering, two in spatial planning, and two in education (encompassing mathematics, physics, and business). Other areas of expertise included linguistics, mathematics, biology, botany, and health and development.

In terms of teaching experience, all participants had a minimum of five years in the profession, ensuring that their perspectives were grounded in substantial classroom practice. Experience levels ranged widely, from as little as 7 years to over 30 years. Some educators reported over 30 years of experience, while others had mid-career experience ranging from 14 to 25 years, and a few were in the early stages of their academic careers with less than 10 years of teaching experience. But it ass

This diverse profile of participants allowed for a rich exploration of the beliefs, motivations, and practices related to blended learning within a single institutional context, contributing to a deeper understanding of its implementation in a public university setting in Kenya. A summary of demographic characteristics for each participant is presented in the table (Table 1: Participant demographics) beneath.

Educator	Gender	Age, between … (years old)	Educational role	Field of expertise
E01	F	46-55	Educator	Linguistics
E02	M	36-45	Educator	Mathematics
E03	F	36-45	Educator	IT
E04	F	36-45	Educator	ICT (health IT)
E05	F	26-35	Educator	Logictics
E06	M	46-55	Educator	IT
E07	M	56-64	Educator/Dean	IT
E08	M	46-54	Educator/Director	IT
E09	M	36-45	Educator	IT
E10	F	56-65	Educator	Agriculture
E11	F	46-55	Educator/Dean	Health and Development
E12	F	56-64	Educator/Dean	Botany
E13	M	66-75	Educator/Dean	Engineering
E14	F	46-55	Educator/Director	Spatial planning
E15	M	56-65	Educator	Engineering
E16	M	56-65	Educator/Dean Blended learning trainer	Business and Economics
E17	M	56-65 (63)	Educator/Dean	Education
E18	M	56-65	Educator/Director	Biology
E19	M	46-5	Educator/Dean	Agriculture
E20	M	56-65	Educator/Director	Spatial planning
E21	F	56-65	Educator	IT

Table 1. Participant demographics

Data collection

The study employed in-depth, semi-structured interviews as the primary method of data collection. These interviews were guided by a predetermined interview protocol that focused on educators' beliefs and perceptions regarding blended learning. The semi-structured format

allowed for consistency across interviews while also providing the flexibility to explore emerging themes and individual perspectives in greater depth.

This method was chosen because open-ended questions enable participants to express themselves freely and provide rich, detailed responses in their own words (Oranga & Matere, 2023). Unlike structured questionnaires, which may limit the depth of insight, semi-structured interviews allow for a more nuanced and human-centered exploration of the topic (Tscholl et al., 2019). The flexibility of this approach facilitated the collection of complex and meaningful data that would be valuable in the subsequent analysis.

The interviews were audio-recorded with participants' consent, then transcribed and anonymized to ensure confidentiality. A total of 21 face-to-face interviews were conducted, lasting on average 30 minutes and 54 seconds. All interviews took place in settings that were comfortable and convenient for the participants, and were conducted in English. Although no formal pilot testing was conducted, the interview guideline was reviewed by a blended learning expert to ensure its relevance and clarity.

Ethical considerations

Before data collection began, ethical approval was obtained from the relevant ethics committees of the participating institutions involved in this cross-institutional study. All procedures were conducted in accordance with ethical standards for research involving human participants.

Prior to the data collection, participants were provided with an information sheet detailing the purpose of the study, their role, and their rights. Prior to their participation, written informed consent was obtained. Participation was entirely voluntary, and all participants were informed of their right to withdraw from the study at any stage without any consequences.

To ensure confidentiality, all data, including audio recordings and interview transcripts, were securely stored and pseudonymized. Identifying details were removed during transcription, and only the research team had access to the raw data. All ethical and data protection measures were followed throughout the research process to ensure that privacy and integrity were maintained across all participating institutions.

Interview guideline

To explore educators' beliefs regarding blended learning, a semi-structured interview guideline was developed. The guideline consisted of a total of 20 open-ended questions, structured around four key themes: background information, educators' beliefs about blended learning, which is the key are of the interview guideline, motivation (based on Self-Determination

Theory), and closing reflections. This format ensured consistency across interviews while allowing space for individual perspectives to emerge.

The questions were carefully designed to encourage participants to reflect on their experiences, perceptions, and internal drivers related to blended learning. Topics included how educators define and implement blended learning, the perceived advantages and challenges they associate with it, and the degree to which they feel supported or autonomous in their teaching context. Drawing on Self-Determination Theory, the interviews also explored aspects such as educators' sense of autonomy, competence, and relatedness in relation to blended learning. The final section invited participants to share their ideal vision for blended learning and any additional thoughts they wished to express.

While all interviews were flexible in structure, certain questions were marked as essential and were consistently asked in every interview to maintain coherence across the dataset. Examples of such questions include: "What does blended learning mean to you?", "If you had complete control, what would an ideal blended learning environment look like for you?" and "What advantages and challenges or disadvantages have you experienced with blended learning?" These questions served to anchor the interviews in the core themes of the study, while still allowing for the richness and variability of individual experiences to be captured.

Data analysis

For the data processing in this study, it was crucial to follow a fixed framework to ensure consistency in data handling and to prevent confusion and erroneous analyses. The interviews were fully transcribed and subsequently processed using NVivo, a specialized software for qualitative data analysis. NVivo was selected for its suitability in managing large qualitative datasets and its robust capabilities for supporting inductive coding processes. All transcriptions were read twice to check for errors and to become familiar with the dataset. The transcriptions of all interviews were analysed thematically. Thematic analysis of qualitative data involves identifying, examining, and reporting specific patterns and themes within the dataset (Braun & Clarke, 2006). This approach provides flexibility in analysing data in various ways while keeping the research objective central (Braun & Clarke, 2006).

During the analysis, inductive coding was applied, meaning that codes were derived directly from the data, without relying on pre-established categories. This coding process was applied consistently across all transcripts. In total, 30 codes and 44 subcodes were generated, which later formed the basis for the development of six overarching themes. The coded transcripts were reviewed twice to ensure the accurate and consistent assignment of relevant codes to appropriate themes. Once the themes were established, the results could be reported.

Throughout the analysis, continuous notes were taken to maintain an overview of the codes, ensuring a smooth allocation to themes. It is also important to mention that the data was analysed across the entire dataset, meaning that the 21 interviews were considered as a whole and analysed collectively.

Results

In the following results section, the themes that emerged from the generated codes will be discussed using direct quotes from the educators, offering insight into each theme, while authentically representing their experiences and viewpoints. This section is structured in six parts, each corresponding to a key thematic area identified during the analysis.

The first part explores the *general beliefs (1)* of JOOUST educators about blended learning. The second part focuses on the *influence of students (2),* while the third part examines the *blended infrastructure* (3), or the institutional and technological environment in which educators work. The fourth part then presents the theme of *pedagogical choices and teaching practice (4)*, which will be influenced by the insights from the previous three themes. The fifth part outlines the educators' perspectives on the *way forward (5)* for blended learning, and the sixth and final part highlights their views on the *ideal blended learning environment (6),* which is their vision of what an optimal blended learning experience should look like.

Perceptions and views

This broad theme captures the educators' overall perceptions and views about blended learning. It includes their attitudes toward the approach, perceived advantages and disadvantages, and how they define and interpret blended learning within their teaching context at JOOUST.

Definition of blended learning (according to the educators)

When asked how they envisage the idea of blended learning, most educators defined it as a combination of two learning environments: a "hybrid of purely online and physical," as E09 described it, where it "involves use of physical learning and some sort of learning that is supported by technology." In essence, "some of the educators' classes are going to be physical, and others are going to be online. So, they're the same cohort, same students, but some sessions can be taught online, some sessions can be offline" (E21), simple as that.

Although the educators' definitions of blended learning were quite similar, demonstrating a shared understanding of what the concept entails, their beliefs (as this part will reveal) differ across several important aspects.

Teaching philosophy

First, before exploring the educators' beliefs about blended learning, it was important to gain a clear understanding of their general teaching philosophy. This understanding provides valuable context for why certain beliefs among educators are sometimes very similar and, at other times, markedly different.

One recurring teaching philosophy, mentioned by nearly half of the participants, emphasized the importance of pragmatism and student-centred learning. One educator from the School of Business and Economics (SBE) (E16) described it as follows:

> My teaching philosophy hinges upon ensuring, as I teach these students, that I give them the practical aspects of the courses that I teach. I know the theories in management accounting and all that, but then how do we apply them in real world? It is my belief that when you teach a student, there are certain core things that you must implant in a student for them to succeed out there. As you teach them, you must teach them about integrity. As you teach them, you must teach them about professionalism.

As E16's statement already suggested, the teaching philosophy among educators is often not only learner-centred, but also deeply focused on "empowering the students to achieve their full potential in life" (E12). This idea of supporting (or even empowering) students through teaching was reflected in multiple ways across the interviews, whether through "fairness" (E11), "an all-inclusive education approach" (E18), "using different sources" (E09), or "solving challenges within the community" (E15).

One educator (E17) went a step further by explicitly linking the importance of blended learning to his pragmatist, learner-centred teaching philosophy:

> I believe in pragmatism. So, I also value, for teaching, a learner-centred approach, where I believe that the learner has something that he knows, and we start from that and build on it. The blended learning will help them to construct the ideas within themselves because they can look for the information. They don't depend on the teacher as the source of knowledge.

Thus, as blended learning appears to help some educators apply their teaching philosophy more effectively, it becomes particularly interesting to explore what other advantages they associate with blended learning, advantages that may (in)directly influence or be influenced by their broader teaching philosophies.

Advantages of blended learning

One of the first advantages typically mentioned by the educators, distinguishing blended learning from both purely physical and purely online learning, is the flexibility it offers: educators can decide at any given time whether to deliver a class physically or online. Given their dual roles as lecturers and researchers, research obligations sometimes interfere with their teaching schedules. When they are not physically present at the university, educators can opt for an online class instead of cancelling or rescheduling. Conversely, when a class is heavily practical, having access to university facilities makes it easier to choose a face-to-face session. As E05 concluded, this flexibility benefits not only the educators but also the students, because “you can have your class from anywhere, and students can also join that class from anywhere.”

Associated with flexibility is the notion of convenience. As E16 stated: “I can sit in the comfort of my sitting room and teach my students across the world.” For many educators, the option of teaching online from time to time without having to be physically present at the university is very appealing. Additionally, as E21 pointed out, there is another convenience attached to online teaching: “The advantage is that I do less of the work. The students do more of the work.”

Alongside flexibility and convenience, another frequently mentioned advantage is the reduction in (transportation) costs. Educators highlighted that they “don’t have to physically move, which is optimizing on transportation costs” (E05). Moreover, as E13 noted: “The world is changing, and it is giving us an opportunity which is less costly to interact in a global way.” However, it is important to recognize that only the combination of both online and physical teaching leads to cost-effectiveness. Outside of university-provided facilities, students often lack free Wi-Fi access and must purchase data bundles to participate in online classes.

Together, these three arguments (flexibility, convenience, and cost) highlight the practical efficiency of blended learning in terms of optimizing the use of time and space. As E18 put it: “I think about saving time. Because when I'm abroad, I continue teaching my students online. And when I'm local, I teach them in the class, physically.” Similarly, E08 emphasized that distance should guide the decision between online and face-to-face teaching: “The students live in the hostels, or they live around here. So most often it doesn't make sense to teach them remotely because they come to the class.” On the other hand, E13 pointed out

that an online option can be a solution when necessary: “Maybe I go to another country or somewhere away from Bondo, like Nairobi, and I don't want my students to miss the class. So, I tell them, can we organize an online class in the evening?”

Besides the practical advantages of blended learning, several educators also highlighted its pedagogical benefits. For the online component, E16 argued (as did E11) that “when you teach online, you tend to cover more [content] than when you are in class.” Similarly, E08 noted that online teaching allows you to “tap into a wider audience,” because you are no longer “limited with those within the surrounding.” Although the ability to reach a broader audience addresses the practical efficiency of online learning again, it also promotes greater inclusivity. As E12 pointed out, sharing online learning materials enables students to learn at their own pace: “Some of the online learning materials you can also share with the students. At the same time, the students can also learn at their own pace.” E12 further explained the inclusivity of the online environment:

> It is very flexible, so that even students who are working during the weekdays can have the opportunity to advance their education during the weekends or even during the evening hours or at any one time that they are free. So, it is a way of inclusivity, leaving no one behind, in terms of advancing their knowledge.

This argument about inclusivity not only applies to learning pace but also to the different types of learners within a class, such as shier students—referred to by E03 as “the keyboard warriors.” E09 similarly argued that online forums “can engage the introvert,” while E17 noted: “The good thing with the online, they are free to ask anything. Because sometimes there are students who are shy when they look at you. But when they are behind the screen, they can ask any question.”

Although the educators did not highlight many specific pedagogical advantages for the face-to-face component, they did emphasize the importance of direct interaction, particularly in more practical courses. As E12 explained:

> At times when people don't give you feedback, you may feel like you are not teaching. So that touch, the face-to-face touch at times is really motivating. Because you are seeing the responses, the non-verbal cues that motivate you as an educator.

Thus, while both online and face-to-face learning have distinct advantages, several educators recognized the strength of blended learning in combining these approaches ('pedagogical complementarity'). As E09 put it:

> Online learning improves my methods of teaching. I tend to think that through design, I would do it better when I do it online, because I would get emerging technologies, and when I marry that or when I mix that with physical teaching, it will be the best.

E14 also saw this advantage, noting that blended learning allows you to "differentiate the learner space," making it once again a more inclusive way for people to learn at "different capabilities" (E03).

Disadvantages of blended learning

Of course, where there are advantages, there are also disadvantages. This is no different for the blended learning environment. For blended learning to be effective, both the physical and online components must be properly utilized. However, as the educators revealed during the interviews, the online learning environment remains a delicate issue, both because of its relatively recent introduction compared to traditional face-to-face teaching and due to the specific local context at JOOUST.

Regarding the online environment, almost all educators pointed to internet connectivity as the main challenge at JOOUST, or as E09 clearly put it:

> Internet is a problem. There's a program from the national government that was meant to power all universities and all secondary schools with free internet. However, we've had the cable dropped out, it terminated somewhere in Bondo.

Because of this persistent connectivity issue, additional problems arise, such as "being disconnected from the students," which leads to lecturers "buying your own internet as a lecturer" (E08), or students "running out of [data] bundles, because we don't have hotspots all over" (E21), or even "people shying away from online or blended learning, because of the lack of proper infrastructure" (E03).

The issue of internet connectivity is closely linked to another major challenge highlighted by most educators: the financial problem. When discussing the online environment, several related issues emerged. As E06 explained, "from this other part of the world, at times,

even affording a proper smartphone becomes difficult for students, let alone a good laptop," or "if you cannot afford the data, then it becomes a challenge to you." E05 was very honest about the situation as well: "I was once a student here and I really did not like online classes because I didn't have money to buy bundles. So, I preferred somebody to come to class because I'm already in campus."

In this sense, internet connectivity and financial constraints are almost two sides of the same problem. From time to time, when internet connection is unavailable, "students have to use their own resources," which is "quite expensive" for them (E18), leading to a situation where they "automatically begin to log off" during an online class (E04). Conversely, financial limitations also impact infrastructure maintenance. Due to the local context, including frequent power fluctuations and failures, JOOUST has "lost equipment for the last three years, worth more than five million" (E08), making a stable internet connection even more difficult to guarantee.

This last argument from E08 uncovers another issue frequently mentioned by the JOOUST educators, one that is also closely tied to the financial problem: the lack of equipment. As already noted, the local context is a major challenge for the university in acquiring and maintaining proper facilities. However, the difficulties are not only caused by local factors such as power fluctuations in Bondo; broader global inequalities also play a role. As E13 succinctly put it: "The machines, these things, most of the online methods may be there, but we in third world countries, we are not endowed with these kinds of facilities, like virtual labs or these types of things."

Still, most educators, like E14, primarily referred to their students when discussing the lack of equipment:

> The disadvantage on my side, basically, is our students: they lack laptops, or some of them don't have phones that they are able to use. But you use it as an advantage, almost, so you can work. Three or four students can join. And that is an advantage, but from their perspective, they are joining three or four of them, because they don't have the right, not each one of them has the right laptop, or the right phone, or something like that.

Although the challenges described above mostly concern the online learning environment, one comment from E16 summarized how these issues also affect the physical environment:

> If the students come here and there's no Wi-Fi, you'd rather listen to your lecture in the house. And the disadvantage with that is that it denies the

> students that aura of being within the campus. Because, when you are within the campus, there's something so different. Whilst at those places where the students stay, there's a lot of disturbances, the movement's all over. There are no restrictions. But at the campus, there are [good] restrictions.

Since students may no longer be willing to come to campus (E08) due to issues such as internet disconnections or lacking infrastructure, the problem of self-commitment has also been highlighted by several educators, particularly regarding online learning. E04 put it bluntly: “It takes a lot of discipline for a student to be keen online, when an online class is going on,” while E05 added that online learning “encourages laziness.” Additional challenges were raised, such as the inability to control students’ participation: “You cannot control students when they decide to join a class, they log in when they want, they log out when they want” (E18), and concerns that “students are taking advantage of e-learning, just staying at home” (E16).

However, as E03 pointed out, the issue of self-commitment is not only on the students' side: educators also need to remain committed to effective online teaching. As E03 explained: “It is somehow disadvantageous because now that strips away the standards. You'd find a teacher who has just sent a Word document and is not meeting the students at all. So, in some way, the student is losing.”

Closely related to this issue of self-commitment is the concern about credibility (and ownership), which several educators also raised. Students, for instance, increasingly take advantage of AI tools, even during exams (E15). Moreover, as E20 mentioned, “you’re not sure whether they’re doing the work,” and E02 warned that “somebody can impersonate, and maybe do the work for the other candidates.”

For educators, credibility regarding their own work also appeared to be an important issue. As E06 noted, educators are wary of “issues like plagiarism, issues of patent, and IP, the intellectual property.” E03 captured this concern vividly:

> There are those who feel like it is my brain, it is my work, if I share it and so many people are accessing it, I'm going to lose my value, I'm going to lose my role. So, most people prefer to just put their cuts online, but not their content. They bring in the copyright issues.

Finally, as was already mentioned as an advantage for the physical learning environment, the interaction and communication with students through online learning was often viewed as a disadvantage by most educators, mainly due to the lack of feedback. They missed “the non-

verbal cues" (E12) and "the exact face-to-face advantage" (?). Furthermore, understanding issues may arise because regular communication is disrupted by the computer interface. E11, for example, described the following pitfall from her perspective as an educator:

> Sometimes the danger when you move fast, you're not too sure that they're following, that they're working with you. You may have a lesson, and at the end probably they didn't understand a lot because you are not meeting them all, so you don't know whether they understood everything to the end.

It is not only individual educators who experience these challenges; some schools face additional difficulties based on the nature of their disciplines. The School of Engineering and Technology (SET), for instance, encountered specific obstacles, as explained by E13:

> Blended learning for us, for engineering particularly, is that engineering is behind. Because when it [blended learning] was started, these methods were for communication [studies]. But engineering has many languages. In engineering, we don't use only one language, the language of talking. We also use the language of drawing. So, if you teach them online, their understanding is low, because I'm using poor facilities, I tend to just talk.

Attitudes toward blended learning

Another topic that most educators were quite certain about was the general attitude toward blended learning—both how it is perceived now and how it should be approached. Despite the previously mentioned challenges, and precisely because of the many advantages, educators emphasized that blended learning must be embraced, or simply because "looking at the way the technology is moving, we have no choice other than to embrace it" (E07).

This attitude marks a significant shift compared to the past, as E16 recalled: "Initially, when this thing was coming, there was a lot of resistance." Now, all educators interviewed displayed a positive attitude toward blended learning, although sometimes cautiously, particularly regarding the online component. For example, E15 reflected:

> I would say that online learning is something that should be embraced. But we should also be conscious of the current technological advancement, especially the use of the advancement in the field of AI, artificial intelligence. And then we see how we can bring all this together to accept and use those facilities and opportunities in a way that will strengthen [education].

Others were less cautious. E19 pointed out: “Some people still believe in the manual, face-to-face. They should learn to change.” E16 summarized the general mindset even more equitably by stating: “You must be willing and ready to learn.”

It is important to note that the responsibility for a positive attitude does not rest solely on educators. As already discussed under the theme of self-commitment, it also applies to students, since “both the lecturer and the student are the users of technology” (E07). As E16 emphasized, “when everybody embraces something, it becomes so easy, the success becomes flawless.”

Even though challenges and disadvantages remain, all educators expressed a fairly optimistic outlook for the future. Many recognized how much progress had already been made. As E08 and E20 honestly stated, respectively: “It was a mess, it was a disaster initially, but we picked up,” and “it's better than 10 years ago, far much better, because the online works actually in Kenya, it became just popular in 2020 during the COVID.”

However, some educators, like E03, acknowledged that there is still work to be done: “But if we can follow these policies and have structures in place on how to do this blended learning, I think it can work very well.”

Ultimately, most educators seemed to agree with the succinct view expressed by E09: “[Blended learning] should be a thing of the past. We just need to look at how to improve on it.”

Influence of students

In addition to educators’ perceptions and views, a second key factor influencing their pedagogical choices and teaching practices is the role of students. The decisions educators make are often closely shaped by their students’ needs, behaviours, and levels of engagement. As such, the influence of students emerges as a significant theme that warrants focused attention in this study.

Interaction with the students

Of course, a big part of the influence that students have on educators comes from their interaction within the blended learning environment. It’s a topic that many educators brought up, as it plays a major role in how students affect both the motivation of educators and the decisions they make when designing and experiencing their blended learning environment.

The face-to-face interaction, or as some educators called it, the old-fashioned way of teaching, was frequently mentioned and forms the first part of this theme on interaction. Most educators believe that “as an educator, face-to-face is the best” (E07). This belief was echoed by the majority of interviewees. They indicated that in a face-to-face setting, you “get that close interaction with the students” (E01), which they appreciated because it allows them to observe both verbal and non-verbal cues that show if “they’re not getting anything of the course” (E11). It’s these “responses, the non-verbal cues that motivates you as an educator” (E12).

Besides this, face-to-face interaction also opens up different perspectives on the educator’s role. As E21 indicated: “When you're face-to-face you take on so many roles apart from just being the teacher. You can take on the role of a mentor for some of them.” Several educators valued this broader role that emerges through direct, in-person engagement with students.

However, face-to-face interaction isn’t always ideal. Some educators noted its downsides as well. For instance, E03 shared: “When you’re doing something in class and you don’t get feedback, everybody is quiet, it’s very discouraging.”

While most educators preferred face-to-face engagement, some also acknowledged the value of online interaction with students. One educator mentioned:

> “It really motivates me mostly when the students engage me online. Because in every course I teach online, I have a place for questions where the students are able to ask questions. So they engage me on areas they don't understand, and they ask questions” (E16).

Some educators had successfully created online environments that foster meaningful interaction, using tools like WhatsApp groups and e-learning platforms. As E02 explained: “With the WhatsApp group, the students are able to post real time questions. At the same time, on the e-learning platform, there is the part for the students to give questions. In fact, it makes them excited.” There is a clear need for platforms like these, where students and educators can connect in motivating and responsive ways. E01 summarized this insight in the following citate:

> “You really need to be able to put that information on the platform in a way in which the students can interact. And then create the discussion forums, create all those for these students to be able to communicate with you, especially those who are distance learners.”

But in reality, as many educators pointed out, this kind of online interaction doesn't always work as intended. Several participants mentioned clear disadvantages to engaging with students in an online setting. In such environments, "at times that environment already create some mental blocks" (E01). Educators observed that many students are simply not very engaged during online sessions. As E04 explained, "the students will just log in and probably do their own things. So, when you begin to ask questions, then you notice that certain students are not even keen."

This lack of engagement can become demotivating for educators. One participant shared that online teaching "can be very demotivating sometimes. Especially when you start with 100 students and you finish with 20 students. Then you feel these are people who are not serious" (E18). However, the issue may not always stem from student interest alone. Technical challenges, such as poor connectivity, also play a role. Due to 'network issues', both students and educators "want to contribute, but you just are not able to" (E05). This educator also pointed out that these recurring obstacles can shape one's preference for either online or face-to-face teaching:

> Yes, I like the physical one because how do I call it? The relationship is positive when we are having physical classes. You can see my reaction, the facial expressions, as opposed to online where sometimes you really want to express yourself but the network is not there so you are stuck.

Apart from viewing face-to-face and online modes as separate, some educators strongly emphasized the importance of combining the two. As E04 said: "I think, for the connection of face-to-face and online, depending on the personality, both would be useful." Several educators pointed out that this connection should be carefully designed, with one educator suggesting that "the online should mirror the face-to-face, whereby I am able to see that somebody is not understanding" (E12).

To summarize this part of the results regarding interaction and the influence of students on educators' pedagogical choices and teaching practices, E03 stated that the engagement of students, whether in online or face-to-face settings, is crucial in shaping an educator's motivation to implement blended learning:

> If the students are engaging, they're asking questions, it motivates you to even do more for them. But when they are quiet, it's very demotivating. I think if we can structure the blended learning well, you'd be able to reach all your learners and your learners would be able to reach you."

Awareness

The awareness of students regarding blended learning is a crucial factor in the successful implementation of a blended learning environment. Several educators highlighted this as a key issue, emphasizing the need for students to be more actively engaged in their learning process. E21 pointed out that student participation in the online learning environment can be frustrating due to a lack of interest: “I know that these students, they use their phones a lot. But why is it that when it comes to phones for education, they cannot use it? So, we may need to create that broad awareness.”

This awareness is necessary to “inform the students about the importance of also learning online as well as working physically (face-to-face)” (E05). The same educator also noted that “even as lecturers, some of us are not informed,” suggesting that awareness should be cultivated not only among students but also among educators themselves.

Raising awareness goes beyond introducing students to the blended learning structure, it also involves helping them understand the broader purpose of education. This connects directly to issues of motivation and participation. As E03 observed: “Most of the students do not understand what blended learning is all about. And I think it's because of the age and the need. They do it to get the paper, not the knowledge.”

AI use

The use of AI is rapidly emerging, and for students in particular, it presents a highly interesting and helpful tool to support their academic lives. Some educators noted that modern students are increasingly turning to AI to enhance their classroom engagement and, more significantly, to improve their performance in assessments at the end of each semester. It happens as fast as “giving an assignment, then within that instant, they've turned to AI, and they've gotten everything they've extracted from AI, and then that's exactly what they present” (E11).

Educators expressed concern that students are using AI to such an extent that they begin to take advantage of the system. This, as E15 pointed out, can become very difficult:

> The students are now taking advantage of having an examen, and just have ChatGPT and they give you everything, whilst not even reading what it gave them. So those are some of the things that are missing and making the blended learning, especially in the area of assessment, a little difficult.

Therefore, E20 suggested a potential solution, proposing that the university “needs to be able to put a software that can detect how much of the percentage of ChatGPT is in the answers.” The broader issues surrounding AI use are, for some educators, closely tied to the use of

mobile phones. E09 emphasized that the root of the problem often lies in phone usage: “The students go to class maybe with cell phones, they go to exams with cell phones, and they want to use those cell phones to steal exams, to cheat.”

Blended environment

As the two previous chapters revealed, the first factor shaping educators’ perceptions of blended learning was their own views and experiences, followed by the influence of their students. Now, a third actor comes into play: the space in which the users (educators and students) operate, namely the blended environment itself.

This third actor also appeared to be significant according to most educators, as it influences their perceptions of blended learning and, in turn, is shaped by those perceptions. Together, these three actors (educators, students, and the environment) ultimately shape the pedagogical choices educators make and their teaching practices (the interconnection that will be explored in the following chapter).

Physical infrastructure

As already mentioned in the section on *Disadvantages*, the scarcity of equipment at JOOUST, due both to the local context of power fluctuations and the broader (inter)national challenges of durable investments, seemed to make it difficult for some educators to fully contribute during their online courses while at the university. In essence, for them to be able to provide decent online courses, “electricity should be stable” (E07).

Furthermore, several educators pointed out that even for physical courses, the infrastructure at the university sometimes poses challenges, such as a shortage of venues: “When you walk around, we don’t have a lot of classes, rooms are scarce, seats are a problem” (E08).

However, given the flexibility of blended learning, educators no longer have to be “100% dependent on venues, physical venues,” which “could be a challenge” (E07). In this way, blended learning could actually serve as a middle ground, offering a practical solution to some of the infrastructural constraints faced at JOOUST.

Online platforms

When asked about the online platforms they use, the educators at JOOUST appeared quite resourceful, referring to a range of learning management systems such as Google Meet, Zoom, Moodle, and KENET. Beyond these basic educational tools, some educators also utilized non-educational platforms, such as WhatsApp. E16, for instance, created communication groups where “students may remind [the educator] of things.” However, he still

encouraged students “to ask questions through the blended e-learning system, because it has the ability to restore that information for a very long time.” This approach aligns with the guidelines provided by the Centre for E-Learning (CfEL) at the university, as E08 explained: “There's a lot of incentives from management, and management has been encouraging through the CfEL for lecturers to develop courses and upload them on Moodle.”

Despite this progress, some educators remained sceptical about the suitability of these ‘learning management systems’ for educational purposes. E13, for example, argued that “the software we use for meetings, like Zoom, Google Meet, all this, they are not meant for learning.” This sentiment was particularly shared by educators from the School of Engineering and Technology, who pointed out that such tools were “[meant] for communication [studies]” (E13). Consequently, some educators sought to make their teaching “a bit livelier and more interesting than those presentation modes” (E04).

Nevertheless, as E16 already indicated, the e-learning platform provided by CfEL was positively received by several educators, especially as an integral part of the blended learning environment. E14, for example, appreciated its convenience:

> It's so easy in terms of sharing with students some of the points that we have shared in class. Because, previously, you probably wanted to print them out, but now, once the class is done, even the same slides you've used in a physical course, you just PDF them, and then you go on your e-platform, and you upload them there.

E03 was also enthusiastic about the platform, particularly because it complemented her teaching method: *“When a question is posted on the forum, the community will help you, the fellow students can help you.”* She further concluded: “With blended learning, it is easy because they're not coming all at once. They're asking questions at different times. You can go to the forum, and from its engagement, you can know what is missing and where they are.”

However, despite the existence of these platforms and the efforts made by educators, it is important to recognize that the local context poses significant challenges for students. Many students struggle with online access because they cannot afford the necessary gadgets, have to share a single device among several users, or, as E06 pointed out, “have never interacted with the IT gadgets properly.”

Pedagogical choices and teaching practices

The fourth theme, ‘pedagogical choices and teaching practices’, is primarily shaped by the three themes discussed above. While these serve as the main influencing factors, several additional topics emerged that also directly impact how educators make pedagogical decisions and implement blended learning in practice. A few of these will be discussed in the following section.

Confidence in designing BL

In In general, a large majority of the participants expressed strong to extremely high confidence in designing a blended learning course. As E05 simply put it: “I'm confident. I don't have any problem with that.” This confidence is largely attributed to the specific training educators receive in navigating online platforms and designing blended learning environments. “Yeah, we feel confident because there's a training. The Centre for E-learning carries out training every now and then, which has helped a lot for the educators. So, they're all trained on how to develop course content” (E08).

Another factor contributing to this confidence is hands-on experience with digital tools. “I'm 100% confident, because I've interacted with the tools” (E09). This practical experience enables educators to better understand what works for their students and tailor their course content accordingly: “Because I've experienced it, I know what works and what helps me. So, I try to incorporate that into the development of the course, to try as much as possible to engage that learner with this content that I'm creating” (E03).

Confidence also seems to grow with increased use of the platform. As E14 noted: “As you become more confident, then you can now begin discussions, you can bring all the interactives that are there on the platform.”

However, despite the generally high levels of confidence, a few educators expressed uncertainty. One reason for this may be that blended learning isn’t always suited to their specific teaching context. As E13 explained, this approach may not apply equally well to those not teaching a “standard online course.” Others say that they are not fully confident, because “there is need to engage with the process of learning that process, and coming up with what we need to use so that we can make blended learning more effective” (E15).

Overall, E07 captured the general sentiment well: “I feel confident, because the challenges that are there can be overcome. And the merits outweigh the challenges.”

Freedom to choice type

Another important factor that directly influences educators' pedagogical choices and teaching practices in the context of blended learning is the extent to which they feel free to implement it in their courses. Generally, most educators reported feeling a strong sense of autonomy in choosing their teaching methods. There are no restrictions imposed by authorities regarding the choice of instructional approach. As one educator stated: "I have 100% freedom. No limitations, zero limitations. I do what I want with the system" (E16).

The presence of this freedom is in itself significant: "The fact that there is a choice is important" (E17). This autonomy allows educators to design their blended learning courses in ways that align with their teaching goals and are best suited to the needs of their students:

> The policy allows that the mode of learning would be blended. So with the policy in place allowing us to do blended learning, then I'll decide at my own discretion as a lecturer, when to do physical, when to do online, whether to do entirely online, to do entirely physical (E01).

Although most educators stated that they have full freedom in designing their blended learning courses, several also pointed out that freedom is not solely defined by the absence of restrictions from institutional authorities. As E11 explained: "So even if you are free, there are still some other factors that affect your freedom."

For some, this freedom is shaped by the students themselves. As E09 put it: "My freedom is now dictated by the people that I'm teaching, by the students." Another educator also emphasized that their flexibility is constrained by the realities and challenges faced by learners: "What is stopping me from really embracing the online thing is the problems that the students have" (E05).

In addition, a few participants expressed concerns about intellectual ownership, noting that the sense of freedom can also be affected by copyright-related issues: "You can feel free to do it, but when you design one, it's like you lose your intellectual property to it" (E11).

In summary, while institutional policy may allow for freedom in teaching methods, this autonomy is often shaped by other influencing factors, primarily the students and, to a lesser extent, structural or legal constraints. E15 captured this balance well, taking into account the range of factors that ultimately determine how much freedom an educator really has:

> It is not questioned by the university as to whether you are doing what needs to be done. So it is open for the lecturers to decide whether to have online or physical classes, depending on how you agree with the students.

Course topics

The course topic of certain classes also influences educators' pedagogical choices and teaching practices regarding blended learning. Some course topics are best suited for face-to-face teaching, while others are more appropriate for online delivery. A recurrent response across the interviews was that face-to-face teaching is essential for courses with a strong practical component. As E10 explained: "It simply means that if it is practical, I can't do online, I usually have to go physically." Similarly, E07 emphasized: "If you are teaching courses that require hands-on, it would be better you do it physically."

Beyond the practical nature of some subjects, a few educators also noted the importance of face-to-face interaction at the beginning of a course to build familiarity and connection with students: "We do have physical at the beginning of the introductory part of the class. So that we get to know one another" (E12).

In contrast, online teaching was seen as better suited for courses that are easier or primarily theoretical. As E04 pointed out: "When it's just introduction of subjects; these theoretical aspects you can cover online. The concepts that are not very deep and rigorous can be done that way."

Way forward

The way forward was a topic discussed in all the interviews. This includes what is needed within the blended learning environment to work toward a better future for both educators and students. Topics such as policy, required skills, and potential solutions will be discussed in the following chapter.

Policy

Policy is seen as one of the key drivers for creating a positive future for blended learning. Currently, educators expressed concerns not about the absence of policies, but about the general attitude towards following them. As E03 explained: "You know, we have policies that we generally don't follow. They're just there to show that we have a policy for this. But if we can follow these policies and have structures in place on how to do this blended learning, I think it can work very well." This educator emphasized that if policies were properly respected and implemented, they could significantly contribute to the success of blended learning.

With the right policies in place, blended learning could better accommodate different types of courses. As E20 pointed out, there is a need for more comprehensive and inclusive guidelines:

> I think blended learning must have very clear guidelines on how it should be conducted. We have some guidelines, all right, but those guidelines do not lay emphasis on practically orientated subjects. It only lays emphasis on examination process.

Skills needed for blended learning

For blended learning to be successfully implemented in the future, certain skills are essential. Throughout the interviews, educators identified several key skills they believe are important to possess when designing and teaching blended learning courses.

First of all, “communication skills” (E01) were highlighted as crucial due to the different ways communication occurs within a blended learning environment. Beyond communication, educators also emphasized the importance of originality and creativity in this process. Creativity can have a broad meaning. For instance, it can involve finding practical solutions to technological challenges: “Sometimes I tether my phone's internet with the university ethernet together or the same gadget so that if one goes off, this other one continues” (E02). Creativity can also shape the way educators present their courses: “As a teacher, you need to lead the learners to be creative by the activities you have given them to undertake” (E17).

In addition, skills such as open-mindedness, research capabilities, and strong pedagogical skills were frequently mentioned. For example, pedagogical competencies like “curriculum development skills and course design skills” (E12) were considered important. This is essential because, as one educator explained, “you need to design them in a given way, so that you're able to break the materials in small pieces, but also complete, so that students can learn in bits” (E14).

Finally, these skills must be supported by solid subject knowledge. Educators stressed that in order to apply effective design and teaching strategies, it is necessary to “master the subject well and, reflecting on what you want to do, you just sit down and plan your course first before you start teaching” (E21).

One skill, and arguably the most important one mentioned by almost all educators, are IT skills. A blended learning environment requires educators to possess at least a basic level of “computer literacy” (E07) and “internet navigation skills” (E04).

Reassuringly, achieving a basic IT level does not seem to demand extensive effort, as one educator mentioned: “It just takes a few steps and you are there” (E18).

In relation to IT skills, several educators also emphasized the value of video-making skills to enhance the blended learning experience. As E10 described: “You would like to have the PowerPoints and you're explaining. And the student can see the PowerPoint, hear you explain it.”

Solutions for blended

When asked about possible factors that could contribute to the success of blended learning, many educators pointed back to the challenges and disadvantages already discussed. Issues such as the “availability of Wi-Fi” (E16) and the need to “invest heavily in technology” (E16) were repeated several times. Solutions were also proposed to address the financial barriers faced by students, particularly the costs associated with purchasing internet bundles. E10 suggested that “the university should give an extra amount for the students to buy bundles,” while E08 recalled that during the COVID-19 period, the university “negotiated with the telecom companies, the guys who provide internet services, and they offered students bundles at discounted prices. It worked.”

Other solutions focused on tackling the lack of student participation, a problem that directly influences educators’ motivation and perceptions of blended learning. One approach to this challenge involved designing “very interactive classes that can hold the focus of the students so that they don't do other things. Maybe also a way of finding out whether these people are active or not” (E12). Some educators linked the problem to a broader decline in student discipline and attitude: “I think that key is that there's need for student discipline” (E18).

A suggested solution was “about creating awareness” (E21) and working to change the attitudes of both students and educators toward blended learning. As E14 put it: “So, for blended learning, I think what would lead to success is actually many people's attitude towards it, because, when I embraced it, immediately it came.” Another straightforward strategy shared by one educator involved grading participation: “I always tell them, they get 10% for class participation. So if by the end of the semester, I don't know your name, you've never talked, minus 10” (E10).

Beyond addressing participation, some general solutions were proposed to foster a more successful blended learning environment. One educator suggested that building a better understanding of blended learning requires you to “exchange ideas with other people and get a community of practice” (E21).

Training blended

One important topic that many educators emphasized was the need for training. Although training is closely linked to the previously discussed solutions, it is treated separately here because it was a recurring theme throughout almost all of the interviews.

Educators strongly believed that structured training programs are essential for both lecturers and students. As E05 explained: “The management should have programs of kind of training to even to train lecturers on how to use the platforms, to communicate, to send notes, to even set cards. I mean also to train the students on how to use the same platforms.”

The belief in the necessity of training is clearly present among the educators, and importantly, it has already been partially implemented. Many participants reported that the training they received significantly boosted their confidence in designing and delivering blended learning courses. As E11 stated: “We've gone through some trainings which have given us some confidence in how you can go about it. So it's possible to design, to come up with an online class, an online course.”

Virtual reality

The future of blended learning may be bright, with some educators envisioning a virtual reality environment where the online setting perfectly mirrors the face-to-face experience, allowing for an effortless switch between the two. Several educators expressed the desire for students who are learning remotely to feel fully immersed, as if they were physically present. As E07 explained, the goal is for “those who are far away, who are doing it virtually, to also feel like it's almost like real,” a concept referred to as virtual reality. E13 described it as follows:

> It should be like we need to remove all things that we have, physical things, into a virtual space. For example, when we walk ‘outside’, this is a laboratory called this, this one is called this, this is called this. But can we create a virtual space of departments?

Perfect situation

To conclude the interviews, educators were asked to describe how their ideal blended learning environment would look in practice. This question aimed to capture a broad view of how educators believe face-to-face learning, online learning, and additional aspects should seamlessly work together.

One of the first ideal situations mentioned ties back to the concept discussed just above: the creation of a virtual reality environment, where online teaching mirrors face-to-face teaching so closely that the transition between the two feels effortless.

Another vision for an ideal blended learning setup, raised by several educators, involved the creation of specific spaces referred to as "smart offices" (E08). These would be designated areas where students could gather to follow classes, whether online or physical, reinforcing the idea of mirroring the face-to-face environment. These smart offices were described as “regulated zones, where students actually log into those zones and they're not just doing what they want wherever they want” (E04).

Additionally, these zones could be supported by an assistant who monitors student behaviour, which E04 phrased as follows:

> An ideal blended learning environment is where I maybe have an online assistant just tracking students' concentration, tracking their input in class, tracking their participation the way we do with the elementary school. I think an environment where you have the teacher, but you also have an assistant who is doing the personality management.

The educators not only shared their visions for the infrastructure of an ideal blended learning environment, but also reflected on how the frequency and interplay between online and face-to-face courses could be organized in a perfect scenario. Many educators believed that, ideally, introductory classes should be delivered face-to-face, followed by subsequent sessions conducted online:

> So that best method is whereby the introduction of the course, we have physical for purposes of knowing one another, knowing people's interest, knowing background. And then going forward, we do online (E12).

This combination was emphasized by several educators who believed it is important to maintain occasional face-to-face contact, while still prioritizing online classes. As E21 explained: “Because then when you get to know them, you get to introduce everything. Then maybe I skip two to do online classes and I do another physical one. Then another two online and then again, another physical.”

And of course, the ideal blended learning situation would also require “where internet connectivity is perfect and everybody has full access to the internet” (E18). One possible solution to achieve this, as suggested by E09, is through “North B, which is a program that was meant to power all universities and all secondary schools with free internet.”

Ultimately, as E03 indicated, educators were focused on providing the best possible experience for their students in order to help them thrive within the blended learning environment.

> An environment that centres on the student. That the learning would be able to adapt to that individual student. So, if it is an environment that can tell me the capability of the student and where the student is and how behind they

are, and I can be able to adapt my content to that student to be able to engage.

Discussion

This chapter reflects on the main findings of the study and connects them to existing literature. The interviews with educators at JOOUST revealed several important insights about their beliefs, practices, and experiences with blended learning.

First, while many educators expressed beliefs that align with social constructivist learning theories, translating these beliefs into actual classroom practice often proves challenging. Second, educators articulated the practical advantages of blended learning, such as flexibility, more explicitly than its pedagogical benefits, which were often implied rather than directly stated. Third, despite existing challenges, most educators held a positive attitude toward the future of blended learning at JOOUST. Fourth, the study found that students play a significant role in shaping educators' beliefs, often prompting reflection or adaptation of teaching strategies. Fifth, infrastructural and institutional limitations were reported to negatively affect educators' sense of autonomy and their ability to implement blended learning according to their pedagogical ideals. Finally, they underscored that blended learning at the classroom level must go beyond simply combining online and face-to-face elements: it calls for intentional integration and targeted professional development.

The discussion that follows will explore each of these themes in light of relevant literature. The chapter concludes by reflecting on the limitations of the study and offering suggestions for future research.

Social constructivists at JOOUST: from beliefs to practice

Most of the educators interviewed emphasized the importance of pragmatism and student-centred learning, an approach closely aligned with the social constructivist learning theory (Engels, 2024). Several key aspects of this theory were reflected in their responses: (1) learning through experience was highlighted by one educator who asked, "I know the theories in management and all that, but then how do we apply them in real world?" (E16); (2) situated learning appeared in references to "using different sources" (E09) and "solving challenges within the community" (E15); (3) meaningful learning emerged in the idea that "a student should be able to get out of himself what he really wants out of himself" (E11); (4) cooperative learning was linked to "fairness" (E11) and "an all-inclusive education approach" (E18); (5) self-directed learning was noted in the belief that "the learner has something that he knows,

and we start from that and build on it" (E17); and (6) the educator's role as a supporter was captured in the aim of "empowering the students to achieve their full potential in life" (E12), as well as a facilitator of the blended learning environment that "becomes a two-way platform" including "a participatory teaching approach" (E19).

Although almost all educators valued something in their teaching that can be associated with the social constructivist leaning theory, be it directly or indirectly, only few of them mentioned how blended learning is related to their general teaching philosophy. But above all, about this philosophy, E20 was not sure if the educators really apply it, though they may be valuing it: "We need to have more student-centred learning, with a lot of support from the lecturers. And this will make also practical approaches, other than just theoretical work. Most of our teaching in the universities tend to be very theoretical." So, although several educators at JOOUST articulated beliefs aligned with social constructivist learning theories, these beliefs would not always be consistently translated into their actual teaching practices. This phenomenon has also been noted in broader educational research, where contextual constraints often hinder the application of teachers' espoused beliefs in practice (Fang, 1996).

Explicit practical advantages and implicit pedagogical advantages

Interestingly, one of the educators from the School of Education (SEHSS) (E17) was able to explicitly link the importance of blended learning to his general teaching philosophy. He explained that blended learning "will help [students] to construct the ideas within themselves because they can look for the information. They don't depend on the teacher as the source of knowledge." He further emphasized that "both the online and the physical environment need to be made [use of]," and stressed the importance of "leading learners to be creative by the activities you have given them to undertake."

This perspective highlights the potential of blended learning as a learning environment that promotes student creativity, autonomy, and active engagement, which are just some of the key principles of the social constructivist learning theory. Previous research has similarly emphasized that blended learning environments foster critical thinking, creativity, and deeper student-centered learning by encouraging learners to take greater responsibility for constructing their own understanding (Garrison & Vaughan, 2007).

The example of E17 suggests that blended learning has the potential to align closely with the pedagogical beliefs that many educators at JOOUST seem to implicitly hold. However, the majority of educators primarily highlighted the practical efficiencies of blended learning, rather than its pedagogical advantages. This observation points to a broader challenge: while educators may hold constructivist beliefs about learning, translating these beliefs into consistent teaching practices within blended learning environments can be difficult.

Indeed, most educators, be it directly or indirectly, mentioned at least one of the following three arguments that all point to the ‘mere’ practical efficiency of blended learning in terms of optimizing the use of time and space: higher flexibility, greater convenience, and the reduction in (transportation) costs.

This tendency to emphasize practical advantages over pedagogical ones may also be influenced by the dual professional roles educators fulfil as both teachers and researchers. Given the competing demands of research productivity and teaching responsibilities, blended learning's efficiency in terms of time and space management becomes particularly attractive.

Still, and partly because of the flexibility the blended learning environment entails, several educators revealed that it offers greater inclusivity too. This idea of inclusivity not only applies to the learner’s pace, but also to the learner’s personality: the more extravert students may thrive during the physical classes, while shier students would prefer the online forum since “behind the screen, they can ask any question”. Blended learning is, in that sense, a good way to listen to the learner’s social needs, providing better learning outcomes too (D. Garrison & Kanuka, 2004).

By referring to the idea of more inclusivity, through blended learning, the educators actually did mention a pedagogical benefit of the blended learning environment in particular, which may be lacking for just online learning, or just physical learning. Since the blended learning environment provides a platform that allows people to learn at “different capabilities” (E03), some educators seem to (indirectly) make use of the strength of the ‘pedagogical complementarity’ of blended learning: they differentiate the learner space, and eventually adjust their course design and method of teaching to what the learner space, be it physical or online, has to offer to both the educator and the students. E10 stated it as followed: “I would definitely make sure I have my more practical oriented and difficult-to-understand topics face-to-face and then the easy introductory ones would be online.”

These educators, as was also argued in the study of Todd (2020), thus recognize that merely transferring their planned face-to-face instruction into an online format is insufficient for effectively promoting student learning.

In conclusion, though educators mostly don’t have the pedagogical background as ‘regular teachers’, most of them (be it indirectly) gave away some key pedagogical benefits of blended learning, like greater inclusivity promoting better learning outcomes, or the method of teaching that can be (easily) adjusted to what the learner space has to offer. Still, it is crucial to note that educators are indeed not ‘regular teachers’, but also researchers and employees of an institution, meaning that the aforementioned practical advantages are to be considered important to them.

Blended learning: from constraint to convenience?

The practical advantages, as discussed above, also seem to be outweighing the practical constraints (which will be discussed later on) at the university, since most educators had very positive attitudes toward (the evolution of) blended learning. They usually argued that "if policy and (infra)structure would be in place, blended learning could work very well" (E03).

According to the study of Mutisya and Makokha (2016), all seven public Kenyan universities that were included in the research ranked heavy workloads the most serious challenge affecting the adoption of e-learning. Although our research has been conducted almost a decade later (2025), none of the lecturers who were interviewed at JOOUST mentioned that heavy workload is the most serious challenge. In fact, most of them argued that e-learning provided more flexibility and greater convenience. E20 said that "I would prefer to have it online. And this is personal, because of the administrative work. Otherwise, you won't be able to cover your courses in time." And E21 even stated that "the advantage is that I do less of the work. The students do more of the work."

From this discrepancy between our findings and prior literature, two interpretations can be drawn: First, we could argue that over the past 9 years, educators have become more comfortable and confident with e-learning tools: on the one hand, since Mutisya & Makokha's study (2016) was conducted before COVID-19, it's likely that the pandemic acted as a catalyst for digital skill development and system-wide exposure to blended and online teaching. And on the other hand, many educators in our study expressed high confidence in using blended learning tools, which could also suggest a shift over time, not only in training (from the CfEL) but in familiarity and institutional support structures (even if imperfect).

But second, we could also argue that workload is actually still an issue, just implicitly acknowledged. Put differently, we don't want to overlook the possibility that the practical benefits educators emphasized, such as flexibility and time efficiency, may be valued precisely because of ongoing workload pressures, even if these were not explicitly mentioned in the interviews.

The importance of interaction and the educator-student relationship

While conducting the interviews, it quickly became clear that all educators consistently referred to their students as central to shaping their beliefs, perceptions, and pedagogical decisions. It is therefore worth highlighting this, as students have a direct and meaningful influence on educators. After all, students are the reason educators teach, this relationship is what drives their professional purpose. As several participants expressed, it is the interaction with students that motivates them to show up for work every day.

Although some interviewees spoke positively about the potential for meaningful interaction in an online environment, most still insisted that “face to face is the best” (E07) when it comes to interaction. This reflects a broader perception that the more traditional, in-person approach to teaching continues to hold significant value. Many educators suggested that their full role as an educator, not just as a content-deliverer, but as a mentor and guide, can only be fulfilled through face-to-face engagement.

These deeper educator roles appear to be closely tied to the motivational aspects of teaching, which may help explain why many educators still prefer face-to-face instruction when it comes to student interaction. This mode of teaching provides them with the human dimension of being an educator. Echoing these sentiments, Edginton and Holbrook (2010, p.7) found that face-to-face interaction “seems to be the greatest strength of blended formats over fully online courses.”

That said, several educators recognized the need to replicate meaningful interaction within online environments. Rather than teaching to a “black screen,” they stressed the importance of creating engaging, interactive experiences. As E17 stated: “Because in teaching there must be interaction. So you must also be smart in designing how the online learning will take place with interaction.” Some educators spoke about actively working to make their online classes more engaging in order to foster interaction in the best possible way. Culbertson (2018) supports this notion, suggesting that the inclusion of games and interactive tasks in blended learning courses can enhance student participation and interaction, making the online environment more dynamic and inclusive.

This emphasis on interaction can be directly linked to one of the core components of Self-Determination Theory (Ryan & Deci, 1985). The third key factor of the theory, which is relatedness, suggests that the sense of connection and belonging plays a critical role in fostering intrinsic motivation. In this context, an educator’s desire to relate to students, not merely as a teacher, but as an educator, can positively influence their motivation to teach.

The findings of this study support earlier research, such as Stacey and Gerbic (2008), who concluded that educators’ interaction with students contributes significantly to the successful implementation of blended learning in practice. This motivation is not only about choosing blended learning over purely online teaching, but also about maintaining the overall drive to teach in meaningful, engaging ways.

It is about preserving the authenticity of frequent face-to-face teaching to foster strong student interaction, while using the online environment, through occasional online classes and digital platforms, as a powerful extension of the classroom. In doing so, educators are able to create a blended learning environment that balances the immediacy and relational strength of

in-person interaction with the flexibility and reach of digital tools, ultimately supporting both student engagement and their own professional satisfaction.

Closely related to the topic of participation is the overall awareness that needs to be cultivated, not only among students but also among educators. A lack of awareness currently presents a barrier to more effective participation in blended learning courses. Both groups must recognize the purpose and potential of this instructional approach in order to benefit fully from it. Several educators stressed the need for improvement in this area. As E03 pointed out, students today often seem to study primarily for the certificate rather than for genuine knowledge. According to this educator, students increasingly rely on tools like ChatGPT during assessments to obtain high grades, while avoiding meaningful participation in class. For educators, this behaviour can be deeply demotivating.

To address this, a blended learning environment must be developed where awareness about the purpose and value of studying is made central, an environment in which both the online and face-to-face components reflect and reinforce this goal. Increasing awareness in this way can also enhance competence, one of the three core components of Self-Determination Theory. Research supports this connection. As Ibrahim and Nat (2019) demonstrated, educators' awareness of and attitude toward blended learning are significant motivators in its successful implementation. When students and educators alike understand what they are studying or teaching for, competence and knowledge are more likely to increase. At present, this sense of purpose is often lacking, and as a result, educators may feel less motivated to embrace and implement blended learning, simply because they are not fully aware of the benefits it can offer.

SDT-theory as a bridge between beliefs and practice

As outlined in the results, everything ultimately comes down to the pedagogical choices and teaching practices of the educator. These are shaped by a combination of their beliefs and attitudes, the influence of students, and the blended infrastructure in which they operate. The bridge between these factors and the choices educators make is motivation, specifically, how motivated they are to translate their beliefs into practice. This intrinsic motivation, as defined by Ryan and Deci (1985), is determined by three key components: autonomy, or the extent to which educators feel free to implement blended learning; competence, or the confidence and skills they possess to do so effectively; and relatedness, or the quality of their connection and interaction with students in a blended learning environment. As mentioned previously, relatedness plays a significant role in shaping educators' pedagogical choices and teaching practices. Understanding how autonomy and competence similarly influence these decisions

is essential to gaining a complete picture of what drives educators to implement blended learning successfully.

The competence of educators has been thoroughly explored in this study, encompassing factors such as confidence, training, and overall skillset. It can be concluded that many educators feel confident in designing and implementing a blended learning environment. For most, this confidence stems largely from having received specific training in blended learning. Several educators emphasized that such training is essential for both designing effective blended learning courses and feeling prepared to teach them. As E16 put it: “So when all the staff are trained and they understand and they know what they're getting out of this, it becomes a beautiful thing.”

This finding is supported by previous research. Porter et al. (2014) demonstrated that technological and pedagogical training is critical in facilitating the transition to an online or blended environment. Similarly, Ibrahim and Nat (2019) concluded that such training increases educators’ motivation to implement blended learning in their courses and enables them to adapt their teaching practices more effectively.

The skills acquired through blended learning training are primarily technological, though pedagogical competencies also receive some attention. These technological skills, often referred to as IT skills, were the most frequently mentioned when educators were asked what is required to design an effective blended learning course. Training plays a vital role in enhancing these skills, helping educators become both more competent and confident in designing and delivering blended learning experiences. As E02 clearly stated: “For this environment to be effective, you must be IT compliant”.

This study confirms that training in blended learning, and the development of relevant skills, is essential. As also confirmed in previous research by Davis and Fill (2007), an increase in competence leads to higher levels of motivation, which in turn contributes to a more successful implementation of blended learning in teaching practices.

Furthermore, the extent to which educators can shape their own blended learning practice represents an important third component of the Self-Determination Theory (SDT) model, autonomy, which significantly influences intrinsic motivation. This concept serves as the third key link between educators’ beliefs and their actual teaching practices. Autonomy refers to the freedom educators have to design and implement blended learning in a way that aligns with their pedagogical values. The question arises: to what extent are educators truly able to make these choices, and how does this affect their motivation to implement them in practice?

On the surface, educators at JOOUST reported having the freedom to choose their preferred teaching methods. They are generally able to design their (blended) courses as they

see fit, with no formal restrictions imposed. However, as E11 insightfully noted: “Even if you are free, there are still some other factors that affect your freedom.” This suggests that while institutional autonomy may exist in theory, practical or contextual constraints can still limit the educators' ability to fully exercise this freedom.

We can call them the limiting factors or disadvantages that influence the educators’ willingness or motivation to fully commit during a blended learning course, or even design one, as one of the educators (E03) argued that some of her colleagues would sometimes be “shying away” from it, because of the lack of infrastructure. As argued by Buchanan et al. (2013), “if a university wishes to increase use of learning technologies, it is not enough to train and encourage faculty: adequate investments must be made in technical infrastructure and support for those activities.”

This aligns with the main concerns mentioned by almost all educators, which are poor internet connectivity, financial problems (or investments), and lack of equipment. All three of them are closely linked to one another, and all come down to (the lack of) infrastructure and institutional support, highly influencing the educators’ choice to design a blended learning environment. Not only at JOOUST, but at other institutions too, “decisions regarding infrastructure and institutional support are vital motivators among instructors towards BL practice” (Ibrahim & Nat, 2019): while technological readiness promotes BL practices, the absence of it discourages it.

Besides the (infra)structural and institutional constraints, fear of copyright infringement also seemed to influence the educators’ willingness to design blended learning courses, regarding both their own work and the work of the students. Also in the study conducted by Mutisya and Makokha (2016), “fear of denial of copyright was ranked the third most serious challenge impeding the adoption of e-learning in public universities”, since “universities denied copyrights [of the educators] for the modules that they wrote and uploaded on the e-learning platforms”.

Lastly, and specifically for the School of Engin and Technology (SET), some online platforms are not compatible with the teaching method. This is also argued in the study of Sánchez-Gómez et al. (2019) regarding the engineering and architecture teachers, since they “demand better institutional policies, support in infrastructure and training”.

It could be argued that, although educators are free to implement blended learning the way they want, there are some factors that can’t be unseen, that indirectly affect their freedom and therefore their autonomy. Autonomy, as being part one of the components of intrinsic motivation, is affected in a more negative, than positive way and therefore restricting the educators to implement blended learning in their course.

BL in the classroom requires intentional integration and professional development

Then, whilst educators are indeed employees of an institution, thereby holding beliefs about blended learning at the institutional level, they are also lecturers, meaning that they also hold beliefs about blended learning in the classroom, and what practice could or should look like. As already mentioned, some educators clearly uncovered how they make use of the blended learning environment in such a way that both physical and online are complementary to one another. E15, for example, argued that you need to "find out where it would be best to have it online, and where it would be necessary to have it physical", meaning that one is not merely a substitution of the other.

While this perspective of E15 reflects a thoughtful, context-sensitive approach to instructional design, it also suggests that the online and face-to-face components are viewed as separate and somehow interchangeable. However, effective blended learning requires more than just combining modes of delivery, it involves the intentional integration of online and in-person elements to create a cohesive and enriched learning experience. As Garrison and Vaughan (2007) argue, blended learning is not merely the sum of its parts, but a unified design in which the whole is greater than the sum of the individual components.

In essence, when online and face-to-face elements are strategically aligned around shared learning goals, the blended environment can foster deeper engagement, critical thinking, and active learning in ways that neither mode can achieve alone.

In reflecting on their own roles in blended learning environments, several educators emphasized the importance of developing a broad set of skills, including creativity, communication, pedagogical expertise, and digital literacy. These competencies align with what Garrison and Vaughan (2007) describe as essential for fostering meaningful learning experiences in blended contexts, where teaching is no longer limited to content delivery but requires active facilitation across modalities. Similarly, Rapanta et al. (2020) highlight that successful blended teaching depends on educators' ability to design interactive learning activities, communicate effectively both online and offline, and adapt to evolving technological demands. As blended learning continues to evolve in higher education, particularly in resource-constrained contexts, it becomes crucial to invest in ongoing professional development that equips educators not only with technical skills but also with the pedagogical confidence to use blended learning creatively and purposefully.

Future perspectives for blended learning

So, what about the future of blended learning, and specifically in this African context? Well, first of all, policies have to be clear, extensive and certainly followed. Policies are there to support the practice, so it is important that it works as a skeleton for the blended learning

environment. There is need for those guidelines so that everybody can start we a structured view on how blended learning can be applied in classes. As Johnson et al. (2016) reviewed that policy has to be very clear and supportive for blended learning to be successful, which is also proved in this research.

Apart from these policies, previously discussed parts like attitude and infrastructure have to be adapted in a way that a blended learning environment can be created were everybody; institution, educators and students can benefit. With the correct, long term investments in infrastructure and technology, the blended environment will be easier and more effective than ever.

Furthermore, a blended learning environment should be created where educators can interact with the students, in a same efficient manner as it can be face-to-face, with the online tools as a complementary element to the physical environment. As E01 put this nicely:

> So, you really need to be able to put that information on the platform in a way in which the students can interact. And then create the discussion forums, create all those for these students to be able to communicate with you.

In this case, the online environment will not only be seen as a replacement or substitutional product, but more as modification of the current environment, where both learning methods perfectly blend together. This statement is drawn upon 'SAMR model for Technology Integration of Dr. Puentedura (2010), which includes four phases of technologic integration: substitution, augmentation, modification and redefinition (Hamilton et al., 2016). If the blended learning environment can go from phase one (substitution) to phase three (modification), in this context, that would mean an effective implementation where everybody benefits.

To conclude this discussion, it can be said that despite its many potential benefits, the implementation of blended learning, particularly within the African context, continues to face significant challenges. This research, along with other studies conducted in Kenya, has highlighted persistent issues such as weak and costly internet connectivity, poor scheduling of classes, ICT breakdowns, difficulties in lecturer-student interaction, lack of digital devices, and an unsupportive learning environment (Ndwiga, Ogeti, & Syomwene, 2024). These barriers hinder the effective adoption of blended learning, creating a gap between institutional and educators' goals and the reality of classroom execution.

Addressing these challenges requires more than just an examination of educators' beliefs. While beliefs are undoubtedly influential, they are not the sole factor affecting the practical implementation of blended learning in Kenya. A broader alignment is needed, one where the physical, digital, and pedagogical elements of the environment work together. The ideal blended learning environment should integrate the strengths of both face-to-face and

online learning while minimizing their respective disadvantages. As E19 succinctly put it, this would mean:

> It would be a [blended learning] space where we have adequate infrastructure in terms of the tools for learning, which will have a space where the people that are supposed to participate are actively involved, they have good attitude, which will have a space where people are prepared, we have the adequate materials, that are motivating and captivating to the persons that are involved, and where we have the physical engagement, where we have useful tools that are available in time and are available for everybody.

Limitations and future research

While this study provides valuable insights into educators' beliefs and intrinsic motivation regarding blended learning in the Kenyan higher education context, several limitations must be acknowledged. First, although the research included a relatively large and diverse sample of 21 educators, covering all academic schools within JOOUST, it was limited to a single institution. As such, while internal diversity was ensured, the findings may not fully represent the wider range of beliefs, experiences, or infrastructural realities present across other Kenyan universities or institutions in different African countries. Future research should therefore involve multiple institutions and cross-national comparisons to enhance the generalizability and contextual depth of findings.

Secondly, this study focused solely on educators' perspectives. While this was an intentional design choice, the lack of student voices limits the scope of understanding around blended learning. Educators frequently reflected on student behavior, participation, and challenges, suggesting that students play a central role in shaping the success of blended environments. Future research should incorporate students' perspectives to provide a more comprehensive and balanced view of the factors influencing blended learning effectiveness.

Furthermore, although the interviews were conducted in a neutral and open-ended manner, the researchers began the study with a specific interest in exploring the link between educators' beliefs and their motivation to implement blended learning in practice. While care was taken to avoid bias, it is possible that pre-existing assumptions subtly influenced the interpretation of responses, and therefore increasing the risk of researcher bias.

Finally, as this study was conducted during a time of transition in educational practices following the COVID-19 pandemic, the results reflect beliefs and experiences in a context that is still evolving. Longitudinal studies may help to determine how these beliefs and practices develop over time, particularly as infrastructure, policy, and training initiatives progress.

Conclusion

This study set out to explore educators' beliefs about blended learning in the context of higher education in Kenya, and how these beliefs relate to their intrinsic motivation to implement blended learning in practice. Drawing on Self-Determination Theory (SDT), the findings reveal a complex and interconnected dynamic between belief systems, contextual factors, and motivational drivers.

Educators' beliefs were found to be shaped by a wide range of influences, including their teaching philosophies, perceptions of student engagement, infrastructural realities, and their experiences with blended learning itself. These beliefs, in turn, affected the educators' motivation to implement blended learning, particularly through the lens of SDT's three core components: autonomy, competence, and relatedness. While educators expressed a sense of autonomy in choosing how to deliver their courses, this autonomy was often indirectly constrained by external factors such as technological infrastructure and student involvement. As a result, the autonomy component of motivation, although theoretically present, appeared to be weakened in practice. In contrast, the component of competence emerged as a strong motivational driver. Most educators reported feeling confident and well-equipped to design and deliver blended learning courses, supported by institutional training and hands-on experience with digital tools. This sense of competence played a crucial role in the implementation of blended learning in practice. The component of relatedness yielded mixed results. While face-to-face interaction was consistently associated with strong relational connections, online teaching environments were perceived as less effective in fostering meaningful interaction. Nonetheless, many educators acknowledged the potential of well-structured online platforms and thoughtful course design to significantly enhance online interaction in the future. This suggests that with the right support and pedagogical strategies, relatedness could evolve into a powerful motivator for implementing blended learning.

In conclusion, by addressing constraints on autonomy, reinforcing training for competence, and investing in strategies to enhance online interaction, institutions can help educators move from belief to motivated action in blended learning implementation.

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