

## **Student Teachers' Experiences of Blended Learning Delivery in Higher Education: A Case of a Selected University in Dar es Salaam**

**Kassimu A. Nihuka**

*Dar es Salaam Tumaini University (DarT), Dar Es Salaam*

### **Abstract**

*The main objective of this study was to examine student teachers' experience of blended learning delivery mode in pursuing a course on Contemporary Issue in Education (EDU 322) during second semester of 2024/2025 in higher education considering a case of Dar es Salaam Tumaini University. The study used mixed-methods approach to collect data from a total of 97 comprising of 58 females and 38 males in their third year of study pursuing Bachelor of Arts with Education (BAED) drawn using random sampling technique. Both quantitative and qualitative data collected using structured google form and focused group discussion guide were then analyzed using SPSS (ver. 26) and data reduction techniques respectively. The findings of the study have revealed that student teachers found blended learning interesting but with limited opportunity to engage with fellow students or course lecturer during the course. From student teachers' perspective, blended learning enhanced learning flexibility and access to reading resources during the course, development of self-paced learning skills and digital skills. However, student teachers faced challenges including unstable internet speed, lack of digital gadgets, insufficient preparedness to use blended learning technologies, and inadequate interaction in the DarTU learning management system. The study concludes that blended learning is effective in promoting student teachers' positive experience, flexibility, exposure and autonomy in learning in higher education. The study recommends that the DarTU management should consider re-viewing its traditional programmes to accommodate blended learning delivery mode to enhance flexible learning not only on-campus but also remotely. This should also include formulation of robust blended learning policy and guidelines and provision of regular continuous professional development for academic staff on blended learning pedagogies.*

**Keywords:** *Blended learning, education, learning management system, online, pedagogy & traditional delivery.*

### **Introduction**

The increasing development in digital technologies is significantly influencing practices in higher education not only at national but also at regional and international sphere. The developments of blended learning, an art and science of programmes and courses delivery that integrates face-to-face and online delivery is widely being adopted in higher education as a flexible and learner-centered approach to education. Blended learning offers solution to challenges associated with the traditional delivery modes by enabling access to diverse learning resources, promoting self-paced

and autonomous learning, and promoting digital literacy skills that are increasingly necessary in the 21<sup>st</sup> C knowledge economy.

As higher education institutions suffer from limited enrolment in their campus-based programmes, limited lecturers and lecture halls, and the demand for flexible learning delivery modes, blended learning is better placed as a practical and scalable solution (Graham, 2006; Hrastinski, 2008). Empirical evidence indicate that blended learning is an effective long-term strategy in enhancing access, equity, and quality in delivery of programmes and courses in higher education (Pima, 2024). This shift demands for redefining of the delivery mode and reorientation of the roles of lecturers and students in higher education environment.

While readiness of higher education and positive management support are important for the effective implementation of blended learning delivery mode, student teachers' experience of blended learning is equally relevant (Boelens, De Wever, & Voet, 2017). Students in higher education form the majority segment of the potential users and are basically the primary beneficiaries of blended learning technologies. Their experience, expectations and challenges are central in realizing the effectiveness and sustainability of blended learning practices (Gikandi, Morrow, & Davis, 2011). According to Gikandi et al, 2011, positive experience are often associated with increased engagement, satisfaction, and improved academic outcomes, whereas negative experience leads to disengagement, resistance to blended learning and poor performance.

DarTU is determined to embrace blended learning as a delivery mode to enhance flexible learning, internationalization of its programmes and increasing its enrolment to over 10,000 students by 2030 (DarTU, 2025). Accordingly, DarTU has installed a robust Learning Management System (DarTULMS), an e-Learning platform to facilitate blended learning among other modes in the university (DarTU, 2025). The said platform has over 10 courses from 5 different programmes uploaded by respective lecturers to make learning flexible and further promote students' academic outcomes.

Additionally, DarTU has put in place a reliable and adequate wireless access to internet of 600 Mbps for both students and lecturers in their private computers, phones, lecture halls, offices, corridors and parking spaces. Moreover, DarTU has a Knowledge and Information Resource Center (KIRC) that houses the University Library, which is largely open-access with a Library Information Management System (KOHA) installed to facilitate flexible access to reading

resources in the university. The university has subscribed to about 34 online journals through a joint subscription under the Consortium of Tanzania University Libraries (COTUL). Subscribed databases include EBSCO Host, Emerald and Research4 Life. Access to most of these resources is only within DarTU using the University Computers connected with the internet. Through the University library, students have access to free online resources such as Emerald, JSTOR, Sage, Premier, IMF, e-Library OAPEN, Oxford University and Academic Journals.

On the basis of the digital infrastructure that are in place at the University coupled with the DarTU's ambition to embrace blended learning as stipulated in its RSP (DarTU, 2025), the author employed the DarTULMS as a platform where all lectures and related reading materials for EDU 322 course (Contemporary Issues in Education) offered during the second semester of 2024/25 academic year were uploaded for flexible access by students. Additionally, students were oriented on how to access freely available online resources that are available through KOHA and other databases during the course.

### **Blended Learning for Delivery of EDU 322 Course**

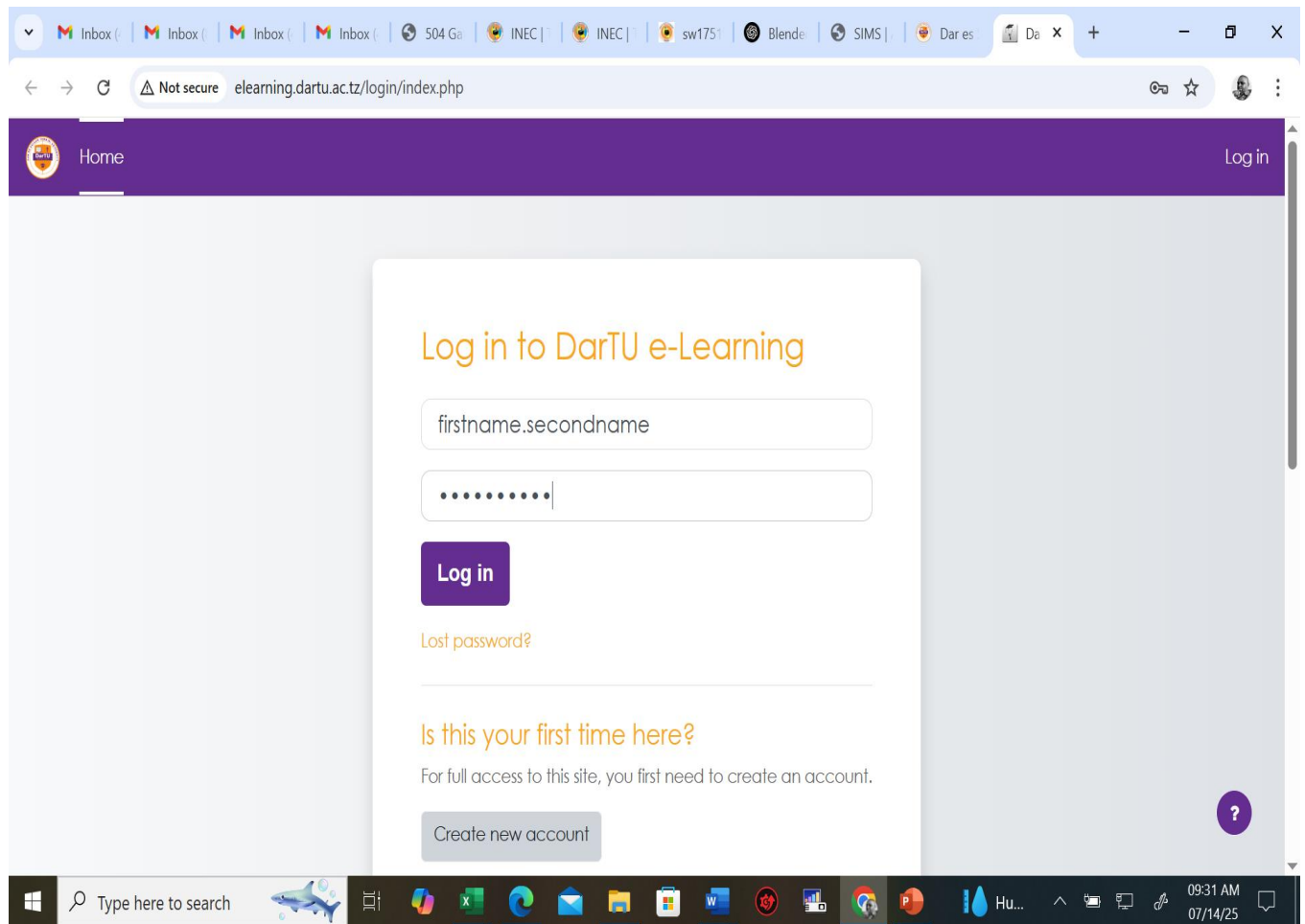
Contemporary Issues in Education (EDU 322) is one of the courses offered by the Dar es Salaam Tumaini University (DarTU) to 3<sup>rd</sup> year Bachelor of Arts with Education (BAED) student teachers during the second semester from April, - July, 2025 in each academic year. It is a 9 Credits course which aims to equip student teachers with: (i) the understanding of various developments and their influence on education, (ii) understanding of challenges and barriers that education should address, (iii) acknowledgement of the available opportunities in addressing multifaceted challenges and barriers to educational access and success, (iv) ability to evaluate various educational policies, practices, and innovations and (v) ability to critically analyze the role of education in a globalized world.

The EDU 322 course consisted of topics, namely; education and globalization in globalized world, education and technology, education and sustainable development goals, education, equity, access, quality, gender and social justice, education policies in Tanzania, and education and climate change including environmental education.

To enhance flexible learning, the said course was offered using blended learning mode which was piloted before rolling it across departments at DarTU. The blended learning involved on-campus face-to-face lectures and online self-paced learning. The on-campus face-to-face lectures were conducted on Fridays from 17:00pm to 20:00pm in Lecture Room 101 in the Alex G. Malasusa's Tower at DarTU campus located along Coca-cola Road - Mwenge, Dar es Salaam. On the other hand, the online self-paced learning mainly asynchronously was facilitated using DarTU Learning Management System (DarTULMS or E-Learning) at one's convenience.

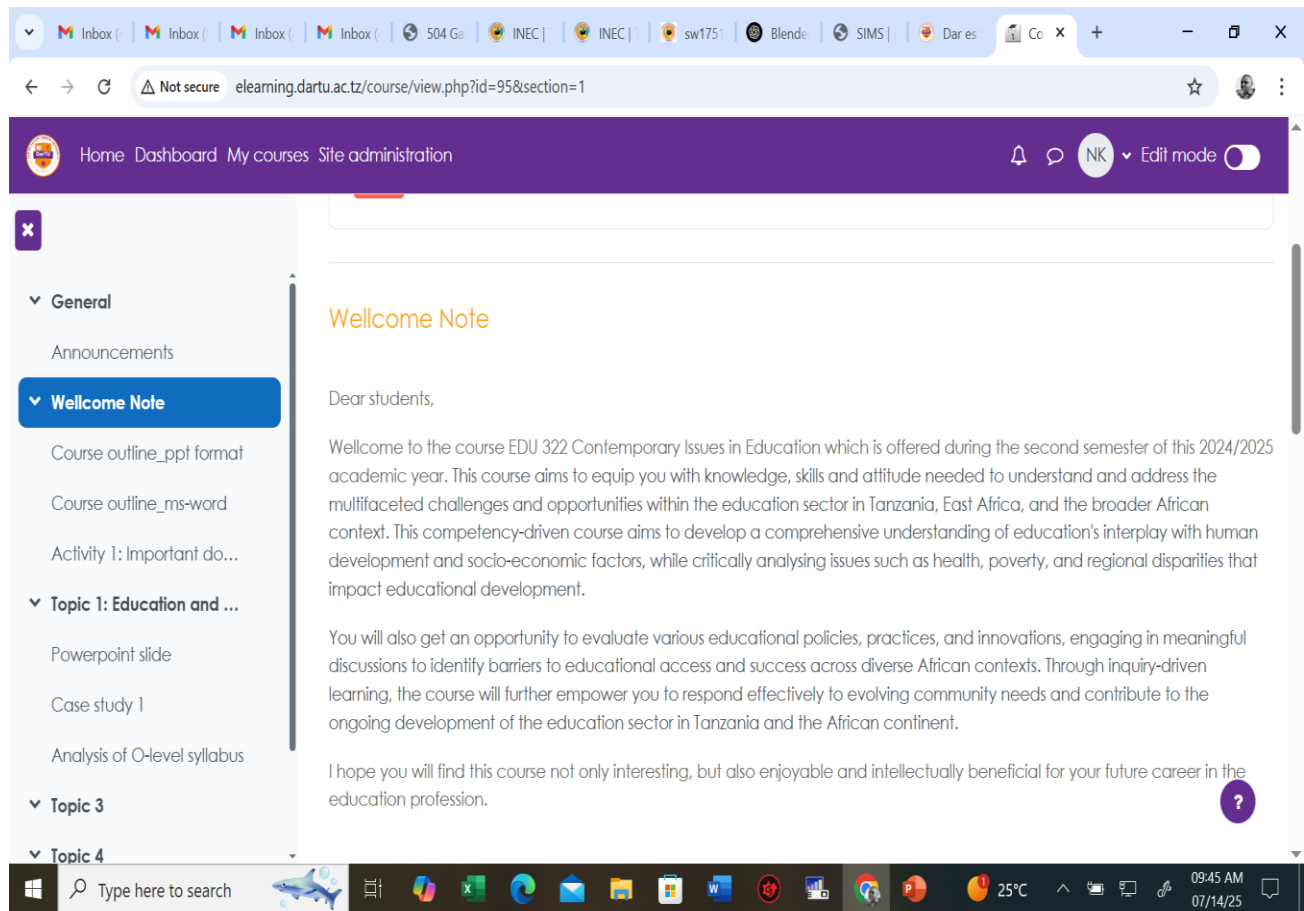
During the course, a half of the total topics were delivered using on-campus face-to-face lectures and the other remaining half were delivered via asynchronous lectures which comprised of course outline, PowerPoint slides, lecture notes and other reading materials that were uploaded into the DarTULMS before the commencement of the second semester of 2024/25 academic year.

Student teachers were well oriented on how to access and navigate in the platform, how to download assignments, how to use chat forum to engage with fellow student teachers and course lecturer among others. Additionally, each student teacher was allocated a user name based on one's first and second names and an initial password which they were required to change it on initial login into the system (Figure 1).



**Figure 1:** Log in to DarTU e-Learning platform

The structure of the course in the DarTULMS consisted of a welcome note together with the objective of the course, the expected learning outcomes and course outline. The welcome note was followed by contents organized into topics each of which contained a PowerPoint slide, a case study and an activity for students as indicated in Figure 2.

The image is a screenshot of a web browser displaying the DarTU LMS course page. The browser's address bar shows the URL 'elearning.dartu.ac.tz/course/view.php?id=95&section=1'. The page has a purple header with navigation links: 'Home', 'Dashboard', 'My courses', and 'Site administration'. A user profile 'NK' and an 'Edit mode' toggle are visible in the top right. A left-hand sidebar menu is open, showing a tree structure of course content: 'General' (Announcements, Wellcome Note, Course outline\_ppt format, Course outline\_ms-word, Activity 1: Important do...), 'Topic 1: Education and ...' (Powerpoint slide, Case study 1, Analysis of O-level syllabus), 'Topic 3', and 'Topic 4'. The main content area is titled 'Wellcome Note' and contains a message to students. The message states: 'Dear students, Welcome to the course EDU 322 Contemporary Issues in Education which is offered during the second semester of this 2024/2025 academic year. This course aims to equip you with knowledge, skills and attitude needed to understand and address the multifaceted challenges and opportunities within the education sector in Tanzania, East Africa, and the broader African context. This competency-driven course aims to develop a comprehensive understanding of education's interplay with human development and socio-economic factors, while critically analysing issues such as health, poverty, and regional disparities that impact educational development. You will also get an opportunity to evaluate various educational policies, practices, and innovations, engaging in meaningful discussions to identify barriers to educational access and success across diverse African contexts. Through inquiry-driven learning, the course will further empower you to respond effectively to evolving community needs and contribute to the ongoing development of the education sector in Tanzania and the African continent. I hope you will find this course not only interesting, but also enjoyable and intellectually beneficial for your future career in the education profession.' A question mark icon is in the bottom right of the note. The Windows taskbar at the bottom shows the search bar, task view, and various application icons, with the system tray displaying '25°C' and the date '07/14/25'.

**Figure 2:** Structure of the course in the DarTU platform

During the course, student teachers were able to attend access lectures, other reading resources, activities, assignments and case studies via the DarTULMS anywhere and anytime on 24/7 basis regardless of geographical location.

### Objectives of the Study

The main objective of this study was to examine student teachers' experience of blended learning delivery mode in pursuing a course on Contemporary Issue in Education (EDU 322) during second semester of 2024/2025 at Dar es Salaam Tumaini University. Specifically, the study sought to investigate the following:

1. Student teachers' experience and engagement with blended learning environments.

2. Challenges faced by student teachers during blended learning.
3. Critical strategies for implementation of blended learning at DarTU.

## **Literature Review**

Empirical studies indicate that students' experience of blended learning is among critical factors in influencing its effectiveness (Sharpe et al., 2006; Ng'ambi, 2013). According to Means et al. (2013) students in higher education value the opportunity to access learning resources anytime and anywhere on 24/7 basis, allowing them to study at their own pace and balance academic commitments with other commitments. Students in higher education develop increased satisfaction of blended learning particularly when it is well-integrated and aligned with course objectives (Owston et al. 2013).

Also, students in higher education often perceive blended learning as a vehicle for acquiring valuable digital skills including self-regulated learning skills, information literacy skills, digital communication skills, and time management skills (Means & Neisler, 2020). The exposure to learning management systems, online collaborations, digital libraries, free online resources and multimedia content also contribute to the development of competences that are essential for improved students' learning and future career development (Garrison, Anderson, & Archer, 2000). However, the extent to which students perceive blended learning positively often depends on their prior exposure to digital environments and their level of digital literacy.

Empirical studies indicate that while students in higher education express interest in blended learning, they also encounter numerous challenges including high internet costs, insufficient institutional support and lack of digital readiness (Pima, 2024; Mtebe & Raphael, 2018). Similarly, Mgaiwa (2021) observed that students in higher education frequently criticized the lack of interaction in blended learning and the absence of timely feedback from lecturers.

Another critical challenge experienced by students in the blended learning is feeling isolated and disengaged in online components, particularly when there is minimal interaction with lecturers or peers (Chhetri, 2021). According to Hrastinski (2008), online learning often times lack the immediacy and responsiveness of traditional classroom settings, making it difficult for students to

seek clarification or receive feedback in real-time. When social and teaching presence are weak, students in higher education perceive blended learning as impersonal, less interesting and ineffective.

Another challenge that shapes students' perceptions is the quality of course design and instructional delivery. According to Pima, (2024) and Hung et al. (2010) a well-designed blended learning courses are characterized by clear learning objectives, coherent structure, interactive activities, and timely feedback. In contrast, poorly designed courses, where online components are disconnected from classroom instruction or where learning materials are insufficient lead to confusion and frustration among students. Lecturers who lack training in blended learning pedagogy often times struggle to create meaningful blended learning experiences, further diminishing students' satisfaction and engagement.

Lecturers' readiness also plays a pivotal role in shaping students' experiences. According to Koehler and Mishra (2009), effective blended learning instruction requires not only technological proficiency but also pedagogical expertise. In many cases, lecturers are not adequately trained to design and facilitate blended learning courses, leading to disorganized content delivery, unclear expectations, and a lack of student engagement. Lack of regular communication, personalized support, and structured online activities, make students perceive blended learning as a substandard substitute for face-to-face teaching (Koehler et al, 2009).

### **Conceptual Framework of the Study**

The framework is informed by constructivist learning theory and institutional implementation perspectives, which emphasize that effective blended learning depends not only on pedagogical design but also on learner readiness, technological infrastructure, and institutional support mechanisms (Graham, 2006; Porter et al., 2016). The framework explains how blended learning delivery mode influences student teachers' learning experiences, while acknowledging the mediating role of technological, institutional, and learner-related factors within a higher education context.

In line with the first specific objective, student teachers' awareness and engagement with blended learning is positioned as a key learner-related construct in the framework. Awareness refers to

student teachers' understanding of blended learning concepts, tools, and expectations, while engagement encompasses their actual participation in face-to-face and online learning activities through the Learning Management System (LMS). Prior research indicates that learners' awareness and engagement significantly influence their acceptance, use, and perceived usefulness of blended learning environments (Davis, 1989; Al-Fraihat et al., 2020). In this framework, awareness and engagement are viewed as immediate outcomes of exposure to blended learning and as precursors to meaningful learning experiences.

Addressing the second objective, the framework identifies challenges faced by student teachers as critical intervening variables that mediate the effectiveness of blended learning implementation. These challenges include technological constraints (such as unstable internet connectivity and limited access to digital devices), pedagogical challenges (such as insufficient interaction and feedback within the LMS), and individual challenges (such as limited digital competence and inadequate preparedness for blended learning). Consistent with studies in Sub-Saharan African higher education, these challenges can constrain student participation and weaken engagement in blended learning environments (Mtebe & Raisamo, 2014; Lwoga & Komba, 2015). Within the framework, such challenges are assumed to negatively influence student teachers' engagement and overall learning experience.

In response to the third objective, strategies for effective implementation of blended learning at DarTU are conceptualized as institutional and pedagogical response variables. These strategies include the formulation of clear blended learning policies and guidelines, improvement of ICT infrastructure and internet reliability, enhancement of LMS functionality and interaction, provision of continuous professional development for academic staff, and orientation and digital skills training for student teachers. The framework assumes that these strategies play a moderating and corrective role, mitigating the challenges encountered and strengthening student teachers' awareness, engagement, and experience of blended learning (Graham et al., 2019; Porter et al., 2016).

Overall, the framework posits a dynamic relationship in which blended learning delivery mode influences student teachers' awareness and engagement, while contextual challenges intervene in this relationship. The adoption of appropriate institutional and pedagogical strategies is expected to reduce these challenges and enhance the effectiveness and sustainability of blended learning

implementation at DarTU. The ultimate outcome of this interaction is a positive and meaningful student teachers' experience of blended learning, characterized by improved engagement, readiness, and acceptance of technology-enhanced learning in higher education.

## **Methods**

This study adopted a mixed-methods research approach that integrated with a descriptive cross-sectional survey design to examine student teachers' experience of blended learning delivery mode in pursuing a course on Contemporary Issue in Education (EDU 322) during second semester of 2024/2025 at Dar es Salaam Tumaini University. Such an approach and design allowed systematic gathering of data on student teachers' experiences and challenges related to blended learning during the course.

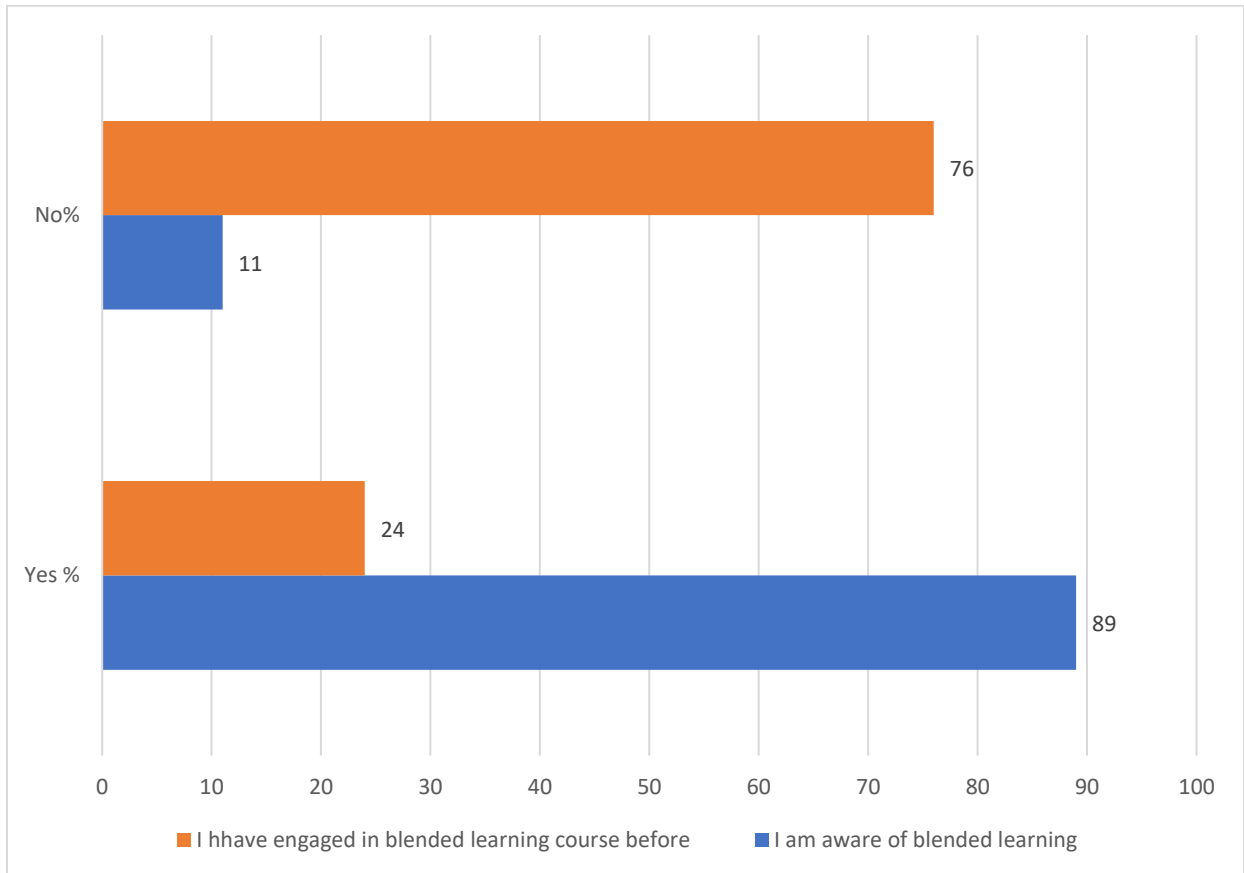
A total of 97 participants comprising of 58 females and 38 males in their third year of study pursuing Bachelor of Arts with Education (BAED) drawn using random sampling technique. Both quantitative and qualitative data collected using structured google form which was administered to the participants using *class WhatsApp group* where all BAED students are members and whole-class discussion guide developed based on Hung et al. (2010), and Mtebe and Raisamo, (2014). Quantitative data from structured google form were then analyzed using SPSS (ver. 26) where frequencies and percentages were computed and Tabled developed as presented in the finding sections. On the other hand, data reduction technique was used to identify key themes such as awareness, engagement and challenges together with respective utterances which formed part of the findings.

## **Findings**

### ***Student Teachers' Awareness and Engagement with Blended Learning***

The first specific objective of the study was to examine student teachers' levels of awareness and engagement with blended learning environments during the EDU 322 course (Contemporary Issues in Education). The findings in Figure 3 indicate that that 89% of students were aware and

had heard of the concept “blended learning,” while 76% indicated that they had never participated in a blended learning course in their studies at DarTU.



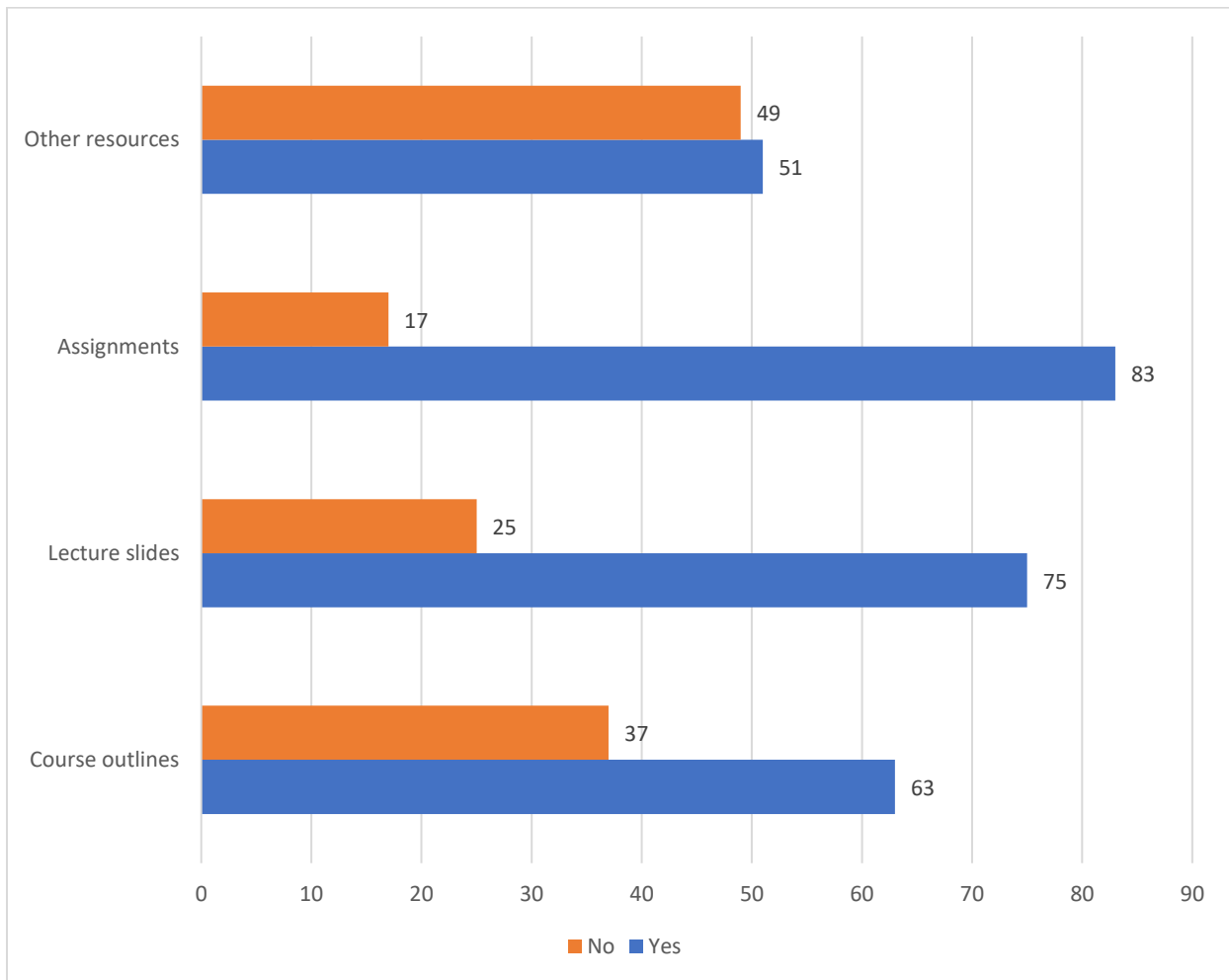
**Figure 3:** Student teachers' awareness and engagement with blended learning

Among those who were aware of blended learning, the most commonly heard blended learning platforms included WhatsApp (40%), Google Classroom (25%), Moodle (15%) and Zoom (09%).

Findings from Focused Group Discussion confirmed that student teachers generally were aware of the concept of blended learning but had limited opportunity to engage in any of the blended learning tools as evidenced by the following utterance reported by the majority of student teachers:

*“I personally know different online learning platforms including google, coursera, zoom, Instagram and many others, but I have never got opportunity to use them as part of the course here at the university so I have used it for the first time during this course”. (3<sup>rd</sup> year student teacher, EDU 322 course, July 8<sup>th</sup>, 2025)*

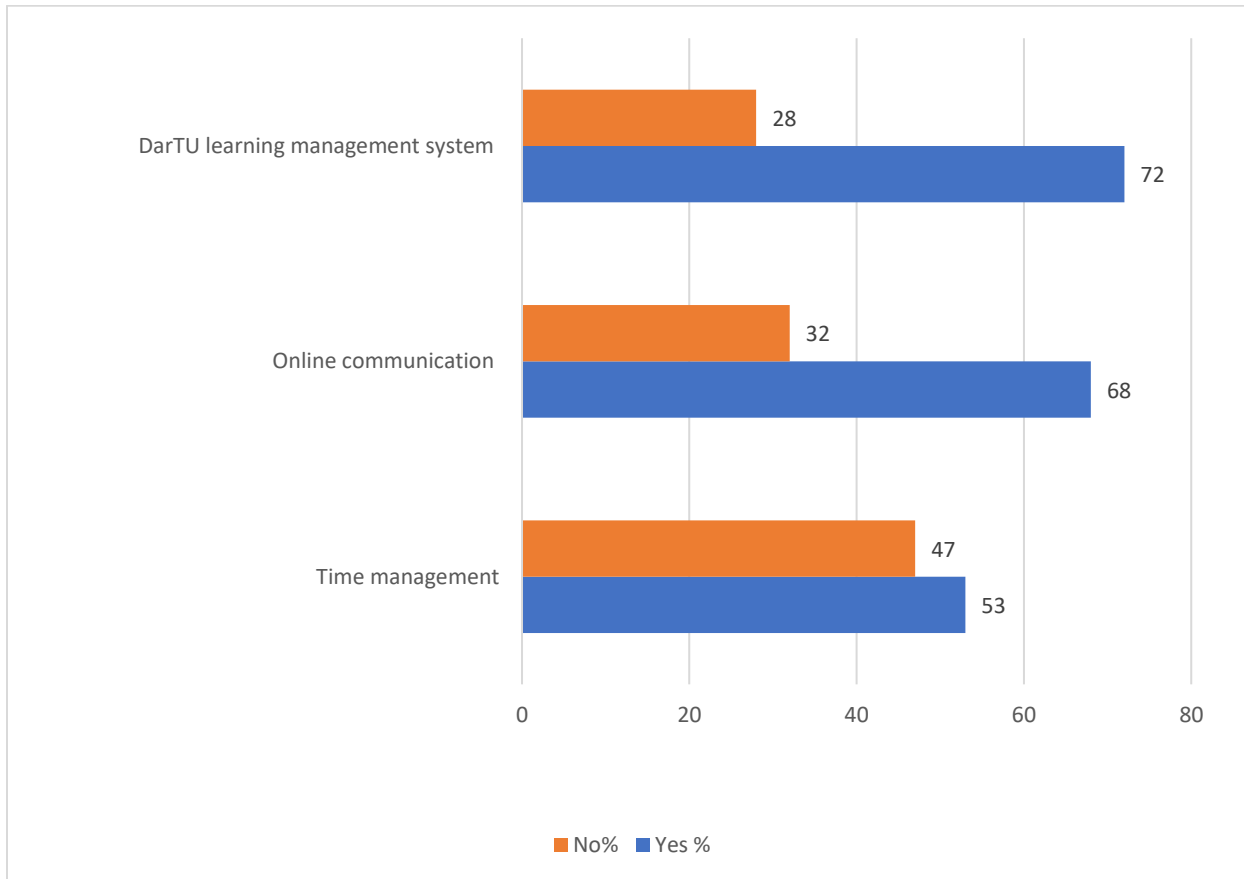
Furthermore, Findings in Figure 4 indicate that students strongly agreed that blended learning was beneficial in providing greater flexibility in accessing course materials at their convenience, particularly course outline (63%), lecture slides (75), assignments (83%), and other reading resources (51%) which could not be easily accessed in a traditional learning.



**Figure 4:** Flexibility of blended learning

As perceived by student teachers, Findings in Figure 5 indicate that student teachers perceived blended learning as also beneficial in improving their self-paced learning and digital literacy. Specifically, findings in Figure 5 reveal that blended learning improved their skills in time

management (53%), online communication (68%), and the use of DarTU learning management system (72%).



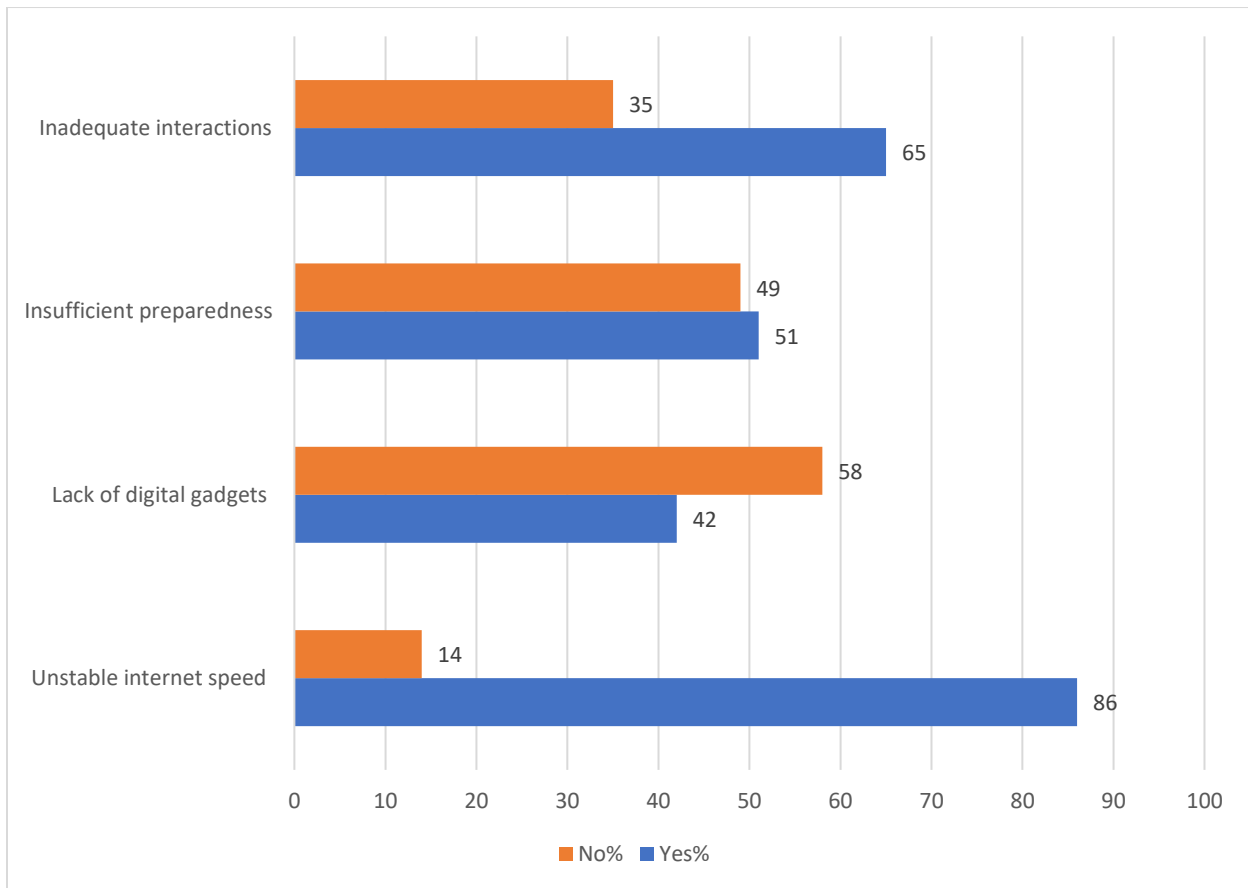
**Figure 5:** *Self-paced learning and digital skills*

Findings from Focused Group Discussion also confirmed that student teachers generally perceive blended learning as beneficial as confirmed by the following utterance reported by majority of student teachers:

*“...I find blended learning quite useful in different ways. It helped me develop time management skills because I was able to access and read lecture materials at my convenience. I also by using the e-learning platform regularly I improved by ICT literacy and communication with the lecturer and fellow student teachers using the platform...”*  
(3<sup>rd</sup> year student teacher, BAED, July 09<sup>th</sup>, 2025).

### ***Challenges faced by Student Teachers during Blended Learning***

The second specific objective aimed to identify challenges faced by student teachers during blended learning when pursuing EDU 322 course (Contemporary Issues in Education) at DarTU. Findings indicate that of the surveyed student teachers faced a challenge of unstable internet speed (86%), lack of digital gadgets (42%), insufficient preparedness to use blended learning technologies (51%) and inadequate interaction in the DarTU learning management system (65%) as presented in Figure 6.



**Figure 6:** *Challenges faced by student teachers during blended learning*

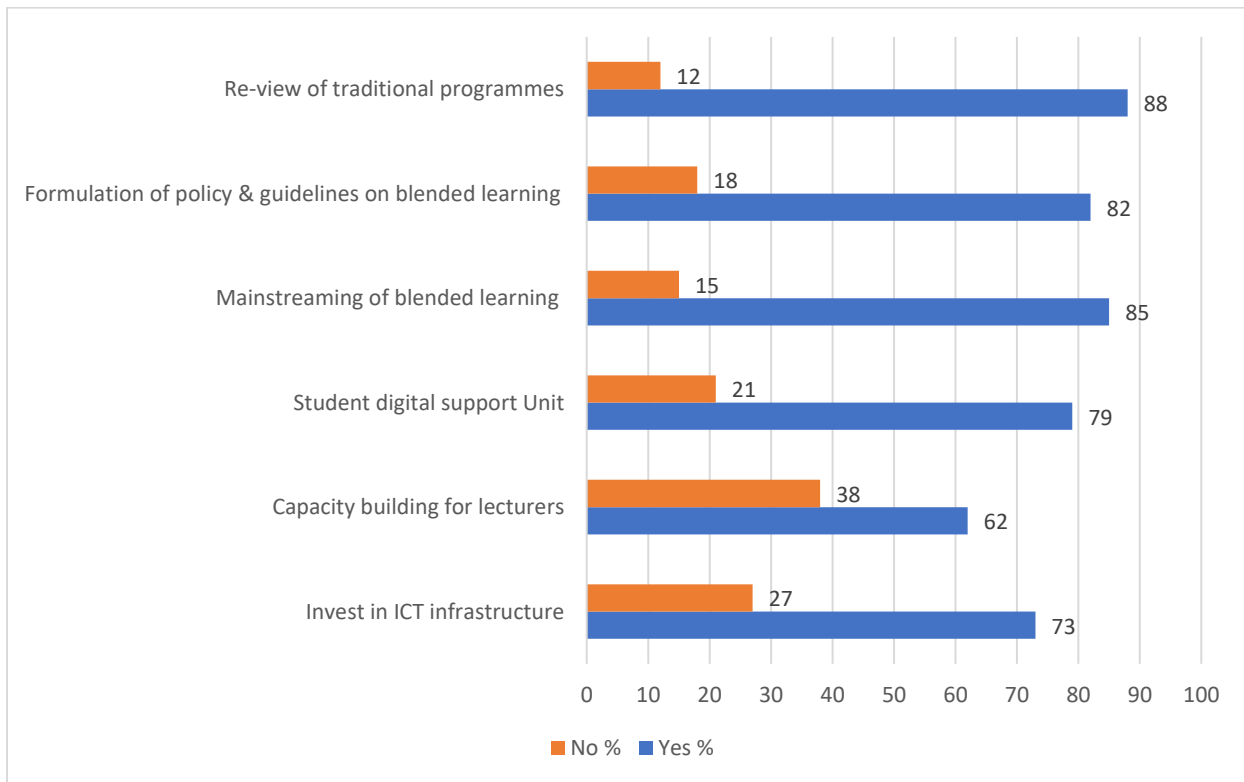
Findings from Focused Group Discussion indicated that majority of student teachers perceived that;

*“The challenges faced during the blended learning often times resulted in missed deadlines, difficulties in participating in real-time discussions, and delays in accessing course content. Sometimes I needed to use my fellow student teachers’ smartphone to access assignments and reading resources from e-learning platform”. (3<sup>rd</sup> year BAED student teacher, EDU 322, July 11<sup>th</sup>, 2025).*

Several student teachers in the Focused Group Discussion reported that materials uploaded into the DarTULMS lacked interactivity because they were simply slides posted on platform, with no accompanying video explanations, discussions, or real-time engagement. As one of the student teachers reported it, *“It’s like reading lecture notes alone. No one to ask questions, no one to explain. Just slides”*.

**Critical Strategies for Implementation of Blended Learning**

The third specific objective was to determine critical strategies for implementation of blended learning to improve student teachers’ experiences of blended learning at DarTU. Findings in Figure 7 present the critical strategies as identified by the study.



**Figure 7: Critical strategies for implementation of blended learning**

From Figure 7, student teachers perceive the need for DarTU to further invest in ICT infrastructure (73%) including campus-wide high-speed wireless internet and computer labs with extended access hours as one of the critical strategies for implementation of blended learning in the university.

The other strategy is for DarTU to provide regular capacity building for lecturers in the university (62%) particularly in relation to blended learning pedagogies and students' support including regular communication and timely provision of feedback.

Creation of student digital support Unit (79%) including a help desk or online peer support forums, which provide reliable technical support to students for navigating in the online learning platform during blended learning was also reported by majority of student teachers as an effective strategy.

Another strategy is for DarTU to mainstream blended learning (85%) across academic departments in the different schools in the University. and institutions. Furthermore, formulation of a clear institutional policy and guidelines on blended learning (82%) to guide blended learning practices is also another strategy that DarTU should employ for effective implementation of blended learning in the university.

**Discussion and conclusions**

This study examined student teachers' experience of blended learning delivery mode in pursuing a course on Contemporary Issue in Education (EDU 322) during second semester of 2024/2025 at Dar es Salaam Tumaini University. The study has established that student teachers are generally aware of blended learning and had heard of the concept of blended learning before. Specifically, student teachers reported that they had heard of blended learning platforms such as WhatsApp, goggle classroom, Moodle and zoom but have had no opportunity to engage with them for learning in higher education. Similar findings were also reported previous study by reported by Pima, (2024), Means et al. (2013) and Owston et al. (2013).

The study has also revealed that from student teachers' perspective, the blended learning delivery was beneficial in various ways. For example, according to student teachers, blended learning was beneficial in providing greater flexibility in accessing course materials such as course outline, lecture slides, assignments and other reading resources at one's convenience unlike in the traditional delivery. Blended learning is also perceived as beneficial in terms of improving student teachers' self-paced learning skills and digital literacy including time management, online communication and the use of DarTU learning management system.

Besides benefits, the study has identified several challenges faced by student teachers during the course, including unstable internet speed, lack of digital gadgets, insufficient preparedness to use blended learning technologies and inadequate interaction in the DarTU learning management system. Moreover, the study revealed a challenge of lack of interactivity of the materials uploaded into the DarTULMS because they were simply slides posted on platform, with no accompanying video explanations, discussions, or real-time engagement. Related challenges were also reported in other studies by Mtebe and Raphael, (2018), Pima, (2024) and Mgaiwa (2021).

### **Recommendations**

Based on the findings of this study, the following recommendations for effective implementation of blended learning at DarTU. First, the study recommends for the need for the DarTU to consider re-viewing its traditional programmes to accommodate blended learning delivery mode to enhance flexible learning including remote learning. This should go hand in hand with the formulation of a clear institutional policy and guidelines on blended learning to guide blended learning practices at DarTU. According to Hrastinski (2008), policy and guideline are also critical in guiding blended learning implementation in higher education and its mainstreaming across academic departments in the different schools.

The other recommendation is the need for DarTU to further invest in ICT infrastructure, including campus-wide high-speed wireless internet and computer labs with extended access hours. This is important in addressing the challenge of unstable internet speed and lack of digital gadgets in the university.

It is also recommended for need for DarTU to provide regular capacity building for lecturers in the university particularly in relation to blended learning pedagogies and students' support including regular communication and timely provision of feedback. According to Koehler and Mishra (2009), capacity building is important in addressing challenges related to insufficient preparedness to use blended learning technologies for lecturers and inadequate interaction in the DarTU learning management system.

Last but not least, the study recommends for the need for creating student digital support Unit including a help desk or online peer support forums to provide reliable technical support to students for navigating in the online learning platform during blended learning at DarTU.

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