

Framework for Enhancing Tutor-student Interaction in Blended Courses: a Case of Bachelor of Youth in Development Work at Makerere University

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Abstract

The study came up with guidelines to help in improving tutor-student interaction in Blended courses on Learning Management System at Makerere University. The study attempted to answer What is the nature and extent of tutor-student interaction on Makerere University E-Learning Environment (MUELE) in Bachelor Youth Development Work (BYDW) course? What are the requirements needed for the framework which can improve the level of tutor-student interaction on MUELE? The study used Focus Group Discussion to get an insight from BYDW students on their tutor-student interaction on MUELE, the study also used in depth interviews to get an insight from BYDW tutors, BYDW course Coordinator and MUELE Administrator. Data collection methods included interview guides, focus group discussions and observation. Therefore, it can be concluded that there is need for Makerere university to come up with a policy to compel the Tutors to give feedback to students submission on MUELE, Makerere university should frequently retool both students and Tutors on the usage of MUELE, Tutors time spent on MUELE should be considered as workload to motivate them to give students feedback on time, Makerere University should start giving BYDW tutors monthly data to enable them respond promptly to students.

Keywords

Blended course, Learning Management System, Makerere University E-Learning Environment

1. Introduction

Blended learning has received accelerated progress globally as the most effective way of delivering high-quality education that prepares students for the world of work, while still giving them a campus experience (Rasheed et al.,2020). Graham, (2015) defined blended learning system as a combination of face-to-face instruction and computer mediated instruction. This approach was developed out of the need for flexibility in learning (Malczyk, 2020).

The ultimate objective of learning systems is to enable both the immediate outcome and learning at any university to be achieved. This ultimate objective is that learning takes place and both the immediate outcome and impact is achieved (Bojović et al., 2020). Regardless of the learning system, objectives such as changing students' behavior, equipping them and enabling them to be part of the solution for their communities are some of the constant indicators of effective learning (Alqahtani, & Rajkhan, 2020)


In Africa, the Blended Learning model has secured a place at the University of Pretoria as a leader in the use of a technology-enhanced learning model (Sias, 2019). Since 2002 the University of Pretoria has experimented and refined a hybrid approach to teaching and learning. The university has adopted a delivery model which makes use of face-to-face teaching, classroombased learning tools supplemented by online and technology-supported activities (Makhafola, 2018). The University of Pretoria's retention, success and completion rates are some of the best in South Africa. Equally, University of South Africa (UNISA) has been employing the model for over a

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decade now (UNISA, 2023). In West Africa Blended learning has also accelerated especially after the funding and support of the Australian Department of Foreign Affairs and Trade where universities like Kumasi Technical University in Ghana, Ladoko Akintola university of Technology in Nigeria, University of Lagos and University of Ibadan in Nigeria have taken part and benefited a lot. In East Africa and in particular Uganda, Makerere University started using the Blended Learning mode especially in Open Distance Education where the students come to the university for two weeks at the beginning of the semester and after two weeks, they return home where they start using the Learning Management System (LMS) to access study materials (Nakitto, 2022). Makerere University began using the blackboard LMS in 2002 and then later in 2014 moved from blackboard to Moodle platform which it customized to Makerere University ELearning Environment (MUELE) (Buluma & Walimbwa, 2021).

The introduction of BYDW in 2018 in the CEES at Makerere University was for the purpose of making learning easy and affordable to different categories of learners. According to available records from the college registrar's office, forty (40) students were admitted to the BYDW programme in 2019 and by 2020 only fifteen (15) students were remaining in the course. This implies that there is a high dropout rate in the blended programme (Maré & Mutezo, 2021). The programme is largely conducted through asynchronous tutor-student interactions and thus its effectiveness is dependent on the quality of interactions. One would imagine that since blended programme helps one save on the time of traveling to the university and accommodation fee, there would be more students retained in the course. However, BYDW online has failed to do that.

This study was guided by Social Constructivist Theory of learning and Terry Anderson's model of Online Learning (Amineh & Asl, 2015; Arieviditch, 2020; Palincsar, 1998). Social constructivism emphasizes the need for all actors involved in the learning process to get involved actively by way of interacting with one another during the learning process. In this study, the aim was to examine how the asynchronous tutor-student interaction has been effective and the possible means of enhancing its success. This is to ensure that the interactions achieve the intended objective to enhance learning. Terry Anderson's Model emphasizes the need for interaction in Blended Learning. Anderson says that interaction helps in allowing the students to take control of their learning process, facilitating program adaptation based on students' input and allowing various forms of participation and communication. This study therefore draws on Terry Anderson's model of Online Learning; that emphasizes the need for tutor-student interaction in BYDW program to bring out effective learning on the side of the students.

This paper is part of a larger study that focused on proposing a framework to improve the levels of asynchronous tutor-student interaction in BYDW at Makerere university but for this conference the paper presents what is the nature and extent of tutor-student interaction on MUELE and What influences tutor-student interaction on MUELE?

2. Methodology

This study employed a qualitative research approach because the researchers aimed to obtain in depth information from the key players who took part in the study. The study employed a blend of case study and design-based research designs and the case of interest in this was Bachelor of Youth and Development Work (BYDW).

The researchers chose a case study because of its many benefits which include the flexibility of collecting data using various means like interview guides, focus group discussion and observation. Case study enabled the researcher to capture the context and lived reality of the participants involved in the study. The researchers were also able to explore the deeper causes of the phenomena under the study through case study. Case study also makes it easy to explain the study results to the audience even if they are not specialists.

The respondents were required to share their experience on the system, provide the critical features, and their input in regard to how the effectiveness of the system would be enhanced. This then helped in designing and testing a framework that would enhance the system.

Design-based research has been popular in educational research, and aims to develop tools, curriculum and related frameworks (Hoadley, & Campos, 2022). In this study, the ultimate objective was to propose a framework that would be used to enhance asynchronous tutor-student interaction. A design based research was thus undertaken in the design process. The design-based research

involved the three step process that entailed; Stage 1: Needs analysis and the creation of design principle, Stage 2: Development of the prototype of framework, Stage 3: Validation of the framework.

Study population

The study population comprises of 40 first and second-year students in BYDW, 24 tutors and 6 administrative staff. These were eligible participants in the study as they are actively involved with the asynchronous tutor-student interaction system as primary players or as administrators.

In undertaking this study, participants were invited to participate under each of the two online focus group discussion. By the time of this study BYDW had three cohorts: 1st cohort was in 2nd Semester 2nd Year; 2nd cohort 1st semester 2nd year and then the 3rd cohort was in the 2nd semester 1st year. Every cohort therefore made one focus group discussion. In the 1st cohort 10 students turned up and joined the online focus group discussion; in 2nd cohort and 3rd cohort 15 students managed to join the 2nd online focus group discussion making a total of 25 respondents under this category of students. The remaining 15 students didn't manage to join the online discussion problems because they had network challenges and therefore accessing zoom was difficulty for them.

The researcher scheduled a zoom meeting and shared the meeting links with the class representatives who then shared in their class WhatsApp groups. Other categories of research participants like BYDW facilitators were utilized as well because they are the ones involved in the teaching process. They had important information to share with the researcher in relation to the study. BYDW Program Coordinator was the one coordinating the BYDW program and both the BYDW students and BYDW tutors were always in touch with the coordinator. The researcher felt the BYDW program coordinator had a lot of information to share on how the program was running. MUELE administrator was in charge of MUELE system and was aware of what was happening in the BYDW courses, the research therefore felt that MUELE administrator had some good information to share. BYDW facilitators, BYDW program coordinator and MUELE Administrator were all engaged using individual zoom meetings.

Table 1

Participants who took part in the study

| Category | Population (N) | Sample (s) | Sampling Technique | Data collection strategy |
|--------------------------|----------------|------------|--------------------|--------------------------|
| BYDW Facilitators | 12 | 6 | Purposive | Interview |
| BYDW Program Coordinator | 1 | 1 | Purposive | Interview |
| MUELE Administrator | 1 | 1 | Purposive | Interview |
| Students | 40 | 25 | Purposive | Interview |

Data collection

The data collection was done using two methods that is focus group discussions and semi structured one-on-one interviews. A focus group discussion involves collection of data by inviting groups of between 5 to 9 to discuss a phenomenon of interest.

In this study, it was important that student and tutor discuss the general issues related to asynchronous tutor-student interaction. The justification for employing focus group discussion was to obtain a widely acceptable framework that was proposed through a participatory process. The participants in the focus group discussion were in their different years of the study; specifically, three discussion groups were conducted using the discussion guide.

Semi structured one-on-one interview was the other data collection method that was used. Semi structured interview involves collection of data by providing an opportunity for the respondents to respond questions. It also allows the respondents to provide their own perspective on phenomenon (Kumari et al., 2023). The main respondents for whom semi-structured interviews were used entailed administrators and tutors. The justification for the method was based on the fact that these are the category of people who use the MUELE as key tutors and administrators in order to collect their views on the asynchronous interaction. Therefore, as a key informant, they shared with the researcher on the strategies to improve tutor-student interaction on the platform. The tutors were also interviewed since they are the instructors of the course; their contribution was important

because they are among the primary players. The interviews were conducted online using zoom meeting, the researcher engaged the 6 BYDW tutors, BYDW coordinator and MUELE Administrator with a number questions to which they responded as the researcher was noting some points. The use of technology was due to the fact that at the time of conducting this research the government had restricted physical meetings as a measure of containing COVID 19 pandemic.

A focus group discussion is an organized discussion between 6 to 12 people. The researcher used focus group discussion to generate data from students premised on the view that the FGDs would enable students to share their opinions openly with their fellow students. Focus group discussions were used to collect data on the students' experiences of tutor – student interaction on the BYDW programme and their views on what needed to be done to improve the interaction. The researcher held two FGDs with different cohorts of BYDW students; one group comprised of 10 students of year one (4 male & 6 female), the second group comprised of 15 year two students (5 male & 10 female). The reason for selecting students in different years was because the researcher wanted to have their different experiences while interacting with their tutors on MUELE. The researcher got in touch with the students' class representatives and informed them of the need to get their views on the study which was being carried out and the class representatives agreed to mobilize their peers to turn up for the focus group discussion. Student class representatives agreed on the date and time in which the focus group discussion would be held, and this was communicated to the researcher to schedule a zoom meeting accordingly. When the questions were all covered, the researcher read to the students the summary of the notes taken down during the discussion, and they all agreed that they were a true record of the discussion.

Table 2
Two Focus Group Discussions

| Focus Group | Turned up | Gender | Programme | Dropped out | Final number of respondent |
|-------------|-----------|--------------------|-----------------|-------------|----------------------------|
| FG# 1 | 10 | 4 male, 6 females | BYDW 1st Cohort | 3 | 7 (4 males, 3 female) |
| FG# 2 | 15 | 5 male, 10 females | BYDW 2nd Cohort | 0 | 15 (5 males, 10 female) |

In focus group discussion, 3 students dropped out of the online zoom meeting because of the network challenges they faced.

Application of Design Based Research in this study

The researchers applied Design Based Research in this study and three steps were involved and used in the study as seen below.

Stage 1: Needs Analysis

This phase involved the researcher doing a needs analysis on tutor-student interaction on the BYDW program on MUELE;

This needs analysis helped the researcher to get a better understanding of the current nature of asynchronous tutor-student interaction in BYDW programme. The researcher was able to identify the requirements for the framework to enhance the level of asynchronous tutor-student interaction in BYDW programme together with the practitioners who in this case were the tutors of BYDW program; students who are studying BYDW; BYDW Program Coordinator and the MUELE administrator.

Stage 2: Development of the framework:

In this phase, the researcher proposed the framework that would be employed to enhance the asynchronous tutor-student interaction on the MUELE Platform. This was then subjected to validation process.

Stage 3: Validation of the framework:

In this phase, the proposed guidelines were reviewed by independent reviewers who had a long experience in tutor-student interaction and the respective adjustments made. The final set of frameworks can now be provided to BYDW programme coordinators to consider its applicability.

This study followed the three steps since the subsequent steps are dependent. This study only collected data that assesses the perceived level of satisfaction in terms of student-tutor interactions, identified the challenges and proposed framework.

Data Analysis

Qualitative data was analyzed using different steps as discussed below:

Data preparation: at this point the researcher ensured that he had all the data like notes, audios, videos and transcripts he had collected using different data collection methods. Familiarization: this step involved the researcher reading, listening to and reviewing the collected data to help him in getting and understanding its content and context. Coding: this step involved the researcher coming up with different themes while categorizing the collected data to make a meaning out of it. Different audio and video files were transcribed and accordingly categorized into their respective themes to get meaning out of them. Data interpretation: during this step, the researcher looked at different categories of data themes. The researcher was also able to analyze the significance of these themes in relation to the research questions hence helping the researcher make the conclusions about the study.

Ethical Consideration

A letter of introduction was sought from the Makerere University's College of Education and External Studies. Using the letter of introduction, permission was sought from BYDW students, BYDW Tutors, BYDW programme Coordinator and MUELE Administrator to carry out the study. The researcher stressed that the information being collected from BYDW tutors, students, coordinator and MUELE administrator would be treated with utmost confidentiality it deserves. This information would only be used for academic purposes. Kumar suggests that a highly ethical approach is important to ensure that research is not affected by either the self-interest of any party or in a way that impacts on any party.

2.1. Findings

Findings The State of Asynchronous Tutor-student Interaction on BYDW

The first objective was to establish the state of asynchronous tutor-student interaction on the BYDW programme in relation to its nature and extent. The findings are in accordance with the focus discussion groups with the students, and the interviews conducted with tutors and course administrators. The key findings for this objective are explained below.

Uploaded Learning Material

The findings show that uploading learning materials by the tutors is one of the common means of interaction methods between tutors and their students in the asynchronous learning system. Specifically, the respondents noted that tutors upload full PDF text books, links to journal articles, and other publications. In some instances, the tutors develop own summarized notes and upload them using different formats like PDF and power point presentations. The students are then expected to utilize the availed materials and references to help them in their studies.

The Mode of Tutor -learner Interaction on LMS

The findings indicate that the main mode of interaction is through written texts; audios and videos are rarely used in LMS. Thus, the interaction modes were largely restricted to traditional text method. Upon probing, it was noted that both tutors and students commonly use text media because they are easy to use.

The Communication Schedules

The respondents noted that the communication from tutors on matters relating to syllabi, notes, assignments, and other expectations about the course should be done early enough. For example, the assignments were given early with a duration of between three weeks and one month before submission. The period given to students to undertake their coursework and assignments was considered to be good enough. However, it was noted that majority of the tutors send reminders to have the work submitted at the tail end of the period. In the process, due to the reluctant nature of students, some of them indicated that by then, they would have forgotten and would start panicking.

Tutor Feedback to Students' Issues

The findings indicated that, in BYDW asynchronous interaction, tutors' feedback to students concerns and assignments was a key component of the programme. It was noted that, students were encouraged to ask the tutors questions related to course issues. Tutors were also required to provide feedback to students' questions and the marked assignments. In this regard, the students from the

two FGD noted that many tutors delayed giving feedback. For instance, it was noted that, at times, a response that would require a day or two to provide a response; the tutor would take a week or two. This was largely attributed to lecturers being too busy or taking long to check the student issues from the different platforms.

Factors that influence the asynchronous tutor-student interaction in the BYDW programme

In this section, the aim was to establish the critical factors that were considered important in influencing tutor-student interaction on the Learning Management System. Data for this research question was collected from students, tutors and administrators using both interviews and focus group discussions. The findings show that tutor-student interaction is influenced by the degree of digital competence, tutor factors, system infrastructure, student discipline, internet connections and devices used.

Digital competence of both students and tutors

The findings show that, to be effective and be able to use MUELE, a threshold of competences was a prerequisite of digital competence for both tutors and students. The LMS that Makerere university uses (MUELE) contained features and capabilities that can enrich the asynchronous tutor-student interactions. These included; chatrooms, discussion forums, messaging, assignment folders and quizzes. The degree to which both tutors and students possess the threshold of digital competence, is the degree to which the interaction can be enriched and is more effective.

Tutors factors

The findings show that tutors were not engaging students actively in the asynchronous tutor-student interaction during the learning process; yet the asynchronous tutor-student interaction was very important for student to succeed with their learning process.

Orienting students

The results indicated that students were supposed to be introduced or oriented on how to effectively interact with their peers and tutors asynchronously. Responses from tutors, students, and administrators indicate that tutors were expected to orient students, communicate the expectations, schedule classes and grade the assignments. Where the tutor fulfilled this role, the tutor-student interaction improved. Students and tutors agreed that in the course units where the tutors were active online; there was a lot of tutor-student interaction.

Online Presence

In terms of tutor presence online, the findings show that tutors were rarely online to respond to students' questions and other concerns.

Providing assignments and timely feedback

The results show that providing assignment in time, marking, and providing timely feedback by the tutors influenced tutor-student asynchronous interaction. All the respondents including students, tutors and administrators pointed out that, the degree to which the tutors provide feedback on assignments determines the degree of success of the tutor-student interaction.

Students accountability and engagement levels

The results show that learning was mainly used to benefit students and so was the asynchronous tutor-student interaction centered towards the students. In order to achieve learning objectives, students had an equally significant duty of being engaged, dedicated and accountable for their own learning. More so, the students at university level ought to play a strong role in getting in touch with the assignments, participating in the scheduled interaction sessions and also be proactive towards seeking clarity from tutors when need be. All that amounts to accountability and engagement levels. The degree to which the students are accountable and engaged, was the degree to which they can gain from the asynchronous tutor-student interaction.

User-friendliness of the system

The study revealed that, user-friendliness of the LMS influenced the quality of tutor-student interaction. Both tutors and students who participated in this study noted that, the ease with which one can log in and upload their work or communicate, determined their attitude towards the interactions.

Framework Design

Objective one and two provided the state of asynchronous tutor-student interaction of the BYDW programme, and factors that Influence the Asynchronous Tutor-Student Interaction in the BYDW Programme such as the results from respondents in this case the BYDW students, BYDW tutors, BYDW Programme Coordinator and MUELE Administrator helped the researcher during the

designing of the framework to improve tutor-student interaction. The responses to objective one identified both the aspects that the interactions have been effective, and the areas that the interaction was ineffective. In developing the framework, the positive aspects of tutor-student interaction in BYDW were retained. In objective two, the respondents identified the critical factors that influences the asynchronous tutor-student interaction. The feedbacks for objective one and two helped the researcher to identify the requirements which include the degree of digital competence from both tutors and students, user-friendliness of the LMS and flexibility of the tutors were used in developing the framework. In addition, the researcher also got useful information like motivation from the students and clarity of the tutor's communication from the reviewed models and frameworks during the study plus the related literature to design the framework. The following framework was thus designed.

Designed Framework to Enhance Tutor-student Asynchronous Interaction in BYDW Programme

The designed framework below is as a result of the response got from the respondents in relation to objective 1 and 2; answering questions 1-3 plus the useful information from the reviewed models and literature used in this study. This helped the researcher design the framework to enhance asynchronous tutor-student interaction in BYDW programme as seen below on the next page:

Table 3
Designed Framework

| No | Challenge at hand | Proposed guidelines | What needs to be done | Impact |
|----|--|---|--|---|
| 1 | Tutors taking long before giving students feedback. | A clear timeline for marking and providing feedback to students should be established. | Tutors should provide the specific reasonable time when this should be done. | Students will be motivated to learn with clear expectations. |
| 2 | Unclear instructions accompanying learning activities on MUELE. | Provide clear instructions and guidelines for the activities given on MUELE. | Tutors should provide clear instructions as they give online activities and assignments. | Students will be engaged since assignments are continuous and marks are accumulated for each single assignment. |
| 3 | Activities not being paced well and lack of activity deadline dates. | Establish the number of assignments that students are supposed to do in a semester, and specify their respective deadlines. | Tutors need to set clear deadline dates for online activities. | Ensures clarity and helps the students to pace their studies. |
| 4 | Old and less useful notes by tutors for the students. | Provide updated reading material to students. | Tutors also need to pace their online activities such that students have time to balance and do the activities for other course units. | The students will relate well with updated information. |
| 5 | Limited tutor online presence on MUELE. | Tutors need to be regularly online to guide and support their students as they do the activities on MUELE. | Tutors need to give and provide useful and updated reading materials to the students. | |
| 6 | Tutor's largely use text only as the main interactive means. | Use of a mixture of interactive tools. | The variety of interactive tools should be mixed to enable audio, video and text to be used | Makes learning interesting. |
| 7 | Students' failure to submit their responses in time. | Impose penalties for late responses. | The students are responsible for submission of their responses within the deadline. | Provides penalties for late submission. |
| 8 | Difficulties in using MUELE for both tutors and students | MUELE trainings should be enhanced for both BYDW tutors and BYDW students to enable them navigate well through MUELE. | The university should provide the tutors and students with training on asynchronous tutorstudents interaction. | Learning and teaching will be more effective. |

Validation of the designed framework

The designed framework was subjected to ten experts from Makerere University that had knowledge of the instructional system design field. Four instructional designers, three material developers and three students who had used the current system were involved in the review and validation exercise. The validation by experts was important in order to get insight for improvements of the guidelines as well as obtaining a guarantee that the guidelines developed was feasible to be implemented in the learning context.

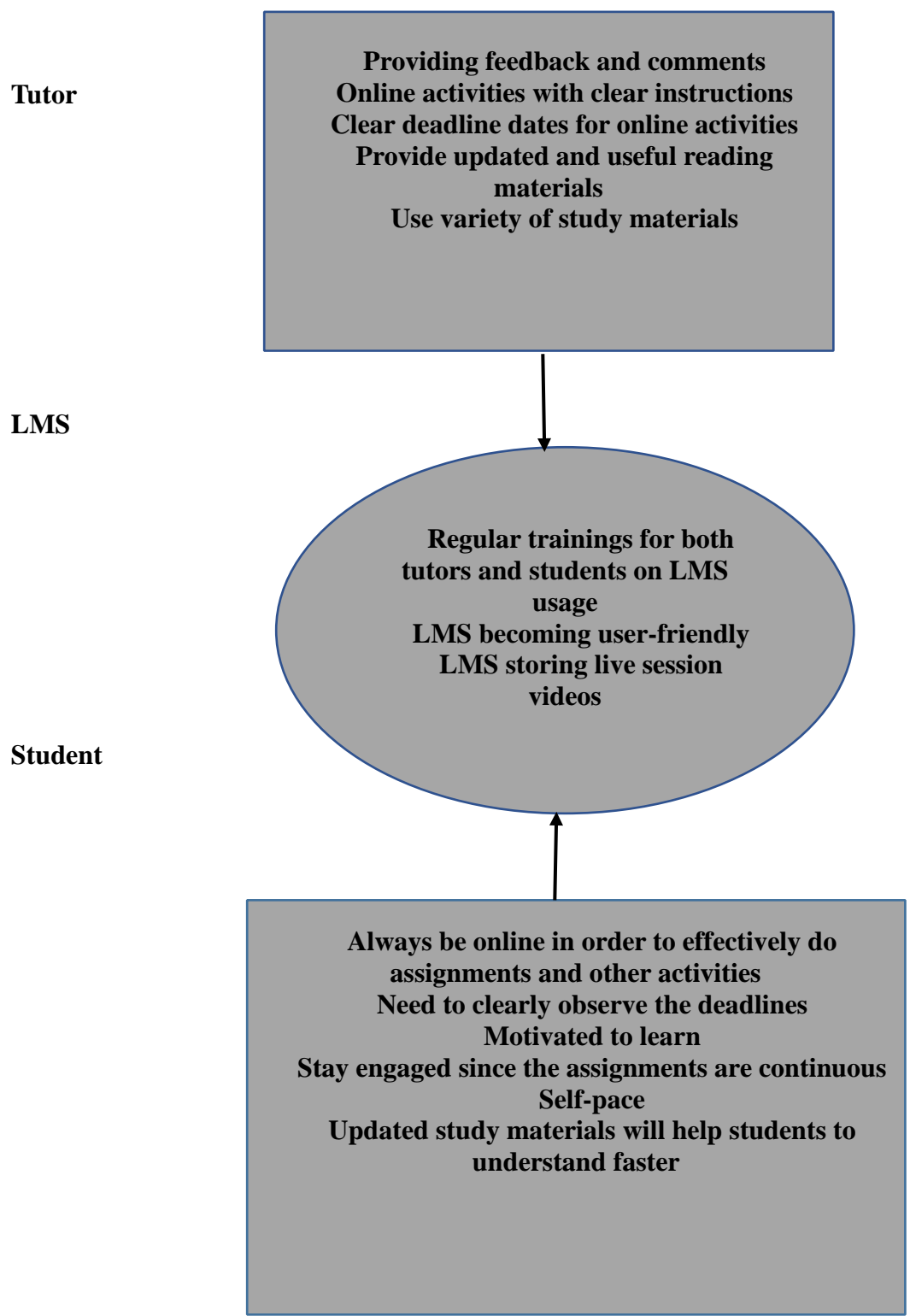


Figure 1: A diagrammatic presentation of the validated framework

2.2. Discussions of the findings

The State of Tutor-student Interaction in BYDW Programme

The findings indicate that, tutors upload written materials which they feel that when students read, they will be able to understand well the course concepts in details, but students wish to have simplified notes. The findings further showed that some students were not proactive in completing their assignments, which required the tutors sending them constant reminders. This could be attributed to the inherent challenges of distance learning (Handel et al., 2020). Uploading of unsurmised materials could be based on higher learning principles that require students to undertake intensive personal or group research. Ideally, higher learning institutions are primed on the fact that the students have a significant role to play in their studies (Curtin, 2021). The study also showed that text is the main medium of communication in the asynchronous tutor-student interaction, however, the best practice should involve the use of variety of media. The study further indicated that some students take long to learn how to communicate through the online learning system. This can be attributed to lack of adequate digital skills. While LMS usage may not have major differences from the key devices that the students have, like the mobile phones; familiarization with a new application may take time (Voogt et al., 2018). The findings showed that the tutors take long to respond to student issues. This can also be explained from the inherent weakness of distance learning (Middendorf & Shopkow, 2017). The findings also showed that tutors don't give students feedback on the activities given especially discussion forum questions, it should be noted that the delay in offering feedback is contrary to principles guiding the asynchronous tutor-student interaction (Curtin, 2021).

To Identify Factors that Influence asynchronous tutor-student interaction on MUELE

The findings showed that the level of digital competence was key in enhancing tutor-student interaction on the LMS. This means that, the degree to which tutors and students are able to use the LMS platform to input either text or any other materials affects the degree to which the tutor-student interaction is effective. The findings also indicate that the user-friendliness of the system influences the success of student-tutor interaction. This is consistent with best practices on asynchronous form of learning that have been found to be effective. The findings further showed that the clarity of the tutor's communication influenced tutor-student interaction on LMS. This can be explained from the perspective of effective communication principles (Topping et al., 2022) which suggests that clarity is a critical factor in effective communication. Flexibility by the tutors was another critical factor that enhanced tutor-student interaction in the current study. Bond (2020) suggests that flexibility is central to blended learning. The result also considered user friendliness of the LMS as one of the major requirements to enhance the tutor-student interaction, which is in line with the technology adoption models (Lai, 2017). Finally, the individual student's level of motivation and personal discipline was found to influence the level of success in asynchronous tutor-student interaction. The core expectation of a student whose programme entails self-learning and studying from a distance is personal discipline and motivation (Cheng et al., 2018).

A Framework for Enhancing asynchronous tutor-student interaction on MUELE

The need to improve on the LMS capability featured prominently. In this regard, blended learning is expected to accommodate different modes of communication. Capabilities to store lecture videos in MUELE was not available at the time of data collection. Monitoring and accountability for both tutors and student should be factored in the blended learning guidelines. Justifiably, there could be many loopholes that could compromise the quality of blended learning. Just like any other form of learning, the distance-learning component of blended learning ought to meet the quality assurance standards (Topping et al., 2022). Furthermore, the demand that both student and tutors be committed to learning usage of digital means is a valid argument. On one hand, the distance learning component of blended learning is undertaken through digital means (Bradley, 2021).

2.3. Conclusion and recommendations

This study sought to examine the state of student-tutor interaction in MUELE, and it can be concluded that there was low asynchronous tutor-student interaction characterized by tutors uploaded reading

materials mainly in text format on MUELE, BYDW tutors took long to give students feedback on the submitted assignments and discussion forum activities. The study also sought to identify factors that Influence the Asynchronous Tutor-Student Interaction in the BYDW Programme. It can be concluded that inadequate MUELE training for both tutors and students greatly affects the level of interaction on MUELE, lack of digital skills especially from students is also another factor which affects their participation on MUELE platform, MUELE platform being complicated and not user-friendly for both students and tutors was another factor which hinders effective interaction between tutors and their students and MUELE platform lacking some features like where live session can be stored for students use after a live session was another important factor identified. The study also sought to design a framework that can enhance asynchronous tutor-student interaction in BYDW programme at Makerere University and it can be concluded that, BYDW tutors don't have a clear timeline for marking and providing feedback to students' submitted work, Tutors don't give clear online instructions about the activities to the students, BYDW students are over loaded with activities from different BYDW tutors with colliding deadlines Finally, the study sought to validate the designed framework to ensure it improves asynchronous tutor-student interaction in BYDW programme and it can be concluded that there is need to enhance MUELE trainings for both tutors and students, the need for tutors to constantly remind the students on the pending deadline of all the assignments given and the need for tutors to start using a mixture of interactive tool or study materials given to students.

2.3.1. Given the above findings, the following recommendations are made:

This study examined the state of student-tutor interaction in MUELE, the researcher recommends that tutors should start uploading a variety of reading materials ranging from texts, audios, videos and images, BYDW tutors should frequently check and provide feedback to what the students have submitted on MUELE in relation to the activities given. The study identified factors that Influence the Asynchronous Tutor-Student Interaction in the BYDW Programme. The researcher recommends that MUELE trainings for both tutors and students should be enhanced to help in improving asynchronous tutor-student interaction, students should also be trained on how to use the trending digital tools around the globe to help in enhancing their digital skills, MUELE platform should be made user-friendly to enable many users to use. The study designed a framework that can enhance asynchronous tutor-student interaction in BYDW programme at Makerere University and the researcher recommends that for Makerere university to realize high level of asynchronous tutor-student interaction on MUELE, BYDW tutors should have a clear timeline for marking and providing feedback to students' submitted work, clear online instructions should be given to students, BYDW tutors should sit at the beginning of the semester and all agree on the number of assignments plus their deadline they are going to give such that deadlines don't collide and tutors need to be regularly online to guide students' discussions on MUELE platform. Finally, the study sought to validate the designed framework to ensure it improves asynchronous tutor-student interaction in BYDW programme and it can be concluded that there is need to enhance MUELE trainings for both tutors and students, the need for tutors to constantly remind the students on the pending deadline of all the assignments given and the need to upgrade MUELE platform to be able to store recorded live sessions to ease students' reference.

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Declaration on Generative AI

The author(s) have not employed any Generative AI tools.

References

- [1] Alqahtani, A. Y., & Rajkhan, A. A. (2020). E-learning critical success factors during the covid-19 pandemic: A comprehensive analysis of e-learning managerial perspectives. *Education sciences*, 10(9), 216.
- [2] Amineh, R. J., & Asl, H. D. (2015). Review of constructivism and social constructivism. *Journal of Social Sciences, Literature and Languages*, 1(1), 9-16.
- [3] Arieviditch, I. M. (2020). Reprint of: The vision of Developmental Teaching and Learning and Bloom's Taxonomy of educational objectives. *Learning, culture and social interaction*, 27, 100473.
- [4] Bojović, Ž., Bojović, P. D., Vujošević, D., & Šuh, J. (2020). Education in times of crisis: Rapid transition to distance learning. *Computer Applications in Engineering Education*, 28(6), 14671489.
- [5] Bond, M. (2020). Facilitating student engagement through the flipped learning approach in K-12: A systematic review. *Computers & Education*, 151, 1– 36. <https://doi.org/10.1016/j.compedu.2020.103819>
- [6] Bradley, V. M. (2021). Learning Management System (LMS) use with online instruction. *International Journal of Technology in Education (IJTE)*, 4(1), 68-92. <https://doi.org/10.46328/ijte.36>
- [7] Buluma, A., & Walimbwa, M. (2021). Blended learning pedagogy and the development of digital competences among teacher trainees in a predominantly face-to-face teacher education program. *SN Social Sciences*, 1(4), 1-30.
- [8] Curtin, R. (2021). Reimagining higher education: The post-Covid classroom. *Educause Review*. <https://er.educause.edu/articles/2021/4/reimagining-higher-education-the-post-covid-classroom>
- [9] Händel, M., Stephan, M., Gläser-Zikuda, M., Kopp, B., Bedenlier, S., and Ziegler, A. (2020). Digital readiness and its effects on higher education students' socio-emotional perceptions in the context of the COVID-19 pandemic. *J. Res. Technol. Educ.*, 1–13. doi: 10.1080/15391523.2020.1846147
- [10] Hoadley, C., & Campos, F. C. (2022). Design-based research: What it is and why it matters to studying online learning. *Educational Psychologist*, 57(3), 207-220.
- [11] Graham, C. R. (2015). *Blended learning systems: Definition, current trends, and future direction*. Global Perspectives, Local Designs, San Francisco, CA: Pfeiffer.
- [12] Jowsey, T., Foster, G., Cooper-loelu, P., & Jacobs, S. (2020). Blended learning via distance in preregistration nursing education: A scoping review. *Nurse education in practice*, 44, 102775.
- [13] Kumari, S. K. V., Lavanya, K., Vidhya, V., Premila, G. A. D. J. S., & Lawrence, B. (2023). *Research methodology (Vol. 1)*. DARSHAN PUBLISHERS.
- [14] Lai, P. C. (2017). The literature review of technology adoption models and theories for the novelty technology. *JISTEM-Journal of Information Systems and Technology Management*, 14, 21-38.
- [15] Malczyk, B. R. (2020). Introducing social work to HyFlex blended learning: a student-centered approach. In *Online and Distance Social Work Education* (pp. 161-175). Routledge.
- [16] Makhafola, L. (2018). *The use of a Virtual Learning Environment (VLE) to embed library information services in a Blended Learning Environment (BLE): a University of Pretoria Engineering study* (Doctoral dissertation, University of Pretoria).
- [17] Maré, S., & Mutezo, A. T. (2021). The effectiveness of e-tutoring in an open and distance elearning environment: Evidence from the University of South Africa. *Open Learning: The Journal of Open and Distance Learning*, 36(2), 164–180. <https://doi.org/10.1080/02680513.2020.1717941>
- [18] Mark Sias. (2019). *HYBRID LEARNING IS THE UNIVERSITY OF PRETORIA'S TEACHING AND LEARNING MODEL*. University of Pretoria.
- [19] Nakitto, B. (2022). *Pedagogical strategies for enhancing interaction in blended learning: a case of Makerere University* (Masters dissertation, Makerere University).
- [20] Palincsar, A. S. (1998). Social constructivist perspectives on teaching and learning. *Annual review of psychology*, 49(1), 345-375.

- [21] Rasheed, R. A., Kamsin, A., & Abdullah, N. A. (2020). Challenges in the online component of blended learning: A systematic review. *Computers & Education*, 144, 103701.
- [22] Topping, K. J., Douglas, W., Robertson, D., & Ferguson, N. (2022). Effectiveness of online and blended learning from schools: A systematic review. *Review of Education*, 10, e3353. <https://doi.org/10.1002/rev3.3353>
- [23] Voogt, J., Knezek, G., Christensen, R., & Lai, K. W. (Eds.). (2018). *Second handbook of information technology in primary and secondary education*. New York: Springer.