



COMMONWEALTH *of* LEARNING

# **Blended Learning Course Experience at Kaimosi Friends University**





## **Blended Learning Course Experience at Kaimosi Friends University**



**COMMONWEALTH *of* LEARNING**

The Commonwealth of Learning (COL) is an intergovernmental organisation created by Commonwealth Heads of Government to promote the development and sharing of open learning and distance education knowledge, resources and technologies.

© 2023 by the Commonwealth of Learning and Kaimosi Friends University



*Blended Learning Course Experience at Kaimosi Friends University* is made available under a Creative Commons Attribution-ShareAlike 4.0 Licence (international):

<http://creativecommons.org/licenses/by-sa/4.0>.

For the avoidance of doubt, by applying this licence the Commonwealth of Learning does not waive any privileges or immunities from claims that they may be entitled to assert, nor does the Commonwealth of Learning submit itself to the jurisdiction, courts, legal processes or laws of any jurisdiction.

### **Acknowledgements**

This report was prepared by Ms. Lilian Ronoh, Co-ordinator of Online Distance Learning, ODeL, Kaimosi Friends University (KAFU), Mr Ayub Shirandula, Chair of the Department of Information Technology, KAFU, and Mr. Hillan Ronoh, Chair of the Department of Computer Science, KAFU.

This report would not have been possible without the valuable contributions and support of Professor Ogodo M. J. Nandi, Acting Vice Chancellor of KAFU; the University Management Board and Senate; the ODeL Directorate and champions from schools and divisions at KAFU; technical support staff from the IT department, the Registrar Academic Affairs and the library; and the staff and students who assisted with data collection at KAFU.

### **Published by:**



COMMONWEALTH *of* LEARNING

4710 Kingsway, Suite 2500  
Burnaby, British Columbia  
Canada V5H 4M2  
Telephone: +1 604 775 8200  
Fax: +1 604 775 8210  
Web: [www.col.org](http://www.col.org)  
E-mail: [info@col.org](mailto:info@col.org)

## Table of Contents

List of Tables.....	ii
<b>Executive Summary.....</b>	<b>1</b>
<b>1. Introduction.....</b>	<b>3</b>
1.1 Research Questions.....	4
<b>2. Literature Review.....</b>	<b>4</b>
<b>3. Methodology.....</b>	<b>5</b>
3.1 Research Design.....	5
3.2 Sample Size.....	5
3.3 Research Instruments.....	6
3.4 Data Analysis.....	6
<b>4. Results.....</b>	<b>7</b>
4.1 Demographic Data.....	7
4.1.1 Ages of Students.....	7
4.1.2 Genders of Students.....	7
4.2 Blended Learning Course Information.....	7
4.2.1 Information on the Year and Semester of Study.....	7
4.3 Digital Literacy and Access to Technology.....	7
4.4 Blended Learning Course Experience Information.....	8
4.4.1 Course Design.....	8
4.4.2 Learning Experience.....	9
4.4.3 Personal Factors.....	9
4.5 Course Interest Information.....	10
4.5.1 Attention.....	10
4.5.2 Relevance.....	10
4.5.3 Satisfaction.....	11
4.5.4 Confidence.....	12
4.5.5 Attitude.....	12
<b>5. Discussion.....</b>	<b>14</b>
<b>6. Conclusions and Recommendations.....</b>	<b>15</b>
6.1 Conclusions.....	15
6.2 Recommendations.....	15
<b>7. References.....</b>	<b>15</b>

## List of Tables

Table 1: Courses taken by respondents .....	6
Table 2: Ages of students.....	7
Table 3: Genders of students .....	7
Table 4: Year and semester of study.....	7
Table 5: Students’ digital literacy and access to technology .....	8
Table 6: Course design .....	8
Table 7: Learning experience .....	9
Table 8: Personal factors.....	10
Table 9: Attention.....	10
Table 10: Relevance.....	11
Table 11: Satisfaction.....	11
Table 12: Confidence.....	12
Table 13: Attitude.....	13

## Executive Summary

In 2019, the Commonwealth of Learning (COL) supported Kaimosi Friends University (KAFU), at that time Kaimosi Friends University College (KAFUCO), in adopting a technology-enabled learning (TEL) policy, with the main aim of improving the quality of learning outcomes and fostering innovations. At the end of the first phase of collaboration, baseline survey research was conducted, and a report based on the research offered insights about TEL-related perceptions, practices and enabling environments at the institution. COL further supported KAFU in phase two of TEL implementation to institutionalise the TEL policy by developing some blended courses and offering these to students. In the 2020/2021 academic year, nine Moodle-based blended courses from three different departments were developed and implemented on the Moodle learning management system. A baseline survey was conducted based on this implementation, and from that research, this report was developed.

The survey was conducted using tools provided by COL online to students who had participated in blended learning. The online questionnaire was distributed to 159 students who had taken blended courses, but only 123 responses received were usable, yielding a response rate of 77.3%, which was considered adequate for the analysis. The software suite Statistical Package for the Social Sciences was used to analyse the quantitative data collected from the online questionnaire; descriptive statistical analysis was performed, including means, percentages, standard deviations and frequencies.

The outcome of this study is intended to assist the university with improving students' satisfaction with blended courses and their appreciation of information and communication technologies' significance in teaching. The results make clear that KAFU students had no trouble with using the relevant technologies. In addition, students found the courses relevant, they were satisfied with their course experiences, and they were confident about doing well when using a blended delivery mode.





# 1. Introduction

In recent years, blended learning (BL) has been used extensively across many institutions to offer education to diverse and dispersed student populations. BL is a delivery mode whereby students learn partly through traditional face-to-face classroom methods and partly online using different digital technologies. In a BL course, students attend a class taught by a teacher in a traditional classroom setting, while also independently completing online components of the course outside of the classroom. The online and in-person learning experiences run in parallel and complement one another. BL enables both teachers and students to engage in ways that would not normally be available in a traditional face-to-face classroom. Moreover, the teaching–learning resources are available for them to access anywhere and anytime.

BL has several benefits: i) improved learning outcomes; ii) confirmed positive effects on student satisfaction and motivation; iii) improved classroom dynamics; and iv) better flexibility (Collopy & Arnold, 2009; Shank et al., 2010).

Improved classroom dynamics include:

- students more eager to learn
- greater engagement
- greater participation
- greater involvement
- improved preparedness (Shank et al., 2010)

Research findings have pointed to several reasons for introducing BL, such as:

- greater focus on student needs and expectations
- enhanced student experiences
- better student engagement and accessibility
- boosted student retention and learning
- the development and use of innovative technological approaches to learning (Fulkerth, 2009)

A learning management system, or LMS, is often the technological cornerstone of a blended learning environment. An LMS is an integrated software application to deliver content and resources online, provide interaction or collaborative workspaces, and manage complete student, course and programme administrative functions, including registration, assessment and analytics. There are several large commercial vendors of LMSs, including Blackboard and Desire2Learn, as well as popular, fully functional open-source alternatives, such as Moodle and Canvas. An LMS is typically implemented on a school-, institution- or district-wide level and requires vendor or in-house infrastructure and technical support (Cleveland-Innes & Wilton, 2018).

KAFU uses the Moodle learning management system to enhance its existing learning environments. As an e-learning tool, Moodle has a wide range of standard and innovative features, such as a calendar and a gradebook.

In 2019, the Commonwealth of Learning (COL) supported Kaimosi Friends University (KAFU), at that time Kaimosi Friends University College (KAFUCO), in adopting a technology-enabled learning (TEL) policy, with the main aims of improving the quality of learning outcomes and fostering innovations. At the end of the first collaboration phase, a baseline survey report was written (Omieno et al., 2020), which offered insights into the perceptions, practices and enabling environment of TEL at the college. This baseline survey also revealed the need for institutional or systemic scaling up of TEL policy, resources and infrastructure if KAFUCO was to fully embrace the digital readiness of its learners and academics. Using a systematic approach, a TEL policy was developed, and several capacity-building

activities on TEL were also organised.

COL further supported KAFU in phase two of TEL implementation to institutionalise the TEL policy by developing some blended courses and offering these to students. COL's *Guide to Blended Learning* (Cleveland-Innes & Wilton, 2018) assisted in the development of these courses, and a course development workshop was also organised. To help further, COL provided support for a consultant to join the KAFU team to demonstrate the different functionalities of Moodle in BL course development. These included designing effective course plans, writing SMART learning outcomes using Bloom's Taxonomy, and helping lecturers understand the core functions of e-assessment and Moodle's assessment modules. The training also covered the use of open educational resources (OER). By the end of phase two, a group of lecturers had become experienced in developing and delivering BL courses, which aimed to improve student learning experiences and outcomes by providing them with flexible and interactive learning opportunities. As a product of this phase, a baseline survey was conducted based on this implementation, and the present report was developed from that research. This report allows for more informed decisions related to the adoption of e-learning, specifically blended learning, as an alternative mode of instruction at Kaimosi Friends University. The research also provided an opportunity for students to voice their opinions about their blended learning experiences, which are presented in the course of the report. This type of analysis can yield important findings for ensuring enthusiastic future enrolment in blended classes at KAFU.

## 1.1 Research Questions

As noted above, this research was conducted with COL's support as part of phase two of TEL implementation at KAFU, to answer the following questions:

1. Is there any significant relationship between personal factors (anxiety, technology access, time and effort) and students' access to KAFU's LMS?
2. What are learners' perceptions about the various ways professors use to capture and hold their attention?
3. How do learners describe the relevance of courses being offered on the KAFU LMS?
4. How do learners rate their satisfaction with and confidence in the courses?
5. What are their perceptions about course design in the KAFU LMS?
6. Is there a significant relationship between online communication, time management skills, digital literacy, performance and learning experience in KAFU's LMS?

## 2. Literature Review

Blended learning has been growing. Conole and Fill (2005) asserted that "e-learning is now no longer a peripheral activity, the province of the isolated enthusiast, but is pervading Higher Education (HE), not just as an effective infrastructure for distance courses but blended with more traditional approaches on campus" (p. 2).

Many experiments have been conducted in various universities to analyse the efficiency of blended learning environments. These studies took into consideration various metrics, including learning enhancement, technology use and technology awareness. A 2018 study found that students who use blended learning strategies benefit from information and communication technologies (Kavitha et al., 2018).

According to Moussa and Atallah (2012), providing students with a variety of learning approaches offers a competitive edge for any higher education institute. The authors argued that when instructors provide lecture-type or face-to-face (F2F) experiences, there is a risk of students experiencing cognitive overload, especially if the presented materials are crowded with redundant

information. Blended learning can make a positive contribution by reducing the risk of cognitive overload and providing an opportunity for students to engage in a variety of instructional delivery modes besides F2F. In a blended class, students work on various targeted tasks through a range of technological tools. Indeed, information and communication technologies have become a fundamental part of educational systems and learning in countries worldwide (Matukhin & Evseeva, 2014).

However, technology integration in itself does not necessarily constitute blended learning. If online learning comprises only a minor component of a classroom-based course, without offering students the independence, convenience and interaction opportunities of being online, it may not actually be a blended learning system but simply a case of technology integration. Creating an effective blended learning environment means making appropriate choices and overcoming the challenges that come with the use of technology. Cleveland-Innes et al. (2017) recently identified the following areas of challenge, from teachers' perspectives: technology access, design, safety and security, skill development and motivation. In a subsequent publication, Cleveland-Innes and Wilton offered the following recommendations on teacher perspectives:

1. **Technology access:** A critical first step is to know which resources are available to your students. Is there limited bandwidth, unreliable Internet connectivity, or a lack of devices such as laptops or smartphones? Once you are clear about access, you can choose learning activities with the technology in ways that allow all to participate.
2. **Design:** Creating the appropriate in-person and online activities means designing courses with the pedagogic principles of both and integrating technology in a way that supports meaningful learning.
3. **Safety and security:** Create awareness of cyber-malice and ensure security interventions against unethical learning practices, academic dishonesty, identity theft and bullying are in place.
4. **Skill development, support and training:** Both students and instructors must have technological literacy and competence with technology applications.
5. **Motivation:** Students need adequate motivation when engaging in a wide range of often shifting learning modalities, some of which may require significant skill development. (Cleveland-Innes & Wilton, 2018, pp. 5–6)

## 3. Methodology

### 3.1 Research Design

Research design is the framework of research methods and techniques chosen by a researcher to conduct a study. The selection of a research approach depends on a number of factors, including the purpose of the research, the type of research questions to be answered and the availability of resources. For the present study, a survey design was adopted. According to Creswell (2012), survey designs are procedures in quantitative research whereby investigators administer a survey to a sample or entire population of people to elicit information about the respondents' attitudes, opinions, behaviours or characteristics. This study sought to learn about students' blended learning experience on the KAFU learning management system.

### 3.2 Sample Size

In the 2020/2021 academic year, nine Moodle-based blended courses in three different departments were developed and implemented on the Moodle LMS. This survey was conducted at the end of the academic year, using tools provided by COL online to students who had participated in blended

learning. The online questionnaire was distributed to 159 students who had participated in blended courses, but only 123 responses received were usable. This yielded a response rate of 77.3%, considered adequate for the analysis.

### 3.3 Research Instruments

The student survey questionnaire provided by COL was administered to students who had undertaken one or more of the nine courses through blended learning during the September–December 2021 semester. The Blended Learning Course Experience Survey (BLCES) described by Bhagat (2019) was used, with minor modifications to fit the KAFU context. The questionnaire comprised five sections. The first gathered general student information, including each respondent’s age and gender. The second gathered blended learning course information, which focused on the respondent’s online course enrolment and their year and semester of study. The third covered digital literacy and access to technology. The fourth addressed students’ blended learning experience, focusing on course design, learning experience and personal factors, and the fifth sought to determine why the module was of interest to the respondent, asking questions related to attention, relevance, satisfaction, confidence and attitude. The third, fourth and fifth sections were all presented to the students using a five-point Likert scale. The sixth section had one open-ended question that elicited comments and suggestions from the respondents. COL shared the collected data with KAFU for analysis and report writing.

### 3.4 Data Analysis

Survey research is defined as “the collection of information from a sample of individuals through their responses to questions” (Check & Schutt, 2012). The researchers employed descriptive analysis, which helped describe and summarise data points in a positive way. The collected data were analysed with the Statistical Package for the Social Sciences (SPSS) software suite, which is widely accepted and used by many researchers in various disciplines. The data were coded, missing data were removed, and the final data analysed came from 123 respondents. SPSS was used to perform descriptive statistics such as percentages, frequencies, mean values and standard deviations for each variable.

Table 1 presents enrolment figures for the nine online courses. HCS 115 Basic Life Support and Pre-Hospital Care had the highest number of students, at 36, representing 29.3%, followed by BIT 214 Web Technologies 1, with 28 students, representing 22.8%. BIT 112 Fundamentals of Programming, NCN 111 Basic Nursing Therapeutics and BIT 213 Introduction to Database System each had one student enrolled, representing 0.8% of the sample for each.

**Table 1: Courses taken by respondents**

<b>Courses</b>	<b>Frequency</b>	<b>%</b>
BIT 421 IT Entrepreneurship	11	8.94
NCN 114 Human Anatomy	11	8.94
HCS 115 Basic Life Support and Pre-Hospital Care	36	29.27
BIT 113 Introduction to Computing	16	13.01
BIT 112 Fundamentals of Programming	1	0.81
BIT 214 Web Technologies 1	28	22.76
REL 111 Introduction to the Study of Religion	18	14.63
NCN 111 Basic Nursing Therapeutics	1	0.81
BIT 213 Introduction to Database System	1	0.81
<b>Totals</b>	<b>123</b>	<b>100.0</b>

## 4. Results

### 4.1 Demographic Data

#### 4.1.1 Ages of Students

The largest proportion of the 123 respondents were aged 19 (28.5%), followed by those aged 20 and 18, at 21.1% and 20.3%, respectively. Two students aged 24 and 25 also participated, representing less than 1% each. The results (Table 2) show the substantial majority were aged 18–21.

**Table 2: Ages of students**

Age	Frequency	%
17	3	2.44
18	25	20.33
19	35	28.46
20	26	21.14
21	14	11.38
22	5	4.07
23	13	10.57
24	1	0.81
25	1	0.81
<b>Total</b>	<b>123</b>	<b>100.0</b>

#### 4.1.2 Genders of Students

The results in Table 3 show that the majority of the student respondents were male (61.8%), compared to 38.2% female.

**Table 3: Genders of students**

Gender	Frequency	%
Male	76	61.8
Female	47	38.2
<b>Total</b>	<b>123</b>	<b>100.0</b>

### 4.2 Blended Learning Course Information

#### 4.2.1 Information on the Year and Semester of Study

Most of the students who participated in the study were in semester one (89.4%). Only 13 respondents were in semester two.

**Table 4: Year and semester of study**

Semester	Frequency	%
Semester one	110	89.4
Semester two	13	10.6
<b>Total</b>	<b>123</b>	<b>100.0</b>

### 4.3 Digital Literacy and Access to Technology

Table 5 shows that overall, a majority of the students agreed their digital literacy and access to technology skills were excellent, meaning their access to and use of digital tools (laptop, smartphone), and their MS Office use, Web browsing, virtual learning environment skills and KAFU LMS use.

**Table 5: Students' digital literacy and access to technology**

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Mean
My digital literacy skills (using MS Office, browsing the Web and navigating through the virtual learning environment) are excellent.	43.1% 53	50.4% 62	4.1% 5	2.4% 3	0.0% 0	4.34
My access to and use of digital tools (laptop, smartphone) are excellent.	43.1% 53	48.0% 59	6.5% 8	2.4% 3	0.0% 0	4.32
My ability to access and use the KAFU learning management system was excellent.	28.5% 35	52.8% 65	10.6% 13	6.5% 8	1.6% 2	4.00

## 4.4 Blended Learning Course Experience Information

### 4.4.1 Course Design

**Table 6: Course design**

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Mean
Description of course objectives, learning activities and assignments in the online course was excellent.	39.0% 48	53.7% 66	4.1% 5	1.6% 2	1.6% 2	4.27
Expression of expectations for performance (e.g., online forums and assignments) in the course was excellent.	27.6% 34	65.9% 81	3.3% 4	3.3% 4	0.0% 0	4.18
The professor's overall organisation of the course was great.	43.1% 53	52.0% 64	4.9% 6	0.0% 0	0.0% 0	4.38
Continuity between face-to-face class and online learning was good.	33.3% 41	56.1% 69	5.7% 7	4.9% 6	0.0% 0	4.18
The pace of the course was user friendly.	33.3% 41	52.8% 65	10.6% 13	3.3% 4	0.0% 0	4.16
The professor's interest in your learning was good.	45.5% 56	49.6% 61	3.3% 4	1.6% 2	0.0% 0	4.39
The professor's feedback on your performance in assignments and participation in the forums was very helpful.	33.3% 41	52.8% 65	10.6% 13	2.4% 3	0.8% 1	4.15
The professor-provided orientation on using the online resources, activities and KAFU learning management system was very helpful.	35.8% 44	55.3% 68	6.5% 8	1.6% 2	0.8% 1	4.24
Overall, the course experience was excellent.	34.1% 42	58.5% 72	7.3% 9	0.0% 0	0.0% 0	4.27

Regarding various course design aspects, such as course organisation and pace, a majority largely agreed these were good or excellent, as shown in Table 6. According to the students, the descriptions

of course objectives, learning activities and assignments in the online course were excellent, the continuity between face-to-face class and online learning was good, the professors' feedback on their performance in assignments and participation in the forums was very helpful, and the orientation their professors provided on using the online resources, activities and KAFU LMS was very helpful. The mean scores were all above 4, indicating positive responses from most of the participants.

#### 4.4.2 Learning Experience

Table 7 shows that a majority of the respondents in each component of the learning experience agreed they had experienced improvement in their learning processes and ultimate performance. Each variable under this question averaged an 80% agreement score among the respondents. Many of the respondents agreed that the multimedia resources on KAFU's LMS enriched their learning experience, communicating online with students and the professor improved their learning, and blended learning improved their performance in mid-semester tests and end-of-semester exams. Most respondents rated using the Moodle Classic mobile app for viewing/reading learning resources, interacting with faculty and peers in forums, and submitting assignments as satisfactory.

**Table 7: Learning experience**

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Mean
Multimedia resources on KAFU's learning management system enriched my learning experience.	20.3% 25	59.3% 73	13.8% 17	5.7% 7	0.8% 1	3.93
Communicating online with students and the professor improved my learning.	26.8% 33	59.3% 73	6.5% 8	7.3% 9	0.0% 0	4.06
Blended learning improved my time-management skills.	29.3% 36	59.3% 73	9.8% 12	1.6% 2	0.0% 0	4.16
Blended learning improved my digital literacy.	44.7% 55	47.2% 58	5.7% 7	1.6% 2	0.8% 1	4.33
Blended learning improved my performance in mid-semester tests and end-of-semester exams.	24.4% 30	52.8% 65	16.3% 20	5.7% 7	0.8% 1	3.94
Blended learning enabled me to learn at any time and any pace, from anywhere, using any device.	35.0% 43	52.8% 65	5.7% 7	5.7% 7	0.8% 1	4.15
Use of the Moodle Classic mobile app for viewing/reading learning resources, interacting with faculty and peers in forums and submitting assignments was satisfactory.	26.8% 33	52.0% 64	14.6% 18	5.7% 7	0.8% 1	3.98

#### 4.4.3 Personal Factors

The results in Table 8 show that a small majority of the students (54%) felt anxious in their blended course, while 27.6% disagreed. A majority (57%) disagreed that they had trouble using the course technologies, while approximately 22% admitted to having trouble. Notably, 78% agreed that their courses required more time and effort to achieve their desired goals and objectives.

**Table 8: Personal factors**

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Mean
I feel more anxious in this course.	18.7% 23	32.5% 40	17.1% 21	27.6% 34	4.1% 5	3.34
I have trouble using the technologies in this course.	7.3% 9	15.4% 19	10.6% 13	57.7% 71	8.9% 11	2.54
This course required more time and effort.	30.9% 38	47.2% 58	9.8% 12	12.2% 15	0.0% 0	3.97

## 4.5 Course Interest Information

### 4.5.1 Attention

Mixed results were recorded in response to this set of questions, as shown in Table 9. A majority of the students agreed their professor utilised different teaching techniques, knew how to make them feel enthusiastic about the subject matter of the course, created suspense and did unusual or surprising things that were interesting. Notably, 40% stated they often daydreamed while in the course, while a similar percentage disagreed with that statement; 70% agreed their curiosity was often stimulated by the questions asked or the problems given on the course subject matter.

**Table 9: Attention**

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Mean
The lecturer knows how to make us feel enthusiastic about the subject matter of this course.	29.3% 36	51.2% 63	6.5% 8	4.9% 6	0.0% 0	4.14
This course has very little in it that captures my attention.	7.3% 9	19.5% 24	17.1% 21	41.5% 51	7.3% 9	2.76
The professor creates suspense when building up to a point.	14.6% 18	31.7% 39	18.7% 23	26.0% 32	1.6% 2	3.34
The students in this course seem curious about the subject matter.	17.9% 22	48.0% 59	14.6% 18	9.8% 12	2.4% 3	3.75
The professor does unusual or surprising things that are interesting.	14.6% 18	39.8% 49	23.6% 29	14.6% 18	0.0% 0	3.59
The professor uses an interesting variety of teaching techniques.	26.8% 33	56.1% 69	8.1% 10	1.6% 2	0.0% 0	4.17
I often daydream while in this course.	17.9% 22	24.4% 30	12.2% 15	29.3% 36	8.9% 11	3.14
My curiosity is often stimulated by the questions asked or the problems given on the subject matter in this course.	22% 27	43.9% 54	15.4% 19	9.8% 12	1.6% 2	3.81

### 4.5.2 Relevance

The findings in Table 10 show a majority of the respondents agreed their course was relevant to their lives, confirming that it related to their goals and expectations. A majority disagreed that the course would not be beneficial to them. Many of the respondents noted that in their course, they tried to set and achieve high standards of excellence.



**Table 10: Relevance**

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Mean
The things I am learning in this course will be useful to me.	47.2% 58	39.8% 49	4.9% 6	0.8% 1	0.0% 0	4.44
The professor makes the subject matter of this module seem important.	45.5% 56	38.2% 47	8.9% 11	0.0% 0	0.0% 0	4.39
I do not see how the content of this course relates to anything I already know.	11.4% 14	30.1% 37	10.6% 13	30.1% 37	10.6% 13	3.02
In this course, I try to set and achieve high standards of excellence.	44.7% 55	43.9% 54	3.3% 4	0.8% 1	0.0% 0	4.43
The content of this course relates to my expectations and goals.	47.2% 58	41.5% 51	3.3% 4	0.8% 1	0.0% 0	4.46
The students actively participate in this course.	32.5% 40	48.8% 60	8.9% 11	0.0% 0	0.8% 1	4.23
To accomplish my goals, it is important that I do well in this course.	60.7% 68	36.6% 41	0.9% 1	0.9% 1	0.9% 1	4.55
I do not think I will benefit much from this course.	3.6% 4	8.0% 9	4.5% 5	41.1% 46	42.9% 48	1.88
The personal benefits of this course are clear to me.	42.0% 47	51.8% 58	4.5% 5	1.8% 2	0.0% 0	4.34

### 4.5.3 Satisfaction

**Table 11: Satisfaction**

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Mean
I have to work very hard to succeed in this course.	60.7% 68	34.8% 39	3.6% 4	0.9% 1	0.0% 0	4.55
I feel that this course gives me a lot of satisfaction.	42.9% 48	47.3% 53	6.2% 7	3.6% 4	0.0% 0	4.29
I feel that the grades or other recognition I receive are fair compared to other students'.	17.9% 20	52.7% 59	21.4% 24	6.2% 7	1.8% 2	3.79
I enjoy working for this course.	42.0% 47	42.9% 48	13.4% 15	0.9% 1	0.9% 1	4.24
I am pleased with the professor's evaluations of my work compared to how well I think I have done.	38.4% 43	50.9% 57	8.0% 9	0.9% 1	1.8% 2	4.23
I feel satisfied with what I am getting from this course.	30.4% 34	58.9% 66	6.2% 7	4.5% 5	0.0% 0	4.15
I feel rather disappointed with this course.	12.6% 14	18.0% 20	8.1% 9	47.7% 53	13.5% 15	2.68
I feel that I get enough recognition of my work in this course by means of grades, comments or other feedback.	18.9% 21	49.5% 55	10.8% 12	10.8% 12	9.9% 11	3.57
The amount of work I have to do is appropriate for this type of course.	30.6% 34	62.2% 69	7.2% 8	0.0% 0	0.0% 0	4.23

In Table 11, the overall findings in this question category show that a majority of the students were satisfied with their particular course. They were pleased with the professor's evaluation of their

outcomes. The respondents agreed that the personal benefits of the course were clear to them, that the course gave them a lot of satisfaction and that the grades or other recognition they received were fair compared to those of other students. A majority agreed they received enough recognition of their work in the course from grades, comments or other feedback.

#### 4.5.4 Confidence

Table 12 shows that a majority of the students were confident of doing well in their courses and felt their success depended on their efforts. However, some felt they had to be lucky to get good grades in the course. Many respondents agreed that in their respective courses, they found the challenge level to be about right — hence their conviction that trying hard had been critical to achieving success, and the amount of work they were required to do was appropriate.

**Table 12: Confidence**

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Mean
I feel confident that I will do well in this course.	45.9% 51	46.8% 52	6.3% 7	0.9% 1	0.0% 0	4.38
You have to be lucky to get good grades in this course.	27.0% 30	26.1% 29	15.3% 17	24.3% 27	7.2% 8	3.41
Whether or not I succeed in this course is up to me.	22.5% 25	41.4% 46	18.0% 20	13.5% 15	4.5% 5	3.64
The subject matter of this course is just too difficult for me.	8.2% 9	18.2% 20	11.8% 13	52.7% 58	9.1% 10	2.64
It is difficult to predict what grade the professor will give my assignment.	6.4% 7	31.8% 35	25.5% 28	29.1% 32	7.3% 8	3.01
As I am taking this course, I believe that I can succeed.	43.6% 48	39.1% 43	9.1% 10	8.2% 9	0.0% 0	4.18
I find the challenge level in this module to be about right: neither too easy nor too hard.	16.4% 18	54.5% 60	21.8% 24	6.4% 7	0.9% 1	3.79
I get enough feedback to know how well I am doing.	27.3% 30	52.7% 58	14.5% 16	4.5% 5	0.9% 1	4.01

#### 4.5.5 Attitude

Table 13 shows that a majority of the students either strongly agreed or agreed with statements related to attitude. For example, they valued the use of logic and reason over the incorporation of their own concerns when solving problems. It was also important for them to remain as objective as possible when engaging in analysis.

Most of the respondents wanted to understand where other people were “coming from” and what experiences had led them to feel the way they do: 28.4% strongly agreed and 53.2% agreed with the statement, while only 1.8% strongly disagreed. This shows the students had a positive attitude.

Asked whether the most important part of their education had been learning to understand people who were very different to them, students had a positive attitude, with 25.7% strongly agreeing and 47.7% agreeing, while only 0.9% strongly disagreed.

A majority of the variables in relation to student attitude were positive, with the highest percentages agreeing and strongly agreeing. Some respondents (41.3%) indicated liking to play devil’s advocate by arguing the opposite of what someone else was saying, while a similar percentage (40.4%) agreed

or strongly agreed that they sought to strengthen their own position through arguing with someone who disagreed with them.

**Table 13: Attitude**

	<b>Strongly agree</b>	<b>Agree</b>	<b>Neither agree nor disagree</b>	<b>Disagree</b>	<b>Strongly disagree</b>	<b>Mean</b>
I like to understand where other people are “coming from,” what experiences have led them to feel the way they do.	28.4% 31	53.2% 58	13.8% 15	2.8% 3	1.8% 2	4.04
The most important part of my education has been learning to understand people who are very different to me	25.7% 28	47.7% 52	18.3% 20	7.3% 8	0.9% 1	3.90
I feel that the best way for me to achieve my own identity is to interact with a variety of other people.	28.4% 31	55.0% 60	11.0% 12	4.6% 5	0.9% 1	4.06
I enjoy hearing the opinions of people who come from backgrounds different to mine – it helps me to understand how the same things can be seen in such different ways.	30.3% 33	56.9% 62	10.1% 11	1.8% 2	0.9% 1	4.14
I am always interested in knowing why people say and believe the things they do.	35.8% 39	53.2% 58	9.2% 10	0.9% 1	0.9% 1	4.22
I try to think with people instead of against them.	28.4% 31	52.3% 57	15.6% 17	3.7% 4	0.0% 0	4.06
I’m more likely to try to understand someone else’s opinion than to try to evaluate it.	22.0% 24	62.4% 68	12.8% 14	2.8% 3	0.0% 0	4.04
I tend to put myself in other people’s shoes when discussing controversial issues, to see why they think the way they do.	24.8% 27	49.5% 54	17.4% 19	6.4% 7	1.8% 2	3.89
Through empathy, I can obtain insight into opinions that differ from mine.	22.9% 25	48.6% 53	19.3% 21	8.3% 9	0.9% 1	3.84
When I encounter people whose opinions seem alien to me, I make a deliberate effort to “extend” myself into that person, to try to see how they could have those opinions.	21.1% 23	55.0% 60	17.4% 19	5.5% 6	0.9% 1	3.90
In evaluating what someone says, I focus on the quality of their argument, not on the person who’s presenting it.	18.3% 20	66.1% 72	13.8% 15	0.9% 1	0.9% 1	4.00
I like playing devil’s advocate – arguing the opposite of what someone is saying.	11.9% 13	29.4% 32	19.3% 21	31.2% 34	8.3% 9	3.06
I find that I can strengthen my own position through arguing with someone who disagrees with me.	14.7% 16	25.7% 28	21.1% 23	32.1% 35	6.4% 7	3.10
I often find myself arguing, in my head, with the authors of books that I read, trying to logically figure out why they’re wrong.	13.8% 15	37.6% 41	32.1% 35	14.7% 16	1.8% 2	3.47
It’s important for me to remain as objective as possible when I analyse something.	22.0% 24	54.1% 59	18.3% 20	4.6% 5	0.9% 1	3.92

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Mean
I have certain criteria I use in evaluating arguments.	23.9% 26	55.0% 60	19.3% 21	1.8% 2	0.0% 0	4.01
I try to point out weaknesses in other people's thinking to help them clarify their arguments.	15.6% 17	51.4% 56	21.1% 23	9.2% 10	2.8% 3	3.68
One could call my way of analysing things "putting them on trial," because I am careful to consider all the evidence.	21.1% 23	55.0% 60	18.3% 20	5.5% 6	0.0% 0	3.92
I value the use of logic and reason over the incorporation of my own concerns when solving problems.	23.9% 26	64.2% 70	11.0% 12	0.9% 1	0.0% 0	4.11
I spend time figuring out what's "wrong" with things. For example, I'll look for something in a literary interpretation that isn't argued well enough.	20.2% 22	56.9% 62	16.5% 18	6.4% 7	0.0% 0	3.91

## 5. Discussion

As noted earlier, the majority of the respondents were male (61.8%) compared with 38.2% female. This result concurs with Kamer's statement (2023) that men constitute the majority of students in Kenyan universities, with approximately 326,000 males compared to 221,000 females.

The most popular blended course at Kaimosi Friends University was HCS 115 Basic Life Support and Pre-Hospital Care (29.3%), followed by BIT 214 Web Technologies 1 (22.8%). These are both science courses, contradicting the notion that the most popular online courses are in the fields of business and the humanities.

The responses concerning digital literacy and access to technology showed that most students know how to use MS Office, feel comfortable using digital tools like laptops or smartphones, and can easily navigate the university's learning management system. These results are in line with a publication by Kamau (2020) analysing key drivers for the implementation of digital literacy programs in Kenyan universities, which reported that having such skills and competencies changes digital literacy and implementation. Kamau also reported that greater student intake at Kenyan universities calls for the implementation of digital literacy in Kenyan universities to ease their capacity pressures.

Responses on course design showed that students were in agreement about the courses being well organised; they found course objectives to be well described and learning activities and assignments to be outstanding. The blending between face-to-face and online learning was suitable, as the lecturers were able to orient students and give them feedback on their performance and participation in forums, which greatly assisted learners. This is in agreement with a study on blended course design, conducted by McGee and Reis (2012), who identified a consensus that the best strategies for design commence by defining course objectives before coming up with activities, assignments and assessments. KAFU students' responses show that course objectives were critical for their blended courses, because these goals informed the instructors' delivery mechanisms both in class and online. Based on the respondents' positive reception of their courses and their sense of success, the BL courses had been designed from a student's perspective.

When asked about their learning experiences, a majority of the students agreed that process and performance were both improved. This report concurs with Marshall-Stuart's 2018 study on blended learning as an instructional approach to improve academic performance, which found that higher

education institutions had introduced blended learning as a strategy to improve their students' performance and achievements.

## 6. Conclusions and Recommendations

### 6.1 Conclusions

This study concludes that students at Kaimosi Friends University are digitally literate, with the ability to access technology like MS Office, use tools such as laptops and smartphones, and work comfortably within the KAFU LMS. In addition, KAFU lecturers are able to design courses with good descriptions of course objectives as well as effective learning activities and assignments, and can give helpful feedback to students on their performance. The university has a learning management system enriched by multimedia resources that can enhance student learning and communication online. Finally, it is clear that the BL courses were perceived as relevant to the student respondents, who expressed satisfaction and were confident of doing well as a result of their effort.

### 6.2 Recommendations

This study's findings show that blended learning at Kaimosi Friends University is the way to go. The researchers recommend the following:

1. The university should offer more courses online, because a majority of its students are digitally literate and have access to digital tools.
2. The university should increase the number of students enrolled in blended learning, because they have expressed confidence and satisfaction with that mode of delivery.
3. The university should promote blended learning, because it will improve the learning process and students' ultimate performance.

## 7. References

- Bhagat, K. K. (2019). *The impact of technology-enabled learning at Universiti Malaysia Sabah*. Commonwealth of Learning. <http://oasis.col.org/handle/11599/3483>
- Check, J., & Schutt, R. K. (2012). *Research methods in education*. Sage Publications.
- Cleveland-Innes, M., Ostashewski, N., Mishra, S., Gauvreau, S., & Richardson, G. (2017). TEL MOOC participant response to the community of inquiry theoretical framework. Presented at *Teaching in a Digital Age – Re-thinking Teaching & Learning* conference, International Council for Open and Distance Education, Toronto, Ontario.
- Cleveland-Innes, M., & Wilton, D. (2018). *Guide to blended learning*. Commonwealth of Learning. <http://oasis.col.org/handle/11599/3095>
- Collopy, R., & Arnold, J. (2009). To blend or not to blend: Online and blended learning environments in undergraduate teacher education. *Issues in Teacher Education*, 18(2), 85–101.
- Conole, G., & Fill, K. (2005). A learning design toolkit to create pedagogically effective learning activities. *Journal of Interactive Media in Education*, 1. <https://doi.org/10.5334/2005-8>
- Creswell, J. W. (2012). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research*. Pearson.
- Fulkerth, R. (2009). A case study from Golden Gate University: Using course objectives to facilitate blended learning in shortened courses. 13(1), 43–54.

<http://dx.doi.org/10.24059/olj.v13i1.1676>

- Kamau, E. (2020). *An analysis of key drivers for the implementation of digital literacy programs in Kenyan universities* [Master's thesis, Strathmore University].  
<http://hdl.handle.net/11071/12084>
- Kamer, L. (2023). *University enrollment in Kenya from 2016/2017 to 2020/2021, by gender*. Statista.  
<https://www.statista.com/statistics/1135820/university-enrollment-in-kenya-by-gender/>
- Kavitha, R. K., Jalaja Jayalakshmi, & V., Rassika, R. (2018). Collaborative learning in computer programming courses using eLearning environments. *International Journal of Pure and Applied Mathematics*, 118(8), 183–189.
- Marshall-Stuart, D-D. (2018). *Blended learning as an instructional strategy to improve academic performance* [Doctoral dissertation, Walden University].  
<https://scholarworks.waldenu.edu/cgi/viewcontent.cgi?article=6780&context=dissertations>
- Matukhin, D., & Evseeva, A. (2014). Further professional training as a constituent part of continuing vocational education. In Y. Zhang (Ed.), *2014 2nd International Conference in Humanities, Social Sciences and Global Business Management (ISSGBM 2014) June 21–22, 2014, London, UK* (pp. 104–1109). Singapore Management and Sports Science Institute.  
<http://hdl.voced.edu.au/10707/341308>
- McGee, P., & Reis, A. (2012). Blended course design: A synthesis of best practices. *Journal of Asynchronous Learning Networks*, 16(4), 7–22. <https://doi.org/10.24059/olj.v16i4.239>
- Moussa-Inaty, J., & Atallah, F. (2012). Multimedia use in higher education in the UAE: A cognitive load perspective. *Journal of Educational Hypermedia and Multimedia*, 21(2), 127–142.
- Omieno, K., Shirandula, A., & Bonareri, M. (2020). *Report on the baseline study of technology-enabled learning at Kaimosi Friends University College*. Commonwealth of Learning.  
<http://creativecommons.org/licenses/by-sa/4.0>
- Shank, Amaral, K. E., & D., J. (2010, December 15). Enhancing student learning and retention with blended learning class guides. *Educause Review*.  
<https://er.educause.edu/articles/2010/12/enhancing-student-learning-and-retention-with-blended-learning-class-guides>





4710 Kingsway, Suite 2500  
Burnaby, BC V5H 4M2  
Canada  
Tel: +1 604 775 8200  
Fax: +1 604 775 8210  
E-mail: [info@col.org](mailto:info@col.org)  
Web: [www.col.org](http://www.col.org)

OCTOBER 2023