

Article

# SWOT Analysis of Blended Learning in Public Universities of Uganda: A Case Study of Muni University

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**Abstract:** With the fusion of information communication technology (ICT) in higher institutions of learning, new teaching and learning practices have developed—often called blended learning—allowing students and teachers to interact with information and each other more independently. This study, therefore, analyses the strengths, weaknesses, opportunities and threats (SWOT) of blended learning in the Public Universities of Uganda, in a case study of Muni University. Descriptive survey design was employed in the research. The target sample of the survey was 25 lecturers and 189 students selected using a stratified random sampling technique from the three faculties. A questionnaire was employed in this study and the data collected were analyzed using SPSS Version 25. The findings of the study identified accessibility, positive attitude, and knowledge and skills as the major motivators for blended learning. The strengths of blended learning found included serving many students in a short time, university readiness, connected both in and out of class, basic IT skills and top management commitment. The weaknesses included low bandwidth and unstable internet, lack of a plagiarism tool, insufficient numbers of computers and dependent on internet connectivity. Opportunities cited were competency-based systems that made it easier to manage individual progress in line with university expansion plans, an accessible way of learning regardless of location and available external support. The threats included unreliable power supply, unreliable internet connection, exchanges of username and passwords by students, internet shorthand used in student assignments. Based on these results, the study provides a baseline to help government and public universities that would like to implement or newly incorporate blended learning to identify strengths, weaknesses, opportunities and threats associated with the blended learning approach. The survey urges that plagiarism plugins for Moodle and BigBlue Button should be added, steady power supply should be provided, internet accessibility should be improved, blended learning training and workshops need to be improved and finally, policies, rules and standards pertaining to blended learning should be enacted.

**Keywords:** SWOT (strengths, weaknesses, opportunities, and threats) analysis; blended learning; public universities

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## 1. Introduction

With the fusion of information communication technology (ICT) in higher institutions of learning, new teaching and learning practices have developed—often called blended learning—allowing students and teachers to interact with information and each other more independently of both place and time by the lowering of information friction. Blended learning is introduced in most educational institutions as

a new educational approach to substitute e-learning [1]. It has become the most popular educational model that universities apply to teaching and learning [2].

According to Allison and Rebecca [3], “blended learning is a method of learning that integrates formal and informal learning, face-to-face and online experiences, directed paths and reliance on self-management, and digital references and collegial connections, to achieve the goals of an individual and the governing body” (p. 2). Ricky et al. [4] added that blended learning requires a good balance of face-to-face contact and online time and a range of pedagogical practices such as flipping and self-regulated learning for actual teaching and learning. Oweis [1] further observed that blended learning combines both direct and indirect forms of online learning that normally contains the internet and intranet, whereas indirect learning happens concurrently within traditional categories.

There are many benefits of using blended learning, for example, it offers flexibility and efficiency, enhanced social interaction, communication and collaboration, lower student dropout, encourages students to use their out of classroom time in meaningful activities, more productive classroom interactions, provides individual learning opportunities for both students and lecturers, thus supporting more self-regulated learning [4–10]. It is cost-effective [11,12], enhancing learning [13,14], increased convenience and access to learning opportunities, more focus on learner-centered learning, emphasize peer-to-peer learning and interaction with remote experts [15]. It also offers consistent and updated messages to both scholars and lecturers, improves lecturers and students’ performance and controls costs, converges learning and study, and is a solution to classroom insufficiency [16–18].

Proper planning in the implementation of blended learning will complement the existing formal means of teaching, learning, assessment and educational administration and management in higher education.

In Uganda, there are eleven (11) public universities, thirty-eight (38) private universities, four (4) military universities and three (3) other degree-awarding institutions. Some public universities in Uganda such as Makerere University, Kyambogo University, Makerere University Business School, Mbarara University of Science and Technology, Muni University, Gulu University, Uganda Management Institute adopted blended learning, but some challenges led to low adoption rates, abandonment and even the failure of some blended learning projects. SWOT (strengths, weaknesses, opportunities, and threats) analysis of blended learning has not been ascertained in these public universities of Uganda. Thus, this work aims to analyze the strengths, weaknesses, opportunities and threats of blended learning in Muni University, one of the public universities where students and lecturers are direct actors in implementing blended learning in their daily educational practices. The findings of the study will help the government and public universities identify and build upon their strengths, discover new opportunities and work upon eliminating threats to blended learning. To accomplish this aim, the study tried to answer the following questions:

RQ1. What are the factors influencing students and lecturers’ intention to use blended learning?

RQ2. What are the strengths, weaknesses, opportunities and threats of blended learning in Muni University as one of the public universities of Uganda?

In the next section, the relevant literature on factors influencing students and lecturers’ intention to use blended learning and SWOT analysis of blended learning are covered. The third section discusses the materials and methods used in the study. In Section 4, we provide the overview of the analysis of the results. In Section 5, we give a detailed discussion of the results. These are followed by the limitations, conclusion and then recommendations.

## 2. Related Work

### 2.1. Blended Learning in Uganda

In Uganda, blended learning has been adopted in some public universities like Makerere University, Kyambogo University, Makerere University Business School, Mbarara University of Science

and Technology, Muni University, Gulu University and the Uganda Management Institute but many challenges led to low adoption rates and the failure of the projects.

Muni University (MU) as a case for this study is a public university that was set up in Arua District, West Nile in the Northern Region of Uganda in 2013 by an Act of Parliament [19]. It is a degree-granting institution, licensed by the Uganda National Council for Higher Education (UNCHE) with the primary aims of supplying quality education, generating knowledge and promoting innovations and community empowerment for transformation [19]. Presently, the university has three Faculties, that is, Faculty of Technoscience (with departments of Computer and Information Science (CIS), Nursing and Midwifery, and Agriculture), Faculty of Science (with Departments of Physics, Chemistry, Biology, and Mathematics), and Faculty of Education (with Department of Education).

MU, since its inception, has seen a significantly high number of students and fewer staff members with heavy workloads. It is university policy that before a new student or the existing one is registered in a semester, they must have either a laptop or a tablet. It is against this ground that the need to develop blended learning became relevant. The accessibility of ICT made it possible for the university to teach all programs using a blended learning approach.

With the support of the government of Uganda and the African Development Bank Higher Education, Science and Technology (ADB V—HEST), the university trained teaching staff on how to develop teaching and learning content and use the Moodle platform.

Limited research has been carried out to analyze the strengths, weaknesses, opportunities and threats (SWOT) of blended learning in public universities as reflected in a low number of published articles [20]. Many of the available articles are publications on SWOT analyses of e-learning. This work therefore, reviews the available literature related to blended learning, guided by the following sub-headings—factors influencing students and lecturers' intention to use blended learning, and SWOT analysis of blended learning.

## 2.2. Factors Influencing Students and Lecturers' Intention to Use Blended Learning

Some factors have been identified from the literature reviewed to have influenced students and lecturers' intention to use blended learning. They include the following:

### 2.2.1. Resources

Basheka, Lubega, and Baguma [21], Ying and Yang [22], suggest that for a successful implementation of blended learning, institutions are required to provide key resources like technological infrastructure (hardware and software) and human resources (academic staff with the necessary qualifications, accomplishments, and experience; as well as continuous training). Relatedly, Chen and Yao [23], Mozelius and Hettiarachchi [24] emphasized the need for technology that should blend with traditional learning which acts as a critical factor in the implementation [25,26]. In addition to that, expert support for students and instructors plays a critical role [27].

### 2.2.2. Instructional Course Design

An instructional course design should consequently be developed to support knowledge transmission and skills acquisition [28]. The appropriate course design has to include relevant multimodal technology didactics that support collaboration and active learning for successful course outcomes. A study by Garner and Rouser [29] recommended a balance between traditional face-to-face activities that offer a richness of human interaction and applied science-enhanced online activities. The course structure is a critical factor related to learners' understanding of collaborative learning and satisfaction [30]. Consequently, the course design influences student satisfaction and perceived learning [31].

### 2.2.3. Motivation

Motivation plays a substantial part in the success of any learning system applied. This should be taken by both the faculty members and learners [22]. This idea was supported by Reference [32] where they indicated that “motivation is a vital element in the success of blended learning.” They thought that posting students’ grades daily and setting them in teams helps to motivate them. This is coherent with the findings of References [8,33,34] who added that these strategies lead towards maintaining student motivation for learning and absorbing them in blended learning classes.

### 2.2.4. Teacher Competence

Snježana [35] and Kim and Bonk [26] point out that teachers’ competencies in computer literacy, working with e-learning systems, utilizing the instructional design model, online moderating, online mentoring and quality literacy motivates them to use blended learning as easily as their learners. Gautreau [36] observed that a computer literate person is more likely to try out new software and his level of experience in working with learning management systems (LMS) will be a prevailing motivator. The competences of the lecturers are a significant factor influencing students and lecturers to use blended learning [25].

### 2.2.5. Attitude and Values

Renzi [37] also found that a teacher’s attitude and values are an important motivating factor in the application of e-learning competence and it is well recognized that teachers get motivated to apply e-learning technology at different tiers based on e-learning values. Successful adoption of e-learning technology by students and teachers depend on their attitude towards technology [38]. Attitude and values such as trialability, ease of use, result demonstrability, observability, compatibility, usefulness, relative advantage and flexibility motivate learners to use blended learning [36].

### 2.2.6. Institutional Factors

Snježana [36] pointed out that institutional factors as critical extrinsic motivational factors influencing academic teacher’s acceptance of e-learning technology. Institutional factors such as capacity and reliability of the ICT infrastructure, perceived adequacy of funding (e.g., technical, pedagogical, personnel), availability of information, changes in structure, policies and organizational culture, level of organizational learning, teachers’ academic freedom, time, organizational culture of teaching work overload, question of property, required resources, professional growth and management reward and encouragement system and recognition of accomplishment motivates learners to use blended learning [35].

### 2.2.7. Communication

According to King and Arnold [32], good communication is a vital component for the successful implementation of blended learning. The way lecturers set up courses in blended learning helps students to build communities both online and in class. Garrison and Vaughan [39] further observed that these communities are important in blended courses because students rarely meet face-to-face every week as they behave in traditional courses. King and Arnold [32] further identified two types of communication that worked for the courses in blended learning, that is, communication between the lecturer and the students and discussion boards for the students. Since students meet in class half of the time, a good system for communicating must be set up in the LMS [32].

### 2.2.8. Didactics

Didactics refer to all kinds of teaching, studying and learning processes [40]. Mozelius and Hettiarachchi [24] point out that one of the most often mentioned reasons for implementing blended learning is the possibility of more effective pedagogical practices. They recommended that the

online component of blended learning should rather focus on didactics in a mix of ideas from social-constructivist and cognitive-behaviorist pedagogical models. Furthermore, students need to feel confident that teachers' feedback to concerns, assessment outcomes and guidance should be timely and responsive [32].

### 2.2.9. Course Outcomes

To achieve maximum outcomes of blended learning, the approach should generally concentrate on learning results [41,42] and blended learning design should start by identifying key learning outcomes [39,42]. Parker, Maor and Herrington [43], Garner and Rouse [29] suggested that active engagement, collaboration, and social presence between learners and lecturers be encouraged for successful learning outcomes to be attained. In addition to that, instructor expertise, students' perceived task value and achievement goals are the most significant elements to achieve learner satisfaction [44]. Furthermore, the student view on collaborative learning in a blended environment has strong relationships with student satisfaction [30].

### 2.2.10. Policy

Successful adoption of blended learning requires a policy. This will help the institution to gain from blended learning investment and in guiding the essential changes in an institution as well as individual staff practices [21]. In addition to that, the policy will help in the enforcement of all lecturers to consider rationing portion of their teaching and learning both face-to-face and online.

For the easy implementation of blended learning, other key factors to consider include the cost-effectiveness to higher education and companies that design blended learning platforms [26,45], accessibility and flexibility of blended learning platforms, technical ability and training [4,22].

## 2.3. *The SWOT Analysis of Blended Learning*

SWOT stands for Strengths, Weaknesses, Opportunities, and Threats. "SWOT Analysis is a simple but powerful tool for sizing up an organization's resource capability and deficiencies, its market opportunities, and the external threats to its future" [46] (p. 97). According to Dyson [47], once internal factors (strengths and weaknesses) and external factors (opportunities and threats) are recognized, strategies can be developed to improve on the strengths, eradicate the weaknesses, take advantage of the opportunities and control the threats. SWOT is an important tool for examining the perceptions of students and lecturers towards blended learning. The results of SWOT analysis will help the university to attain its objectives and identify the hindrances that must be minimized to achieve the desired outcomes of blended learning.

### 2.3.1. Strengths

#### Offers Flexibility and Efficiency

The offline and online options available for the LMS allows learners to access learning resources with limited internet connectivity. Azizan [6] opined that such systems promote flexibility and efficiency in determining where the learners access various learning resources from the internet and intranet. Such learning content according to [6] includes videos, e-library (e-books, e-journals and databases) and lecture notes. These flexibilities of the system open doors for instructors to increase their capacity of learning and learners to minimize costs. Winterstein et al. [7], Ho et.al. [8], Vaughan [48] also observed that blended learning increases the flexibility of learning time and place. It permits flexibility and self-regulation learning among learners and instructors [4,9].

#### Enhanced Social Interaction, Communication, and Collaboration

Blended learning can connect people, activities and events through the use of technology and the collaboration between learners and instructors, and learners with fellow learners may form virtual

communities and conducive learning atmosphere where they can exchange and value knowledge, thoughts, experience and other learning products [6]. In reinforcement of this argument, Reference [4] asserted that blended learning leads to the establishment of a community of practice. Likewise, Bernard et al. [10] added that blended learning facilitates student interaction (i.e., with other students, content, and teachers). Rossett and Frazee [5] also stated that blended learning can create dialogue outside of the classroom among students and teachers with the help of tools such as discussions, chats and forums. This made the classroom interactions more productive through pre-work.

#### Cost-Effectiveness

Since blended learning combines both online and offline teaching and learning, it has the potential to balance out and lessen the price and time of program growth and deployment [11]. This is in line with the work of Reference [6] who observed that blended learning combines different delivery modes that balance out and improve the development and implementation costs and time. Although Reference [11] observed that an online, web-based training content may be excessively expensive to produce but combining with face-to-face sessions may make learning effective for remote learners and lecturers.

#### Enhancing Learning

According to Snipes [13], blended learning is important in improving the retention of concepts learned and performance of learning tasks. Winterstein et al. [7] noted that e-learning as an element of blended learning can complement traditional lectures, by improving the learning experience of both teachers and students. It assists learners to fit different learning styles and foster self-management of studies [4,8,48]. Research has found out that blended learning, when implemented well, can contribute to higher grades among learners as compared to traditional classroom setting [14]. With online quizzes, students can distinguish those fields that require to be reviewed and can conveniently access their scores in the online Gradebook [15].

Ho et.al. [8] mentioned that courses conducted via blended learning seem to have lower dropout, reduce the duration of the actual classroom time hence reducing exhaustion, encourage students to utilize their classroom time in significant activities, classroom interactions are more productive [5,48] and provide individual learning opportunities for both learners and instructors, thus supporting more self-regulated learning [7].

#### 2.3.2. Weaknesses

##### Resource Intensive

Cucciare, Weingardt and Villafranca [12] observed that blended learning systems require more resources like trainers, hardware, software, money and time for developing the system and learning content as compared to traditional forms of teaching. Rossett and Frazee [5] further added that both software and hardware are expensive. This is in line with the findings of [49–51] who identified the challenges of having appropriate infrastructure like websites and lack of technical dedicated experts required to implement the blended learning system. Lastly, high maintenance cost is yet another concern [1].

##### Dealing with Technical Issues

Sabri et al. [18] observed some challenges to deal with computer-related and technical issues when using blended learning. Some of these issues include difficulties in uploading course materials and slow internet accessibility. Learners complained about the rampant interruption sessions during online assessments and online discussion due to these technical inconveniences [18]. This confirms what is reported in the studies of References [5,49–52] about the poor internet speed and connectivity and inadequate support services offered to blended learners.

## Digital Divide

The blended learning approach is technology dependent and thus many developing countries are still struggling to close the digital divide. As expressed by Reference [45], implementing blended learning is not easy for many nations around the world because of different social-economic situations. In the view of Reference [5], conducting online assessments is reliant on expensive technology that may be available or not to all campus students. Another deterrent to such a technology-dependent learning approach is the inconsistent power supply [49–52].

## The Loss in a Classroom Community

Graham [45] says that students in higher education should be given the prerogative to choose between face-to-face settings, online or blended learning in their class. The reasons why learners might select instructional mode is because they trust that traditional classroom setting is better at creating social interaction, support mutual teamwork, building social-emotional relations and improve learning process with their peers [53]. He further supplemented that in blended learning, learners may not merely see the isolation of lively social interaction with peers but also be incapable of connecting with their teachers.

## Support and Training for Instructors and Learners

Abdul, Othman and Warris [16] observed that instructors require training so that they can constantly alter their course content to satisfy the rapid changes in engineering and society needs. The instructors call for IT experts to offer expert support in troubleshooting any computer related troubles. Graham [45] noted that blended learning makes an extra workload for the teachers to discover how to use blended learning technologies. Kajumbula and Tibaingana [49], Aguti [50], Bbuye [51] observed that learners should be provided with computer-related and technological skills to succeed in a blended learning setting because some students from different social, economic backgrounds might be facing difficulties in accessing or adapting into the online learning component in blended learning due to lack of IT skills and knowledge [52,53].

Other challenges that affect the effective delivery of blended learning include finding the right blend, poor system management, fear or lack of confidence in using the LMS and technology, difficulty in finding the appropriate model, measuring the impact of blended learning environment, quality assurance, stress due to limited time on certain assignments and finally, plagiarism and credibility also pose a major problem [1,5,49–52].

### 2.3.3. Opportunities

#### Extending the Reach and Mobility

With the rapid advancement of mobile and wireless technologies, teaching and learning can take place anywhere and anytime. Consequently, blended learning technologies have made learning easy and accessible and have also promoted rich and interactive learning experiences [6]. Singh [11] also found out that applying a single method of teaching and learning limits the range and number of people who can access the information. If such types of information can be posted on a blended learning system, learners can easily access them at any time and location. Rossett and Frazee [5] observed that uniform learning content can be given to on-campus students and international students who can likewise use the system to easily post assignments online. Cucciare, Weingardt, and Villafranca [12] noted that since blended learning contains different learning strategies, it bears the capability to gain large numbers of individuals quickly via the internet with information that can be of benefit to learners. The authors further added that when complementary training materials are offered, they can reach many learners.

## Technology

According to Motschnig-Pitrik and Standl [54], Liebowitz and Frank [55], the expansion of technology causes blended learning to produce a perfect learning environment for the development of educational services. They claimed that there is a radical transformation of all prospects of education as a consequence of technology dynamics.

Some of the opportunities of blended learning include the desire by universities to extend their student population, external funding in training staff on professional competencies of using e-learning and providing ICT infrastructure [25], increasing the market need for e-learning services [56].

### 2.3.4. Threats

#### Low Bandwidth and Unstable Internet

The effective deployment and implementation of blended learning requires robust network connectivity for accessing learning content and connecting to online classes. Unfortunately, many scholarly studies have found out that many developing countries have unreliable internet connectivity and low internet bandwidth [1,18,25,52,57].

#### Unreliable Power Supply

Various research findings have identified inconsistent power supply as a major threat to technology/ICT led learning [25,49–53]. According to Ndume, Tilya, and Twaakyondo [58] who conducted a study in Tanzania, one of the developing nations in Africa, reported unstable power as a single of the greatest obstacles to e-learning and contributing to the digital divide in Tanzania and Uganda.

#### Lack of Clear Policies and Legislation Regarding Blended Learning

Implementation of blended learning requires policies to be instituted to make it legal and enforceable [59]. In this regard, Reference [21] recommended institutions aspiring to implement blended learning to produce the proper policies to sustain the learning approach. The policy, according to the authors, will lay out clear goals, execution plans and identify risk mitigation programs. Unfortunately, Reference [59] pointed out the lack of policies and legislation supporting e-learning and digital learning in many developing countries. Demiray [59] added that there is a need for a clear stipulation in government policies and legislation regarding e-learning programs, lack of quality and standard e-learning plans.

Rossett and Frazee [5] summarized other threats to blended learning as internet shorthand used in student assignments, dependency on computers for spellings which probably deteriorate students' knowledge of the English language, chat sessions while conducting online classes or assessments proved to be a distraction, exchange of student ID and passwords to complete assignments for others and increasing global and national competition to recruit students to study in fully blended learning formats, particularly at the undergraduate level.

## 3. Materials and Methods

### 3.1. Study Design

The study aimed at analyzing the strengths, weaknesses, opportunities and threats of blended learning in MU as one of the public universities in Uganda. A survey study was conducted where scenario-based questions were drafted and presented in questionnaires. A questionnaire was designed and pre-tested with a few respondents to test the robustness. The outcomes of the pre-test were applied to modify some questions. An evidence-based questionnaire was used in this field to obtain quantitative information to serve the research questions—(a) what are the factors influencing students and lecturers' intention to use blended learning? (b) what are the strengths, weaknesses, opportunities and threats (SWOT) of blended learning at MU as one of the public universities in Uganda? A descriptive design



was applied in the research because it examines the beliefs, positions, behaviors and habits of members of a target audience. The study was accepted by the review committee of ethics.

### 3.2. Sample Technique

The participants of the research study were the students and lecturers of MU as one of the public universities in Uganda implementing blended learning. Stratified random sampling was employed to make a more precise, accurate and better estimate of the population. The sample size for the survey was determined using the Krejcie and Morgan table and formula [60].

### 3.3. Data Collection and Analysis

A structured questionnaire was organized into four (4) parts—the social demographic characteristic of respondents, such as the respondent's gender, faculty, department and blended learning experience. These characteristics served as moderating variables. The second part covered the skills in using blended learning; the third part was a five-point Likert scale about factors influencing students and lecturers' intention to use blended learning and finally, the fourth part covered, the strengths, weaknesses, opportunities and threats (SWOT) analysis of blended learning. Both open and closed-ended questions were utilized for the survey. The data were analyzed using SPSS version 25. For a five-point Likert scale data, results for the mean (M) above 3 were deemed significant.

## 4. Results

The empirical findings of this study are structured into four sections to provide answers to the research questions as analyzed below:

### 4.1. Social Demography Characteristic

In a population of five-hundred fifty ( $N = 550$ ) that is, 500 students and 50 lecturers, stratified random sampling was employed and a sample of 261, that is, 217 students and 44 lecturers were selected from each stratum using the Krejcie and Morgan table and formula. Questionnaires were designed and administered to each group. A total of 214 (82.0%) fully completed questionnaires were returned, of which 189 (87.1%) were filled by students and 25 (56.8%) by lecturers respectively. This gave a response rate of 82.0%.

Seventy-two point five percent of the respondents were male and 27.5% were female in case of the students; 80.0% and 20.0% were male and female in case of the lecturers as shown in Figure 1a; 74.1% of the students belong to the faculty of technoscience and 25.9% to faculty of science, while 68.0% and 32.0% of lecturers belong to faculty of technoscience and faculty of science as shown in Figure 1b. Forty-six percent of students belong to the department of computer and information science, 25.9% in education and 28.0% in nursing and midwifery, while 40.0%, 36.0%, 24.0% of the lecturers belong to the departments of computer and information science, education and nursing and midwifery respectively as shown in Figure 1c. The participants' blended learning experiences were analyzed. The aim was to ascertain whether the blended learning experience influences students and lecturers' intention to use the technology. Pertaining to the students blended learning experience, 33.3% reported that they have used a blended learning system for a period of less than 1 year, 40.2% between 1–2 years, 26.5% between 2–3 years and no student had used the blended learning for more than 3 years. In case of lecturers, 52.0% used less than 1 year, 12.0% between 1–2 years, 12.0% between 2–3 years and 24.0% for more than 3 years as indicated in Figure 1d. The findings from the analysis are summarized in Figure 1 below:



**Figure 1.** Respondents’ social demography characteristic i.e. (a) Gender d; (b) Facilities; (c) Departments; (d) Blended learning experience.

4.2. Responses of Students and Lecturers’ Regarding Skills on Using Blended Learning

Participants were asked to assess their skills in using blended learning. The results in Table 1 above show that 48.1% of the students need blended learning training skills, 86.2% can do self-enrollments, 80.4% can access course materials, 81.5% can submit assignments, tests and quizzes, 67.7% can participate in online discussions and 66.1% can send course feedback messages to the lecturers. Fifty-two percent of lecturers need blended learning training skills, 84.0% can enroll students, 92.0% can upload course materials, 88.0% can set and mark online assignments, tests and quizzes, 88.0% can participate in an online discussion with students and 72.0% can send a course feedback message to students. Thus, the university needs to train both students and lecturers on blended learning so that they can fully take part in the scheme.

**Table 1.** Respondents’ blended learning skills.

S/N	Skills of Blended Learning	Students		Lecturers	
		Yes	No	Yes	No
1	Need training skills	48.1%	51.9%	52.0%	48.0%
2	Can do enrollment/self-enrollment	86.2%	13.8%	84.0%	16.0%
3	Can access and upload course materials	80.4%	19.6%	92.0%	8.0%
4	Can submit/set assignment, tests, and quizzes	81.5%	18.5%	88.0%	12.0%
5	Can participate in online discussions	67.7%	32.3%	88.0%	12.0%
6	Can send a course feedback message	66.1%	33.9%	72.0%	28.0%

### 4.3. Factors Influencing Students and Lecturers’ Intention to Use Blended Learning

The study sought to establish the perceptions of respondents regarding factors influencing students and lecturers’ intention to use blended learning. The percentages, mean, and standard deviations were computed to provide insight in this respect. The findings are as shown in Table 2 below.

**Table 2.** Factors influencing students and lecturers’ intention to use blended learning.

No	Factors	VL	L	A	H	VH	Mean	Std Dev
1	Accessibility within and outside the university	12.7	6.3	20.1	21.7	39.2	3.68	1.378
2	Positive attitude towards using blended learning	5.3	9.0	26.5	31.2	28.0	3.68	1.133
3	Knowledge and skills	2.1	9.5	31.7	32.8	23.8	3.67	1.011
4	Favorable learning environment	1.6	12.2	31.7	34.9	19.6	3.59	0.989
5	Perceived usefulness	5.8	12.7	24.3	39.2	18.0	3.51	1.014
6	Perceived quality content	2.6	11.1	34.9	35.4	15.9	3.51	0.976
7	Awareness and adaptation	6.3	7.9	37.0	26.5	22.2	3.50	1.114
8	Good user interface	9.5	15.9	27.5	23.8	23.3	3.35	1.262
9	Perceived ease of usage	7.9	15.9	32.3	25.4	18.5	3.31	1.176
10	Perceived resources	7.9	15.9	29.6	31.2	15.3	3.30	1.148
11	Self-management of learning	5.3	18.5	34.9	25.4	15.9	3.28	1.102
12	Previous experience	14.8	14.8	29.1	24.3	16.9	3.14	1.285

Where VL—Very Low, L—Low, A—Average, H—High, and VH—Very High.

The majority of the respondents agreed that the factors in Table 2 influence their intention to use blended learning. These factors include the accessibility of blended learning within and outside the university (M = 3.68, Std Dev = 1.133), positive attitude towards using blended learning (M = 3.68, Std Dev = 1.133), knowledge and skills (M = 3.67, Std Dev = 1.011), favorable learning environment (M = 3.59, Std Dev = 0.989), perceived usefulness (M = 3.51, Std Dev = 1.014), perceived quality content (M = 3.51, Std Dev = 0.976), awareness and adaptation (M = 3.50, Std Dev = 1.114), good user interface (M = 3.35, Std Dev = 1.262), perceived ease of use (M = 3.31, Std Dev = 1.176), perceived resources (M = 3.30, Std Dev = 1.148), self-management of learning (M = 3.28, Std Dev = 1.102), and previous experience (M = 3.14, Std Dev = 1.285).

### 4.4. SWOT Analysis of Blended Learning at Muni University

This study mainly focuses on the SWOT analysis of blended learning at MU as one of the public universities in Uganda implementing blended learning. The perceptions of the respondents regarding the strengths, weaknesses, opportunities and threats to blended learning at MU were examined. Percentages, mean and standard deviation values were calculated to assist the researchers in concluding in this respect. The findings from the analysis are as indicated in Tables.

#### 4.4.1. Strengths of Blended Learning

As indicated in Table 3, respondents agreed that, serving many students in a short time (M = 4.36, Std Dev = 0.757), university readiness to support and invest in blended learning project (M = 3.92, Std Dev = 1.093), connected both in and out of class (M = 3.87, Std Dev = 1.127), basic IT skills (M = 3.86, Std Dev = 0.943), top management commitment to implementing blended learning (M = 3.77, Std Dev = 1.211), instant results and feedback (M = 3.65, Std Dev = 1.139), meaningful use of study material (M = 3.65, Std Dev = 0.965) and independent learning (M = 3.59, Std Dev = 1.100) are the strengths of blended learning.

**Table 3.** Strengths of blended learning.

No	Strengths	SD	D	N	A	SA	Mean	Std Dev
1	Serving many students in a short time	0.0	4.0	4.0	44.0	48.0	4.36	0.757
2	University readiness to support and invest in blended learning project	4.2	4.8	24.3	28.6	38.1	3.92	1.093
3	Connected both in and out of class	5.8	6.9	14.8	39.2	33.3	3.87	1.127
4	Basic IT skills	1.6	7.4	20.6	44.4	25.9	3.86	0.943
5	Top management commitment to implementing blended learning	7.4	9.5	14.3	36.5	32.3	3.77	1.211
6	Instant results and feedback	5.8	11.6	20.6	36.5	25.4	3.65	1.139
7	Meaningful use of study material	3.7	7.4	25.9	46.6	16.4	3.65	0.965
8	Independent learning	4.8	12.2	23.8	37.6	21.7	3.59	1.100

SD—Strongly Disagree, D—Disagree, U—Uncertain, A—Agree, and SA—Strongly Agree.

#### 4.4.2. Weaknesses of Blended Learning

With Table 4, respondents agreed that low bandwidth and unstable internet (M = 4.33, Std Dev = 1.180), lack of plagiarism tools to monitor the quality of student assignments (M = 4.27, Std Dev = 1.147), insufficient numbers of computers (M = 4.08, Std Dev = 1.164), dependent on internet connectivity (M = 3.89, Std Dev = 1.400), lack of commitment among staff and students to use blended learning (M = 3.76, Std Dev = 1.301), limited competencies of staff on using blended learning (M = 3.61, Std Dev = 1.277), stressful when time-limited assignments are given (M = 3.49, Std Dev = 1.236), resistance of some students and lecturers to adopt change and new technology (M = 3.48, Std Dev = 1.270), lack of awareness to implement blended learning (M = 3.47, Std Dev = 1.210), absence of an up-to-date blended learning platform (M = 3.40, Std Dev = 1.340) and absence of university policy on blended learning (M = 3.24, Std Dev = 1.199) are the weaknesses of blended learning.

**Table 4.** Weaknesses of blended learning.

No	Weaknesses	SD	D	N	A	SA	Mean	Std Dev
1	Low bandwidth and unstable internet	5.8	5.8	5.8	14.8	67.7	4.33	1.180
2	Lack of plagiarism tools to monitor the quality of student assignments	6.3	3.2	7.9	22.2	60.3	4.27	1.147
3	Insufficient numbers of computers	5.8	5.8	11.1	28.6	48.7	4.08	1.164
4	Dependent on internet connectivity	11.6	7.9	10.1	20.6	49.7	3.89	1.400
5	Lack of commitment among staff and students to use blended learning	7.4	13.8	13.2	26.5	39.2	3.76	1.301
6	Limited competencies of staff on using blended learning	8.5	12.7	19.0	28.6	31.2	3.61	1.277
7	Stressful when time-limited assignments are given	9.0	14.3	18.0	36.5	22.2	3.49	1.236
8	The resistance of some students and lecturers' to adopt change and new technology	10.6	11.1	22.8	30.7	24.9	3.48	1.270
9	Lack of awareness to implement blended learning	6.9	15.9	24.3	29.1	23.8	3.47	1.210
10	Absence of an up-to-date blended learning platform	10.1	19.6	18.0	24.9	27.5	3.40	1.340
11	Absence of university policy on blended learning	9.5	18.5	25.9	30.7	15.3	3.24	1.199

SD—Strongly Disagree, D—Disagree, U—Uncertain, A—Agree, and SA—Strongly Agree.

#### 4.4.3. Opportunities for Blended Learning

Furthermore, in Table 5, the respondents agreed that competency-based systems that make it easier to manage individual progress (M = 4.02, Std Dev = 0.994), in line with university expansion plans and the growing trend towards blended learning adoption (M = 3.94, Std Dev = 0.971), the accessible way of learning regardless of location (M = 3.92, Std Dev = 1.093), available external support of blended learning specialists (M = 3.91, Std Dev = 1.056), and management support (M = 3.89, Std Dev = 1.026) are the opportunities for blended learning.

**Table 5.** Opportunities for blended learning.

No	Opportunities	SD	D	N	A	SA	Mean	Std Dev
1	Competency-based systems that make it easier to manage individual progress	3.2	6.9	8.5	47.6	33.9	4.02	0.994
2	In line with university expansion plans and the growing trend towards blended learning adoption	3.2	3.2	21.7	40.7	31.2	3.94	0.971
3	The accessible way of learning regardless of location	5.3	4.8	18.0	37.0	34.9	3.92	1.093
4	Available external support of blended learning specialists	3.7	7.4	15.9	40.2	32.8	3.91	1.056
5	Management support	4.2	6.3	13.8	47.1	28.6	3.89	1.026

SD—Strongly Disagree, D—Disagree, U—Uncertain, A—Agree, and SA—Strongly Agree.

#### 4.4.4. Threats to Blended Learning

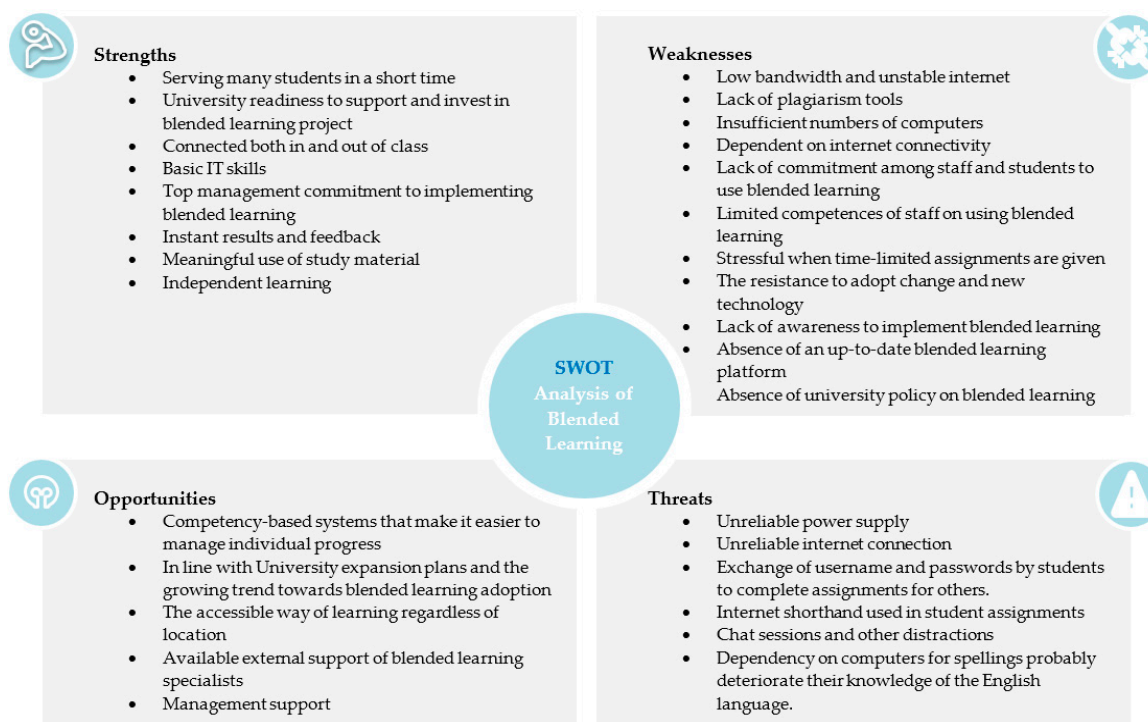
Finally, in Table 6, the researchers sought to establish respondents’ views on the threats to blended learning. They identified the following as threats to blended learning—unreliable power supply (M = 4.47, Std Dev = 1.003), unreliable internet connection (M = 4.36, Std Dev = 1.025), exchange of username and passwords by students to complete assignments for others (M = 3.99, Std Dev = 1.151), internet shorthand used in student assignments (M = 3.85, Std Dev = 1.185), chat sessions and other distractions (M = 3.79, Std Dev = 1.205), and dependency on computers for spellings probably deteriorate student and lecturers’ knowledge of English language (M = 3.78, Std Dev = 1.209).

**Table 6.** Threats to blended learning.

No	Threats	SD	D	N	A	SA	Mean	Std Dev
1	Unreliable power supply	3.7	2.1	9.0	13.8	71.4	4.47	1.003
2	Unreliable internet connection	3.2	4.2	9.0	20.6	63.0	4.36	1.025
3	Exchange of username and passwords by students to complete assignments for others.	4.8	7.4	15.3	28.6	43.9	3.99	1.151
4	Internet shorthand used in student assignments	5.8	8.5	18.0	30.2	37.6	3.85	1.185
5	Chat sessions and other distractions	4.8	12.7	18.0	27.5	37.0	3.79	1.205
6	Dependence on computers for spellings probably deteriorate their knowledge of the English language.	6.3	10.1	18.0	30.7	34.9	3.78	1.209

SD—Strongly Disagree, D—Disagree, U—Uncertain, A—Agree, and SA—Strongly Agree.

The summary of the SWOT analysis is presented in Figure 2:



**Figure 2.** Summary of the findings in the strengths, weaknesses, opportunities and threats (SWOT) analysis of blended learning at Muni University.

## 5. Discussion

The perception of students and lecturers remains very important in the adoption and implementation of a blended learning system. Therefore, the main aim of this work was to analyze the strengths, weaknesses, opportunities and threats (SWOT) of blended learning in MU one of the public universities in Uganda. The focal point of the survey was to ascertain how MU students and lecturers use blended learning platform and if the recommendation can improve the technology. Before analyzing the SWOT, there is a need to ascertain the factors that motivate participants to use blended learning.

The finding from research Question 1, Table 2, shows that accessibility of blended learning within and outside the university makes it the best choice for both students and lecturers to use. This outcome is consistent with the study conducted by References [4,22] who noted that easy accessibility of blended learning makes teaching and learning easy; a positive attitude towards using blended learning make students and lecturers use the system. This is in line with the submissions of References [35,37,38] who also found that teachers' attitudes and values are a significant motivating factor in producing and implementing e-learning competence; knowledge and skills in blended learning are one of the elements that motivate students and lecturers. This finding is in conformity with what References [25,26,35,36] found as they noted that teachers' competencies in computer literacy, working with e-learning systems, applying the instructional design example, online moderating, online mentoring and quality literacy motivates them to use blended learning; The respondents also noted that perceived resources motivate them to use the scheme. This finding is reported in other earlier studies conducted by References [21–27], who believed that for a successful implementation of blended learning, requires putting in place key resources such as the required technology infrastructure (hardware and software) and human resources (academic staff) who possess the necessary qualifications, skills and experience, as well as continuous training. Other factors include learning environment, perceived ease of use, perceived usefulness, good user interface, awareness and adaptation, self-management of learning and perceived quality content.

The study identified the strengths, weaknesses, opportunities and threats of blended learning at MU.

Respondents identified the following as the strengths of blended learning:

- Blended learning can serve many students in a short time, thus saving students time and enhancing teaching and learning interaction between readers and students. This is in line with the work of References [6,10] who state that blended learning can connect people, actions and outcomes through technology and the interaction between learners and instructor, as well as learners with fellow scholars, may build online communities and learning exercises where they can exchange and value knowledge, thoughts, experience and other learning products. It is as well affirmed by Reference [5] where it was noted that blended learning can create dialogue outside of the classroom among students and teachers with the help of tools such as discussions, chats, and forums. This made the classroom interactions more productive through pre-work;
- There is flexibility in the scheduling of classes. This result is logical with the work conducted by Reference [6] where it was likewise noted that blended learning combines offline and online learning;
- With online teaching, the internet provides flexibility and efficiency in instruction and learning activities which can be conducted via videos or teleconference. It is as well confirmed by other researchers such as [4,7–9,48] where it was identified that blended learning increases the flexibility of learning time and place and permits flexibility and self-regulation learning among learners and teachers;
- Instant results and feedback, meaningful use of subject material and independent learning are some of the benefits of blended learning. These findings are similar to the studies of [4,7,8,20,48] where it was found out that blended learning provides individualized learning opportunities for both scholars and lecturers thus supporting more self-determined learning.

Regarding the weaknesses of blended learning, respondents stated that:

- ⇒ It is dependent on internet connectivity which makes it difficult to be accessed by other students and lecturers. This reaffirms the findings of earlier studies by References [18,52] who observed that slow internet accessibility makes it hard to upload course materials. It is further supported by References [5,20,49–52] who observed that poor internet speed and connectivity is a heavy challenge in blended learning implementation;
- ⇒ Lack of plagiarism tools to monitor the character of student assignments. This result is logical with the work conducted by Reference [1] in which the researcher identified that plagiarism and credibility pose a major problem to blended learning;
- ⇒ There is a high risk of reduced face-to-face social interactions with blended learning mode. This outcome is consistent with the study conducted by Reference [53] where it was noted that in blended learning, learners may not only experience the isolation of lively social interaction with peers but also incapable to connect with their instructors;
- ⇒ The insufficient number of computers per student is also another challenge. This finding is reported in other earlier studies conducted by References [5] that added that the process of conducting online tests is entirely dependent on expensive technology that may or may not be available to all off-campus students.
- ⇒ Very limited staff capacity to implement blended learning. This finding is described in other earlier studies conducted by References [49–51]. It is also consistent with References [52,53] who argued that learners should be provided with computer-related and technological skills to succeed in a blended learning setting because some students from different social, economic background might be facing difficulties in accessing or adapting to the online learning component in blended learning due to lack of IT skills and knowledge;
- ⇒ Some of the weaknesses found include; dependent on internet connectivity, lack of commitment among students and readers to use blended learning, stressful when time-special assignments are granted, resistance by some students and lecturers' to adopt new technology, lack of awareness to

implement blended learning, absence of an up-to-date blended learning platform, and absence of university policy on blended learning.

The opportunities for blended learning include:

- ✘ It is in line with university expansion plans and the growing trend towards blended learning adoption. This outcome is consistent with the study conducted by Reference [25] in which they observed that the development of e-learning is in line with the university's expansion strategies so that it can reach more students;
- ✘ Availability of external support of blended learning specialists. This finding is also reported in another earlier study conducted by Reference [25] where they opined that external support will help the institution in training staff on professional competencies of using e-learning which is a great opportunity;
- ✘ Respondents also identified the accessible means of learning regardless of location as an opportunity. This result is logical with the work conducted by Reference [11] where they found that using a single method of teaching and learning limits the range and number of people who can access the information. If such kind of information can be posted on a blended learning system, learners can easily access them at any time and location. It is as well affirmed by References [5,20] where it was observed that uniform content can be presented to students and international students are appreciative of online assignments. Cucciare, Weingardt, and Villafranca [12] added that when complementary training contents are provided on blended learning, they can reach many learners;
- ✘ Finally, the respondents also identified management support—competency-based systems that make it easier to manage individual progress as some of the opportunities for blended learning.

Threats to blended learning identified by respondents include:

- An unreliable power supply is a major threat to the implementation of blended learning. This reconfirmed the findings of earlier studies by Reference [25,49–53] where they identified a concern of inconsistent power supply, which makes it hard to rely on online components of blended learning. It is as well affirmed by Reference [58] where they noted that lack of power played a heavy role in the digital divide in Tanzania and Uganda thus hindering the implementation of e-learning;
- Unreliable internet connection is also a threat. This result is logical with the work conducted by Reference [25] in which they found that, for successful implementation of blended learning, there should be stable internet connectivity but in many developing and least developing countries, the internet is unreliable and the bandwidth is low. It is as well affirmed by References [1,18,52,57] who identified poor internet speed and connectivity as a threat to blended learning.
- Chat sessions while multitasking online proved to be a distraction. This reconfirms the findings of Reference [5] who took note that chat sessions while multitasking online is a distraction to students.
- Exchange of student username and passwords to complete assignments for others. This outcome is consistent with the study conducted by Reference [5] where they found that exchange of student ID and passwords to complete assignments for others is common with blended learning platforms if not properly monitored.
- Dependence on computers for spellings deteriorate students and lecturers' English language knowledge. This is supported by Reference [5] who observed students who depend on computers for spelling checking have their English knowledge deteriorated.
- Respondents also identified internet shorthand used in student assignments and lack of intrinsic motivation of students as some of the threats to blended learning. This is in line with the work of Reference [5] who urged that internet shorthand like acronyms, emoticons and playful spelling is used by a student in assignments, online essay exams and quizzes.



## 6. Limitations of the Study

The study was limited to only MU as one of the public universities in Uganda that implement blended learning. It only involved a total of 25 lecturers and 189 students. The survey data are mainly used for descriptive analysis regarding the current factors influencing students and lecturers intention to use blended learning and the SWOT analysis of blended learning. The study did not investigate the views of other stakeholders, such as university IT officers, university leaders and administrative staff. The participation in the filling in of the questionnaire was mainly voluntary, which might influence the representativeness of the sample participants. For example, it might be that the lecturers who were more interested in learning about blended learning filled the questionnaire, while those who were not interested did not. Therefore, the findings from this study may not fully represent the opinions of all students and lecturers of MU and other public universities in Uganda.

## 7. Conclusions

Blended learning has been enforced in many public universities of Uganda including Muni University but no research has been carried out to analyze its strengths, weaknesses, opportunities and threats. This paper provides a baseline study to help government and public universities that would like to implement or newly incorporate blended learning to identify strengths, weaknesses, opportunities and threats associated with the blended learning approach. This work, therefore, recommends that for a successful implementation of blended learning, the university should be able to add Turnitin plagiarism plugins for Moodle and the BigBlue Button on the Moodle for video conferencing. Steady power supply should be provided and the university should also improve on their internet connectivity and accessibility so that both students and lecturers can easily access the system. The university should provide blended learning training for both students and lecturers. Finally, both the government and university should come up with policies, rules and standards for blended learning.

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## References

1. Oweis, T.I. Effects of Using a Blended Learning Method on Students' Achievement and Motivation to Learn English in Jordan: A Pilot Case Study. *Educ. Res. Int.* **2018**, *2018*, 7425924. [[CrossRef](#)]
2. Bauk, S.; Šćepanović, S.; Kopp, M. Estimating Students' Satisfaction with Web-Based Learning System in Blended Learning Environment. *Educ. Res. Int.* **2014**, *2014*, 731720. [[CrossRef](#)]
3. Available online: <https://www.amanet.org/training/articles/blended-learning-opportunities-45.aspx> (accessed on 20 February 2019).
4. Ricky, N.Y.-K.; Rechell, L.Y.-S.; Kwan-Keung, N.; Ivan, L.K.-W. A Study of Vocational and Professional Education and Training (VPET) Students and Teachers' Preferred Support for Technology-Based Blended Learning. In Proceedings of the 2017 International Symposium on Educational Technology, Hong Kong, China, 27–29 June 2017; pp. 268–271.
5. Rossett, A.; Frazee, R.V. *Blended Learning Opportunities*; White Paper; American Management Association: New York, NY, USA, 2006; Available online: <http://www.amanet.org/blended/insights.htm> (accessed on 2 March 2019).
6. Azizan, F.Z. Blended Learning in Higher Education Institution in Malaysia. In Proceedings of the Regional Conference on Knowledge Integration in ICT 2010, Kolej Universiti Islam Antarabangsa Selangor (KUIS), Putrajaya, Malaysia, 1–2 June 2010; 2010; pp. 454–466.

7. Winterstein, T.; Greiner, F.; Schlaak, H.F.; Pullich, L. A Blended-Learning Concept for Basic Lectures in Electrical Engineering. In Proceedings of the 2012 International Conference on Education and e-Learning Innovations, Sousse, Tunisia, 1–3 July 2012; IEEE: Piscataway, NJ, USA, 2012; pp. 1–4.
8. Ho, A.; Lilly, L.; Kurt, T. Testing the professor's hypothesis: Evaluating a blended-learning approach to distance education. *J. Public Aff. Educ.* **2006**, *12*, 81–102. [[CrossRef](#)]
9. Tshabalala, M.; Ndeya-Ndereya, C.; van der Merwe, T. Implementing Blended Learning at a Developing University: Obstacles in the way. *Electron. J. E-Learn.* **2014**, *12*, 101–110.
10. Bernard, M.B.; Borokhovski, E.; Schmid, R.F.; Tamim, R.M.; Abrami, P.C. A meta-analysis of blended learning and technology use in higher education: From the general to the applied. *J. Comput. High. Educ.* **2014**, *26*, 87–122. [[CrossRef](#)]
11. Singh, H. Building effective blended learning programs. *Educ. Technol.* **2003**, *46*, 51–54.
12. Cucciare, M.A.; Weingardt, K.R.; Villafranca, S. Using blended learning to implement evidence-based psychotherapies. *Clin. Psychol. Sci. Pract.* **2008**, *15*, 299–307. [[CrossRef](#)]
13. Snipes, J. Blended Learning: Reinforcing Results. 2005. Available online: <http://www.clomedia.com/talent.php?pt=search> (accessed on 15 January 2019).
14. González-Gómez, D.; Jeong, J.S.; Rodríguez, D.A.; Cañada-Cañada, F. Performance and Perception in the Flipped Learning Model: An Initial Approach to Evaluate the Effectiveness of a New Teaching Methodology in a General Science Classroom. *J. Sci. Educ. Technol.* **2016**, *25*, 450–459. [[CrossRef](#)]
15. Geoffrey, N.M. Challenges of Implementing Quality Assurance Systems in Blended Learning in Uganda: The Need for an Assessment Framework. *HURIA J.* **2014**, *18*, 87–99.
16. Abdul, W.N.; Othman, J.; Warris, S.N. Blended Learning in Higher Education: An Overview. *E-Acad. J. UiTMT* **2016**, *5*, 115–122.
17. Owston, R.; York, D.; Murtha, S. Student perceptions and achievement in a university blended learning strategic initiative. *J. Internet High. Educ.* **2013**, *18*, 38–46. [[CrossRef](#)]
18. Sabri, N.M.; Isa, N.; Daud, N.M.N.; Aziz, A.A. Lecturers' Experiences in Implementing Blended Learning Using i-Learn. In Proceedings of the International Conference on Science and Social Research, Kuala Lumpur, Malaysia, 5–7 December 2010; pp. 580–585.
19. Muni University. Mission. Vision and Muni Core Values. 2015. Available online: <https://muni.ac.ug/about-muni/mission-vision-core-values.html> (accessed on 13 February 2019).
20. Hande, S. Strengths Weaknesses Opportunities and Threats of Blended Learning: Students' Perceptions. *Ann. Med. Health Sci. Res.* **2014**, *4*, 336–339. [[CrossRef](#)] [[PubMed](#)]
21. Basheka, B.; Lubega, T.; Baguma, R. Blended learning approaches and the teaching of monitoring and evaluation programmes in African universities: Unmasking the UTAMU approach. *Afr. J. Public Aff.* **2016**, *9*, 71–88.
22. Ying, A.N.L.; Yang, I. Academics and learners' perceptions on blended learning as a strategic initiative to improve the student learning experience. *MATEC Web Conf.* **2017**, *87*, 4005. [[CrossRef](#)]
23. Chen, W.S.; Yao, A.Y.T. An Empirical Evaluation of Critical Factors Influencing Learner Satisfaction in Blended Learning: A Pilot Study. *Univers. J. Educ. Res.* **2016**, *4*, 1667–1671. [[CrossRef](#)]
24. Mozelius, P.; Hettiarachchi, E. Critical Factors for Implementing Blended Learning in Higher Education. *Int. J. Inf. Commun. Technol. Educ.* **2017**, *6*, 37–51. [[CrossRef](#)]
25. Chang, T.; Kintu, J.M. A SWOT analysis of the integration of e-learning at a university in Uganda and a university in Tanzania. *Technol. Pedagog. Educ.* **2015**, *24*, 1–19. [[CrossRef](#)]
26. Kim, K.J.; Bonk, C.J. The future of online teaching and learning in higher education: The survey says. *Educ. Q.* **2006**, *29*, 22–30.
27. Raphael, C.; Mtebe, J.S. Instructor support services: An inevitable critical success factor in blended learning in higher education in Tanzania. *Int. J. Educ. Dev. Using Inf. Commun. Technol.* **2016**, *12*, 123–138.
28. Heinerichs, S.; Pazzaglia, G.; Gilboy, M.B. Using Flipped Classroom Components in Blended Courses to Maximize Student Learning. *Athl. Train. Educ. J.* **2016**, *11*, 54–57. [[CrossRef](#)]
29. Garner, R.; Rouse, E. Social presence—Connecting pre-service teachers as learners using a blended learning model. *Stud. Success* **2016**, *7*, 25–36. [[CrossRef](#)]
30. So, H.J.; Brush, T.A. Student perceptions of collaborative learning, social presence, and satisfaction in a blended learning environment: Relationships and critical factors. *Comput. Educ.* **2008**, *51*, 318–336. [[CrossRef](#)]

31. Gray, J.A.; Diloreto, M. The Effects of Student Engagement, Student Satisfaction, and Perceived Learning in Online Learning Environments. *Int. J. Educ. Leadersh. Prep.* **2016**, *11*, 1-0.
32. King, S.; Arnold, K. Blended learning environments in higher education: A case study of how professors make it happen. *Mid-West. Educ. Res.* **2012**, *25*, 44–59.
33. Holenko, M.; Hoić-Božić, N. Using online discussions in a blended learning course. *Int. J. Emerg. Technol. Learn.* **2008**, *3*, 18–23.
34. Slevin, J. E-learning and the transformation of social interaction in higher education. *Learn. Media Technol.* **2008**, *33*, 115–126. [[CrossRef](#)]
35. Snježana, B. *Factors that Influence Academic Teacher's Acceptance of E-Learning Technology in Blended Learning Environment; E-Learning-Organizational Infrastructure and Tools for Specific Areas*; Guelfi, A., Ed.; InTech: London, UK, 2012; ISBN 978-953-51-0053-9.
36. Gautreau, C. Motivational Factors Affecting the Integration of a Learning Management System by Faculty, California State University Fullerton. *J. Educ. Online* **2011**, *8*, 1–25.
37. Renzi, S. Differences in University Teaching after Learning Management System Adoption: An Explanatory Model Based on Ajzen's Theory of Planned Behavior. Ph.D. Thesis, University of Western Australia, Perth, Australia, 2008.
38. Mihailova, G. E-learning as an internationalization strategy in higher education: Lecturer's and student's perspective. *Balt. J. Manag.* **2006**, *1*, 270–284. [[CrossRef](#)]
39. Garrison, D.R.; Vaughan, N.D. *Blended Learning in Higher Education: Framework, Principles, and Guidelines*; John Wiley Sons: Hoboken, NJ, USA, 2008.
40. Kansanen, P. Teaching as teaching-studying-learning interaction. *Scand. J. Educ. Res.* **1999**, *43*, 81–89. [[CrossRef](#)]
41. Alammary, A.; Sheard, J.; Carbone, A. Blended learning in higher education: Three different design approaches. *Australas. J. Educ. Technol.* **2014**, *30*, 440–454. [[CrossRef](#)]
42. Shand, K.; Glassett-Farrelly, S.; Victoria, C. Principles of course redesign: A model for blended learning. In Proceedings of the Society for Information Technology Teacher Education International Conference 2016, Savannah, GA, USA, 21 March 2016; pp. 378–389.
43. Parker, J.; Maor, D.; Herrington, J. Authentic online learning: Aligning learner needs, pedagogy, and technology. *Issues Educ. Res.* **2013**, *23*, 227–241.
44. Diep, A.-N.; Zhu, C.; Struyven, K.; Blicck, Y. Who or what contributes to student satisfaction in different blended learning modalities? *Br. J. Educ. Technol.* **2016**, *48*, 473–489. [[CrossRef](#)]
45. Graham, C.R. Blended learning systems: Definitions, current trends, and future directions. In *The Handbook of Blended Learning: Global Perspectives, Local Designs*; Bonk, C.J., Graham, C.R., Eds.; Pfeiffer: San Francisco, CA, USA, 2004; pp. 3–21.
46. Thompson, A.A.; Strickland, A.J.; Gamble, J.E. *Crafting and Executing Strategy-Concepts and Cases*, 15th ed.; McGraw Hill/Irwin: New York, NY, USA, 2006; p. 97.
47. Dyson, R.G. Strategic development and SWOT analysis at the University of Warwick. *Eur. J. Oper. Res.* **2004**, *152*, 631–640. [[CrossRef](#)]
48. Vaughan, N. Perspectives on blended learning in higher education. *Int. J. E-Learn.* **2007**, *6*, 81–94.
49. Kajumbula, R.; Tibaingana, A. *Incorporating Relationship Marketing as a Learner Support Measure in Quality Assurance Policy for Distance Learning at Makerere University*; Makerere University: Kampala, Uganda, 2009.
50. Aguti, J.N. *Distance Education in Uganda. Paper Delivered at the Workshop on the Support for Distance Education Students at Hotel Africana Kampala Uganda*, (unpublished). 2000.
51. Bbuye, J. *Distance Education in Uganda, Development, Practices, and Issues*; Makerere University: Kampala, Uganda, 2005.
52. Oroma, J.O.; Ali, G.; Mbabazi, B.P. Towards Personalized Learning Environment in Universities in Developing Countries through Blended Learning: A Case of Muni University. *Sch. World Int. Refereed J. Arts Sci. Commer.* **2018**, *6*, 78–84.
53. Okaz, A.A. Integrating Blended Learning in Higher Education. In Proceedings of the 5th World Conference on Learning, Teaching and Educational Leadership, WCLTA 2014, Prague, Czech Republic, 29–30 October 2014; pp. 600–603.
54. Motschnig-Pitrik, R.; Standl, B. Person-centered technology enhanced learning: Dimensions of added value. *Comput. Hum. Behav.* **2012**, *29*, 401–409. [[CrossRef](#)]

55. Liebowitz, J.; Frank, M. *Knowledge Management and E-Learning*; Taylor & Francis Group: London, UK, 2011.
56. Cojocariu, V.-M.; Lazar, I.; Nedeff, V.; Lazar, G. The SWOT analysis of e-learning educational services from the perspective of their beneficiaries. *Proc. Soc. Behav. Sci.* **2014**, *116*, 1999–2003. [[CrossRef](#)]
57. Mbabazi, B.P.; Ali, G. Evaluation of E-Learning Management Systems by Lecturers and Students in Ugandan Universities: A Case of Muni University. *Int. J. Innov. Res. Sci. Eng. Technol.* **2016**, *5*, 9529–9536.
58. Ndume, V.; Tilya, F.N.; Twaakyondo, H. Challenges of adaptive eLearning at higher learning institutions: A case study in Tanzania. *Int. J. Comput. ICT Res.* **2008**, *2*, 47–59.
59. Demiray, U. *E-Learning Practices, Cases on Challenges Facing E-Learning and National Development: Institutional Studies and Practices, I*; Anadolu University: Eskisehir, Turkey, 2010.
60. Krejcie, R.V.; Morgan, D.W. Determining Sample Size for Research Activities. *Educ. Psychol. Meas.* **1970**, *30*, 607–610. [[CrossRef](#)]



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