

# Effective Utilization of ICT in English Language Learning - The Case of University of Botswana Undergraduates

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**Abstract** The study investigates the effective utilization of Information and Communication Technology (ICT) by first year undergraduates of the University of Botswana (UB) in their reading and writing skills. The first year students are not first language (L1) learners of English. They have not utilized computers for learning reading and writing in their basic education and have not been exposed to such Learning Management Systems (LMS) as Blackboard and Moodle at the secondary school level. Consequently, at the university, when they are required to utilize computers in reading and writing in their core courses, this becomes a huge challenge. This paper investigates how UB first year undergraduates utilize the computer as an ICT tool in their reading and writing skills using the quantitative and qualitative research methods. A questionnaire was administered to 200 students enrolled in both ICT 121 and ENG 131 courses during the second semester of 2013/2014 academic year. In addition, interviews and classroom observations over the same period were conducted by the researchers. The constructivist theory of learning formed the theoretical framework. The findings reveal that most first year students have difficulty in downloading and uploading course materials using the LMS platforms; they are also unaware of the silent interactive communication offered by the computer as an ICT tool. The researchers recommend that first year undergraduate students should be given lots of practice on the use of the LMSs and computer skills for effective performance in their academic work.

**Keywords** Information and Communication Technology (ICT), Learning Management System (LMS), First Language (L1), Blackboard, Moodle, Reading Skills, Writing Skills

Information and Communication Technology (ICT) has become so pervasive and vital in today's world that it is impossible to envision life in the 21<sup>st</sup> century without it. To keep abreast with the rest of the world, the University of Botswana has incorporated ICT into its daily operations, in administration as well as in teaching and learning. In fact, it would be impossible for UB to realize its vision "to be a leading academic centre of excellence in Africa and the world" (UB Strategic Plan) [1] if teaching and learning are not firmly anchored on the use of technology. Mingle [2] notes that in today's world, no institution can reach its educational goals without the use of technology. According to Tinio [3], one of the most commonly cited reasons for using ICTs in the classroom has been "to better prepare the current generation of students for a workplace where ICTs, particularly computers, the internet and related technologies, are becoming more and more ubiquitous." Technological literacy, or the ability to use ICTs effectively and efficiently, is thus seen as "representing a competitive edge in an increasingly globalizing job market" (Tinio)[4]

Batane and Motshegwe [5] reveal that ICT "resources were put in place and technology use formally launched" in UB in 2001. Since then, the institution has vigorously pursued the policy of increasing the technological base in order to provide state of the art infrastructure to its clientele (UB IT Policy) [6]. UB has about 3,300 computers connected to the UB network; 1,700 of these are used by students while 1,600 are used by staff members (Batane & Motshegwe) [7]. In addition, UB has a Wide Area Network (WAN), Wi-Fi network accessibility on campus, Blackboard and Moodle Learning Management Systems (LMSs) for online courses, an Integrated Tertiary Software (ITS) for management of students' records (Batane & Motshegwe) [8]. Recently, the ITS system was replaced with ASAS (Academic Student Administration System) for more efficient management of staff and student records. In addition, all lecture rooms and theatres are equipped with computers, multimedia projectors and screens to facilitate

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## 1. Introduction

lecture presentations. Certainly, this is a huge investment in education by a university in the developing world and it would only be rational for these resources to be effectively utilized and managed by all stakeholders.

In teaching and learning, UB has adopted the blended approach to classroom instruction. Tinio [9] explains that the blended approach refers to “learning models that combine traditional classroom practice with e-learning solutions.” For example, “students in a traditional class can be assigned both print-based and online materials, have online mentoring sessions with their lecturer through chat, and are subscribed to a class email list. Also, a web-based training course can be enhanced by periodic face-to-face instruction” (Tinio) [10]. This is to ensure that the benefits of both the traditional method and the ICT mediated model are availed to students in their learning. ICT is not intended to substitute for the teacher but to be used as an enrichment of instruction. Therefore, the face-to-face approach of classroom instruction should not be dispensed with on account of technology.

### 1.1. Background of Study

Research in the use of ICT to enhance teaching and learning abound in literature. Though some scholars feel that these studies are inconclusive, nonetheless, they point to the fact that ICT in education can make both positive and negative impact on students’ learning. Tucano [11] explains that a review of the research on impacts of ICTs on student achievement yields few conclusive statements, about the use of ICTs in education. For every study that cites significant positive impact, another study finds little or no such positive impact. He further points out that many studies that find positive impacts of ICTs on student learning rely (to an often uncomfortable degree) on self-reporting (which may be open to a variety of positive biases). Tinio [12] also reveals that:

*‘The experience of introducing different ICTs in the classroom and other educational settings all over the world over the past several decades suggests that the full realization of the potential educational benefits of ICTs is not automatic. The effective integration of ICTs into the educational system is a complex, multifaceted process that involves not just technology... but also curriculum and pedagogy, institutional readiness, teacher competencies, and long-term financing, among others’ (p.2).*

It is, therefore, necessary to review both the positive and the negative impacts of ICT in learning for a holistic view and to have a balanced understanding of the phenomenon under study.

On the positive side, Hennessey et al. [13] affirm that technology is revolutionizing teaching and learning in various ways and suggest the need for teachers and students to exploit technology in order to change pedagogy. Specifically, their study indicates that when appropriately utilized, technology increased learners’ motivation, engagement and participation through providing novelty and

variety, creating interest and excitement and adding more fun in the classroom. In addition, Tinio [14] asserts that “information and communication technologies (ICTs)—which include radio and television, as well as newer digital technologies such as computers and the Internet—have been touted as potentially powerful enabling tools for educational change and reform.” When used appropriately, different ICTs are said to “help expand access to education, strengthen the relevance of education to the increasingly digital workplace, and raise educational quality by, among others, helping make teaching and learning into an engaging, active process connected to real life” (Tinio)[15]. Furthermore, Purcell et al.[16] also indicate that digital technologies in the classroom are impacting students’ writing in myriad ways and there are significant advantages from tech-based tools such as the internet, social media and cell phones. These tools encourage student creativity and personal expression; encourage greater collaboration among students; and allow them to share their work with a wider and more varied audience.

Some of the studies carried out at UB reveal that the use of technology in teaching and learning has a positive impact [17, 18, 19]. According to Batane and Mafote [20], students reported that using technology in learning greatly improved their understanding of course content; the use of WebCT and other online courses made course materials easily accessible, reduced elaborate and extensive note-taking in class and helped them participate in online discussions with their lecturers and classmates. Also, Oladiran and Uziak [21] found that technology generated interest in students’ courses, enhanced learning and understanding of course materials, provided useful feedback on assignments and improved interaction between learners and their lecturers.

However, despite the positive impact reported in these studies, the use of technology in teaching and learning has its problems and challenges. For example, technology has been said to encourage student laziness since it makes it easy for them to take short cuts and not put effort into their writing; they often ‘copy and paste’ and download material from the internet without acknowledging sources, thereby encouraging plagiarism (Purcell et al.)[22]. At the click of the mouse, technology provides students with a whole range of information; consequently, creativity, critical thinking and problem-solving abilities are stifled. From classroom observations, students of this generation are poor at analyzing and synthesizing information and in ‘thinking outside the box’. Furthermore, classroom observations reveal that the use of the LMS platforms encourage students’ absenteeism in class and reduces face-to-face interaction between lecturers and students, which is so vital in the learning process.

This study focuses on the use of ICT by first year undergraduates at UB in their reading and writing skills. In this study, ICT is defined as a “diverse set of technological tools and resources used to communicate and to create, disseminate, store and manage information. These include computers, internet, broadcasting technologies (radio and

television) and telephony” (Tinio)[23]. At UB, all first year undergraduates take an ICT course which exposes them to the use of computers in learning and to the LMS platforms- Moodle and Blackboard. In addition, the IT department organizes regular training sessions through orientation workshops and offers regular support to students throughout the academic year (Batane & Motshegwe)[24]. There are also several points at which students can access computers and internet facilities on campus. For example, every faculty has a well-equipped computer laboratory and IT personnel, the university library houses many computers with internet connectivity, there is also the IT building which has several computer laboratories for teaching, seminars, workshops and conferences. Indeed, the University of Botswana has provided ICT facilities and infrastructure for teaching and learning which are comparable to any modern learning environment in Africa and the world. In the light of the above, this study investigates how these resources are utilized by first year students especially in their reading and writing skills.

It is important to understand the background of the first year students in this study. Most of the students who come to study at UB are from a background where teaching and learning are done in the traditional mode through the use of print media tools such as books, notes, handouts; and teachers dictate or write notes on the chalkboard and students copy from it. That is to say, these students are used to the traditional teaching approaches in traditional classrooms. Though there is a small degree of use of ICT tools such as radio and tape recorders, especially at the primary school level, the use of these ICT tools mostly focuses on students’ listening and speaking skills as opposed to development and improvement of reading and writing skills.

There has since been the introduction of computer awareness at the junior secondary school level and most of the junior schools have a computer laboratory. However, the computer as an ICT tool has not yet been integrated into the school lessons nor is it part of the examinable subjects in the Junior Certificate (JC) examinations. Thus, at this level, most students have exposure to use of the computer by joining the schools’ computer clubs that are normally run as part of extra- mural activities which take place outside class time. At the senior secondary school level, Computer Studies as a subject is part of the school curriculum and it is an examinable subject which is only offered as an optional course and not as a core course. Because of the mindset of students who normally associate and categorize computing as a difficult subject (like Math and Science), most students do not opt for Computer Studies at the senior secondary school level. Consequently, when these students are admitted into UB, they face numerous challenges; first, with integrating into the university system in general, and then with the teaching and learning approaches that are different from their previous learning experiences. One of the challenges that these students face is that of reading and writing using ICT tools such as the computer and the use of LMSs such as Blackboard and Moodle that are part of ICT

tools used at UB by many lecturers in their day to day teaching.

At the university, the students realize that notes are no longer dictated or written on the board for them to copy; instead, content material is often projected on the screen and they are expected to listen, read and write at the same time. Materials are posted on the LMS platforms and they are expected to access them, submit assignments online and have interactive communication with lecturers and classmates on these platforms. Furthermore, students are required to search for journal articles, read and understand them and use the information to word process their assignments. All these processes seem overwhelmingly difficult in this new learning environment and this new experience impacts negatively on their performance, especially in reading and writing.

Reading and writing are very crucial language skills that students need in order to be successful at university. At this level, students are expected to read extensively and intensively to be able to process the huge amount of material in all their courses. Apart from reading to comprehend recommended texts, they are also expected to write assignments, reports, tests and examinations. It is therefore important for them to effectively acquire reading and writing skills to ensure success in their courses across the curriculum. Fortunately, the English Department and the Communication and Study Skills Unit offer compulsory courses for all first year students in academic reading and writing. Students are expected to integrate the knowledge and skills acquired in their ICT classes to their reading and writing tasks. It would seem that these students are well equipped with ICT as well as the language skills of reading and writing to be able to do well in their various disciplines. However, this is not often the case. Most first year students struggle with integrating ICT into their reading and writing skills.

## 1.2. Statement of Problem

Many first year undergraduates at UB seem challenged and overwhelmed with integrating ICT into their reading and writing skills. Though some of them have been exposed to computers at the junior and senior secondary school levels, and they can use computers/ smart phones to access the internet for social networking, the use of ICT in learning presents a huge challenge. The fact that they are introduced to e-learning and online courses on LMS platforms for the first time in education compounds the problem. These students are used to the traditional teaching approaches where the teacher dictates or writes notes on the board and distributes handouts; but at UB, power point presentation is used in most of the classes, course materials are posted on Moodle and Blackboard, and students are required to research online for assignments and projects. This novel experience becomes overwhelming and their performance is negatively affected. For example, students submit word processed assignments that are full of spelling and

grammatical errors showing that they are unaware of the interactive function of the computer as a learning tool. Whereas they respond to verbal interaction by the teacher in the traditional setting, they are unaware of the silent interaction offered by the computer as a learning tool; therefore, they do not self-correct or edit their work using computer applications such as the spell checker and dictionary.

### 1.3. Theoretical Framework

This investigation is grounded on the constructivist theory of learning. Constructivism views learners as active participants in the learning process, who do not just passively receive information, but make connections between what they have acquired previously and the current information [25, 26]. Constructivism states that knowledge is actively constructed by learners rather than transmitted by the teacher (Jonassen) [27]. According to Oliver [28], the strengths of constructivism lie in its emphasis on learning as a process of personal understanding and the development of meaning in ways which are active and interpretative. In this domain, learning is viewed as the construction of meaning rather than as the memorization of facts [29, 30].

Within the constructivist approach, the teacher is seen as a facilitator, a coach or a mentor in the learning process and there is a move from teacher-centred approach to student-centred learning environment. Oliver [31] points out that technology has the capacity to promote and encourage the transformation of education from a very teacher-directed enterprise to one which supports more student-centred models. The use of ICT in education encourages independent, self-directed learning where students take responsibility for their learning instead of depending on the teacher to present the content of the curriculum. ICT tools encourage collaborative learning as well. Students can work collaboratively, for instance, in problem-solving tasks, engage in chats and internet discussions on any given topic. Wang [32] asserts that “computer-supported collaborative learning has shown positive effects on students’ performance in problem-based tasks.”

## 2. Methodology

This study has employed the survey method, using the questionnaire, interview schedule and classroom observations as instruments of data collection. The three instruments were used for purposes of triangulation in order to ensure validity of the results. The questionnaire was administered to 200 first year students registered for the 2013/2014 academic year. All the students that formed the sample were registered for ICT 121 and ENG 131 courses for the second semester. The questionnaire was administered in the various ICT 121 classes with the help of some instructors who collected the filled questionnaires from the students before the end of the classes.

The Questionnaire was divided into four sections numbered A, B, C and D. Section A had four items which solicited demographic information such as gender, age, programme of study, level of certificate (See Table 1 below).

Section B of the questionnaire had eight items which solicited information on the students’ use of the computer as an ICT tool in reading and writing tasks. Section C had ten items which sought answers on the impact of ICT tools in their reading and writing assignments. Students were asked various questions on how ICT tools have helped in word processing assignments, improving their vocabulary, editing written work and accessing information from the internet. Section D consisted of three open-ended questions which sought information on how effectively students utilized ICT tools in reading and writing; and also the challenges they faced in using ICT tools in their learning at the university. This section gave students the opportunity to freely express their opinion on the effective use of the computer as an ICT tool in learning. Frequency counts and simple percentages were used in data analysis from the questionnaire survey. Results have been presented in tables and charts as shown below.

The interviews, on the other hand, were conducted by the researchers in their offices throughout the semester. Students were randomly selected from the entire population of 200 students and invited for a face-to-face interview using a structured interview guide. Each interview session lasted about 15 minutes and respondents’ answers to the questions were recorded verbatim in note books. The answers were later coded and analyzed question by question. A total of 100 students were interviewed by the researchers at various times during the semester.

The classroom observations were carried out by the two researchers in their various classes throughout the semester. Results were also recorded in note books and later used to corroborate results from the questionnaire survey and interviews.

## 3. Findings

The findings of the study are presented in accordance with the three main sections in the questionnaire; namely, students’ use of the computer as an ICT tool in their reading and writing tasks, the impact of ICT tools on their reading and writing tasks and the effective utilization of ICT tools in their learning at the university. Results of the data analysis have been presented below.

### 3.1. Data from the Questionnaire

From Table 1 below, 125 female students and 70 male students answered the questionnaire. Five students who also answered the questionnaire did not indicate their gender. This shows that there are more female first year students (62.5%) than the males (35%) in the sample. Furthermore, Table 1 shows that the students’ ages ranged between 15 and

30 and above, with the majority (45%) falling between the 15- 20 age bracket. Data also shows that the students came from a wide range of disciplines which include the physical sciences, environment science, humanities, social sciences, media studies, Fine and applied arts, etc. The students were enrolled for certificate courses (15); diploma courses (35) and degree courses (150). The degree students formed the greater percentage (75%) of the sample.

**Table 1.** summarizes students' personal data

Section A- General Information	Question 1	Question 2	Question 3	Question 4
Gender				
Female	125			
Male	70			
no gender indicated	5			
Age range				
15-20		94		
21-25		75		
26-30		16		
30-above		10		
no age indicated		5		
Program of study				
Diploma LIS			13	
BIS 220			30	
BAH Fine arts			15	
BAH 220			70	
BIS210			30	
BSc210			22	
BAP230			10	
no program indicated			10	
Level of certification				
Certificate				15
Diploma				35
Degree				150

**Table 2.** Responses for questions on the use of the computer as an ICT tool in reading, writing and the use of the LMS platforms

Items	Responses						
Question 1	SA 5	Agree 4	NS- 3	DS-2	SD-1	no response	Total
i. I always word process my writing assignments.	102	78	5	10	5	0	200
ii. I spell check my writing assignments before submitting	79	29	27	42	23	0	200
iii. I use the computer dictionary to check meaning of new/difficult words	49	33	41	28	45	4	200
iv. I use the computer thesaurus to check synonyms and antonyms.	39	31	51	28	45	6	200
v. I always search for articles in the internet using appropriate search engines.	61	34	34	36	33	2	200
vi. I can download course outlines and assignments and upload my work on Moodle/ Blackboard.	80	30	33	28	29	0	200
vii. I can engage in discussion forums on Moodle/ Blackboard.	33	31	44	45	47	0	200
viii. I use email to communicate on Moodle/ Blackboard.	37	21	46	45	48	3	200

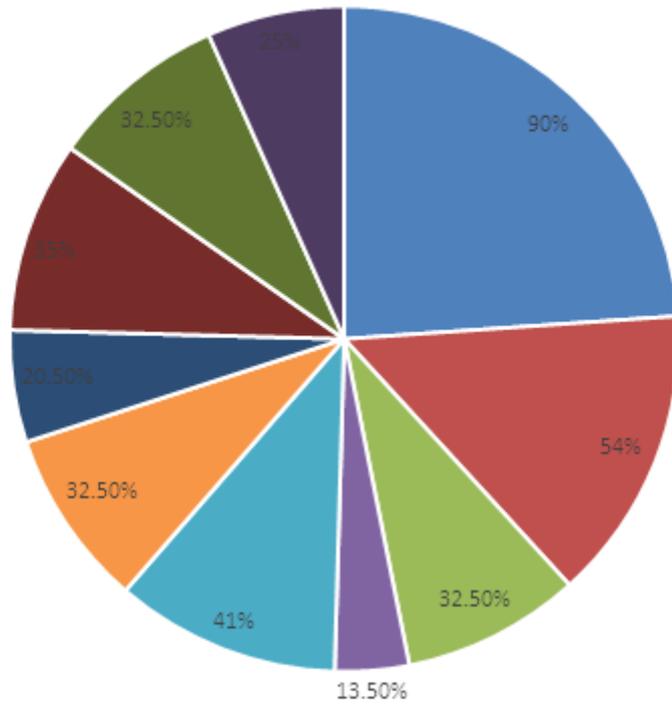
### 3.2. The Use of Computer as an ICT Tool

Table 2 summarizes responses for questions on the use of the computer as an ICT tool in reading, writing and the use of the LMS platforms. Using the Likert scale of 1- 5, students were required to respond to questions by indicating whether they strongly agreed (SA=5), Agreed (A=4), Not sure (NS=3), Disagreed (D=2) and Strongly Disagreed (SD=1).

#### 3.2.1. The use of the computer as an ICT tool in writing

How do you utilize the computer for reading and writing tasks?

- Data from Table 2 show that overwhelmingly (90%) of students always word process their assignments showing that the majority of first year students utilize the computer as an ICT tool in their writing skill.
- 54% of students indicated that they use the computer spell checker to edit their work, 32.5% do not spell check their work before submitting, while 13.5% are not sure that they do. This result tallies with classroom observation which found that many students submit work that are full of spelling and grammatical errors.
- 41% of students indicated that they use the computer dictionary to check the meaning of words when word processing, 32.5% do not utilize the computer dictionary when word processing, while 20.5% were not sure. Four students did not answer the question.
- Furthermore, 35% of students use the thesaurus to check meaning of words, antonyms and synonyms, 32.5% do not make use of the thesaurus when word processing, while 25% of students were not sure that they do. Six students did not answer the question. These results show that the majority of students are not making effective use of the computer as an ICT tool to develop and improve their vocabulary to enhance their writing.



- word process assignments
- edit with spell checker
- don't use spell check to edit
- not sure
- use the computer dictionary to check the meaning of words when word processing
- do not use the computer dictionary
- not sure
- use the thesaurus to check meaning of words, antonyms and synonyms,
- don't use of the thesaurus for word processing
- not sure

3.2.2. Use of the Computer as an ICT Tool in Reading

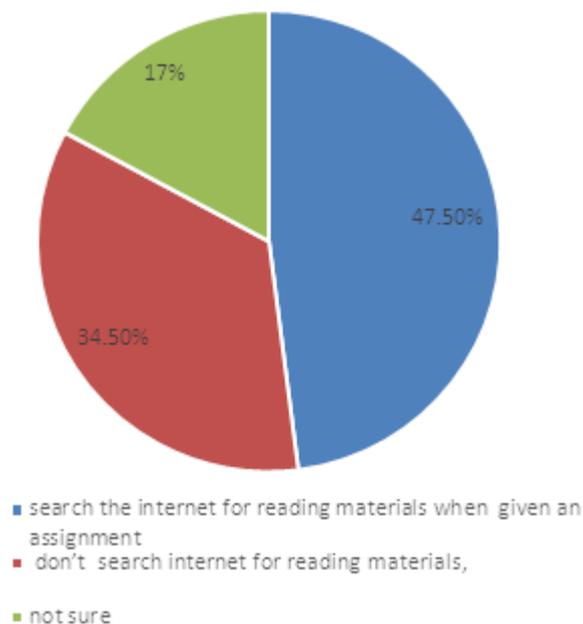


Chart 2

v) Data from Chart 2 show that 47.5% of students indicated that they search the internet for reading materials when they are given an assignment, 34.5% do not search the internet for reading materials, while 17% were not sure that they do. Two students did not answer the question. This result points to the fact that the majority of students do not utilize the internet to search for information when they are given an assignment. Probably, they rely on the print media (e.g. books, handouts and other printed materials) for information when doing their assignments.

3.2.3. Use of the LMS Platforms

vi) Data from Chart 3 show that 55% of students indicated that they can download and upload materials on Blackboard and Moodle; 28.5% revealed that they have difficulty in uploading assignments and downloading course materials using the LMS platforms, while 16.5% were not sure. The percentage of students (45%) that cannot effectively use the LMS platforms seems quite significant.

vii) Furthermore, 32% of students engage in discussion forums using the LMS platforms; 46% do not engage in discussion forums using the LMS platforms, while 22% of them were not sure that they do. This result where 68% (46% plus 22%) do not effectively engage in discussion forums with lecturers and their classmates somehow contradicts Batane and Mafote's [33] result to the effect that students participate actively in online discussions with their lecturers and classmates at UB. The majority of first year students, from this study are not actively utilizing the LMS platforms in discussion forums with lecturers and classmates.

viii) Similarly, 29% of students use email to communicate with lecturers and classmates on the LMS platforms; 41.5% do not use the email to communicate with lecturers and

classmates on the LMS platforms, while 23% of them were not sure that they do. Three students did not answer the question. These results (vii and viii) indicate that most students are not effectively utilizing available LMS communication forum tools in their academic work.

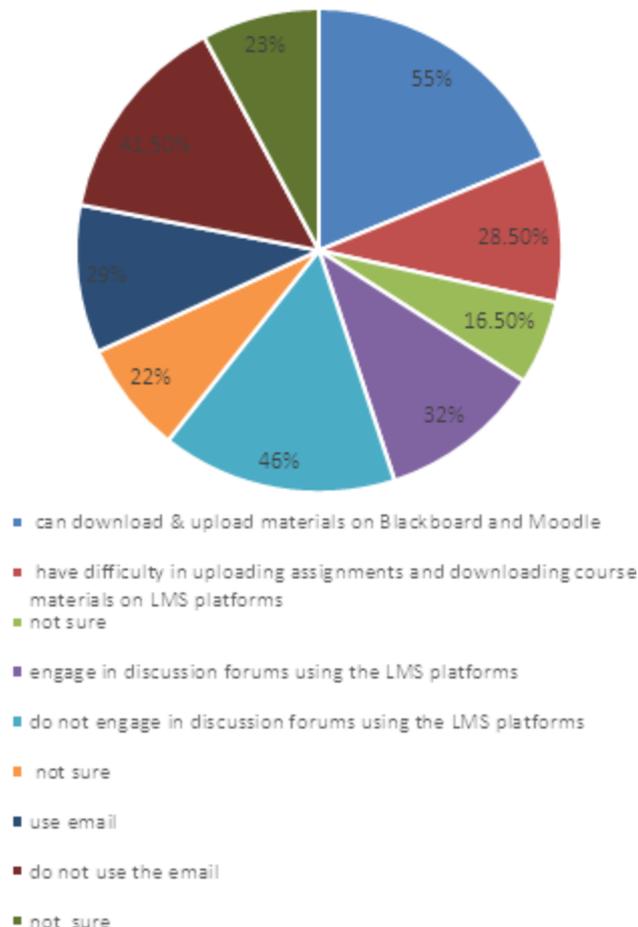


Chart 3

3.3.1. Question 2: How has the use of the computer as an ICT tool helped to develop your writing skill?

- i. Chart 4 shows that 85% of students indicated that the computer as an ICT tool helps them in word processing assignments.
- ii. 56.5% agreed that the computer helps them in checking spelling using the spell checker, while 43.5% did not agree or were not sure that the computer assists them in checking spelling of words. Obviously, these are the students who indicated that they do not use the spell checker.
- iii. Furthermore, 41% of students revealed that the computer dictionary and thesaurus help them to learn new words while 46.5% do not learn new words using the computer dictionary and thesaurus. 12.5% of students were not sure that they learn new words using the computer dictionary and thesaurus.
- iv. In getting information from the internet, 54% of students indicated that they get information from the

internet for their assignments while 31% did not agree that they get information from the internet for their assignments. 12% of students were not sure and six students did not give any response.

- v. A total of 51.5% agree that they communicate with lecturers and classmates using the email; 28.5% do not use the email for academic purposes, while 20% of students were not sure. This result does not tally with students' responses in an earlier question where only 29% agreed that they use the email to communicate with their lecturers and classmates.

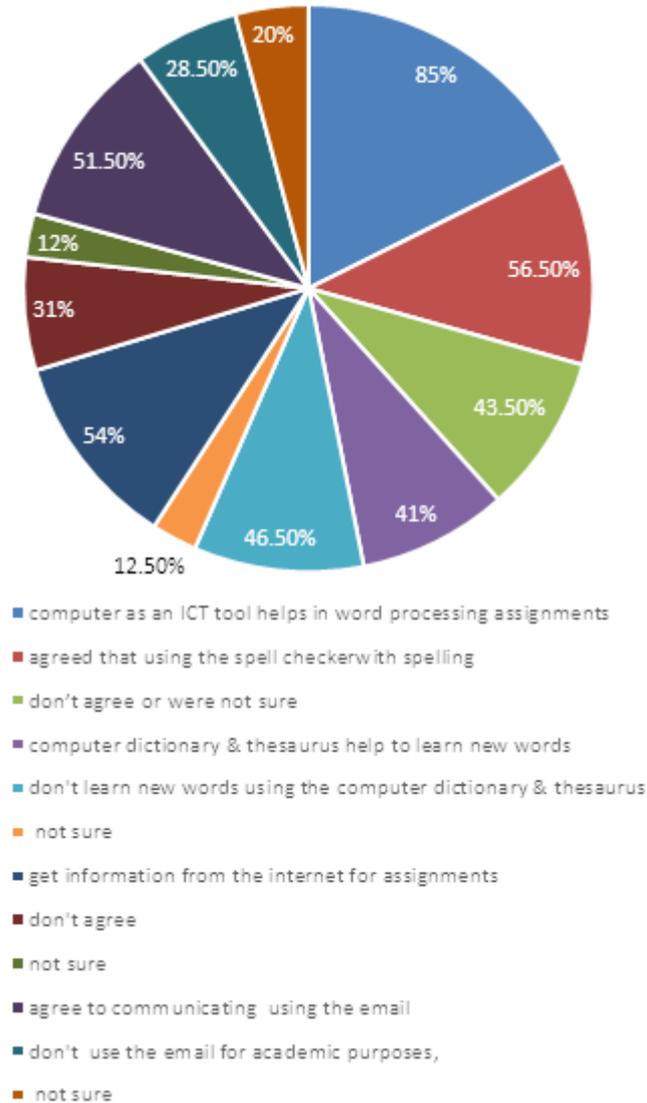


Chart 4

3.3.2. Question3- How has the use of the computer as an ICT tool helped to develop your reading skills?

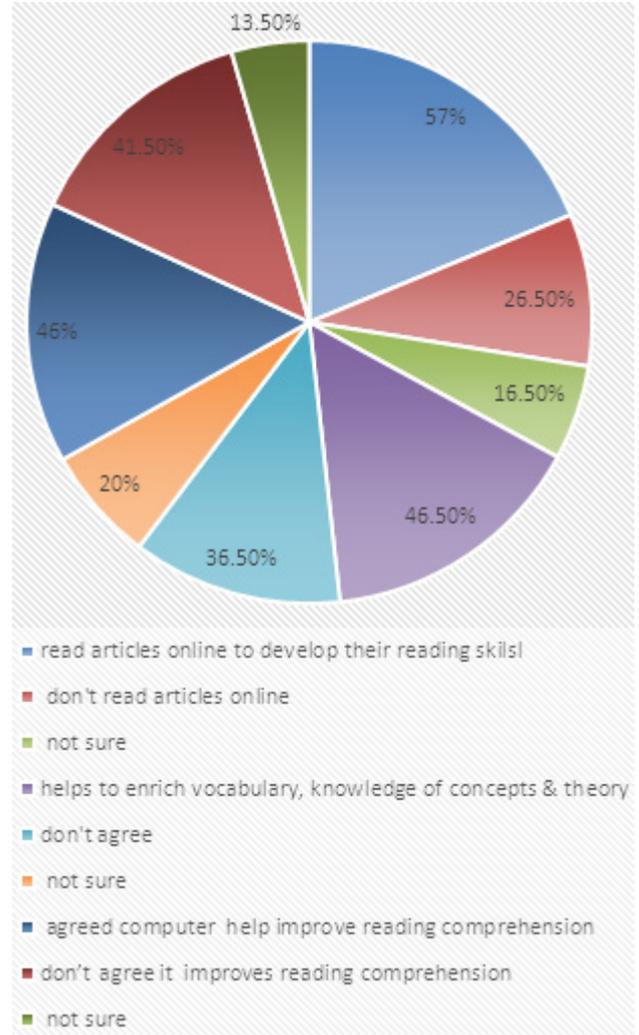


Chart 5

- i. Chart 5 shows that 57% of students indicated that they read articles online to develop their reading skill; 26.5% do not read articles online, while 16.5% of students were not sure that they do.
- ii. 46.5% of students indicated that the computer as an ICT tool helps them to enrich their vocabulary, knowledge of concepts and theory; 36.5% did not agree that the computer helps them to enrich their vocabulary, knowledge of concepts and theory in their disciplines, while 20% were not sure.
- iii. Furthermore, 45.5% of students agreed that the computer as an ICT tool helps to improve their reading comprehension; 41.5% did not think that the computer as an ICT tool improved their reading comprehension, while 13.5% of students were not sure. The results in 3.3.2 clearly indicate that many students are not utilizing the computer as an ICT tool in developing their reading skills.

### 3.4. Effective Use of the Computer as an ICT Tool

Section C consists of open-ended questions where students were required to comment freely on their opinion about the effective use of the computer as an ICT tool in reading and writing.

#### 3.4.1. Question C. 1.

In your opinion, how can the computer as an ICT tool be used effectively for reading and writing?

Many students indicated that they would need more tutorials to be able to use the computer more effectively in their reading and writing skills. They also indicated that they would want to have more assignments that demand the use of the LMS platforms so that they would be compelled to utilize them.

#### 3.4.2. Question C.2

What challenges do you encounter in using the computer as an ICT tool for reading and writing?

Many students complained about difficulty in using some of the computer application programs and limited computer skills as some of the challenges that they encounter. Others complained about limited computer access, slow internet, internet interruptions, and frequent power cuts.

#### 3.4.3. Question C.3

In your opinion, how can these challenges be overcome?

Students indicated that they would want the number of computers increased; the available computers should be regularly maintained for fast internet connectivity; they would also want the university to have a stand-by generator to complement national power supply. Most students indicated that they would want more ICT practice and assistance in areas that they are deficient. They also would like all the lecturers to encourage the use of ICT tools in all their courses.

### 3.5. Data from Interviews

From the interviews, students' responses to the following questions were analyzed as follows:

- i) When lectures are projected on the screen using power point presentation, are you able to listen, read and write at the same time?

44% revealed that they have no problems with listening, reading and writing at the same time when lecturers use power point presentation in delivering lectures but 56% indicated that they find it difficult to listen, read and write at the same time during power point presentations. They would prefer that lecturers explain the content and then give time for students to write. This limitation can be tied to the traditional pedagogical approach that these students were used to in basic education. At the university where ICT tools, such as multimedia projectors are used, the tutor, tutee and tool coexist simultaneously throughout the lesson time.

These students, therefore, find it difficult to fit into the Teaching and Learning Triangle interaction of ICT (Sello & Malie) [34] which they were not used to at the primary and secondary levels of education.

- ii) When you are given a reading assignment on online journal articles, do you read directly on the computer or do you prefer to print and read from the hard copy?

40% of students have no problems with reading journal articles online while 60% would prefer to print articles and read from the hard copy. The reasons given for this preference are as follows: students find it more convenient to read from the hard copy because they can highlight and underline important points; they can keep the hard copy and read at a convenient time; some find the scrolling up and down distracting and cumbersome. Some others complained about their eye sight being affected by reading on the computer for a long time.

- iii) When word processing a given assignment, do you type directly on the computer or do you first of all draft your answers before word processing the assignment?

30% indicated that they can type directly on the computer instead of first drafting on paper before word processing because they see drafting on paper as a waste of time. However, 70% revealed that they prefer drafting on paper, editing and revising the drafts before word processing the assignment. Some indicated that if it is a simple and short assignment such as writing a paragraph or drawing up an outline for an essay, they might word process directly without first writing a draft.

- iv) When you word process your assignments, are you aware of the silent communication offered by the computer (for example, do you take note of the green and red underlining of words, phrases or sentences, and pop up audio messages that come up on the screen).

45% indicated that they are aware of the silent interactive communication offered by the computer when word processing. However, only 10 of the 45 respondents take time to correct the mistakes; the other 35 stated that they ignore the silent communication if they cannot figure out what the computer is indicating. 55% of the students revealed that they are not aware of the computer's silent interactive communication so they just word process and submit their assignments. This data synchronize with classroom observation made by the researchers to the effect that students submit word processed assignments with a plethora of spelling and grammatical mistakes, which show that most students are unaware of the silent interactive communication offered by the computer. The researchers observed that this may also arise from the students' limited knowledge of input device skills especially the QWERTY alphabet layout of the keyboard or the click and drag mouse

skills hence the many typographical or figure errors that they make when they word process.

- v) Are you able to download course materials and upload assignments on the LMS platforms?

40% of the respondents indicated that they can use the LMS platforms with ease while 60% said they have difficulty in using the LMS platforms. These students indicated that though they have been taught how to download and upload materials on the LMS platforms, they still find it difficult. They rely on other students to help them out each time they need to use the LMS platforms. This result tallies with data collected from the questionnaire and classroom observations. This problem could arise from students' lack of exposure to the use of LMS platforms including ICT tools such as computers at basic education, hence this gap in ICT tool usage at the university.

- vi) Are you able to have chats with your classmates using the LMS communication forums when working on an assignment?

20% of respondents revealed that they use the discussion forums when working on an assignment while 80% indicated that they do not use the discussion forums on the LMS platforms. They prefer to have face-to-face discussions with their group members or lecturers than using the discussion forums on Blackboard or Moodle. The reasons given for this preference include difficulty in using the platforms and the ease of face-to-face discussion with peers.

These results also tally with data collected from the questionnaire and class observations where the majority of students indicated that they neither chat with classmates and lecturers nor use the email on the LMS platforms for academic purposes. This again may stem from the traditional and cultural face-to-face mode of communication that begins from home and runs through basic education. Therefore, because of that installed mindset of traditional face-to-face communication, students tend to avoid using the faceless LMS communication forums for academic purposes.

#### 4. Summary of Findings

The data collected from this study show that the majority of students use the computer as an ICT tool for word processing their assignments. However, it is evident that most first year students are not effectively utilizing the computer as an ICT tool in their reading and writing. A significant percentage of students do not utilize the spell check function in editing their work; do not use the computer dictionary and thesaurus in enriching their vocabulary, knowledge of concepts and theory. Many students are not utilizing the LMS platforms in discussion forums and emailing for academic purposes. Furthermore, it is evident that most first year students (60%) prefer reading on print to reading on the electronic platform. Finally, most students (80%) prefer the face-to-face interaction with lecturers and

classmates to the faceless interaction and communication of the computer and the LMS platforms and forums. Considering the fact that the subjects of this study are first year undergraduate students, it would be necessary to carry out a similar study on the same set of students in their penultimate or final year at the university to find out whether there would be any significant difference in the results obtained in their use of ICT tools in reading and writing.

#### 5. Conclusions

This study has established that many first year undergraduates at the University of Botswana have various problems with using the computer as an ICT tool in their reading and writing skills. The use of the LMS platforms is also a challenge to many of them. The study therefore recommends that the first year undergraduates be given more tutorials and practical sessions on the LMS platforms and the use of the computer as an ICT tool, especially for reading and writing skills. In addition, lecturers should encourage the use of ICT tools in teaching and learning to ensure that students receive enough exposure and practice in ICT skills. Lecturers should also insist that assignments should be word processed and encourage the use of the LMS platforms for teaching and learning.

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