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Factors Influencing Students' Use of Schoology Learning Management Platform and the Impact on Online Learning in ICT University, Cameroon

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Abstract:

The study investigated the impact of Learning Management Systems (Schoology) on Online Learning Case Study ICT University Cameroon. Using schoology is challenging to some students in the ICT University. Students have issues completing courses that have been scheduled online, students getting frustrated, Students failing to submit their assignment on time, Students dropping courses, Students not attending classes and students finding themselves in the position of retaking courses not because they are lazy or are not working hard but because of frustration either because the platform could not submit the assignment or the tools and features in this platform was not easy to use. This study attempted to answer the research questions: 'How does technical support, usage of features and tools and Instructor online presence impact on schoology impacts online learning in the ICT University?'
Primary data were collected by randomly distributing questionnaires to students. 180 students participated in the study by providing data which was sought through the use of questionnaires. Only 160 was deemed valid. Numeric data collected was analyzed quantitatively using statistical tools. The opinions of males and females were found. Findings of the study revealed that tools and features have a statistically significant relationship with online learning, thus, this implies the other variables (instructors' presence and technical support) as components of learning management system (schoology) do no impact online learning significantly. The study recommended that, Since the world is turning into a digital atmosphere where almost everything is now computerized, developing in the learning aspect is also crucial thus calling for the need to improve on the learning systems in Cameroon. Online learning should be introduced and well developed with tools and features that would facilitate the learning process. Lecturers should also understand that their presence online is highly needed by students in order to facilitate and direct them on how to go about their studies easily. This research recommends a similar study to be done but concentrate on the government schools. There is need for a study to be conducted to determine the challenges facing online learning in Cameroon, this will help in enhancing online learning in Cameroon, thus positively affecting the growth of the economy.

Keywords: Schoology, e-learning, technology adoption, acceptance, higher institutions of learning, moodle

1. Introduction

The Learning Management System or popularly known as LMS in the community of higher institutions is an online portal that connects lecturers and students, provides an avenue for classroom materials or activities to be shared easily, also a portal that enables lecturers and students to interact out of the classroom, having discussions through forums that could otherwise take up too much of the time supposed to be spent learning in the classroom(Adzharuddin & Ling, 2013). Adzharuddin and Ling (2013) in a study asserted that LMS is useful for both students and instructors in online learning. Students and teachers use LMS as a tool for communication and interaction. LMS also help instructors to provide their learning materials to students. LMS also has management task such as examination, tracking, virtual life classes, and delivery. This helps instructors undergo their teaching process without any change the teaching process. In the last few years, integrated computer systems known as Learning Management Systems (LMS) have rapidly emerged and are having, and will increasingly have, profound effects on university teaching and learning(Coates, James, & Baldwin, 2005). Davis, Carmean, and Wagner (2009) asserted in a study that Learning management systems have been a part of the e-Learning ecosystem for more than 13 years and are emerging directly from e learning industry. They came to existence in the late 1990s Many universities across the world have adopted this system in the last four years. They can also be called distributed learning systems, content management systems, course management systems, learning platforms. Learning management systems have become increasingly attractive in recent times. Modern education is highly technical dependent and this has redefined teaching learning process.(Cavus & Alhih, 2014). E- Learning gives students more flexibility to learn and to interact with peers and lecturers(Zakaria & Daud, 2013). An LMS offers a wide range of functionalities and tools to support teaching and learning. It not only delivers contents but also looks after administration, registration, tracking, skills

gap analysis and reporting(Gilhooly, 2001). An example of a Learning Management System (LMS) used by K-12 educators, is a platform called Schoology. Millions of people are using Schoology to learn, create, and share academic content(Staker & Horn, 2012).Priyatno (2017) in a research brought out findings that Schoology has a mobile application for students, parents, and instructors to add to their Android, Apple and Kindle Fire gadgets in order to extend learning and conversation outdoor of school. Crucial in the improvement of an self-sustaining learner, Schoology gives college students and teachers with a special social networking trip that encourages reflection, sharing, interaction and overall, supports satisfactory practices in pedagogy and cooperative cell gaining knowledge of (Priyatno, 2017). Schoology is a success in K-12 education because open-access to the course content material and practice during the college day, expanded student to student and instructor to student interaction, and increased student efficacy in learning. Another gain for students and instructors who use Schoology is that when students are absent, they can make up something that they neglected due to the fact their educational work, resources, and assessments are posted on the site, which has open get admission to even when students are now not at college (Haugen, 2015; Staker & Horn, 2012). The results the study determined that when schools supply students with online studying communities in their course, such as Schoology, then the direction tends to have extra profitable studying consequences than through normal approaches. The standard intention is for every learner to have a personalized ride which they can get entry to at all times (Staker & Horn, 2012). Looking at strengths, Schoology has weaknesses which are known by users. in a research analyzed some weaknesses of schoology which are first, it does not have a feature to give comments on students writing as one found in Edmodo. Second, it takes time to play a video which is uploaded in schoology. Uploading a video into YouTube and link it to schoology might be the best solution to use in this case. Third, schoology's direct chat feature seems to be difficult to access both using computer or hand phone.

Looking at our context the ICT UNIVERSITY CAMEROON, LMS are used in this university. The ICT University makes use of MOODLE and SCHOOLOGY. Moodle which is available in 215 countries around the world, has 1,176,162 registered members in its own web site and is available in 75 different languages and permits teachers easily load their lesson notes prepared in different formats (e.g. SCORM, flash, MP3, RSS, PowerPoint, PDF, word) (Cavus, 2015). Moodle was used in the ICT university before schoology was introduced. This research paper looked at schoology because it is the recent technology which was introduced two years ago and the researcher seeks to know how it affects online learning. In the ICT University, Schoology is one of the LMS used for online learning. Schoology is used for the interaction between lectures and students, administration, course material and time table updates. SCHOOLOGY is a social network-based tool that allows teachers to interact with students in a way that satisfies both technological needs and curricular elements(Manning et al., 2011). Manning et al. (2011) asserted in a study that Schoology can be used for two main purposes interactive communication and academic information exchange. Instructors can create assignments, group work, discussion questions that allow students to communicate with their instructors. Students have the ability to be part of reading workshops where they can post comments and ask questions. The second purpose of schoology is the ability to deliver academic information. With schoology, students are able to access their grades, teacher's feedback on submitted assignment, attendance records. Access to this information creates communication between teachers and students and students are accountable for their academic responsibilities. This is also practiced in the ICT University as students have the ability to communicate with teachers and access course materials, grades, assignments and feedbacks from submitted assignments. In ICT University, schoology was introduced by an instructor in 2017 and it has been used to teach more than 8 courses.

A lot has been done in the ICT University to improve on online teaching and learning and the instructors have put in their efforts to see that courses are programed on time. Despite the efforts of the ICT university to move towards E-learning which is an edge in today's educational sector, using schoology is a main challenge to some students. Cases of students getting frustrated, students failing to submit their assignments, Students dropping courses, Students not attending classes is still registered. There must be a problem causing all of this so the need to investigate how the use of schoology as a LMS is affecting online learning particularly looking at Technological support, usage and features of schoology, and also teacher's presence to see if these are the reasons for the problems influencing its usage. Could it be that this problem arises because there is nobody to give them technical support to sudents? Could it be that students cannot use schoology? Could it be that teacher's presence was a reason?

Many authors (Abdellah, 2016; Daud & Ghani, 2017; Permata, 2016; Priyatno, 2017; Schlager, 2016; Suana, Maharta, Nyeneng, & Wahyuni, 2017) have studied about Schoology and in their study unlike those who have studied Moodle (Cho, Jung, & Im, 2014; Zakaria & Daud, 2013) a good number of those who have investigated schoology have not looked at the aspect of usage of tools and features and instructor presence. The Previous studies on Schoology have concentrated on the aspects of adoption and acceptance of the platform but have not gone further to investigate how this platform will impact on learning. In this study the researcher will be investigated how technical support, usability and features and teacher's presence influenced online learning. Therefore, the study aimed at examining the factors influencing the use of Schoology as an Online teaching management Platform to teaching ICT Courses in the ICT Department

2. Methodology

2.1. Research Approach and Design

Research design constitute the blueprint for the collection, measurement and analysis of data (De Vaus & de Vaus, 2001). A quantitative approach was used. This study employs the use of enquiry method through the use of questionnaire. The choice of the method was informed by the fact that the researcher intends to primarily describe the sufficient sample sizes required for management research activities. The emphasis was on investigating and interpreting.

2.2. The Study Population and Sample

By definition, population is the group to which a researcher would like the results of the study to be generalizable (Richardson, 2005). This study focuses on the impact of schoology on the success of online learning. The population for this study consists of undergraduate students from the ICT University of Cameroon. The researcher used this population for the purpose of this research due to the survey type selected to explore. The ICT University offers courses in the schoology platform. From June 2018 – June 2019 six courses were taught and the total number of students who participated in those courses on Schoology was surveyed thus;

№	Course Title	Number of Students
1.	IT Policy and Strategy	15
2.	Digital Literacy	124
3.	E-Government	15
4.	Ethics and Professional conduct	22
5.	ICT and Society	133
6.	E-Business and Web Design	28
	Total:	**337**

Table 1: Student Population (June 2018- June 2019)

From the table above, 337 students took courses on schoology. Using the Morgan (1970) table, a sample size of 160 was derived from the 337 population.

2.3. Data Collection

The researcher used a quantitative research method. The questionnaires were administered by the researcher herself to collect the data from a convenient sample of 180 students. The questionnaire had closed ended questions. The sample characteristics included adults who were mentally sound and are/have taken online courses on schoology and were willing to participate.Permission was obtained from the Head of Department in the ICT University Cameroon. Consent was obtained from the students themselves. Anonymity, self-determination and confidentiality were ensured during administration of the questionnaires and report writing. Questionnaires were distributed to students to ensure validity.

2.4. Data Analysis

Data was analyzed using Statistical Package for Social Sciences (SPSS) version 25.0 software. Regression analysis was used as data analysis technique. The data collected was run through various models so as to clearly bring out the impact of learning management system (schoology) on online learning. Linear regression model was used to analyze the regression equation. The focus of this study is the impact of learning management systems (Schoology) on online learning. The set of independent variables include; instructors' presence (IP), technical supports (TS), and tools and features (TF). The linear regression model is used to show the linear combination among the variables

3. RESULTS

The text included in the sections or subsections must begin one line after the section or subsection title. Do not use hard tabs and limit the use of hard returns to one return at the end of a paragraph.

3.1. Demographic Information

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	102	63.7	63.7	63.7
	Female	58	36.3	36.3	100.0
	Total	160	100.0	100.0	

Table 2: Gender

Though not really vital for the analysis, the researcher sought to know the gender of the respondents in order to ensure that the research was free from gender bias. It was found that of the 160 respondents considered in the study, 102 of them were male, representing 63.7% of the respondents while 58 of them were female, representing 36.3% of the respondents. Thus, the study was free from gender bias since both sexes were considered in the study.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Year 1	74	46.3	46.3	46.3
	Year 2	24	15.0	15.0	61.3
	Year 3	41	25.6	25.6	86.9
	Year 4	19	11.9	11.9	98.8
	Others	2	1.3	1.3	100.0
	Total	160	100.0	100.0	

Table 3: Academic year

The researcher also wished to know the level of the students considered in the study. It was found that 74 of the, were year 1 students, 24 of them were year 2 students, 41 of the respondents were year 3 students, 19 were year 4 and 2 of the respondents had other levels not mentioned in the boxes.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	ICT	117	73.1	73.1	73.1
	BMS	43	26.9	26.9	100.0
	Total	160	100.0	100.0	

Table 4: Department

As concerns the department of studies, 117 students, representing 73.1% were ICT students and 43 others were BMS students, representing 26.9%.

3.2. Online Instructors' Presence

Elements	N	Frequencies					Mean	Std. Deviation
		A	SA	N	D	SD		
My instructor was easy to get with via the schoology learning management platform	160	95	33	20	7	5	1.7125	1.04843
My instructor gave fast feedback via a variety of methods	160	78	43	27	8	4	1.8563	1.03308
Instructors clearly communicated important due dates/time frames for learning activities	160	59	73	23	4	1	1.8438	0.80523
Instructor update course material weekly giving students enough material to use and work on	160	72	59	22	4	3	1.7938	0.90489
Valid N (listwise)	160							

Table 5: Online Instructors' Presence

The researcher sought to know each respondents level of agreement or disagreement as concerns the elements above in table 4. which are related to online presence of instructors in facilitating online learning of students in the schoology platform. From the study, it was found that majority of the students agreed and strongly agreed to the fact that their instructors were very easy to get with via the schoology learning platform, their instructors give very fast feedback via a variety of methods, instructors clearly communicated important due dates/time frames for learning activities and the fact that instructors update course materials weekly giving students enough materials to use and work on as shown by the mean value of 1.7125, 1.8563, 1.8438 and 1.7938 respectively

3.2.1. Technical Support

Elements	N	Frequencies					Mean	Std. Deviation
		A	SA	N	D	SD		
Students of ICTU don't know how to operate computer and computer tools	160	18	17	24	62	39	3.5438	1.27800
Internet connectivity is a problem to me	160	42	52	29	26	11	2.4500	1.23268
Uploading and Downloading materials in the Schoology learning management platform is easy	160	78	39	23	12	8	1.9563	1.17814
ICTU students don't really have knowledge on how to use the Schoology software and need training	160	18	18	42	59	23	3.3188	1.18890
Valid N (listwise)	160							

Table 6: Technical Support

The researcher also wished to know the students level of agreement or disagreement as concerns the elements above related to technical support of instructors in the schoology management learning platform. The study found that most of the students agreed and strongly agreed on the points that internet connectivity is a problem the student and the fact that uploading and downloading materials to and from the schoology learning management platform is easy. This can be confirmed by the mean values shown above of 2.4500 and 1.9563 respectively. On the other hand, most of the students disagreed and strongly disagreed to the fact that students of ICTU don't know how to operate computer and computer

tools and the fact that ICTU students don't really have knowledge on how to use the schoology software and need training as shown by their respective mean values of 3.5438 and 3.3188.

3.2.2. Tools and Features

Elements	N	Frequencies					Mean	Std. Deviation
		A	SA	N	D	SD		
My interaction with the instructor using schoology tools and features is clear and understandable	160	76	39	29	12	4	1.9313	1.08808
It is difficult to answer Quizzes on schoology	160	11	13	22	49	65	3.9000	1.21934
I feel comfortable taking assignments, test and exams on schoology	160	55	47	25	16	17	2.3313	1.32571
The Schoology platform is easy to navigate and the tools/features are easy to use	160	76	44	24	7	9	1.9313	1.14443
Valid N (list wise)	160							

Table 7: Tools and Features

The researcher sought to know how comfortable the students are while using the tools and features of the schoology software. This could be known by assessing the level of agreement and disagreement of the elements in table 4.8 above which are related to the tools and features of the schoology software. It was discovered in the study that most of the students agreed and strongly to the facts that; their interactions with lecturers using the schoology tools and features is understandable and clear; they feel comfortable taking assignments, tests and exams on schoology; and the fact that the schoology platform is easy to navigate and the tools and features are easy to use. This is confirmed by the mean values of 1.9313, 2.3313 and 1.9313 respectively. On the other hand, most of the students disagreed and strongly disagreed to the fact that it is difficult to answer quizzes using schoology as shown by its mean value of 3.9000.

3.2.3. Data Analysis and Interpretation

Model Summary									
Mode l	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df 1	df 2	Sig. F Change
1	.474a	.224	.209	1.05450	.224	15.028	3	156	.000
a. Predictors: (Constant), Instructors' Presence (IP), Technical Support (TS), Tools and Features (TF).									

Table 8: Model Summary

From the study, online line was explained by 22.4% by changes in the three independent variables (instructors' presence, technical support, and tools and features) as represented by the R Square. Other factors contributed 77.6% to online learning. These factors, not studied in this research are significant and are therefore crucial to online learning.

4. Conclusions

The main objective of this study was to determine the impact of learning management system (schoology) on online learning in ICTU Cameroon. Conclusions arrived at indicated that learning management system (schoology) accounted for 22,4% of online learning in ICTU Cameroon. Tools and features was found to have a statistically significant relationship with online learning, thus, this implies the other variables (instructors' presence and technical support) as components of learning management system (schoology) do no impact online learning significantly. From the ANOVA test, the overall model was established as statistically significant since the F critical value was 15.028 at 5% level of significance. The model was statistically significant in predicting whether instructors' presence, technical support and tools and features influence online learning. This was supported by a significant value of 0.000.

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