

An Evaluation of Lecturers' Perceptions on Learning Management System

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Abstract

With the advancement and evolving use of technology, more tasks are accomplished effectively and efficiently using information technology tools. Learning is one of such tasks. Learning Management Systems have placed significant roles in many businesses and recently many schools has adapted these tools to deliver effective and efficient online teaching considering the current pandemic situation. The purpose of this research paper is to identify lecturers' perceptions on the use of learning management systems, (LMS) to also identify the technology-to-performance chain or in other words how task-technology fit influences the performance impacts of LMS. Hence, the objective of this research is to determine lecturers' attitudes toward the use of learning management systems (LMS) at Toledo Community College. To address this objective the rest of this research gives a better understanding of the learning management system and how it is executed where as the sum of 66 virtual questionnaires created utilizing Google form to teachers enrolled at the Toledo Community College. The Methodology was then used to analyze the collected data and create recommendations and conclusions. The results collected of the survey were later analyzed, tabulated and summarized with the use of the descriptive statistical data analysis which was used to describe the basic features of the data collected whilst conducting the survey. The data was interpreted and summarized in the discussion and conclusion to present the main findings from the results of the survey. The research on lecturer's perceptions on task-technology fit view of Learning Management Systems assist an individual in understanding the importance and usage of Learning Management Systems. Additionally, it addresses how it's perceived impacts and utilization influences performance.

Keywords: Technology, Task-technology fit, Learning Management System, Utilization

Introduction

Information Technology has transformed how people interact with products and services but has had less effect on learning. Due to the new and fast evolving world around us, many aspects of our daily lives are changing in various ways. Technology has been used for recordkeeping, social interaction, helping with research and much more but it has been lacking in education, which plays an important role in our community. That is why the researchers hope to open the eyes of the general population to understand more about education and technology.

The research is based on identifying lecturers' perceptions on the use of LMS. Which stands for learning management system, (LMS) is a software application used to administer, monitor, report, organize, and deliver educational courses, training programs, or teaching activities. The idea of a learning management system developed directly from e-Learning. The objective of this research is to determine lecturers' attitudes toward the use of learning management systems (LMS) at Toledo community college. To address this objective the rest of this research will give a better understanding of the learning management system and how it is executed.

Literature Review

Distance Learning is the learning of students who may not always be physically present at a school (Merriam Webster). Over the past 30 years, a revolution has taken place, but no troops took to the battlefield, and no shots were fired. This revolution has been electronic and has a profound impact on citizens of all nations in a way that often was unexpected (Kurzman, 2013). Oosterhof, Conrad, & Ely (2008) in their book, "Assessing Learners Online" have given a concise synopsis of distance learning. The technology of online/distance learning at present is in the fourth generation. The concept of distance education evolving through generations provides a helpful structure when considering history and heritage. In 1989 Nipper, the first to use a generational framework, suggested three generations of distance education linked to production, distribution, and computer conferencing. Subsequently, these three generations were often labelled correspondence, broadcast, and computer mediated.

The first two generations are fairly universally accepted. However, different writers, building on Nipper's work, have constructed subsequent generations somewhat differently. Moore and Kearsley (2005) describe the third generation as developing a systems approach; while Taylor (2001) says it was based on telelearning (audio/video conferencing). Taylor goes on to suggest a fourth generation that is linked to flexible learning based on online teaching, and a fifth generation that exploits additional aspects of "intelligent" digital technologies.

This research focuses on a lecturer's perceptions of Learning Management Systems. This study provides additional information to reveal the relationship between the lecturers and Learning Management Systems on how effective it is for many, specifically at Toledo Community College.

Additionally, this research focuses mainly on lecturers' perceptions of Learning Management Systems. With the findings of this research, it is the hope that the management of Toledo Community College consider alternative factors to improve the effectiveness and efficiency of online learning using Learning Management Systems.

E-learning success research

According to Corich (2005), the Open Polytechnic was the first NZ educational institution to introduce e-learning and since then it has been adopted as a standard method of curriculum delivery in all major tertiary institutes and universities across the country. The availability of these new technologies has given greater impact for instructors to provide content to students in their teaching methods. Moreover, the availability of such technologies such as Blackboard and Moodle has provided lecturers with wider opportunities to blend delivery in the form of classroom instruction and online delivery (Lin & Kinsuk, 2007).

In similar studies, Zhang, Zhao, Zhou, and Nunamaker (2004) reported improved academic outcomes for e-learning students, and Chou and Liu (2005) reported that students using their e-learning environment showed improved learning performance and satisfaction. The University of the West Indies (UWI) was the

first university to offer distance learning in the Caribbean region. In the article, Classroom without Walls: A case for Borderless Education in the Caribbean, researcher Allan E. Young (August, 2008), completed his study with students attending UWI in Jamaica. Young's research determined that borderless education within the Caribbean has the potential to provide access to a greater percentage of the population.

Task-technology fit

In an article by Goodhue et al (1995) on Task-technology fit (TTF), it is the degree to which a technology assists an individual in performing his or her portfolio of tasks. More specifically, TTF is the correspondence between task requirements, individual abilities, and the functionality and features of the technology. Furthermore, the antecedents of TTF are the interactions between the task, technology, and the individual.

According to Goodhue and Thompson (1995), task-technology fit is a critical construct that was missing or only implicit in many previous models. Second, it is more explicit concerning the links between the constructs, providing a stronger theoretical basis for thinking about a number of issues relating to the impact of IT on performance. These include; making choices for surrogate measures of MIS success, understanding the impact of user involvement on performance, and developing better diagnostics for IS problems. A smaller number of researchers have focused on situations where utilization can often be assumed, and have argued that performance impacts will result from task-technology fit – that is, when a technology provides features and support that “fit” the requirements of a task (Goodhue, et al, 1995)

In addition, technology itself cannot improve learning outcomes; certain learning behaviours, such as reflective thinking, should be prompted first so that learning outcomes can be improved (Zhang, et al, 2017). Learning Management Systems (LMS) can provide students with the ability of anytime-anywhere learning and, for lecturers, can facilitate the administration, documentation, tracking, reporting, and delivery of educational programmes (Mlitwa, 2006). Use of LMSs in educational institutions is believed to augment face-to-face teaching where it still occurs, as well as enables online and distance learning in other instances, thereby removing learning barriers (Mudaly, 2012). In addition, an LMS can track an individual student's learning progress (Watson and Watson, 2007) and enable interaction between lecturers and students (Liu, 2013). While LMSs have been used in teaching and learning for the last two decades at least (Blackboard Learn, 1997), Billman (2014) claims that lecturers are not yet utilising the LMS to its full potential in order to realise its benefits as well as meet the changing educational needs of students.

Shivandi Dhawan (June, 2020) in his research, Online Learning: A Panacea in time of Covid-19 Crisis, identified the importance of online learning along with the Strengths, Weaknesses, Opportunities, & Challenges of e-learning in the time of crisis. Due to the COVID-19 pandemic, this forced many countries including India, to convert from the traditional way of teaching to online learning with the use of a computer. He identified that through online learning students can be flexible in completing their lessons.

Research Question

The idea of a learning management system developed directly from e-Learning but more specifically, TTF is the correspondence between task requirements, individual abilities, and the functionality and features of the technology (Goodhue, et al, 1995). Hence, this research focuses mainly on interpreting the lecturers' perceptions of Learning Management Systems at the Toledo Community College and considering alternative factors to improve the effectiveness and efficiency of online learning using Learning Management Systems.

Research Methodology

This chapter will give a description of the method used to collect the necessary information needed to aid in providing the results to complete our research. In this section, you will be able to identify the target population used to gather the information, the method of data collection and the interpretation of research data.

Study Design

In order to identify each lecturer's perceptions of the Learning Management System at Toledo Community College, a descriptive research design was used. A survey was prepared with questions that the researchers gather with relevant information needed to determine the results. The descriptive research design collected detailed and realistic information to better describe a lecturer's perception. The data collected allowed the researchers to better understand the problem and are able to analyze the results.

Participants

The target populations are the teachers at Toledo Community College who are currently teaching via online learning this semester, period January to May. The target population consists of a total of 66 teachers.

Subject

The research was conducted and targeted the teachers at the Toledo Community College. The Toledo Community College is the number one and popular secondary institution in the Toledo District. The school is located in Punta Gorda Town and is made of diverse cultures. It has five different departments providing various programs that students can choose from; General studies, Arts, Business, Science and Vocational.

The participants of the questionnaire conducted were teachers currently enrolled and teaching at the college this semester. The questionnaire conducted was an online survey that was shared to teachers via social media platforms and emails targeting all teachers from all departments who are currently delivering online classes.

Procedure for Collection

After consent was given by the lecturer, Mr. Manuel Medina, the research on the lecturer's perceptions of Learning Management Systems went into effect. The researcher distributed a sum of 66 virtual questionnaires to teachers enrolled at the Toledo Community College. The questionnaire was created utilizing google forms by the researcher which was then issued to teachers via a link with the assistance of social media platforms and emails. Permission was obtained prior to distributing the questionnaire along with informing teachers that their participation and information obtained in this research was both voluntary and confidential.

Measurement

In a research paper there are three types of Data Collection tool, these three types include: (1) Questionnaires, (2) Interviews and (3) Focus Group. Questionnaires are a set of standardized questions often called items which follow a fixed scheme in order to collect individual data about one or, more specific topics (Lavrakas, P.J., 2008). According to Boyce, C. & Neale, P. (2006) an interview is "conducting intensive individual interviews with a small number of respondents to explore their perspectives on a particular idea, program or situation". The form in which this is carried out is the interviewer (researcher) will ask questions to the interviewee (sample population). Focus group is a gathering of deliberately selected people who participate in a planned discussion intended to elicit individual perception about a particular topic or area of interest (Devault, G., 2018). Focus groups data collection method is most suitable for types of studies where multiple perspectives needed to be obtained regarding the same problem.

This research paper has utilized questionnaires, which has been created through the use of technology, therefore, an online survey that was shared to teachers via social media platforms and emails targeting all the teachers at Toledo Community College who are currently conducting online classes. The Items that were used to measure the concepts of interest for the LMS domain were gathered from past research on E-learning. With the different LMS tools currently available, the questions were adjusted that would apply on the type of LMS tool that is being used at the College. The questionnaires were vetted, reviewed and verified by group members and make necessary changes where applicable. The questionnaire consisted of seven (7) sections that collected information on the background of the participants, their teaching

preferences, prior use of LMS, task-technology fit, expected consequences use of LMS, perceived impact on teaching and consumerization attitude. Using a scale from strongly disagree to strongly agree, each section collected information on how LMS tool will apply on delivery of classes and how it their perceived impact and perceptions of adapting LMS as a new form of classroom teaching.

Measurement Model

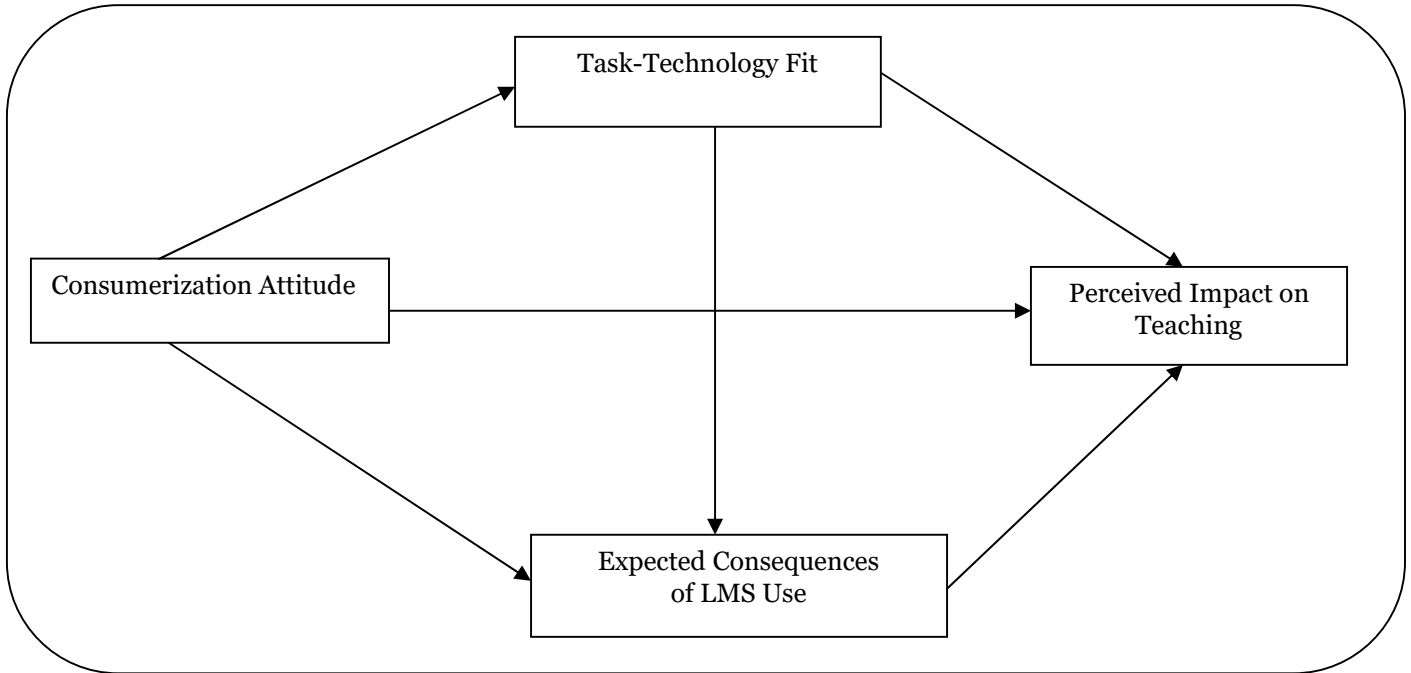


Figure 1: The Constructs – Consumerization Impact on Learning Management System

Construct	Survey Questions	Source
Background Information	BI1: Please indicate your gender: BI2: Please indicate your age range: BI3: Please indicate your highest degree attained: BI4: Please indicate the department you teach in: BI5: Please indicate which Learning Management System (LMS) you have used:	TCC
Teaching Preferences	TP1: I prefer teaching face to face rather than online. TP2: I am more effective teaching face to face than online. TP3: Students learn more in my face to face classes than online. TP4: I would want to teach some online courses after the college resumes face to face teaching. TP5: I would want to teach all my courses online after the college moves back to face to face teaching. TP6: I would not want to teach any online courses after the college moves back to face to face teaching.	TCC
Prior Google App Suite Use	PGASU1: Please state the number of semesters you have used Google App Suite. PGASU2: I used Google App Suite to facilitate teaching face to face classes prior to the school's move to online delivery.	

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	<p>PGASU3: I have taught classes utilizing an LMS other than Google App Suite</p> <p>PGASU4: How many semesters have you taught using an LMS other than Google App Suite.</p> <p>PGASU5: I used an LMS other than Google App Suite to facilitate teaching face to face classes (prior to online delivery)</p> <p>PGASU6: I plan to continue using Google App Suite to enhance my teaching after we return to face to face teaching.</p> <p>PGASU7: I would like to continue using my preferred LMS to enhance my teaching after we return to face to face teaching.</p>	TCC
Task-Technology Fit	<p>TTF1: Google App Suite fits well with the way I like to teach online.</p> <p>TTF2: Google App Suite is compatible with all aspects of my online teaching.</p> <p>TTF3: Google App Suite is easy to use.</p> <p>TTF4: Google App Suite is user friendly.</p> <p>TTF5: It is easy to get Google App Suite to do what I want it to do.</p> <p>TTF6: Google App Suite is easy to learn.</p> <p>TTF7: It is easy for me to become more skillful at using Google App Suite.</p> <p>TTF8: New features of Google App Suite are easy to learn.</p> <p>TTF9: Do you think the output from Google App Suite to the students is presented in a useful format?</p> <p>TTF10: Can you provide accurate information to your students with Google App Suite?</p> <p>TTF11: Can you provide up-to-date information to your students with Google App Suite?</p> <p>TTF12: Can you provide information students need in time using Google App Suite?</p> <p>TTF13: Can you provide information that seems to be just about exactly what your students' need with Google App Suite?</p>	TCC
Expected Consequences of LMS Use	<p>ECLU1: Using Google App Suite will help me to accomplish my online teaching more quickly.</p> <p>ECLU2: Using Google App Suite will help me to accomplish my online teaching more quickly.</p> <p>ECLU3: Using Google App Suite will improve my online teaching performance.</p> <p>ECLU4: Using Google App Suite will increase my online teaching productivity.</p> <p>ECLU5: Using Google App Suite will enhance my effectiveness as a teacher while teaching online.</p> <p>ECLU6: Using Google App Suite will make it easier to complete my teaching tasks while teaching online.</p> <p>ECLU7: Using Google App Suite will give me greater control over my teaching tasks while teaching online.</p> <p>ECLU8: Overall, I think that Google App Suite will be useful in my ability to teach online.</p> <p>ECLU9: Using Google App Suite will improve the quality of my online teaching.</p>	TCC
Perceived Impact on Teaching	<p>PIT1: Google App Suite has a large positive impact on my effectiveness and productivity as an online teacher.</p> <p>PIT2: Google App Suite is an important and valuable aid to me in my online teaching.</p> <p>PIT3: I teach better online with Google App Suite than without it.</p>	TCC
Consumerization Attitude	<p>CA1: If I could choose my own Learning Managements System it would fit well with teaching online.</p> <p>CA2: If I could choose my own Learning Managements System it</p>	

	<p>would fit well with helping me to be efficient in teaching online. CA3: If I could choose my own Learning Managements System it would be compatible with my online teaching. CA4: If I could choose my own Learning Managements System my online teaching performance would improve. CA5: If I could choose my own Learning Managements System I would work faster while teaching online.</p>	<p>TCC</p>
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Table 1: Measurement items used for questionnaire.

Hypothesis

The questionnaire consisted of several questions in relation to Task-Technology Fit, expected consequences of LMS use, perceived impact on teaching and consumerization attitude.

H1: Task–technology fit will positively influence the perceived impact on teaching. This section aims to identify if the current LMS tool is satisfactory enough for online classes or if the lecturer’s have a preference of their own that will be more productive and efficient.

H2: Expected consequences of LMS use will positively influence perceived impact on teaching. In an educational standpoint, Learning Management System is an software application is designed specifically to create, distribute and manage the delivery of educational content. The Toledo Community College is currently using the Google App Suite as their LMS platform for online teaching. The questionnaire will gather information from lecturers to identify the efficiency and effectiveness of the LMS tool currently being used or if any other LMS would be more suitable. The LMS tool was chosen by the college, however, the questionnaire will gather information lecturer’s perceptions to determine if the current LMS tool is suitable or not. Additionally, it will determine if the consumers were able to choose their own LMS tool, would it positively or negatively impact their online teaching.

H3: Consumerization attitude will positively influence perceived task-technology fit. The information would be necessary to assist the college in knowing what the lecturers’ perceptions are on Google App Suite. The results of the questionnaire will illustrate the lecturers’ attitudes towards the impacts of Google App Suite and how it influences task-technology fit.

H4: Consumerization attitude will positively influence expected consequences of LMS use. This section will help to illustrate the lecturer’s attitude towards the effects of LMS and how it influences their productivity in online teaching using Goggle App Suite. In addition, it will help to identity if it will have a positive effect.

H5: Consumerization attitude will positively influence perceived impact on teaching. Online teaching has transformed delivery of classroom materials that has been evolving with modern technology to provide improved opportunities to enhance teaching. One would ask how Google App Suite improves the quality of a lecturers’ online teaching. What are the impacts and is it beneficial in teaching online at the college? This research aims to gather information based on the lecturers’ perceptions if the LMS tool is satisfactory in delivering online teaching at the college.

Data Analysis

After the survey has been conducted using convenience sampling, the data was collected and analyzed. Data analysis summarizes all the data collected and involves the interpretation of data to determine the patterns, relationships or trends. It determines how each research participant responded to each question and in what different ways. Thus, the data analysis was done using three stages, summarizing the date, tabulating the results and interpreting the tabulation.

First, the data was summarized using the descriptive statistical data analysis. Descriptive data analysis is used to describe the basic features of the data collected in a study. It provides simple summaries about the sample and the measure. To summarize the data, percentage was used which falls under one of the major types of descriptive statistics known as the measure of frequency.

After the data has been summarized, the second step was to tabulate the results. Microsoft Office Excel Software was used to tabulate the data collected by performing statistical analysis. This method placed the results gathered from the survey in the form of tables, charts and graphs for easy interpretation. For example, we demonstrated in the form of tables, charts and graphs the percentage of participants that are female or males, and the different age group members and data was verified as 100% accurate before being analyzed.

Finally, since the tabulation was done by Microsoft Office Excel Software, results were provided to interpret the data. Based on the results, the interpretation led to the hypothesis being accepted or rejected, In addition, the end result yielded the information needed for the research. Also, recommendations made by the participants that were presented.

Ethical Concerns

Informed Consent

A letter of consent was sent to the institution asking for consent of the participation in the research. Teachers from the college were free to decide if they wanted to participate or refrain from participating in the study. The questionnaire was done using the clear, well thought out language for clear understanding by all participants.

Harm

All data that was collected from the questionnaire were held in confidence so as to prevent any of the participants from harm such as exposure or victimization.

Privacy

All responses from the participants were anonymous and kept in confidentiality. The responses of the questionnaire are only accessible to the persons who conducted the research.

Deception

The questionnaire was formulated to ensure that all questions were clear to ensure confusion did not occur when requesting answers to all questions. The terms used throughout the questionnaire were relatable to teachers delivering online classes at the college.

Privacy of Participant

To protect the privacy of the participants, the data was collected will be disseminated in aggregate form. In the questionnaire, the researcher did not ask for the participants to provide their names in order to keep all information confidential. The information collected will be kept for the use of this research only. The participants will be informed of any changes to the risk or benefits of the study. The identity of the participant will not be revealed, however only their responses will be used in the research. The raw data collected will be stored in the Statistical Package for Social Sciences and only the researchers can view and access the information.

Results

Due to Covid-19 statutory regulations the questionnaires were sent out via emails by the researchers, to all teachers at the Toledo Community College, asking to participate in the research. A total of 53 teachers (43.4% females, 47.2% males and 9.4% prefer not to say) participated in the research as shown in Diagram 1 under the measurement model. The ages ranged from 20-50 as shown in Figure 2 below, however the majority of the participants ranged from 20-30.

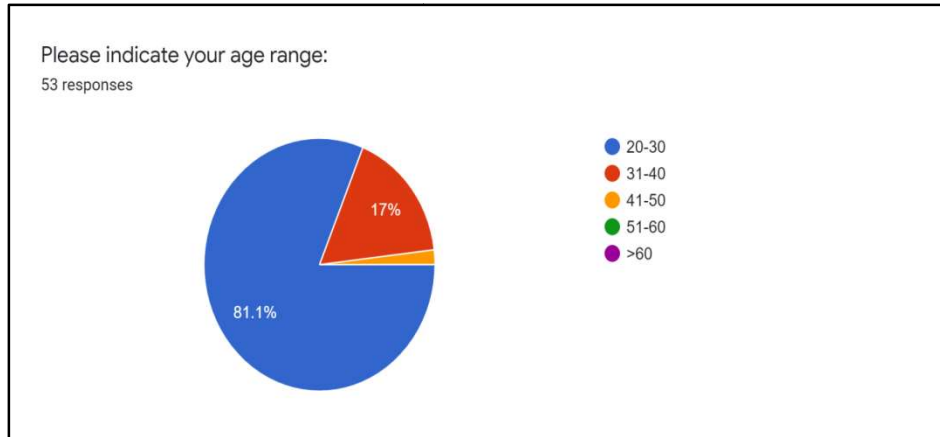
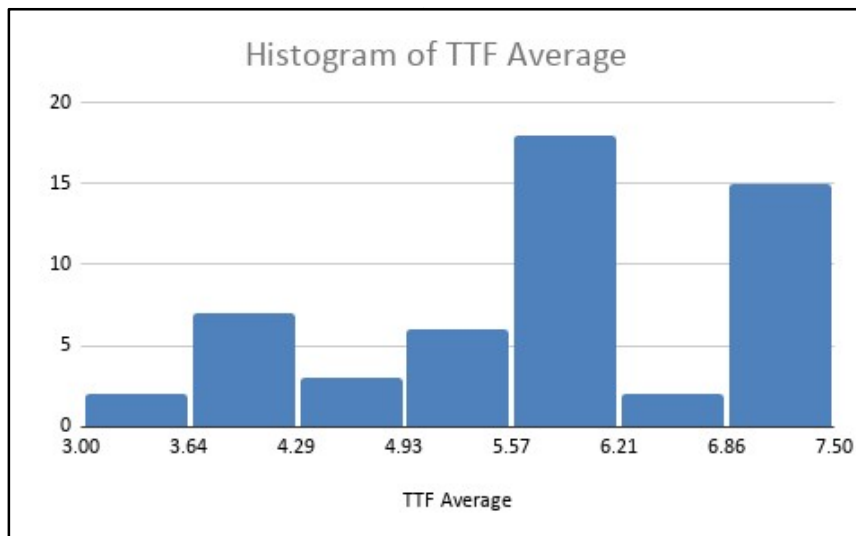


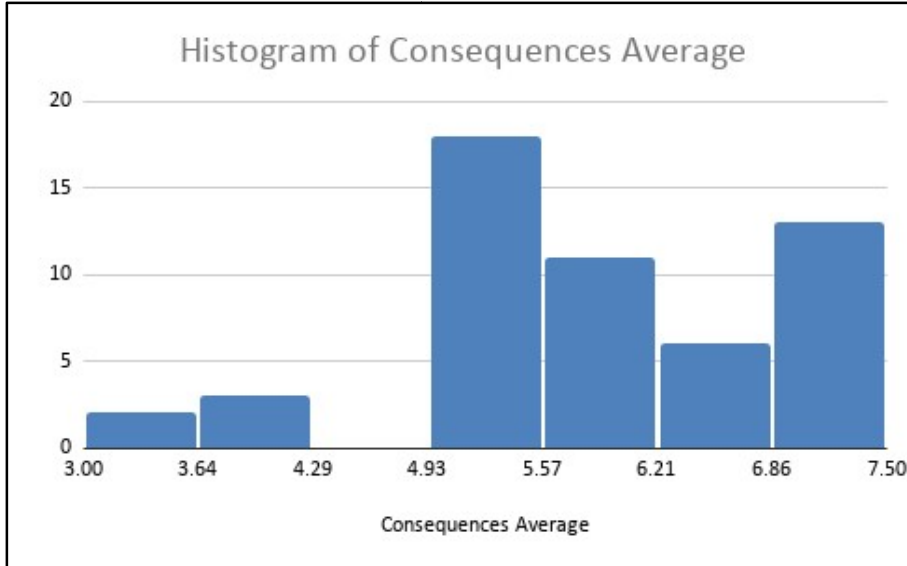
Figure 2: Age ranges

The questionnaire consisted of seven (7) sections, however, the focus was on the four (4) constructs which is Task-Technology fit, Expected Consequences of LMS Use, Perceived Impact on Teaching and Consumerization Attitude. The information gathered will be represented using histograms displaying the results of the questionnaire.



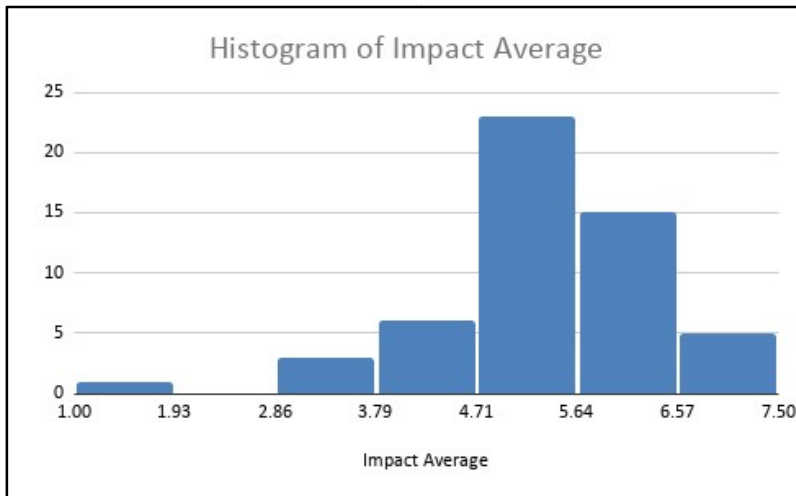
Histogram 1: Task-Technology Fit

The average for task technology fit shows that the participant's greatest average is between 5-6 and the second highest is at 7, where they were asked on the use of the Learning Management Use. This would mean that majority of the participants finds it compatible in using the Learning Management System for online teaching.



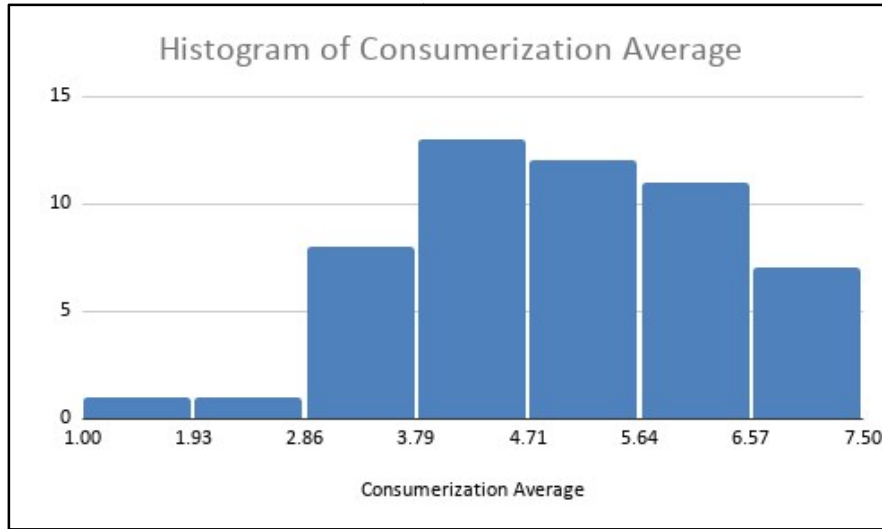
Histogram 2: Expected Consequences of LMS Use

The above histogram shows that the greatest average of participants is somewhere in between or considered a neutral figure and would that mean that it is expected that the Learning Management System can better prepare and improve their quality of online teaching using LMS.



Histogram 3: Perceived Impact on Teaching

The histogram shows that LMS has a perceived impact on a fair average number of participants that ranges from 4.71-5.64 that definitely shows that there are areas of opportunities to improve their online teaching.



Histogram 4: Consumerization Attitude

This last histogram shows positive data presented on the average for the consumerization attitude towards the use of LMS. The average number is almost equal across the board which certainly shows that LMS has positively impacted and equipped them for online teaching; however there would be areas of opportunities to improve.

Discussion

As stated before, the purpose of the research study that was conducted serves to gather the necessary information needed in order to complete the research on the Learning Management System at Toledo Community College. The study included a survey that would collectively identify each lecturers' perception at the Toledo Community College concerning the status of the school's Learning Management System. The school's Learning Management System at the time was in use to deliver classes to students who were either enrolled within each of the five different school departments. These departments included general studies, arts, business, science and the vocational department. The survey was provided to the school's teachers from each department providing online classes via email and social media.

The results collected of the survey were later analyzed, tabulated and summarized with the use of the descriptive statistical data analysis which was used to describe the basic features of the data collected whilst conducting the survey. The data was interpreted and came together in order to reveal the main findings from the results of the survey. For this survey, 53 teachers from the Toledo Community College participated and as a result there seems to be more teachers that are in the age range of 20-30 than 31-50. In terms of technology, this is a good sign as the majority of the younger generations are technophiles meaning that they are more capable of working and being flexible with technology as opposed to the older generation.

In reference to the histogram showing the average participants who found Task Technology Fit compatible and useful in the distant learning setting, the majority of the population size agrees that technology aids in their functionality of their Learning Management System. If the majority of lecturers found major use from this method of online teaching then their implications may result in a successful online teaching environment. However, the histogram for the consequences average showed rather a neutral average of participants. Although the distant learning method of teaching has been very useful, there is no question that the quality of online teaching using the Learning Management System can be immensely improved. Certain aspects such as increasing student engagement and building a personal connection with the students have yet to be improved. Furthermore, discussions should be more meaningful when operating an online meeting for the class sessions as not to make the sessions more efficient and effective. These simple changes would without a doubt go a long way, as in regards to the histogram of the impact average a fair amount of the population size, meaning, that there is much to take

in when deciding on improvements of a number of aspects that need to be improved for online teaching. Lastly, the histogram for the consumerization average illustrates a positive attitude towards the use of Learning Management Systems. Majority of the population agree that the distant learning method has had a positive impact in their change of teaching style. The distant learning has equipped the teachers with much more experience and teaching techniques. However, there are still areas of opportunities that need to be worked on for improvement.

Conclusion

Taking a look at the results of the study, there has been a considerable variation of the responses from the lecturers on their general perception about the distant learning method. The results provide evidence that the lecturers using the Learning Management System have found it useful but there is still room for major improvements. It is believed that what distant learning is lacking as opposed to the traditional way of teaching is the ability of keeping student engagement, building personal relationships with the students and using the time period of the class time wisely to make meaningful discussions. Students are not being much responsive in terms of distant learning. Teachers may ask a question during a zoom meeting and most of the students stay quiet without saying a word. Teachers are supposed to motivate students to participate during the class sessions in order for active learning to take place. For example, teachers may encourage students to participate by offering extra points towards their final grade to those who participate during class sessions. This way, the more students participate this will allow students and the lecturers to build personal relationships as there is more communication between them. Regarding meaningful discussions, teachers should spend time teaching students about study skills and practices such as extracting the necessary notes from the textbook or what exact notes to take down during class sessions. In this manner, students will be more prepared for examinations and feel confident when taking them.

Limitations

One of the main limitations during the time of conducting the study was the unavailability of conducting interviews and focus groups. During the Covid-19 pandemic physical interactions have been limited which is why this study had to stick with online surveys which were sent to the lecturers through email. The sample was also homogeneous as solely lectures from a prestigious secondary school participated in the survey. Therefore, the results are not generalized as opposed to conducting the same survey in a rural community where technology is more limited. For future reference, further research should be conducted in rural school areas in order to diversify the outcomes of the study and determining their difficulty about how they operate through distant learning.

Whether we accept it or not, distant learning has become the new norm during this time due to the Covid-19 Pandemic and the limitations of social interactions that come with it. The study provided clear evidence that the Learning Management System has been quite useful when used to deliver academic lessons to students while staying at home. There are some aspects about distant learning that can be improved to optimize the learning process. However, with time certain aspects will improve to the point that both teachers and students alike will feel motivated and competent to take on distant learning.

Recommendation

Recommendations for further studies would be to conduct more in depth research in southern district of the country to help identify the impact of Learning Management Systems and how best to improve the quality of online teaching using LMS. In addition, studies should investigate and clearly outline all the features that Google App Suite offers and rate their satisfaction in order to have a better understanding in the areas that requires improvements. Further recommendations are to gather more international studies that particularly target the satisfaction of lecturers with each feature that are both tested for their effectiveness and efficiently for the college and the students.

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Appendix

Consent Letter



Hummingbird Avenue
P. O. Box 340, Belmopan
Belize, Central America

From: Kieran Ryan
cc: Mr. Steven Lewis
Chair, MPIT Department UB
Date: 1/18/2021
Re: University of Belize Research

Dear Sir/Madam,

Good day, my name is Kieran Ryan. I am an Assistant Professor at the University of Belize, Faculty of Science and Technology and I teach business students a course called Management Information Systems. The course requires students to complete a research paper as their final project.

The research is to measure the success of a functional information system at an organization. It asks users of the system about their attitudes towards the system utilizing a survey. No confidential information will be collected. Students need to collect between thirty and fifty surveys. The feedback of the research can be presented to you or your organization. It would inform your organization if the users believe the system is successfully meeting their needs and if not how it can be improved.

Thank you for your time.

Sincerely,



Kieran Ryan, PHD
Assistant Professor
University of Belize

Questionnaire - Task Technology Fit – Teachers (Toledo Community College)

MIS Research - Task Technology Fit - Lecturers Perceptions of Learning Management Systems

Background Information

Dear Participant,

We the students from Faculty of Management & Social Sciences at the University of Belize are conducting a research study to determine a lecturer's perceptions on Learning Management Systems currently being utilized at their institution.

We are requesting your participation, which will involve answering a few questions on this topic. This questionnaire will take 5-10 minutes of your time to complete. Your participation in this study is voluntary. If at any time you discontinue the questionnaire, your results will be discarded. The results of the research study may be published; however, your identity will remain confidential.

If you have any questions, feel free to ask. Thank you for your time.

TTF



**Management Information Systems
Research**

Please complete this form:

- a. To gather empirical evidence of your perceptions on Google App Suite.
 - b. To fulfill the university's mission by publishing academic research papers.
-

Background Information	
Please indicate your gender.	<input type="checkbox"/> Female <input type="checkbox"/> Male <input type="checkbox"/> Prefer Not to Say
Please indicate your age range.	<input type="checkbox"/> 20-30 <input type="checkbox"/> 31-40 <input type="checkbox"/> 41-50 <input type="checkbox"/> 51-60 <input type="checkbox"/> >60
Please indicate your highest degree attained.	<input type="checkbox"/> Associates <input type="checkbox"/> Bachelors <input type="checkbox"/> Masters <input type="checkbox"/> Phd <input type="checkbox"/> MD
Please indicate the department you teach in.	<input type="checkbox"/> Arts <input type="checkbox"/> Science <input type="checkbox"/> Vocational <input type="checkbox"/> Business <input type="checkbox"/> General studies
Please indicate which Learning Management System (LMS) you have used:	<input type="checkbox"/> Moodle <input type="checkbox"/> Google App Suite <input type="checkbox"/> Other _____

Indicate your agreement with each statement by rating it from (1) strongly disagree to (7) Strongly agree.

Teaching Preferences	
I prefer teaching face to face rather than online.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
I am more effective teaching face to face than online.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
Students learn more in my face to face classes than online.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
I would want to teach some online courses after the college resumes face to face teaching.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
I would want to teach all my courses online after the college moves back to face to face teaching.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
I would not want to teach any online courses after the college moves back to face to face teaching.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>

Prior Learning Management System (LMS)	
Please state the number of semesters you have used Google App Suite.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> >6 <input type="checkbox"/>
I used Google App Suite to facilitate teaching face to face classes prior to the school's move to online	<input type="checkbox"/> Yes <input type="checkbox"/> No
I have taught classes utilizing an LMS other than Google App Suite	<input type="checkbox"/> Yes <input type="checkbox"/> No
How many semesters have you taught using an LMS other than Google App Suite.	0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> >4 <input type="checkbox"/>
I used an LMS other than Google App Suite to facilitate teaching face to face classes (prior to online delivery)	<input type="checkbox"/> Yes <input type="checkbox"/> No
I plan to continue using Google App Suite to enhance my teaching after we return to face to face teaching.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
I would like to continue using my preferred LMS to enhance my teaching after we return to face to face teaching.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>

Task-Technology Fit	
Google App Suite fits well with the way I like to teach online.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
Google App Suite is compatible with all aspects of my online teaching.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
Google App Suite is easy to use.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
Google App Suite is user friendly.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
It is easy to get Google App Suite to do what I want it to do.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
Google App Suite is easy to learn.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
It is easy for me to become more skillful at using Google App Suite.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
New features of Google App Suite are easy to learn.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
Do you think the output from Google App Suite to the students is presented in a useful format?	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
Can you provide accurate information to your students with Google App Suite?	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
Can you provide up-to-date information to your students with Google App Suite?	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
Can you provide information students need in time using Google App Suite?	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
Can you provide information that seems to be just about exactly what your students need with Google App Suite?	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>

Expected consequences of LMS use	
Using Google App Suite will help me to accomplish my online teaching more quickly.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
Using Google App Suite will help me to accomplish my online teaching more quickly.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
Using Google App Suite will improve my online teaching performance.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
Using Google App Suite will increase my online teaching productivity.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
Using Google App Suite will enhance my effectiveness as a teacher while teaching online.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
Using Google App Suite will make it easier to complete my teaching tasks while teaching online.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
Using Google App Suite will give me greater control over my teaching tasks while teaching online.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
Overall, I think that Google App Suite will be useful in my ability to teach online.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
Using Google App Suite will improve the quality of my online teaching.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>

Perceived Impact on Teaching	
Google App Suite has a large positive impact on my effectiveness and productivity as an online teacher.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
Google App Suite is an important and valuable aid to me in my online teaching.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
I teach better online with Google App Suite than without it.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>

Consumerization Attitude	
If I could choose my own Learning Managements System it would fit well with teaching online.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
If I could choose my own Learning Managements System it would fit well with helping me to be efficient in teaching online.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
If I could choose my own Learning Managements System it would be compatible with my online teaching.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
If I could choose my own Learning Managements System my online teaching performance would improve.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
If I could choose my own Learning Managements System I would work faster while teaching online.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>