

Lecturers' perceptions on the usage of Microsoft Teams to conduct online learning at the Corozal Community College

Ulani Escobar

University of Belize
Hummingbird Avenue, Belmopan
2020151756@ub.edu.bz

Rosalinda Fuentez

University of Belize
Hummingbird Avenue, Belmopan
2017117216@ub.edu.bz

Racquel Escalante

University of Belize
Hummingbird Avenue, Belmopan
2012110533@ub.edu.bz

Delcia Flowers

University of Belize
Hummingbird Avenue, Belmopan
2020153224@ub.edu.bz

Irma Galdamez

University of Belize
Hummingbird Avenue, Belmopan
2010110712@ub.edu.bz

Abstract

Educational institutions across the world have closed due to the COVID-19 pandemic jeopardizing the academic calendars. Most institutions have shifted to online learning platforms to keep academic activities going. However, the questions about the preparedness, designing, and effectiveness of e-learning are still not clearly understood, particularly for a developing country like Belize, where the technical constraints like suitability of devices and bandwidth availability possess a serious challenge. Microsoft Teams as an innovative online learning platform provides unique features to enhance its potential to help CCC lecturers conduct better interaction while facilitating a positive online learning environment. This research aimed at exploring teachers' perceptions of online learning via Microsoft Teams. The study was conducted with twenty-eight teachers at the Corozal Community College. Data was collected by using surveys and was distributed to the teachers through google forms. The data obtained was analyzed descriptively. The findings of the research revealed that online learning via Microsoft Teams is categorized as something new for the teachers but this interaction and learning environment motivates them to participate in online learning, as a result, they can easily comprehend teaching materials and can better equip students with information.

Keywords: E-learning, Microsoft Teams, lecturers, online learning platforms

Introduction

With the COVID-19 disease spreading across the globe, many countries have ordered closure of all educational institutions. Educational institutions have come to a functional standstill since they had to protect their students from viral exposures, which are likely in a highly socializing student community. In the beginning of February 2020, schools only in China and a few other affected countries were closed due to the proliferating contamination. However, by mid-March, nearly 75 countries had implemented or announced the closure of educational institutions. As of 10th March, school and university closures globally due to the COVID-19 pandemic has left one in five students out of school. According to UNESCO, by the end of April 2020, 186 countries have implemented nationwide closures, affecting about 73.8% of the total enrolled learners. (UNESCO, 2020) Even though the lockdown and social distancing are the only ways to reduce the spread of COVID-19, by breaking the chain of transmission, closure of educational institutions has affected a large number of students.

As the schools and colleges are shut for an indefinite period, both educational institutions and students are experimenting with ways to complete their prescribed syllabi in the stipulated time frame in line with the academic calendar. Nevertheless, COVID-19 has been a trigger for educational institutions worldwide to pursue creative approaches on relatively short notice. During this time, most of the educational institutes have shifted to online mode using Blackboard, Microsoft Teams, Zoom, or other online platforms. The educational institutions in affected areas are seeking stop-gap solutions to continue teaching, but it is important to note that the learning quality depends on the level of digital access and efficiency. The online learning environment varies profoundly from the traditional classroom situation when it comes to learner's motivation, satisfaction, and interaction (Bignoux & Sund, 2018). The Community of Inquiry (COI) framework offers a convenient baseline for intervening in online teaching and learning (Garrison et al., 2001). According to COI framework, the success of web-based instruction is determined by creating a learners' group. In this group (analogous to the traditional classroom situation), learning happens through three interdependent elements: (1) social presence, (2) cognitive presence, and (3) teaching presence. A study by Adam et al. (2012) argued that there was no significant difference between online learning and face-to-face class with regard to their satisfaction and also, they supported the fact that online classes will be as effective as traditional classes if it is designed appropriately. These facts clearly show us that online learning is a perfect substitute for the traditional classroom learning if it is designed suitably.

Educational institutions in Belize have also made a transition to an online teaching environment soon after Government's decision to close schools on March 20, 2020 with tentative resumption on April 20, 2020, which was later extended for an uncertain day for reopening of schools. As one of the educational institutions, Corozal Community College (CCC) has responded to this situation wisely. CCC using supporting applications, namely the zoom application, WhatsApp, Google classroom, Moodle, and Microsoft Teams was able to give continuity in the learning process to teachers and students. Through various considerations, CCC chose the Microsoft Teams application as the main application to use to conduct online learning during the pandemic.

Microsoft Teams is a communication platform that is integrated with Microsoft office 365. This application provides features for meetings, video conferencing, file storage and offers easy access for its users. Users can create virtual classes and manage the class like a real class, in which students can interact with fellow students and teachers in a virtual setting. This interaction can be done through online class meetings, chats, posts, and online assessments. Microsoft Teams also guarantees the security of application user data. The features and conveniences provided by Microsoft Teams make this application very suitable to be used as a medium to carry out online learning. Microsoft Teams application is a new experience for CCC students and lecturers; therefore, they need to adapt to these circumstances. As per the results, online learning process is running effectively and efficiently but at a reduced rate. The results of this study are expected to help lecturers to improve the quality of online teaching using the Microsoft Teams application. The research found that most teachers have a positive perspective on teaching using Microsoft Teams.

The results of the study are important for educational institutes like CCC for two main reasons. Firstly, the shift to online mode has been an abrupt one due to unprecedented lockdown imposed to manage the COVID-19, and the institutions did not have time to design and adopt the course contents for online mode.

Second, even after lockdown is revoked, life after the COVID-19 pandemic will not be like before and online learning is here to stay, though in combination with regular offline classes. There is uncertainty about the length of the pandemic and chances of reinfections, the social distancing can become a new normal. Therefore, all educational institutions need to be prepared to shift the majority of the course content to e-learning platforms and modify the course structure and curriculum suitably. The results of the study can be an important input in deciding on the learning environment in online platforms to promote effective learning. In the next section, we provide a brief review of literature followed by the data and methods section where we describe the methodology used in the study. Then, we discuss the results and the implications followed by concluding remarks of the study.

Literature Review

Information Systems have become an integral aspect of modern education. An information system is a collaborative effort in an educational institution. When the tool benefits learning, it benefits teaching and vice versa. Its major goal is to facilitate student learning, online teaching, and parental involvement. An information system is described as the collection of hardware, software, data, people, and procedures that work together to produce quality information. These information systems provide opportunities to improve student learning by providing alternate ways for learners to use technology in learning environments (Shelly, Cashman, Vermaat, Discovering Computers 2007) Management capabilities are also enhanced in the perspective of lecturers since online teaching is amplified to allow lecturers in finding more creative ways to teach.

Goodhue and Thompson's model is focused entirely on the ability to support and engage students in a wide range of activities while accommodating their needs and capabilities as students. This includes conducting online quizzes & tests, accessing course materials, and communicating with instructors. "Goodhue and Thompson (1995) proposed that an explanation of information systems success needs to recognize both the task for which the technology is used and the fit between the task and the technology." (McGill & Klobas, 2008) The report mentioned that this model directly impacts performance and indirectly impacts utilization. It argues that for an IS to positively aid performance, it must be in line with the tasks that are intended to support it. Applying such a model to e-learning makes it a collaborative work environment between all users.

The report on Extending the task-technology fit model with self-efficacy constructs by Mark Dishaw, Diane Strong & D. Brent Bandy compares the relationship between the Task-technology Fit Model (TTF) and the Technology Acceptance Model (TAM). It mentions that both models were combined to facilitate and capture two different views of users. TAM assumes that users' beliefs and attitudes toward a particular IS greatly determine whether users exhibit the behavior of using the IS. TTF takes on a rational approach by assuming that users choose to use IS that provides benefits, such as improved job performance, regardless of their attitude towards the IS (Goodhue 1995). In the combined model, TTF constructs both serve as antecedents to the TAM model constructs, Perceived Usefulness and Perceived Ease of Use, and also as direct effects on software Utilization. (Dishaw. M, Strong. D, Bandy. D, 2002)

The paper 'LMS Use and Instructor Performance: The Role of Task-technology fit' written by McGill, T., Klobas, J. and Renzi, S. (2011) contributes greatly to the idea of the TTF model. This paper uses Goodhue and Thompson's (1995) technology-to-performance chain (TPC) to explore the roles of task-technology fit (TTF) and level of LMS use in the performance impacts of LMS for instructors. The findings revealed that TTF directly affects instructors' perceptions of the LMS impacts on their performance. This suggests that the better the fit of an LMS to the skills and tasks of an instructor, the more positive its effect will show in performance levels. Learning Management Systems are widely used in schools worldwide (Browne et al., 2006). While individual usage is high, it is primarily confined to simple uses such as distribution of teaching materials; fewer than 10% of instructors use LMS to support active social or collaborative learning online (Becker & Jokivirta, 2007; OECD, 2005).

Accessibility of mobile wireless technology influences the development of mobile learning substantially (So, 2016). The task-technology fit may be assessed by considering the individual's satisfaction level of the extent to which a system's operational activities meet his/her task needs as an individual (Goodhue, 1998; Mpekoa and Bere, 2015). It explains to readers that the TTF model involves the relationship between task requirements, individual abilities, and a functional mobile technology system. Task characteristics have a positive influence on task technology fit aiding both students and lecturers.

The Issac, Aldholay Abdullah & Ramayah research demonstrates the advantages of online learning using the task-technology fit model. Online learning is defined as the use of digital gadgets such as (desktop computers, laptops, tablets, and smartphones) to deliver instructions using the internet (Clark & Mayer, 2016). The advantages of online learning spread to wide aspects, among the first is the convenience and flexibility and is not limited to developing countries alone. Online learning provides schedule flexibility where students can access at any time and are available whenever they want which makes it easy to access (Aldholay, Isaac, Abdullah, Abdulsalam, & Al-Shibami, 2018). Online learning is a great convenience for students all over the world since some institutions provide a wide range of programs & degrees where students can complete at the comfort of their home. Students will have the opportunity to interact with a bigger base of learners and communicate effectively and will have the needed amount of time to absorb the information. (Aldholay, Isaac, Abdullah, & Ramayah, 2018)

Based on all research papers gathered, having an Information System implemented in an institution has proven its success using the task-technology fit model. TTF in developing countries, learning management systems, and in education, each contribute immensely to Goodhue and Thompson's model.

Methodology

The Corozal Community College has incorporated the use of Microsoft teams as part of their institutions' e-learning platform. The use of this LMS is for the institution to be able to operate and keep providing quality education. Microsoft teams help in providing the students with all necessary materials such as notes, quizzes, tests, grades, and lessons. It allows the lecturers to conduct face-to-face meets and prepare schedules. Goodhue and Thompson's (1995) Task Technology Fit Model state that the use of information technology would most likely have a positive impact on individual performance especially if it can be used to perform all the user's tasks. Therefore, it is the reason for this research as Microsoft teams is analyzed for its efficiency and impact on the teachers of CCC. Said model was used to perform analysis. The model consists of 4 areas that are included in this research as it was also used to create the survey.

- Task Technology Fit: Is the degree to which a technology assists an individual in performing his or her portfolio of tasks (Goodhue & Thompson, 1995). Furthermore, this analysis is based on how Microsoft teams being the learning management system is an excellent technology for lecturers as it allows them to do all their required lessons and provide students with all the information necessary for a successful education.
- Expected Consequences of LMS use: Making use of an LMS comes along with many assumptions of how it should benefit one and improve the users' job productivity. These expectations that come along with using an LMS is said to come from the lecturers' norms and not from social norms (Tanya. M & Jane. K, 2008).
- Perceived Impact on teaching: Perceived fit motivates learners to continue using LMS's as it is described as a person-technology compatibility (Lin & Wang, CH, 2021). In addition, it was discovered that it is so; many responses were that Microsoft teams makes them more productive as they feel that it enhances the way they teach. In addition, proving the point that these lecturers teaching schemes have been impacted using technology.
- Consumerization Attitude: Teachers have their own way of teaching and the lecturers of the Corozal Community College are like no other; most of them have been making use of technology way before it became mandatory. However, we have now discovered that they feel that using Microsoft teams

increase their job performance and made it somewhat easier. At the same time, they have certain expectations of how an LMS should function. So many believe that if they choose their own LMS that can function up to their expectations they would teach even better.

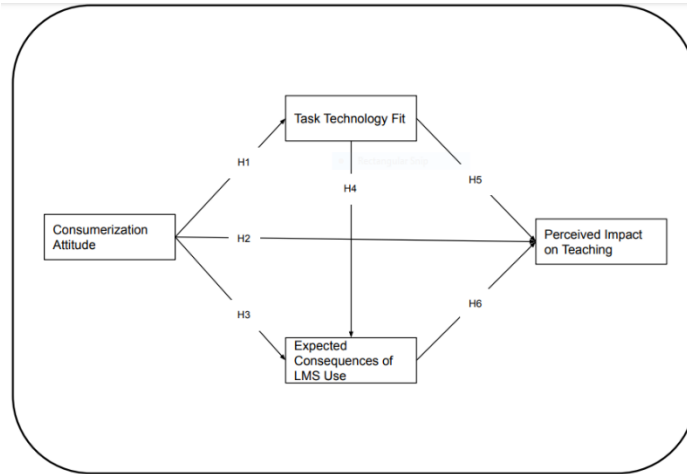


Figure 1: Goodhue and Thompson's IS Model

The Figure above shows the hypothesis relationship between the model and how the use of an LMS like Microsoft teams can have an impact on the learning environment. Also, how the user's attitude is very important as it shows what they expect to get from making use of it. Moreover, it can change the way the user is accustomed to teaching as it can make them want to find ways to incorporate it into the learning environment full time.

Hypothesis:

H1: Consumerization attitude will negatively influence perceived task-technology fit.

H2: Consumerization attitude will positively influence perceived impact on teaching.

H3: Consumerization attitude will negatively influence expected consequences of LMS use.

H4: Task–technology fit will have a positive influence on expected consequences of organizational LMS use.

H5: Task–technology fit will have a positive influence on perceived impact on teaching.

H6: Expected consequences of LMS use will positively influence perceived impact on teaching.

Construct Measurement:

The way this research was completed and carried out was with the use of a survey. As this survey was carefully prepared to be able to collect the necessary data, it was done in accordance with Goodhue and Thompson's TTF Model (1995). After completion, it was distributed through email to the list of teachers. We then waited for a response which took about two weeks.

Table 1: Measurement Items for Survey

Construct	Survey Questions	Source
Task Technology Fit	TTF1: Microsoft teams fits well with the way I like to teach online. TTF2: Microsoft teams is compatible with all aspects of my online teaching. TTF3: Microsoft teams is easy to use. TTF4: Microsoft teams is user friendly. TTF5: It is easy to get Microsoft teams to do what I want it to do. TTF6: Microsoft teams is easy to learn. TTF7: It is easy for me to become more skillful at using Microsoft teams. TTF8: New feature of Microsoft teams are easy to learn. TTF9: Do you think the output of Microsoft teams to the students is presented in a useful format. TTF10: Can you provide accurate information to your students with Microsoft teams. TTF11: Can you provide up-to-date information to your students with Microsoft teams. TTF12: Can you provide information students need in time using Microsoft Teams. TTF13: Can you provide information that seems to be just about exactly what your students need with Microsoft teams.	Goodhue and Thompson (1995)
Expected Consequences of LMS	EPC1: Using Microsoft Teams will help me to accomplish my online teaching more quickly. EPC2: Using Microsoft Teams will improve my online teaching performance. EPC3: Using Microsoft Teams will increase my online teaching productivity. EPC4: Using Microsoft Teams will enhance my effectiveness as a teacher while teaching online. EPC5: Using Microsoft Teams will make it easier to complete my teaching tasks while teaching online. EPC6: Using Microsoft Teams will give me greater control over my teaching tasks while teaching online. EPC7: Overall, I think that Microsoft Teams will be useful in my ability to teach online. EPC8: Using Microsoft Teams will improve the quality of my online teaching.	Staples and Seddon (2014)
Perceived Impacts on teaching	PIF1: Microsoft Teams has a large positive impact on my effectiveness and productivity as an online teacher. PIF2: Microsoft Teams is an important and valuable aid to me in my online teaching. PIF3: I teach better online with Microsoft Teams than without it.	Lin and Wang (2012)
Consumerization Attitude: Perceived Impact / Expected performance improvement	PF1: If I could choose my own Learning Management System it would fit well with teaching online. PF2: If I could choose my own Learning Management System it would fit well with helping me to be efficient in teaching online. PF3: If I could choose my own Learning Management System it would be compatible with my online teaching.	Dishaw and Strong (1999)

	EPI4: If I could choose my own Learning Management System my online teaching performance would improve. EPI5: If I could choose my own Learning Management System I would work faster while teaching online.	
Table 1: Measurement Items for Survey		

The table above shows the research measures along with the questions that were included in the forum for the respondents based on the learning management system that the Corozal Community College is using for online learning.

Sampling and Data Collection

The data collected for this research was acquired through the teachers from the Corozal Community College. “Cluster sampling” is the method used to conduct this research as it allows the population to be split in groups and chosen to participate. A total of 28 surveys were answered which is equivalent to about 80% of the lecturers.

The table below shows all the details of the respondents. The most common gender in this survey was the females, accounting for 57.14 percent of the total sample. Almost all lecturers at the high school are from the ages of 20-40 years. The most dominant level of education that these teachers hold is a bachelor’s degree and about 28% of them are from the science department.

Table 2: Characteristics and results of the Respondents

Details	Number	Percentage
Gender		
Female	16	57.1%
Male	12	42.9%
Age		
20 -30	8	28.6%
31 - 40	8	28.6%
41 - 50	12	42.9%
Education Level		
Associates Degree	2	7.14%
Bachelor’s Degree	18	64.29%
Master’s Degree	6	21.43%
PHD	2	7.14%
Department		
Math	4	14.3%
Science	8	28.6%
Counselling	4	14.3%
Social Studies	4	14.3%
Business	4	14.3%
Communications	4	14.3%
Table 2: Characteristics and results of the Respondents		

Data Analysis & Discussion

The research was based upon using the Goodhue and Thompson's Task Technology Fit Model using the four constructs. These are: Task Technology Fit, Expected Consequences of LMS use, Perceived Impact on Teaching, and Consumerization Attitude. In the context of survey research, a construct is an abstract idea, underlying theme, or subject matter that one wishes to measure using survey questions. (Lavrakas, 2021). They explain how and why certain phenomena behave the way that they do.

Applied research follows since no hypothesis testing was done. Hypothesis testing is used to assess the plausibility of a hypothesis by using sample data. A series of histograms will be utilized to forecast the results from the lecturers. The averages of each construct were used to formulate the histograms.

The data was acquired from an Educational Institution whereby about 75% of the surveys were answered. The four constructs in the survey were analyzed with the usage of Google Sheets. A 7 point Likert scale was applied with questions on a continuum from strongly disagree to strongly agree. A Likert scale assumes that the strength/intensity of an attitude is linear and makes the assumption that attitudes can be measured. These charts will help to evaluate the success of Microsoft Teams at the Corozal Community College.

Construct #1 – Task Technology Fit

Goodhue defines task-technology fit (TTF) as the degree to which technology assists an individual in performing his or her tasks. Performance impacts from information systems are difficult to measure directly. For this reason, many information systems researchers and practitioners rely on surrogate measures of IS success, such as user evaluations. Goodhue and Thompson (1995) utilized user evaluations to measure task-technology fit. Their instrument was based on TTF dimensions such as quality, locatability, authorization, compatibility, ease of use/training, production timeliness, systems reliability, and relationship with users. (Goodhue & Thompson, 1995).

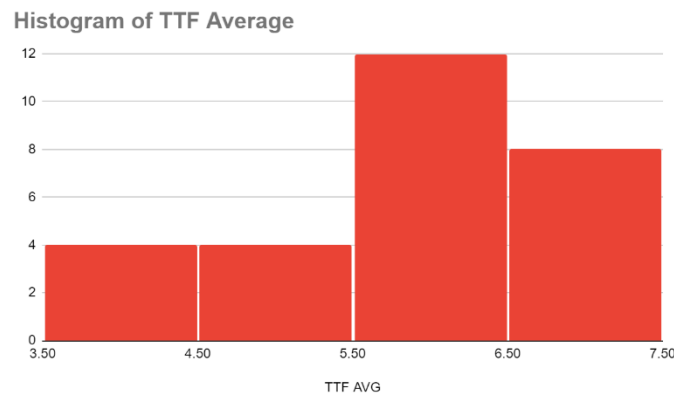


Figure 2. Histogram depicting TTF Averages

Using the above histogram, it can be said that the usage of Microsoft Teams to conduct online learning at the Corozal Community College is advantageous to lectures. Older lecturers who are not really acquainted with computer & internet knowledge and that are used to face-to-face can be said to be the ones that responded very low. With practice and time, they are sure to increase the scale. Lecturers that responded highly using 6's and 7's are well acquainted with computer and internet knowledge. These are the lecturers that find minimal fault using Microsoft Teams. They agree that Microsoft teams is user-friendly, compatible with the way they teach online, and how prompt they can get information to students using this information system. More than 50% of the respondents found Microsoft teams to be very applicable to their daily lives with online teaching.

Figure 1. Histogram depicting Task Technology Fit Averages

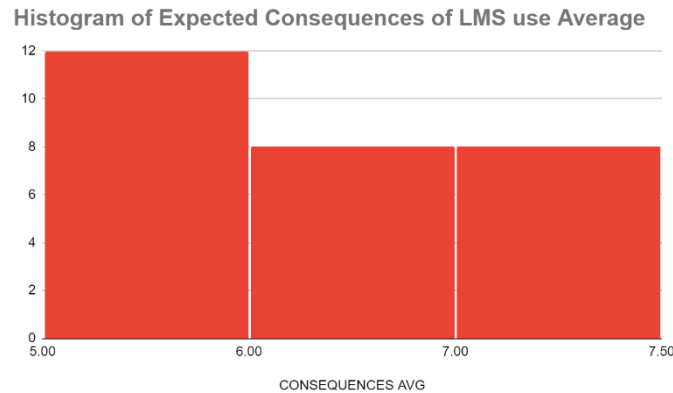
Construct #2 – Expected Consequences of LMS Use

Figure 3. Histogram depicting Expected Consequences of LMS Use Averages

This construct is focused on figuring how effective Microsoft Teams is to conduct online teaching. As shown, five was the highest choice answered. It signifies that the lecturers still suffer some kind of difficulty using Teams. We did not get an answer below five which is excellent and shows that even older lecturers, despite consequences, still manage to be productive using the information system. 'Using Microsoft Teams will improve my online teaching performance' was the question where over 80% of the respondents answered with a seven using the Likert scale.

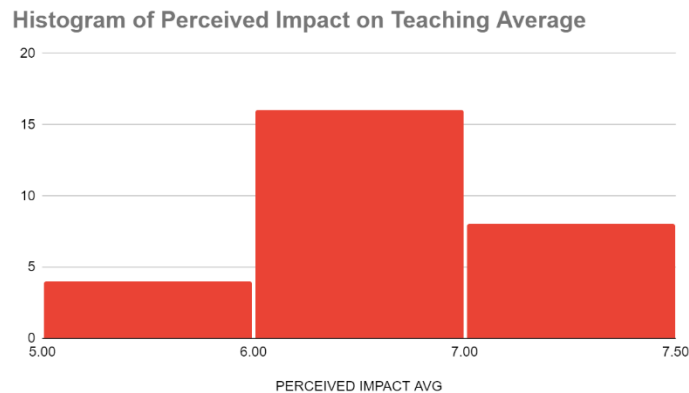
Construct #3 – Perceived Impact on Teaching

Figure 4. Histogram depicting Perceived Impact on Teaching Averages

Construct 3 is based on the positive or negative impact Microsoft teams has on lecturers and the way they conduct their online teaching. Again, no responses below five were received which shows already how efficient Microsoft Teams can be. With all responses received, the most favorable response was with regards to the question that Microsoft Teams is an important and valuable aid to the online teaching of lecturers. An average choice of six was chosen which denotes that lecturers believe there is a positive impact while using this information system to provide online learning to students.

Construct #4 – Consumerization Attitude

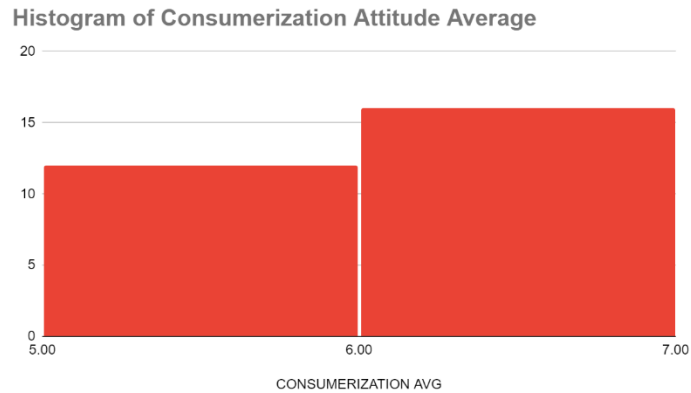


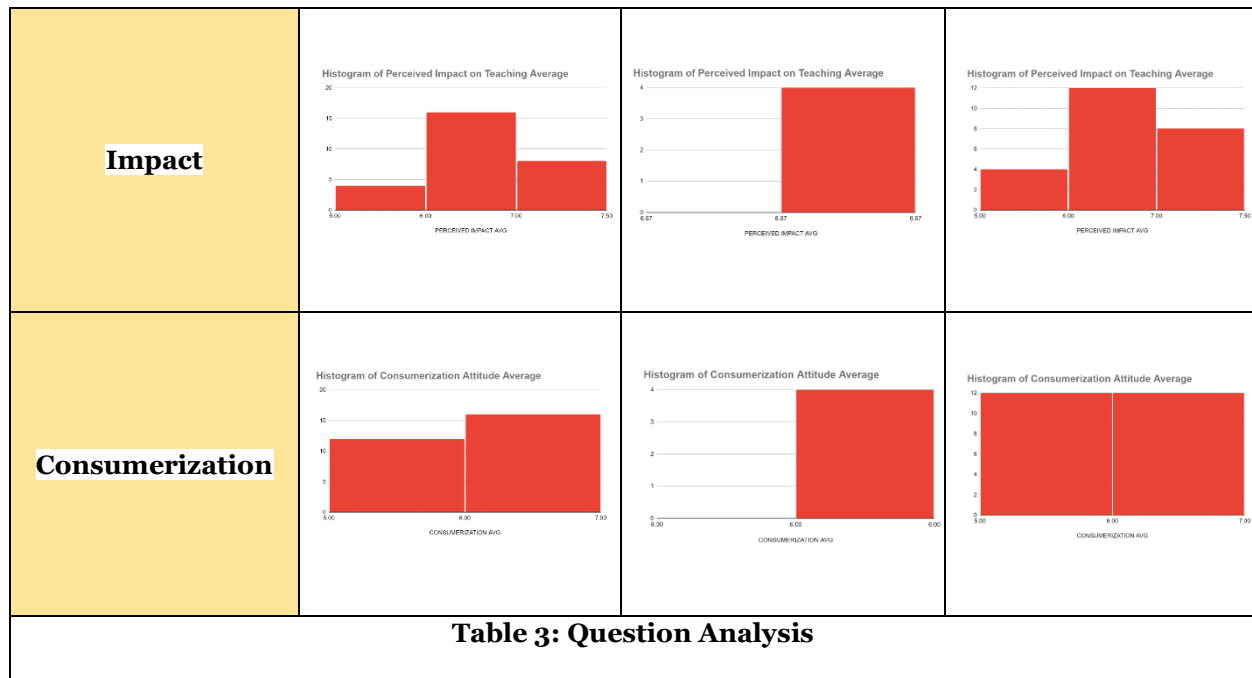
Figure 5. Histogram depicting Consumerization Attitude Averages

The final construct reflects the Perceived fit or Expected Performance Improvement. As much as how beneficial Microsoft Teams can be, lecturers believe that if they can choose their own information system to conduct online teaching, they would adapt to it easily and make sure that whatever Information system they are using is compatible with the way they teach online. The highest responses received were 6's and 7's where lecturers conclude they can take up the challenge to use their own form of IS that can still be beneficial to current and aspiring students.

Discussion

Question Analysis – “I have taught classes utilizing an LMS other than Microsoft Teams.”

	All Respondents	Microsoft Teams Only	Microsoft Teams +
TTF	Histogram of TTF Average	Histogram of TTF Average	Histogram of TTF Average
Consequences	Histogram of Expected Consequences of LMS use Average	Histogram of Expected Consequences of LMS use Average	Histogram of Expected Consequences of LMS use Average



The table above is focused on the question analysis ‘I have taught classes utilizing an LMS other than Microsoft Teams.’ The first column illustrates all the responses regarding each construct. The second column which represents the ‘No responses’ was analyzed to figure out if lecturers solely operate on what the school provides or if they go that extra mile to use other information systems to conduct online teaching. Only 4 respondents stated that they have not used an LMS other than Microsoft Teams. This shows that they prefer using what they know to operate and have mastered this learning management system. The third column represents the ‘Yes responses’ where a total of 24 responses were received. This signifies that these lecturers give themselves that extra push in finding ways to better equip themselves when teaching online and to be diverse with systems.

Conclusion

The purpose of this research was to gain insight into the lecturers’ perceptions on the usage of Microsoft Teams for online learning. Online learning has not been easy on students worldwide, but it has become the main educational pathway due to COVID-19. The results from the research were collected from the responses of teachers at Corozal Community College (CCC). After analyzing the results from the research, it was learnt that most teachers are comfortable with using Microsoft teams for online learning. However, some are more comfortable with using their form of information systems to execute their sessions. Some limitations were gathered while carrying out this research. Upon putting together the Literature Review, it was very tedious sifting through a lot of papers and journals. Choosing carefully from papers that focused on the TTF model and correlates to online learning is an example of this. Another obstacle was obtaining the data for the data analysis. Exact data was collected to formulate the research; however, not all teachers responded which can be a result of their inbox being flooded with their student messages and ours was not a priority. Also, another challenge presented itself when the principal of the school was contacted and there was no response; therefore, the email addresses of the teachers had to be obtained another way. While doing the methodology, the data collected was self-reported consequently leading us to go with what was provided without knowing if the questions were answered truthfully. An overall limitation was time constraints to fully execute this research paper to the best of its potential. A recommendation for future direction would be to allow teachers to use the information system of their choice if it is easier to deliver their online classes, that way their content will be more interactive, creative, and understandable for students.

References

- McGill, T., & Klobas, J. (2008). A task–technology fit view of learning management system impact. Retrieved from https://scholar.google.com/scholar?hl=en&as_sdt=0%2C5&q=A+task%E2%80%93technology+fit+view+of+learning+management+system+impact&btnG=
- Dishaw, M., Strong, D., & Bandy D. Brent. (2002). EXTENDING THE TASK-TECHNOLOGY FIT MODEL WITH SELF-EFFICACY CONSTRUCTS. Retrieved from <https://core.ac.uk/download/pdf/301338925.pdf>
- McGill, T., Klobas, J., & Renzi, S. (2008). The Relationship between LMS Use and Teacher Performance: The Role of Task-Technology Fit. Retrieved from https://researchrepository.murdoch.edu.au/id/eprint/846/1/The_Relationship_between_LMS_Use.pdf
- McGill, T., Klobas, J., & Renzi, S. (2011). LMS use and Instructor Performance: The Role of Task-technology Fit. *International Journal on E-Learning*, 10 (1). pp. 43-62. Retrieved from https://researchrepository.murdoch.edu.au/id/eprint/12296/1/LMS_Use_and_Instructor_Performance.pdf
- Bere, A. (2018). Applying an Extended Task-Technology Fit for Establishing Determinants of Mobile Learning: An Instant Messaging Initiative. Retrieved from <http://jise.org/Volume29/n4/JISEv29n4p239.pdf>
- Isaac, O., Aldholay, A., Abdullah, Z., & Ramayah, T. (2018). Online learning usage within Yemeni higher education: The role of compatibility and task-technology fit as mediating variables in the IS success model. Retrieved from <http://osamaisaac.com/wp-content/uploads/2020/08/1-Isaac-et-al.-2019-Computers-Education-Elsevier.pdf>
- Vanduhe, V., Nat, M., & Hasan, H. (2020). Continuance Intentions to Use Gamification for Training in Higher Education: Integrating the Technology Acceptance Model (TAM), Social Motivation, and Task Technology Fit (TTF). Retrieved from <https://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=8957115>
- Tariq, A., & Akter, S. (2011). An assessment of m-Health in developing countries using task technology fit model. Retrieved from <https://ro.uow.edu.au/cgi/viewcontent.cgi?article=4187&context=commpapers>
- D'Ambra, J., Wilson, C., & Akter, S. (2013). Application of the task-technology fit model to structure and evaluate the adoption of e-books by academics. Retrieved from <https://ro.uow.edu.au/cgi/viewcontent.cgi?article=4249&context=commpapers>
- Shaw, M., & Gribbins, M. (2010). Task-Technology Fit for Mobile Information Systems. Retrieved from https://www.researchgate.net/profile/Michele-Gribbins/publication/220220763_Task-

[Technology Fit for Mobile Information Systems/links/0fcfd5093d8d900f0a000000/Task-Technology-Fit-for-Mobile-Information-Systems.pdf](#)

Park, C. (2019). Exploring a New Determinant of Task Technology Fit: Content Characteristics. Retrieved from

<https://scholarworks.lib.csusb.edu/cgi/viewcontent.cgi?article=1385&context=jitim>

Dishaw, M., & Strong, D. (1998). Extending the technology acceptance model with task technology fit constructs. Retrieved from

<http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.460.5961&rep=rep1&type=pdf>

Zigurs, I., & Khazanchi, D. (2008). From Profiles to Patterns: A New View of Task Technology Fit. Retrieved from

<https://digitalcommons.unomaha.edu/cgi/viewcontent.cgi?article=1024&context=isqafacpub>

Mokhtar, S., Katan, H., & Hidayat-ur-Rehman, I. (2018). Instructors' Behavioural Intention to Use Learning Management System. Retrieved from

https://www.temjournal.com/content/73/TemJournalAugust2018_513_525.pdf

Isaac, O., Mutahar, A., Abdullah, Z., & Ramayah, T. (2017). Internet usage, user satisfaction, task-technology fit, and performance impact among public sector employees in Yemen.

Retrieved from <http://osamaisaac.com/wp-content/uploads/2020/08/3-Isaac-et-al.-2017-Internet-usage-performance-impact-Emerald-IJILT.pdf>

Lin-Shan, W. (2012). Perceived fit and satisfaction on web learning performance: IS continuance intention and task-technology fit perspectives. Retrieved from

https://www.researchgate.net/profile/Wen-Shan-Lin/publication/257481793_Perceived_fit_and_satisfaction_on_web_learning_performance_IS_continuance_intention_and_task-technology_fit_perspectives/links/5e6064604585152ce80916a1/Perceived-fit-and-satisfaction-on-web-learning-performance-IS-continuance-intention-and-task-technology-fit-perspectives.pdf

Omotayo, F., & Haliru, A. (2019). Perception of task-technology fit of digital library among undergraduates in selected universities. Retrieved from [https://e-](https://e-tarjome.com/storage/panel/fileuploads/2020-08-12/1597237133_E15118-e-tarjome.pdf)

[tarjome.com/storage/panel/fileuploads/2020-08-12/1597237133_E15118-e-tarjome.pdf](https://e-tarjome.com/storage/panel/fileuploads/2020-08-12/1597237133_E15118-e-tarjome.pdf)

Tam, C., & Oliveira, T. (2016). Performance impact: Using the task-technology fit (TTF) approach. Retrieved from [https://www.researchgate.net/profile/Carlos-](https://www.researchgate.net/profile/Carlos-Tam/publication/301657694_Performance_impact_of_mobile_banking_Using_the_task-technology_fit_TTF_approach/links/59f376f7a6fdcc075ec347e9/Performance-impact-of-mobile-banking-Using-the-task-technology-fit-TTF-approach.pdf)

[Tam/publication/301657694_Performance_impact_of_mobile_banking_Using_the_task-technology_fit_TTF_approach/links/59f376f7a6fdcc075ec347e9/Performance-impact-of-mobile-banking-Using-the-task-technology-fit-TTF-approach.pdf](https://www.researchgate.net/profile/Carlos-Tam/publication/301657694_Performance_impact_of_mobile_banking_Using_the_task-technology_fit_TTF_approach/links/59f376f7a6fdcc075ec347e9/Performance-impact-of-mobile-banking-Using-the-task-technology-fit-TTF-approach.pdf)

Al-Maatouk, Q., Othman, M., Aldraiweesh, A., Alturki, U., Al-Rahmi, W., & Aljeraiwi, A. (2020). Task-Technology Fit and Technology Acceptance Model Application to Structure and

Evaluate the Adoption of Social Media in Academia. Retrieved from
<https://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=9081966>

Appendix

Survey Questions:

Task Technology Fit:

- TTF1: Microsoft teams fits well with the way I like to teach online.
- TTF2: Microsoft teams is compatible with all aspects of my online teaching.
- TTF3: Microsoft teams is easy to use.
- TTF4: Microsoft teams is user friendly.
- TTF5: It is easy to get Microsoft teams to do what I want it to do.
- TTF6: Microsoft teams is easy to learn.
- TTF7: It is easy for me to become more skillful at using Microsoft teams.
- TTF8: New feature of Microsoft teams are easy to learn.
- TTF9: Do you think the output of Microsoft teams to the students is presented in a useful format.
- TTF10: Can you provide accurate information to your students with Microsoft teams.
- TTF11: Can you provide up-to-date information to your students with Microsoft teams.
- TTF12: Can you provide information students need in time using Microsoft Teams.
- TTF13: Can you provide information that seems to be just about exactly what your students need with Microsoft teams.

Expected Consequences of LMS:

- EPC1: Using Microsoft Teams will help me to accomplish my online teaching more quickly.
- EPC2: Using Microsoft Teams will improve my online teaching performance.
- EPC3: Using Microsoft Teams will increase my online teaching productivity.
- EPC4: Using Microsoft Teams will enhance my effectiveness as a teacher while teaching online.
- EPC5: Using Microsoft Teams will make it easier to complete my teaching tasks while teaching online.
- EPC6: Using Microsoft Teams will give me greater control over my teaching tasks while teaching online.
- EPC7: Overall, I think that Microsoft Teams will be useful in my ability to teach online.
- EPC8: Using Microsoft Teams will improve the quality of my online teaching.

Perceived Impacts on teaching:

- PI1: Microsoft Teams has a large positive impact on my effectiveness and productivity as an online teacher.
- PI2: Microsoft Teams is an important and valuable aid to me in my online teaching.

PI3: I teach better online with Microsoft Teams than without it.

Consumerization Attitude: Perceived Impact / Expected performance improvement:

PIF1: If I could choose my own Learning Management System it would fit well with teaching online.

PIF2: If I could choose my own Learning Management System it would fit well with helping me to be efficient in teaching online.

PIF3: If I could choose my own Learning Management System it would be compatible with my online teaching.

EPI4: If I could choose my own Learning Management System my online teaching performance would improve.

EPI5: If I could choose my own Learning Management System I would work faster while teaching online.

Chart – Model used:

