Is the University of Makati e-Ready? An Evaluation of Its Faculty's Technology Acceptance in LMS Utilization

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Abstract

Due to the spread of the COVID-19 virus in 2020, academic institutions worldwide including the University of Makati (UMak) shifted to the conduct of online classes through the Open Distance Learning Act of 2014. To do so, UMak introduced the Technology Based Learning Hub (TBL Hub) as the university's official Learning Management System (LMS) in the second semester of the school year 2020-2021. This study aims to evaluate the behavior of UMak's College of Education (COE) faculty in utilizing the said LMS based on Fred Davis' (2018) Technology Acceptance Model (TAM). This mixed methods research evaluated its respondents' behavior through a researcher-made questionnaire adapted from Alshorman and Bawaneh (2018) and Cunningham and Bradley (n.d.). The results of the study revealed that the respondents' perceptions of the TBL Hub's perceived usefulness in terms of course management and faculty-student and peer interaction have already somewhat met their expectations. In terms of the LMS's implementation of the process, they also agreed that the TBL Hub's perceived ease of use has already been established. This is despite some issues in learning and interaction reported by both the faculty and students. It shows that UMak's technology acceptance based on its use of LMS already acquired positive acceptance. Moreover, the respondents reported concerns about the Moodle system based on their personal experiences and provided recommendations that would help maintain and improve their positive technology acceptance of the LMS. Overall, the positive technology acceptance in the TBL hub's perceived usefulness and perceived ease of use indicates that the UMak-COE faculty are e-ready.

Keywords: *TBL Hub, technology acceptance, online classes, learning management system*

Introduction

Online teaching is a form of distance education in which a course or program is intentionally designed in advance to be delivered fully online (Bates, 2016). This form of teaching is not new in the Philippines as the country is acknowledged as a hotspot for English language learning. Companies like 51TalkPH, Weblio, English Mania, and many more are online English Teaching companies in the Philippines catering to primarily Asian countries (China, Korea, Japan, etc.). This is made possible using video teleconferencing applications and learning management systems designed explicitly to each company's needs and offers. According to Research and Markets (2021), the global online education market is expected to grow at a CAGR of 14.6% during the forecast period (2021-

2026). In addition, the edtech industry is expected to grow from $227 billion in 2020 to $404 billion by 2025 (HolonIQ, 2022). The influx of enrollees and success in online teaching gave the current generation of school administrative officials an idea of how the academe could thrive in the middle of the COVID-19 crisis that halted academic institutions' operations. To alleviate the significantly volatile and vulnerable situation brought about by the global pandemic, most, if not all, sectors took a wide range of measures to help ease the effects of the unprecedented global circumstances. The measures included migrating face-to-face classes to the online learning modality just so teachers and students could continue their classes from the comforts of their homes.

Education is a necessity. The long-term closure of schools may have a broader range of significant impacts on society. As explained by Das (2020) in a webinar sponsored by The World Bank, “disruptions to schooling and the resulting learning losses— from shocks to schooling and incomes, from unequal access to remedial measures such as distance learning, and from subsequent inequalities once students return to school— could be large” (par. 1). To avoid the drastic impact of closing schools during the pandemic, the education sector opted to adopt the online learning setup that has already been utilized by English online learning companies for the past years. Besides, based on the report of Li and Lalani (2020) to The World Economic Forum, “even before COVID-19, there was already high growth and adoption in education technology, with global Edtech investments reaching US$18.66 billion in 2019 and the overall market for online education projected to reach $350 Billion by 2025" (par. 3). Thus, the migration from face-to-face to online classes is not new in the education sector. View Sonic (2020) claimed that this migration to online education is likely to have a lasting impact on the future of education since more students and educators have already recognized the flexibility and accessibility of online education through adaptive and social learning. In 2014, Executive Order 10650, or the Open Distance Learning Act of 2014, which aims to expand and further democratize access to quality tertiary education and technical educational services in the country through open learning services was released. However, it was only in 2020 that this executive order was fully enacted as the basis for implementing online classes. This situation has caught the teachers unprepared, considering that online teaching is the only viable way to continue their classes. Although the education sector regulates online learning, it resulted in various reactions from teachers and students, especially regarding the practicality, validity, and reliability of the said teaching method since this is an entirely new paradigm for most teachers, especially for seasoned ones. Their concerns regarding online teaching vary from their access and knowledge of the devices for online classes to their use and understanding of the learning management systems (LMS) that their respective institutions require (Brooks & Grajek, 2020).

The locally funded University of Makati (UMak) is among the universities that also embraced online learning. It utilized the online application Moodle as the official LMS of the institution. Moodle is a "learning platform which is considered an open-source software package designed to help educators, administrators, and learners with a single robust, secure and integrated system to create personalized learning environments" (Moodle, 2020, par.1). This Moodle app was customized to fit the UMak brand and was named Technology-Based

Learning (TBL) Hub. It features the same functions as the default Moodle app, such as posting modules, URLs, assignments, etc., creating quizzes/exams, attendance, forum, and quick messaging with students. The platform is only accessible to the members of the said university using their respective UMak-provided email addresses. The said LMS was first introduced to the UMak community in the second semester of 2020-2021 as a test run to see if it works efficiently. The university administration created a team that would supervise and coordinate the concerns of the faculty members and students on its use. Furthermore, the TBL Hub team conducted a series of webinars to address the challenges of the faculty members in terms of the use of the internet and other technologies in teaching.

Objectives of the Study

In this study, the College of Education faculty members, who use the TBL Hub daily, evaluated the said platform based on its usability and implementation. To fully identify usability, Ferguson (1954) in Martin et al. (2019, p.100) defined this as "the [teachers'] capacity to successfully perform" to use the application. On the other hand, the faculty's evaluation of the LMS's implementation is based on their perception of the system's performance. Various researchers may have studied the readiness and attitude in the use of online teaching in general; however, this study evaluated the behavior of the respondents regarding (1) perceived ease of use and (2) actual ease of use of the TBL Hub. The study aimed to bridge the gap between the implementers of the TBL Hub's objectives (the management) and the users' (teachers and students) concerns by understanding the latter's behavior regarding technology acceptance. Specifically, this study answered the research questions stated below.

1. How efficient is the TBL Hub for the respondents in terms of course management and faculty-student and peer interaction?
2. What is/are the reported personal experiences of the respondents in their use of the TBL Hub?
3. How do the respondents evaluate the TBL Hub based on the implementation of its process and collaboration?
4. What is/are the recommendations of the respondents that would encourage them to fully accept the TBL Hub as part of the teaching and learning process?

Review Of Related Literature

The studies and literature in this section elaborate on the factors that reportedly influenced teachers' behavior toward online teaching.

Age and Online Teaching Experiences

Most seasoned faculty members have limited to no knowledge of most online applications, more so of LMSs such as Moodle and Google Classroom. On the other hand, most young teachers are more adept at using the computer and the internet in their classes, making the online teaching modality more convenient. Age may be a factor in the faculty members' acceptance of technology in

online teaching; however, this may not always be the case because some new-generation teachers also experience teaching difficulties in the online platform. Interestingly, embracing the online teaching modality may not be all about age, as Wray et al. (2008) in Martin et al. (2019) claimed that "a faculty member's past teaching experience serves as foundation to teaching online" (p. 97). Given this claim, it is assumed that seasoned teachers should not be adamant about embracing the online modality since it is just the same as classroom teaching, and they can use their teaching experiences in the face-to-face set up in the conduct of their online classes. This includes but is not limited to gamified learning activities, collaborative activities, teacher-student interactions, and assessments. These are usual activities in the face-to-face setup that can also be done via online teaching. The only difference is that, in online classes, teachers do this with limitations since social interactions are also limited as compared in the face-to-face classes. However, this should not be taken in general, regardless of age since a teacher's role in the classroom is different in online teaching. According to Easton (2003) in Martin et al. (2019), an "online faculty focus[es] on instructional time and space, virtual management techniques, and the ability to engage students through virtual communication" (p. 97). Therefore, the information and technology (IT) competencies of the teacher needed for this platform are much higher and are of utmost importance for them to succeed. In this regard, Berge (1995) categorized the necessary conditions for successful online tutoring as "(1) pedagogical, (2) social, (3) managerial, and (4) technical" (pp. 2-3). These categories may be similar to the face-to-face setup; however, the teacher's technical skills, wherein "the facilitator must make participants comfortable with the system and the software that the conference is using (p. 2)" is somewhat problematic for most teachers. If Berge's (1995) categorization of necessary conditions for successful online teaching was accurate then the fourth category, where the technical skills of the teacher are concerned, is indeed the main takeaway in the present situation.

Device and internet access

The online class modality has been an enormous challenge in the Philippine education sector. Many concerns among students and teachers alike flooded during the onset of online teaching in 2020. However, the most significant concern was the country's poor internet access to utilize the online modality (Bayagas, 2020, in Joaquin et al., 2020). According to the most recent survey conducted by the Social Weather Stations (SWS), only 39 percent of Filipino households that have family members engaged in online distance learning have reported having a reliable and stable internet connection (Valiente, 2021). That number is even far from half of the total population of Filipino families in the country. Although the survey was done nationwide, it is not evident if the data gathered reached the country's far-flung areas. Furthermore, the survey was done only with students; hence, the number of teachers affected by poor internet connection is not yet counted, both for those who were in the cities and for those who opted to stay in their provinces when the pandemic started. Despite this, the Department of Education (DepEd), Commission on Higher Education (CHED), and Higher Educational Institutions (HEIs) in the country still implemented pragmatic approaches to continue the education of Filipino learners through modified forms of asynchronous and synchronous online

learning that aim to facilitate student learning activities. Top universities in the Philippines which include the De La Salle University (DLSU), Ateneo de Manila University (ADMU), University of Sto. Tomas (UST), and University of the Philippines (UP), adapted to this approach. They all have specific LMSs partnered with video teleconferencing applications their teachers and students are using to fill the gap in education that the pandemic has brought. However, since all these applications used in online teaching are accessed online, the teachers' second concern is the devices they should use in their classes.

Experience in the use of LMS

Teachers were left with no option but to utilize online platforms to continue teaching their students during the pandemic. Some teachers may be well-versed in using online platforms but still have reservations about using these in their classes. The University of Kentucky teachers experienced the same dilemma regarding the online teaching system. According to Cunningham and Bradley (n.d.), it was discovered that "teachers were willing to integrate online learning tools into their classroom if certain requests were met concerning the system itself and its implementation process" (p. 2). In other words, although the teachers have a positive acceptance of their LMS, they would still like the management to consider their convenience in using their LMS for their classes. Hence, the data that Cunningham and Bradley (n.d.) gathered on the implementation of the system mainly concerns their teachers' request for support and more hands-on training. In his study, Gay (2016) in Martin et al. (2019) supported this when he examined online instructor e-learning readiness assessment before, during, and after course delivery. He found out that "the availability of online help desk services is [also] an urgent need of online faculty" (p.100). In an interview made by Amancio (19 June 2021) at the Sulu State College, a faculty mentioned, "… it is also important to listen to our faculty because when we introduced many tools to them, they had a hard time memorizing or doing their expertise on each tool" (par.3). In this regard, they decided to make their e-learning system explicitly designed for their faculty's needs after finding out that:

> "The first lesson we learned is we should always be flexible for faculty and students. One size fits all does not apply to us. We have to invest in our teachers. We need to train and listen to them. For the government, they have to address access to internet connection because this is our main problem here". (par. 5)

In a study on all the faculty members of the Abdulrahman Bin Faisal University for the academic year 2016–2017 regarding their university's use of a new LMS, Alshorman and Bawaneh (2018) found that the attitudes of faculty members toward the use of the LMS in teaching were positive. The most important reason for this is "the awareness of faculty members of the usefulness of electronic programs and their added value in teaching and the transfer of knowledge through the educational technology that has invaded the world of knowledge, especially university teaching" (Alshorman & Bawaneh, 2018, p.11). Their study may have resulted positively since they utilized their LMS more conveniently, contrary to the abrupt need for online classes during the COVID-19 pandemic. The drastic change brought about by the pandemic is a significant change

that members of the academe must endure. According to Bush (2006, p. 19), "cultural change is difficult and problematic"; thus, we can safely say that the attitude of teachers toward the use of online platforms is not only due to the unprecedented phenomena that did not give them much time to prepare but also because it is challenging to shake a culture that they have been practicing since time immemorial. Furthermore, Promethean (2020) in Wang et al. (2021, p. 1) reported that "fewer than 5% of teachers believe that they have received full training, and only 36% of teachers think that they have been adequately supported" after having been required to use the online platform during the onset of the pandemic. The reported figures are understandable due to the inability of most schools to give in-depth training to their faculty members. However, it is also worth noting that this inability to train faculty members entirely is because of the health protocols mandated in all institutions that there should be no face-to-face interactions at all costs to prevent the spread of the COVID-19 virus. This must have been added to the academic personnel's anxiety, which resulted in them being adamant about accepting the technology offered to them fully.

Synthesis

Implementing the policies in online teaching was forced on the academe without considering the readiness of the concerned individuals. In the study by Martin et al. (2019, p. 97), they mentioned that "technological developments require faculty members to consider new ways to prepare, organize, deliver, and assess courses and learning materials for online teaching". The online competencies of the teachers should have been given much consideration since not all of them are familiar with the use of online applications. The behavior of the teachers to determine whether or not to accept technology in their pedagogies may also be relevant. The age and online teaching experiences of a teacher may be significant; however, without the technical skills of the teacher, it could still be somewhat problematic not only for the teacher but also for the students. Secondly, mobile phones and laptop computers are already a part of people's everyday lives. However, some are still concerned with the capabilities of their gadgets, especially those in academia. Some devices are not designed for heavy use, such as long video calls, rendering of videos, and others as these shorten the lifespan of devices and require the purchasing of a new one. Besides, the teachers' limited experience using specific applications, especially on other online LMSs, makes them more adamant about using these in their classes. Lastly, the urgency of implementing the online classes made the teachers more anxious about using the online platform in general. This resulted in them using applications that they were most familiar with.

Theoretical Framework

This study also used the factors mentioned above to evaluate the behavior of UMak's College of Education faculty using the Technology Acceptance Model (TAM) by Fred Davis in 1989. The model posits the relationship between how the users come to accept technology (perceived usefulness) and how they use that technology (perceived ease of use) (Gordon, 2013). The perceived usefulness (U) is defined as "the prospective users' subject probability that using a specific application system will increase his or her job performance within the

organizational context" (Davis et al., 1989, p. 985). Hence, one of the indicators of the users' behavior is if they see that the use of technology innovation in an organization would result in maximum efficiency, regardless of whether it is a new system. Moreover, the perceived ease of use (EOU) is defined as "the degree to which the prospective user expects the target system to be free of effort" (Davis et al., 1989, p. 985). Ultimately, the non-acceptance behavior of the users would end if a particular technology was viewed as easy to use, uncomplicated, and efficient. Thus, this model included EOU in the framework to explain another contributing factor that affects user behavior.

Figure 1

Technology Acceptance Model

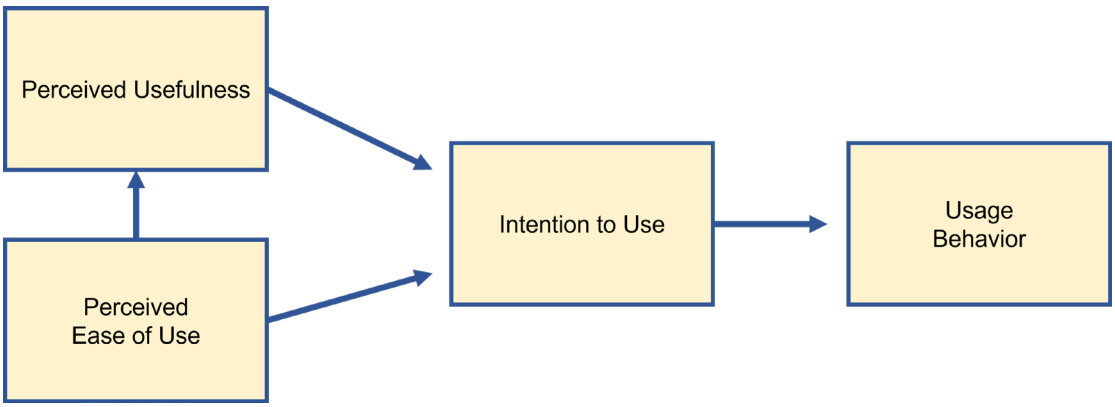


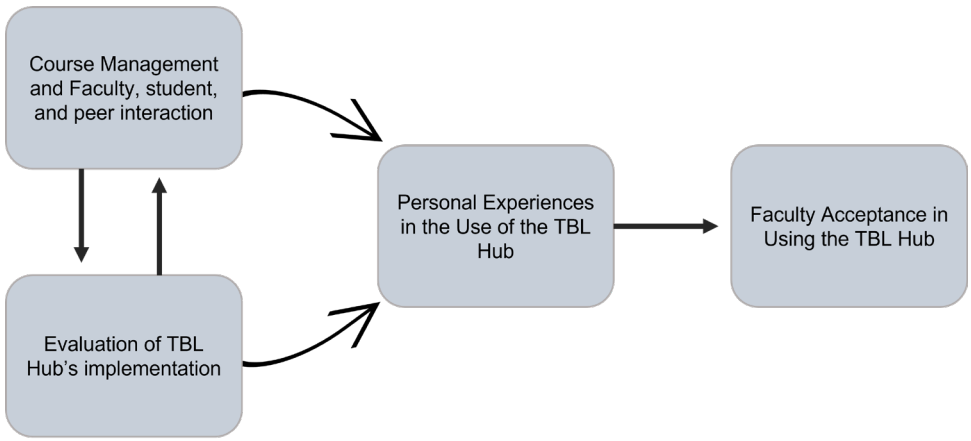
Figure 1 shows the framework of the Technology Acceptance Model (TAM) by Davis (1989). As can be seen, the perceived usefulness (U) and the perceived ease of use (EOU) affect a user's intention to use technology. It shows that the relationship between U and EOU and the users' intention to use technology is more significant than the users' experience, sex, or age. The perception of using a specific technology change not because technology is different but because each user is different (QUT IFB101, 2015). Thus, technology acceptance is possible if the users share those same beliefs.

Conceptual Framework

The framework below (Figure 2) is utilized to understand the variables employed in this study. It adopted the Technology Acceptance Model (TAM) by Davis, tailored to the objectives of this study.

Figure 2

Behavior of the UMak Academic Community in Utilizing the TBL Hub



The Technology Acceptance Model would evaluate the UMak academe's use of the Technology-Based Learning Hub (TBL Hub). The perceived usefulness of the said LMS consists of the respondents' evaluation of the efficiency of its course management and faculty-student and peer interaction. This gives an idea of how the users come to accept the effectiveness of the TBL Hub in their online teaching experiences based on the perceived increase in their job performance. On the other hand, the users' perceived ease of use is measured using the respondents' evaluation of the TBL Hub's implementation of its process and collaboration. This would allow the researcher to evaluate the users' concerns regarding implementing the LMS in their respective classes based on its mechanism of process and collaboration. Their experiences using the TBL Hub were also gathered to understand the respondents' behavior. This will help the researcher validate the respondents' answers on the TBL Hub's perceived usefulness and ease of use and determine their intention and usage behavior in using the LMS. As mentioned by Asiri et al. (2012), "the faculty members' acceptance of technology also plays a key role in optimal utilization of LMS in higher education" (p.127). Therefore, understanding users' behavior would help create possible interventions to accept the new technology - the TBL Hub. Through this, "their ready acceptance of such a system would lead to an increase in usage and motivate [teachers] to use [the] LMS in their classes (Al-Busaidi & Al-Shihi, 2010, in Asiri et al., 2012, p.127).

Methodology

Research Design

This study follows an explanatory-sequential design, a mixed methods research where quantitative data is collected and analyzed first, then the qualitative data is collected and analyzed based on the quantitative results. Specifically, it utilized a present situation analysis, wherein the quantitative data gathered were described and interpreted to identify the behavior of the respondents in the use of the TBL Hub. The overall purpose of this design is that "the qualitative data help explain or elaborate the initial quantitative results" (Creswell et al.,

2003 in Creswell, 2006). This study evaluated the behavior of the respondents through their perceived efficiency of the TBL Hub in their course management and interaction with their students. Furthermore, the researcher also determined the behavior of the University of Makati's College of Education faculty members through their evaluation of the implementation of the TBL Hub - the learning management system utilized by the institution. To expand on the gathered quantitative results, the researcher employed the follow-up explanation model by collecting additional data from the participants. This was done by answering open-ended questions about the personal experiences and recommendations of the respondents using the said LMS. As a result, this study provided the institution's management with pertinent data that would possibly solve the respondents' reservations about using the LMS.

Locale

The researcher conducted the study at the University of Makati (UMak) located at J.P. Rizal Ext., West Rembo, Makati City. UMak is a public, locally funded university of the local government of Makati, which caters mainly to the less privileged citizens of Makati City. This institution is envisioned as the primary instrument in producing Makati youths into productive citizens and IT-enabled professionals. UMak aims to provide innovative and quality education to produce skilled and knowledgeable individuals of the 21st century. Thus, for this institution to inculcate these missions in its students, it trains its academic and administrative personnel to be adept at using technology.

Respondents

The study's respondents are selected through purposive sampling, specifically total enumeration. All the College of Education faculty members were invited to answer the researcher's instrument. These faculty members consist of (1) full-time and (2) part-time faculty members in the college of education, including (3) adjunct faculty members from other colleges who are teaching general education, professional education courses, and major subjects to the students at the college under study. Thus, it is a requirement that they are currently teaching the students of the College of Education and are using the TBL Hub as their learning management system.

Instrument

To gather the study's quantitative data, the questionnaires from Alshorman and Bawaneh (2018) and Cunningham and Bradley (n.d.) were adapted to identify the respondents' behavior in using the TBL Hub. The researcher-made questionnaire comprised of two sections: the respondent's perception of TBL Hub's efficiency and the respondent's perception of TBL Hub's implementation of its process and collaboration. These variables were answered using a 4-point Likert scale. The questions were customized to fit the objectives of the study. On the other hand, the qualitative data were gathered using open-ended questions used as follow-up questions for the respondents' answers. The researcher used Google Forms to collect both quantitative and qualitative data stated above from the respondents who are in work-from-home/ online

classes arrangement due to IATF's COVID-19 restrictions. All questions in the questionnaire were validated by experts in the field of psychometric analysis, linguistics, and technology.

Data Collection

Data collection took place from November 13-30, 2021. The gathering of data commenced after the researcher sought the permission of the Dean of the College of Education to conduct this study with the college's faculty members. Upon approval, the names of the faculty members endorsed by the dean were collected. Each selected respondent received an email containing the informed consent form which they signed before they answered the questionnaire. When their informed consent forms were already returned to the researcher, a copy of the survey questionnaire was sent to them via Google Forms. This was answered by the respondents and the results were gathered in the summarized data provided by Google Forms.

Data Analysis

The data gathered via the researcher-made questionnaire was analyzed using the Statistical Package for the Social Sciences (SPSS) version 25. Descriptive statistics such as the mean and the standard deviation was used in analyzing the data.

Ethical Considerations

The respondents were asked to consent to the researcher with the collection, use, processing, storage, disclosure, and disposal of personal data following RA 10173 or the Data Privacy Act of 2012. Moreover, the respondents were informed that the researcher respects their anonymity and the confidentiality of their answers to the survey was ensured. Most importantly, all data and associated findings are real and were not fabricated. On request, the original data can be provided for inspection and validation of the findings.

Results and Discussions

Table 1

Respondents' Perception of the TBL Hub's Efficiency

Indicators	Mean	SD	Interpretation
1. To what extent are the students comfortable accessing the TBL Hub's attendance checker?	2.61	7.0	Somewhat Met Expectations
2. To what extent are you comfortable checking your students' attendance using the TBL Hub's attendance checker?	2.67	.69	Somewhat Met Expectations
3. To what extent are the students comfortable accessing syllabi, handouts, files, modules, links to materials, announcements, etc., on the TBL Hub?	2.83	.62	Somewhat Met Expectations
4. To what extent are you comfortable posting syllabi, handouts, files, modules, links to materials, announcements, etc., on the TBL Hub?	3.33	.49	Exceeded Expectations
5. To what extent are the students comfortable submitting their assignments and assessment tasks on the TBL Hub?	2.72	.57	Somewhat Met Expectations
6. To what extent are you comfortable checking students' assignments and assessment tasks on the TBL Hub?	2.78	.81	Somewhat Met Expectations
7. To what extent are the students comfortable tracking their progress using the Gradebook on the TBL Hub?	2.78	.65	Somewhat Met Expectations
8. To what extent are you comfortable using the Gradebook for keeping records on the TBL Hub?	2.67	.91	Somewhat Met Expectations
9. To what extent are the students comfortable learning online courses using the TBL Hub?	2.44	.65	Somewhat Did Not Meet Expectations
10. To what extent are you comfortable teaching online courses using the TBL Hub?	2.78	.77	Somewhat Met Expectations
11. To what extent are the students comfortable promoting interaction outside the classroom using the TBL Hub?	2.33	.70	Somewhat Did Not Meet Expectations
12. To what extent are you comfortable promoting interaction outside the classroom using the TBL Hub?	3.16	.94	Somewhat Met Expectations
OVERALL MEAN SCORE	2.76		Somewhat Met Expectations

LEGEND		
Rating	Rating Scale Range	Verbal Description
4	3.26 - 4.00	Exceeded Expectations
3	2.51 - 3.25	Somewhat Met Expectations
2	1.76 - 2.50	Somewhat Did Not Meet Expectations
1	1.00 - 1.75	Did Not Meet Expectations

Table 1 reports the respondents' perception of the TBL Hub's efficiency. Regarding course management and faculty-student and peer interaction, the respondents perceived the TBL Hub's efficiency as Somewhat Met Expectations based on the overall mean score of 2.76. With this, it could be inferred that the TBL Hub has benefited the faculty members in conducting online classes. This is a good indicator that the respondents' perceived usefulness of the TBL Hub is positive, which could help in its complete and long-term implementation with or without the pandemic. In the study of Cunningham and Bradley (n.d.), their respondents also got the same perception of their proposed online tool when they gave the pre-test of their research. However, their post-test showed that "the faculty members, after implementation, were no longer willing to use online learning tools in their classrooms" (p. 13). This is somewhat contrary to this study's result since it is proven that after implementing the LMS, teachers are already learning to accept the use of the TBL Hub and may stay for good. This may be due to the current situation where the education sector has no choice but to conduct online teaching, contrary to Cunningham and Bradley's (n.d.) study written before the pandemic. Perhaps, if their research were written during the pandemic, their faculty members might have a different perception.

Based on the data above, the primary uses of the LMS, such as posting syllabi, handouts, files, modules, links to materials, announcements, etc., got a mean score of 3.33, which is interpreted as Exceeded Expectations. This is evidence that the COE faculty members utilize the TBL Hub at least by using this as a repository for the files they need in their classes. This is also observed in the studies of Cunningham and Bradley (n.d.) and Guillot's (2003), where respondents reported high comfort levels in using their online tools/LMS, specifically in posting their teaching materials. On the other hand, Somewhat Did Not Meet Expectations were reported on faculty-student and peer interaction indicators such as in (1) To what extent are the students comfortable learning online courses using the TBL Hub? and (2) To what extent are the students comfortable promoting interaction outside the classroom by using the TBL Hub. These are the same observations in both Cunningham and Bradley's (n.d.) and Guillot's (2003) studies. To add, Guillot's (2003) respondents also reported issues with having threaded discussions, which their teachers are using as a teaching tool. This same result was also observed in the teacher-student interaction function of the TBL Hub. Although the teachers are satisfied with the perceived usefulness of the TBL Hub as a repository of learning materials, they seem not confident using it in off-class interactions and communications. It can be deduced from this situation that the TBL Hub has limited capability for group chats and threaded discussions, features which can easily be found on most

social networking sites. Hence, students may have insisted their teachers use other platforms or even emails for communication and synchronous threaded discussions instead of the ones available on the platform since the former seemed more efficient.

Respondents' Reported Personal Experiences in the Use of the TBL Hub

Based on Table 1, the TBL Hub has exceeded the respondents' expectations in using it to post or store teaching and learning materials for their students to access. Aside from these, other features of the LMS were also used by the respondents but did not get the exact extent of expectations: (1) attendance checker, (2) checking students' assignments and assessment tasks, (3) using the Gradebook, and (4) chat. The respondents shared some personal experiences using the TBL Hub, and below are some of their reported positive experiences.

Respondent 8:	*Above average to Excellence [sic] (85% positive experience)*
Respondent 9:	*So far when it comes to posting assignment/ activity and harvesting outputs, TBL helps a lot.*

Both Respondents 8 and 9's answers confirmed Cunningham and Bradley's (n.d.) report of their faculty's experiences using their LMS and the result from Table 1. This only proves that the TBL Hub serves its purpose as an LMS for the University of Makati. Although there may be many aspects where the LMS should improve, the data gathered confirms the latter's usefulness as an online class platform. On the other hand, below are some of their reported negative experiences.

Respondent 1:	*The hub is okay only to some extent…maybe due to their system issues...[sic] had trouble checking assignments in the early part of the semester; browsing and access issue.*
Respondent 2:	*There are times that it is difficult to access [sic] TBL Hub and their system[sic].*
Respondent 5:	*There are times I could not upload my materials.*
Respondent 6:	*It sometimes log [sic] down and students felt that Gmeet and Gclassrooms are more convenient for them.*
Respondent 14:	*Not comfortable in using it "mabagal" [sic] waste of time.*

Most of the reported issues of the respondents are in terms of system issues like error messages and lagging concerns. As a result, teachers and students alike experience problems logging in to their accounts, and uploading and downloading materials, especially in the early part of the semester, as reported by Respondent 1 . This also includes teachers having difficulty in checking their students' outputs. In addition, Respondent 10 claimed that the TBL Hub's

Gradebook feature is not user-friendly. This also results in teachers and students resorting to mainstream platforms that they find more convenient and easier to use. These respondents' experiences confirmed the findings in indicator 1. However, besides the system issues, the internet connection is another culprit in the error messages and lagging concerns. Respondent 17 has the same observation saying, "Some other features of TBL hub are not that easy to use when you do not have a stable connection according to students' experience." Therefore, certain features of the LMS may not be end user-friendly due to its complicated interface (according to Respondent 10, who is already a senior citizen) and need for a stable internet connection. This has been seconded by Respondent 15.

Respondent 10:	*It's not easy to track the progress of individual students.*
Respondent 17:	*At first, I am not comfortable using it since I am already using a Google Classroom but after attending trainings and watching videos on how to facilitate the LMS so far, I'm doing fine. My only concern was the error we are experiencing from time to time. Students are complaining that whenever they check attendance there's always an error. Some other features of TBL hub is [sic] not that easy to use when you don't have a stable connection according to students' experience.*
Respondent 15:	*Even [when] I appreciate and enjoy using TBL, but the student can't use it most of the time because it need [sic] high speed internet connectivity, and some students are only using their mobile data.*

Valiente (2021) states that more than fifty percent of Filipino families do not have a strong internet connection. Thus, unless the internet system in the whole country is improved, conducting online classes could continue to be burdensome.

The UMak administration assigned a team of experts - the TBL Hub team to supervise the successful implementation of the TBL Hub This team manages the process of its implementation by preparing the TBL Hub for teachers and students and solving the end-users' issues. To help the team, each college assigned coordinators who function as the first line of troubleshooters. If the coordinators cannot resolve the concerns on their end, they will seek the team's help. With this system, the TBL Hub team has a more systematic and pragmatic way of implementing the LMS.

Table 2

Respondents' Perception of the TBL Hub's Implementation

Indicators	Mean	SD	Interpretation
1. The integration of the TBL Hub meets my resistance.	2.33	.69	Partially Disagree
2. The integration of the TBL Hub increases my instructional preparation time.	3.17	.92	Agree
3. Because of the TBL Hub, teachers promote activities necessary to integrate technological goals into the existing curriculum.	3.11	.68	Agree
4. The TBL Hub Team is accepting of the preparation and training required to integrate the use of the TBL Hub in online classes.	3.22	.73	Agree
5. UMak's administration is accepting of the preparation and training required to integrate online learning tools.	3.33	.69	Strongly Agree
6. The learning process using the TBL Hub is met with resistance.	2.72	.57	Agree
7. The support provided for the TBL Hub team is sufficient for successfully integrating the LMS.	3.00	.84	Agree
8. Ongoing support (webinar series) is necessary for the integration process.	3.00	.69	Agree
9. The time and effort invested in the TBL Hub result in increased student achievement.	2.67	.91	Agree
10. It isn't easy to provide ongoing professional support for the successful implementation of the TBL Hub.	2.67	.69	Agree
11. Whenever I have difficulties with the TBL Hub system, I know whom to contact to receive support and report issues.	3.35	.49	Strongly Agree
12. When a technical issue arises with the system, I report the case to our college coordinator.	3.06	.87	Agree
13. When I recognize a weakness in the system, I report it to our college coordinator.	3.06	.87	Agree
14. Teachers are excited about the opportunity to be part of the TBL Hub implementation.	2.89	.96	Agree
15. UMak community support must be present before adopting the LMS.	3.44	.51	Agree
16. I discuss with my colleagues how to use the TBL Hub.	3.11	.76	Agree
17. The TBL Hub helps learners learn without coming to the university.	3.06	.73	Agree
18. Using the TBL Hub increases the interaction between teachers and students.	2.72	.67	Agree
19. Using the TBL Hub facilitates the teacher's role in the online teaching modality.	2.94	.64	Agree
20. Using the TBL Hub offers a significant benefit in online teaching.	2.84	.64	Agree

to be continued on next page

Indicators	Mean	SD	Interpretation
21. The TBL Hub makes it easy for teachers to provide students with a unique learning environment.	2.83	.71	Agree
22. The TBL Hub increases the capacity of UMak as an educational institution.	3.17	.51	Agree
23. The TBL Hub helps to achieve effective and active teaching and learning.	2.83	.71	Agree
24. The TBL Hub helps to deliver information to students quickly.	2.78	.73	Agree
OVERALL MEAN SCORE	**2.97**		**AGREE**

LEGEND		
Rating	Rating Scale Range	Verbal Description
4	3.26 - 4.00	Exceeded Expectations
3	2.51 - 3.25	Somewhat Met Expectations
2	1.76 - 2.50	Somewhat Did Not Meet Expectations
1	1.00 - 1.75	Did Not Meet Expectations

Table 2 reports the respondents' evaluation of the TBL Hub's implementation. Regarding its process and collaboration, the respondents evaluated the TBL Hub's implementation as Agree based on the overall mean score of 2.97. With this, it could be inferred that the TBL Hub has been managed well, considering its end-users' needs, skills, and limitations. Table 2 also shows that the respondents have appreciated the administration's acknowledgment of the faculty members' need for the preparation and training required to integrate online learning tools and the UMak Community's support in the adoption of the LMS, which got a mean score of 3.33 and 3.44 respectively and both are interpreted as Strongly Agree. This is proven in Cunningham and Bradley's (n.d.) study, where "teachers were willing to integrate online learning tools into their classroom if certain requests were met itself and its implementation process "(p. 9). Indeed, conceding to the teachers' needs in using new technologies could motivate and improve their acceptance. Additionally, Respondent 17 claimed that she appreciated the TBL Hub more after attending webinars that the TBL Hub team had conducted and watching posted videos on how to improve the faculty's online classes using the LMS in the university's website social media platforms. Furthermore, the respondents also gave a 3.33 mean score to the indicator; *Whenever I have difficulties with the TBL Hub system, I know whom to contact to receive support and report issues.* This is a good indicator that the faculty members are confident in practicing the use of the LMS since they know that if they encounter a problem, there will be a support team to help them. Furthermore, as in Guillot's (2003) study, teachers may have been more comfortable using the tool since they must have realized that some technical skills are no longer necessary since a technical support team is there to assist them. Should a more advance technical skill be needed, the technical team would still be there to assist so the rest of the specialized knowledge and expertise required to perform specific tasks in the utilization of the TBL Hub should still be possessed by the teachers. Also, Alshorman and Bawaneh (2018) posited that

using the LMS decreases teaching roles since it increases students' autonomy in learning. Hence, a positive acceptance in the perceived ease of use category of the TBL Hub's implementation of its process and collaboration. Albeit the overall positive acceptance in Table 2, the indicator on the integration of the TBL Hub meets my resistance, received the lowest mean of 2.33, interpreted as partially disagree. The respondents may have already considered using the TBL Hub in their online classes; however, it may still need much improvement. Through the continuous professional support given by the administration and its perceived usefulness, many faculty members are already starting to see the benefits of using the TBL Hub in their online classes based on the Agree results in most of the indicators in Table 2.

Respondents' Recommendations for Faculty's Full Acceptance in the Use of the TBL Hub

With the positive acceptance result in the TBL Hub's perceived usefulness and its perceived ease of use, it can be incurred that the faculty members' full acceptance of the TBL Hub in the university as part of the teaching and learning process is on its way. To aid this, the respondents provided substantial recommendations to maintain and improve their intentions to use the TBL Hub and eventually have more positive behavior. The following are the respondents' recommendations in terms of improving the system:

1. Increase the capacity for uploading files.
2. Update the applications sourced in Moodle LMS v. 3.9.
3. Provide a bigger or larger server to be more efficient.

Since most of the respondents are concerned about the LMS's lagging and its accessibility, recommendations 2 and 3 are the possible solutions they expect. Furthermore, increasing the current file upload capacity which is only 20MB is a good recommendation, especially when specific applications are not read, or the file size does not fit the limit. The TBL Hub team has already worked out some of these recommendations, specifically in improving the system part. On the other hand, the following are respondents' recommendations that are not connected to the Moodle system.

1. Acknowledge faculty members who fully integrate the TBL hub in their classes.
2. Motivate one another in the faculty to continuously use the TBL Hub.
3. Improve training schedules.
4. Provide pocket Wi-Fis.

The service provider continuously improves the Moodle system, and the UMak management may consider the respondents' recommendations about technology culture through the TBL Hub team. According to Society for Human Resource Management (n.d.), "[a]n organization's culture is defined as the proper way to behave within the organization. This culture consists of shared beliefs and values established by leaders and then communicated and reinforced through various methods, ultimately shaping employee perceptions, behaviors and understanding". Therefore, to help mold an organization's technology culture,

developing a shared positive experience using the prescribed LMS is a good start. Based on the respondents' recommendations, acknowledging positive behavior, such as when faculty members have completed a task involving the use of the TBL Hub and motivating one another to use it continuously, could make a difference. Cheng (1993) in Rizk and Choueri (2007, p. 17) found that "educational institution culture correlates with teachers' attitudes toward their work in such a way that stronger educational institution cultures had better-motivated teachers". Understandably, when one group member motivates and inspires another member to use the LMS, this will snowball and result in more satisfied end-users. The respondents appreciate the training and webinars conducted by the team, but they have reservations about the schedules. Respondent 8 recommended improving these to apply the lessons learned since they could no longer manage their time teaching and doing paperwork while attending webinars.

> *…trainings are necessary, but our Wednesdays are all spent [to the] webinars, such contents cannot be utilized for the obvious reason of the problems on the LMS…*

On the other hand, a few respondents recommended that the university provide teachers and students with a stable Wi-Fi connection to compensate for the internet speed needed to run the TBL Hub smoothly. However, the SWS already reported that this concern is a national problem (Bayagas, 2020, in Joaquin, et al., 2020). Thus, even when pocket Wi-Fis are provided, internet connectivity may still be a problem. Instead, the City Government of Makati, through the Department of Information and Communications Technology (DICT), has provided all UMak faculty and students with tablet computers that they could use in their online classes.

Conclusion

The TBL Hub is an essential part of online teaching during the pandemic in UMak. It serves as a one-stop-shop for all the applications teachers and students need to conduct online classes. Although the TBL Hub is still relatively new (almost three years of implementation) and still has several areas to be improved on, the respondents already have a positive technology acceptance based on their evaluation of the perceived usefulness and perceived ease of use of the LMS. The perceived usefulness is acquired from the efficiency of the TBL Hub regarding its course management and faculty-student and peer interaction which received a Somewhat Met Expectations result. It implies that the faculty members' job performance improved when they started using the TBL Hub in their online classes. However, in terms of the students' convenience in using the TBL Hub in learning and interaction, the respondents believe that it somewhat did not meet their expectations based on the reports of their respective students. In the reported personal experiences of the respondents in their use of the TBL Hub, they confirmed the improvement in their online pedagogies. However, issues such as error messages, lagging concerns, and internet access are reported as their reservations in using the LMS, especially in its first year of implementation. Therefore, once the respondents' reported concerns are addressed, and their recommendations are considered, they will

have a more positive behavior in using UMak's TBL Hub. On the other hand, the respondents agree that the perceived ease of use in the implementation of TBL Hub's process and collaboration is somewhat free of effort, which could affect a user's intention to use technology. It manifests that the faculty members are provided by the UMak administration with the proper preparations and training needed to integrate this online learning tool and that they know whom to contact to receive support and report issues. This is proven by the Strongly Agree result of the said indicators. However, to ensure a continuous and improved positive acceptance of using the LMS, the respondents recommended improving Moodle's system so they could easily navigate and upload files. Additionally, developing a shared positive experience in using the TBL Hub, improving training schedules, and providing Wi-Fi connections were also recommended, which could help improve the technology culture in utilizing the LMS.

Recommendations

The researcher recommends that a policy guideline that promotes a strict utilization of the TBL Hub in submitting outputs and in off-class interactions with their teachers and classmates would address the faculty's concerns about their students not being comfortable using the TBL Hub. This would also help in a more efficient and safe output and message retrieval that would benefit both parties. Resistance may occur upon implementing this policy; however, this could be resolved by providing the students with proper preparations and training in integrating this online learning tool and letting them know who to contact for support and issues. This would also give the students more confidence in the LMS, just like the positive acceptance of the respondents in this study in the perceived ease of use of the TBL Hub's implementation. Promoting a behaviorist approach to establish a positive technology culture in the university to continue the legacy of the TBL Hub implementation is also recommended. The respective coordinators of each college who are assigned to become the ambassadors in the use of the LMS should facilitate a weekly session with their respective departments to acknowledge and talk about the best practices in the use of the TBL Hub in their online classes and sharing of other relevant experiences. Lastly, the researcher recommends conducting evaluative research on the students' technology acceptance of the TBL Hub. This will help assess if both the faculty members and students at the University of Makati are already e-ready for online teaching and learning.

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