AN EMPIRICAL INQUIRY ON UNIVERSITY EDUCATORS' PERCEPTION ON A LEARNING MANAGEMENT SYSTEM IN A HIGHER EDUCATIONAL INSTITUTION AT SOUTHERN PHILIPPINES

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ABSTRACT – *A newly introduced system in an institution represents change, and its success is often associated with an individual's ability to accept such change. This study investigated construct that University educators perceived to facilitate their acceptance of a learning management system. The result of the study will be utilized to provide insights into successful change management in an organization implementing change. A total of 117 University educators responded to a 24-item online questionnaire containing seven constructs: Facilitating Conditions (FC), Social Influence (SI), Effort Expectancy (EE), Performance Expectancy (PE); and Understanding the Rationale (UR), Feelings Acknowledge (FA), and Having a Choice (HC). Descriptive statistics using mean and standard deviation were employed as the main method of analysis. The findings revealed that Facilitating Conditions (FC) and Understanding the Rationale (UR) are the constructs that University educators perceived to facilitate their acceptance of the Learning Management System. This result may be attributed to the University's effort to communicate with the educators the reasons behind the change and the provision of the necessary resources for them to be able to use the LMS. Therefore, if the University educators were prepared, equipped, and supported, they believe they will accept changes- the introduction and implementation of the LMS in their University. This paper came up with recommendations for an in-depth study on constructs that facilitates the actual use behavior of the University educators on the LMS.*

Keywords: Change Acceptance, Change Management, Learning Management System, University educators

INTRODUCTION

Educational institutions undergo change in the hope of bringing improvement to the organization. Changes may be attributed, among others, to new educational policies and guidelines, updates in the curricula, or the introduction of new technology in the teaching and learning process that has revolutionized the day-to-day life of students, educators, and school administrators [1].

At the height of the Covid-19 pandemic, educational institutions were subjected to a paradigm shift from the usual teacher-centered face-to-face classes to e-learning or online learning [2]. The pandemic has led educational institutions to create learning opportunities, independent of time and place, and be able to offer easily accessible learning environments. Consequently, the Philippine Commission on Higher Education (CHED) issued Memorandum Order # 4 s., 2020, ensuring the continuity of the quality of higher education despite the disruption caused by the pandemic [3]. It encouraged higher education institutions to maximize the use of technology to support learning and teaching, such as using Learning Management Systems (LMS). CHED Chairman De Vera pointed out that flexible learning is here to stay, and with the "new normal", faculty and administrators need to rethink strategies for managing the educational system [4].

An LMS is a software that is designed specifically to create, distribute, and manage the delivery of educational contents [5]. The purpose of LMS is not just to enhance education efficiency and productivity, but also to offer a different method of teaching [6]. It enables academic and training institutions to provide several tools that can efficiently and effectively support distance education and supplement traditional face-to-face teaching. LMS is considered the future of learning that offers endless opportunities for both teachers and learners alike to bring education to the next level [7].

Responding to the new paradigm shift, and as part of continuous innovation in curriculum delivery, a state university in Southern Philippines implemented its Flexible Learning Program (FLP) in the 1st Semester of SY 2020-2021. The University developed, introduced, and implemented an e-learning portal which became its official LMS that enabled teaching and learning to continue despite the COVID 19 pandemic. More than two years have passed since the official LMS was implemented at the University, and using analytics, its administrators were able to measure the real-time course utilization from faculty members from all across colleges. For the last four semesters, it has recorded an average of 67% utilization [8], but a downward utilization trend was also observed, which can be an indication of resistance across the demographics of its users [9].

The successful implementation and use of LMS have become a critical challenge for many higher education institutes, local and abroad, during the Covid19 pandemic [10] and even during the pre-pandemic period [11]. The success of LMS in any institution starts with instructors' acceptance since they are the major drivers of LMS [12]. However, instructors' perceptions, self-efficacy beliefs, and instructional goals, as well as the availability of resources, support services, and time affect the faculty's acceptance of technology [13]. These are translated to the low actual usage of LMS or underutilized technology because these systems are not used by faculty members and students to their fullest capacities [9,14,15]. Be that as it may, little attention is given to how well these systems are utilized in higher education [16]. Although a number of studies and literature have looked into different factors influencing the acceptance of new technology, it is still evident that research needs to be undertaken to identify the

factors that affect an individual's decision of whether or not to accept technology tools within education, particularly an LMS [17].

A newly introduced system in an institution represents change, and individuals moving through changes must be prepared, equipped, and supported so that they successfully accept the changes [18]. The LMS of the University is an example of change that needs change management. Managing change is a complex process and risky endeavor [19], hence, many organizations struggle with organizational change projects and fail to realize expected outcomes [20].

Given these circumstances, the researcher deemed it necessary to investigate different constructs that are perceived by the University educators to facilitate acceptance of their learning management system. With a view to providing the University Administration insights into successful change management, particularly for its LMS, thus this study.

Statement of the problem:

This study sought to determine the degree of agreement among University educators on the following constructs they perceived to facilitate acceptance of an LMS:

    A. Facilitating Conditions (FC)
    B. Social Influence (SI)
    C. Effort Expectancy (EE)
    D. Performance Expectancy (PE)
    E. Understanding the Rationale (UR)
    F. Feelings Acknowledge (FA)
    G. Having a Choice (HC)

MATERIALS AND METHODS

Research Design

This study utilized a quantitative descriptive survey research design. It employed an online survey instrument to gather information from respondents on their degree of agreement on seven constructs perceived to facilitate their acceptance of a Learning Management System in their University. A survey design provides a quantitative description of trends, attitudes, and opinions of a population, or tests for associations among variables of a population, by studying a sample of that population [21].

Research Setting

The study was conducted in a state-run university in Southern Philippines, particularly in one of its campuses which houses six colleges for Engineering and Architecture, Information Technology and Computing, Science and Mathematics, Science and Technology Education, Technology, and Medicine.

Respondents of the study

As presented in Table 1, the respondents of this study were 117 educators across all Colleges who have been teaching at the University for two years or more. The respondents were gathered through purposive sampling- a non-probability technique where samples are selected from the population because they are the best to address the research purpose and questions [21] and a particular trait exists in a population [22] - in this case, educators with more than two years of experience in using the official Learning Management System of the University.

Table 1. Demographic profile of the respondents (n=117)

Profile	Frequency	Percentage
Age		
26 & below	8	6.84
27-42	55	47.01
43-58	45	38.46
59-77	9	7.69
Gender		
Female	69	59.00
Male	42	35.90
LGBTQIA	6	5.10
Employment Status		
Regular	84	71.8
Contract of Service	19	16.2
Part-time	14	12
Type of Teaching Load		
Undergraduate	64	56.01
Graduate	5	4.40
Both	45	39.5
Instructional Setting		
Lecture	59	51.30
Laboratory	3	2.60
Both	5	46.1

Research Instrument

The adapted questionnaires from UTAUT model [23] and Facilitators' Scale [24] were utilized to identify the constructs that University educators perceived to facilitate their acceptance of the official LMS. From the two merged questionnaires, a total of 24 questions were utilized for the online survey. A 4-point Likert scale of 1 (fully disagree), 2 (disagree), 3 (agree), and 4 (strongly agree) was used to measure the degree of agreement on each statements. The 4-point scale is ideal in some circumstances, such as when recording thoughts on goods or services that the user has used or experienced and whose opinion is crucial [25]. As there is no safe "neutral" option on a 4-point Likert scale, the user is essentially obliged to form an opinion [22]. By omitting a midpoint in the scale, respondents' social desirability bias and misuse of the midpoint are eliminated [26]. A qualifying statement was added to immediately identify any respondents who do not qualify as members of the target respondents and route them to the exit page [27].

Validity and Reliability of the Research Instrument

The content validity of the test items was rated for relevance by ten experts (5 educators who have research experience in the field) and lay experts (5 potential research subjects). Using subjects of the target as experts ensures that the population for whom the instrument is to be distributed is represented [28]. The I-CVI of the 24 items scored between 0.80 to 1.0. Judgement for each item was interpreted using Table 2 below [29]. Experts are in agreement that the 24 items are appropriate to use.

Table 2. Interpretation for I-CVI

I-CVI	Interpretation
>0.80	Appropriate
0.70-79	Needs revision
<0.69	Eliminate

Pilot testing was done to ensure the reliability of the instrument to the target respondents [30]. A scale's internal consistency is quantified by a Cronbach's alpha (α) value that ranges between 0 and 1, with optimal values ranging between 0.7 and 0.9 [21]. As presented in Table 3, the internal consistency of the questionnaire had the lowest value of 0.72 and the highest value of 0.94, which are within the optimal acceptable values.

Table 3. Reliability test result (Cronbach alpha criterion)

Factors	Number of Items	Cronbach's alpha
Facilitating Conditions	4	0.72
Social Influence	3	0.81
Effort Expectancy	4	0.89
Performance Expectancy	4	0.93
Understanding the Rationale	3	0.92
Feelings Acknowledge	3	0.86
Having a Choice	3	0.94

Data Collection

After seeking approval to conduct the study in the University from its Chancellor, the adapted questionnaire was subjected to validity and reliability by a pool of experts and a representative sample from the target population. Minor word modifications from the suggestions of the experts were incorporated into the questionnaire before it was subjected to reliability testing. Once the questionnaire was finalized and created thru Google Forms, it was sent via email and messenger to all faculty members in the University whom the researcher has access and contacts. The data collection was made from January 24- February 24, 2023.

Data Analysis

The frequency and percentage were used to profile the respondents, as presented in Table 1. The rated scores from the responses using the 4-point Likert scale were converted into useful mean values by analyzing the responses using a score. The mean score analysis was used to measure the overall mean degree of agreement as presented in Table 4 [31]. The results of the data analysis are presented in Table 5.

Table 4. Interpretation of Mean Score

Mean Scores	Interpretation of Mean
1.00 – 2.00	Low
2.01 – 3.00	Moderate
3.01 – 4.00	High

Source: Talib, 1996

RESULTS AND DISCUSSIONS

It can be gleaned from Table 5 that there are two constructs with mean scores between 3.01-4.00, Understanding the Rationale *(M=3.30, SD=0.57)* and Facilitating Conditions *(M=3.24, SD=0.44)*. From the result, it can be understood that the educators are in high agreement that these constructs facilitate their acceptance of the LMS.

Table 4. Mean, standard deviation, and description of criteria for the degree of agreements on constructs perceived to facilitate acceptance of the LMS .

Items	Question Statements	MEAN	SD	Overall Mean	Overall SD	Interpretation
Facilitating Conditions						
FC 1	I have the necessary resources, such as mobile phones, laptops, desktops, internet connection, etc to use the LMS.	3.74	0.54	3.24	0.44	High Agreement
FC 2	I have the knowledge needed to use the LMS.	3.31	0.66			
FC 3	The LMS is not compatible with other systems/technologies I use.	2.70	0.86			
FC 4	If I have difficulties using the LMS, a specific person or group is available for assistance.	3.19	0.82			
Social Influence						
SC 1	My co-teachers influenced my decision to use the LMS.	2.86	0.84	2.81	0.61	Moderate Agreement
SC 2	My family believes that I should use the LMS	2.26	0.88			
SC 3	University Administration motivates me to use the LMS.	3.32	0.79			
Effort Expectancy						
EE 1	I find the LMS easy to use.	2.63	0.81	2.74	0.71	Moderate Agreement
EE 2	I find the LMS clear and understandable to interact with.	2.70	0.79			
EE 3	Learning to operate the LMS will be easy for me.	2.79	0.74			
EE 4	It would be easy for me to become skillful at using the LMS.	2.84	0.82			
Performance Expectancy						
PE 1	I would find the LMS useful in my teaching.	3.06	0.81	2.91	0.76	Moderate Agreement
PE 2	Using the LMS enables me to accomplish instructional tasks (e.g. lectures, discussions, demonstrations, assessments, etc) more quickly..	2.89	0.82			
PE 3	Using the LMS increases my teaching productivity (e.g: planning classwork/laboratory exercises, assessments, grading, checking attendance, etc).	2.85	0.82			
PE 4	Using the LMS will enhance my teaching career.	2.82	0.82			
Understanding the Rationale						
UR 1	I feel that I completely understand the reasons that brought about the	3.27	0.61	3.30	0.57	High

	introduction and implementation of the LMS.					Agreement
UR 2	I feel that the University administration provided me with the necessary information to understand the reasons behind the introduction and implementation of the LMS.	3.29	0.64			
UR 3	I feel that I completely understand the reasons that brought about the introduction and implementation of the LMS.	3.32	0.63			
Feelings Acknowledge						
FA 1	I feel that the University administration takes into account my opinions and ideas in the LMS introduction and implementation.	2.93	0.72			
FA 2	I feel that the University administration cares about my worries about the introduction and implementation of the LMS.	3.00	0.79	2.91	0.71	Moderate Agreement
FA 3	I feel that my worries were highly taken into account before the introduction and implementation of the LMS.	2.81	0.80			
Having a Choice						
HC 1	I think that I personally have control over the introduced and implemented LMS.	2.79	0.82			
HC 2	I have the opportunity to propose ways of introducing and implementing the LMS.	2.72	0.85	2.70	0.79	Moderate Agreement
HC 3	I feel that I personally have an influence on the way the LMS was introduced and implemented.	2.60	0.88			

Legend: [3.01-4.00 (High Agreement); 2.01-3.00 (Moderate Agreement); 1.00-2.00 (Low Agreement)

Constructs with means between 2.01-3.00 are Feelings Acknowledge *(M=2.91, SD=0.71)*; Performance Expectancy *(M=2.91, SD=0.76)*; Social Influence *(M=2.81, SD=0.61)*; Effort Expectancy *(M=2.74, SD=0.71)*; and Having a Choice *(M=2.70, SD=0.79)*. This means that the educators are in moderate agreement that these five constructs, are what they perceived to facilitate their acceptance of the LMS.

Understanding the Rationale (UR) showed the highest mean *(M=3.30)* among the constructs. Gagne, et al [25], defined it as the perceived understanding of the reasons that brought about the change in the organization. Kirkpatrick [32] suggested that communication in the form of providing or giving a rationale for doing a task is one of the key factors that facilitate employee acceptance of change. The result revealed that educators highly agree that their use of the LMS is due to the University administration having provided them with the necessary information to understand the reasons behind the introduction and implementation of the LMS. Increasing communication or keeping employees informed about upcoming changes and explaining the need for the changes can help people to envision future outcomes for the organization and is posited as a facilitator of change acceptance [24]. The result implies that the University has provided complete information and reasons to understand the implementation of the LMS.

The second factor that highly facilitates the educators' acceptance of the LMS is Facilitating Conditions (FC). Facilitating Conditions refers to the degree to which a person believes that organizational and technical infrastructure exists to support the use of the system [23]. Venkatesh et al. [33], state that facilitating conditions have four indicators, namely, the availability of resources/ facilities to use the technology, the knowledge of using the technology, technology compatibility with other techniques used, and the availability to get help from others when having difficulty using the technology. The findings above revealed that University educators accept the LMS

because they have the necessary physical and digital infrastructures such as desktops, laptops, and internet connectivity; possess the knowledge to use the LMS, and have technical assistance when needed. Several studies revealed that facilitating conditions such as introducing and increasing the availability of resources- internet access, access to mobile devices, and familiarization with the technology features [34] and providing adequate training [35] influence the acceptance of technology. In a study conducted by Namoco [36], facilitating conditions resulted for a 22% explained variance in technology acceptance. Conversely, lack of assistance, lack of timely support, incomplete information, and limited resources can prevent individuals from accepting web-based technology [37]. These two constructs, Facilitating Conditions and Understanding the Rationale may be equated to Organizational factors that influence the use of technology in teaching in terms of motivators, training, technology alignment, organization support and technical support [12]. Successful implementation of new technology in an organization requires work facilitation, trainings, problem solving, goal setting and orientation. [38]. Further, effective work group functioning such as quality communication can influence people's perception of an organizational goal.

The constructs with moderate agreement, Feelings Acknowledge, Performance Expectancy, Social Influence, Effort Expectancy and Having a Choice may be classified as Instructor Factors. These factors relate to individual's efficacy, attitude, experience and innovativeness [12]. Individual member's reaction to organizational change is a key determinant of the successful implementation of change [39].

CONCLUSION
This study investigated the constructs that educators perceived to facilitate their acceptance of the LMS in a Philippine state university. It can be concluded that Understanding the Rationale (UR) and Facilitating Conditions (FC) are the constructs perceived by University educators to facilitate change acceptance, in the context of

an LMS usage. This result may be attributed to the University's effort to communicate with the educators the reasons behind the introduction and implementation of the LMS. Furthermore, educators were provided with the necessary resources for them to be able to use the LMS. Therefore, the University educators were prepared, equipped, and supported which facilitated the acceptance of the changes- the introduction and implementation of the LMS in their University.

RECOMMENDATION

Based on the findings, it is recommended that Higher Educational Institutions may enhance communication with the users of the technology and provide necessary resources in the use of a Learning Management System for them to accept it. Change managers may also acknowledge the individual's reaction to an organizational change in order to successfully implement change. It is further recommended that an in-depth study on the influence of the studied constructs on the actual use behavior of the University educators on the LMS.

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