

PREDICTORS OF FACULTY READINESS TO FLEXIBLE LEARNING MANAGEMENT SYSTEM

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Abstract

The closure of academic institutions around the world tested the readiness of universities to deal with remote measures of learning delivery. Thus, the study was conducted to assess the level of readiness of the faculty members at Eastern Samar State University Guiuan campus and to determine the different predictors to be used in developing an intervention program. A descriptive-correlational research design was utilized in the study. The study was participated by 102 faculty members. One-way ANOVA, Pearson's correlation, and regression analysis were used in testing the hypotheses.

The results of the study revealed that there is no significant difference between the faculty profile and its level of readiness to flexible learning management system. A significant relationship has been concluded among and between faculty readiness, course design, course rapport, time management, and technical competence. The regression analysis disclosed that course design and technical competence are the predictors of faculty readiness in the flexible learning management system. Thus, heads of academic institutions should provide resources to train faculty members in the use of technology and other platforms that are used in the flexible learning environment. Also, develop a positive attitude towards technology in the teaching process by making a continuous effort to improve their technological skills. More importantly, provide the necessary equipment for faculty to deliver the teaching-learning process effectively and efficiently, ensuring that learners acquire the necessary knowledge, skills, and competencies for each course.

Keywords: Flexible Learning Management, Faculty Readiness, Technical Competence

Introduction

The closure of different educational institutions all over the world due to the spread of COVID-19 has accelerated the development of the online learning environment so that education would not be disrupted. The coronavirus pandemic has evaluated the readiness of universities to deal with a crisis that requires online and remote measures. Several educational systems are collaborating to promote instruction that will improve students' creativity, analytical skills, and performance abilities in the absence of face-to-face education. Thus, institutions are planning to conceptualize the so-called flexible learning management approach to teaching as it is believed to be the most convenient and appropriate method of instruction delivery to ensure that students can meet the desired competencies, knowledge, and skills in their field of specialization. Flexible learning is an integration of face-to-face and online instruction [1]. It refers to the "new traditional model" or the "new normal," which is presently introduced to several educational institutions to adopt. Incorporating a flexible learning approach offers both synchronous and asynchronous teaching methods and fosters an environment that extends well beyond the traditional boundaries of the brick-and-mortar classroom setting while enhancing the learning experiences of students [21]. The goal of flexible learning is not to try to recreate face-to-face (F2F) classrooms, which is impossible to do, but to provide opportunities for learners to work more independently and learn to use tools and strategies that they otherwise might not have. While innovation, creativity, and resilience are requirements to make things work, universities need to be adaptive and fast thinking to ensure that learning continues in a healthy way [12].

However, in adopting the pedagogy, instructors are charged in finding numerous ways to engage students in course content while overcoming the various challenges of online learning. They must consider new ways to prepare, organize, deliver, and assess courses and learning materials for online teaching [5]. The problem is that many of the faculty members are not prepared. Hence, designing transformational learning opportunities for teachers, both in pre-service programs and in professional development, requires a deep understanding of what

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student-centered and active learning entails. Researchers discovered a small program offered to teachers for flexible learning environments [3]; [18]. As a result, the burden of creating a student-centered, flexible environment falls on the faculty. It is important to review the reasons for offering students online classes that go beyond periods of confinement

Thus, this encourages the researchers to investigate to determine the extent of the faculty members' readiness to apply a flexible learning management system approach in the teaching process that will be correlated to their profiles and other measuring variables. As such, the researchers proposed an action plan for faculty readiness, which is significant to the development of programs at higher educational institutions for the implementation of the new normal instructional system brought about by the COVID-19 pandemic. Similarly, by integrating technology, faculty members can be more effective and efficient in their instruction delivery. This study provided knowledge as to the technical development of the faculty, including numerous ways and techniques.

Literature Review

Flexible Learning Management System (FLMS) is not a new concept. Since then, teachers have always used the approach [30]. The New Media Consortium Horizon reported that flexible learning design was one of the short-term focus areas driving technology adoptions in higher education [1]. The approach has been defined in different ways. This kind of instruction offers innovative educational solutions by skillfully blending traditional classroom instruction with online activities for teachers and students and digital learning. The idea is rooted in the fact that learning is not just a one-time event but a continuous process [24]. It is an effective combination of different modes of delivery, models of teaching, and styles of learning [23]. Flexible learning involves the combination of two fields of concern: education and educational technology [6]. By giving students some degree of choice over their learning pace and course, flexible learning can help to make education more student-centered.

As emphasized, knowledge about how to deliver flexible learning is essential in determining factors that will be able to facilitate students' learning approaches that are best suited to them [22]. Moreover, recognizing the need for the teachers to be equipped with the necessary knowledge and skills in using different methods in flexible learning will help them appropriately provide holistic academic development, understand how to best use the technologies, and develop a primary understanding of how to develop an effective flexible learning environment [7]. In a study, it was expressed that

technical support must be in place to work effectively in the online environment. Also, the teachers must be required to have further training in the use of technology customized to their specific online teaching needs, designed to form collaborative communities of practice [26]. Even though most abilities are believed to be comparable and transferable across contexts, a conclusion was made that educators can benefit from training, support, and faculty development during the transition of the educational system [14].

Faculty members must gain substantial technological competence [11] to deliver effective instruction in distance education [29]. As a result, it is critical to assess teachers' readiness to use technology to ensure that current pedagogical strategies are being implemented to meet the needs of students in the digital age [4]. This current study aimed at measuring the level of readiness of the faculty members and determining the predictors of that readiness to be used in crafting an action plan. Faculty members must be trained in course design [19], grading criteria, teacher-student interaction [2], and online rapport [32]. Since open communication, comfort, respect, and approachability are key elements of online rapport that help promote learning, it is crucial to understand the characteristics that go into its development. According to the findings of a study, professors should carefully select the methods and online media platforms to use in capturing students' attention and encouraging constructivist and observational learning among them during the curriculum preparation phase [17]. A substantial relationship between teacher evaluation and student course expectations was concluded as well as between professor-student rapport [33]. Furthermore, fostering better relationships with online students may enhance student achievement [9]. In certain online classrooms, the author used rapport-building teaching techniques like video updates, one-on-one emails, and individualized electronic comments on homework, comparing the results to those of online classes that did not use these techniques. According to the mean difference tests, logit models, and regression models, the rapport-building and time management courses have much reduced attrition and significantly higher grades [28].

The development of new time management skills is important in the transition to online teaching [34]. Online teaching was regarded as a time-consuming activity by some authors [17]; [31]. The following are guidelines for time management: 1) design the course a semester before delivery, 2) set aside weekly hours to facilitate the course, using the learning management system to manage time, 3) set aside weekly hours to grade assignments, 4) allocate

time to brush up on new strategies or tools, and 5) use facilitation strategies to manage time spent on the course [16].

Faculty must create techniques to increase student participation when facilitating an interactive online course. This promotes teachers' feedback, collaborative learning, the growth of relationships, independent networking, and self-directed proactive learning [15];[25]. Learning should be transformative and provide students the chance to examine and consider their presumptions, to critically evaluate their ideas and judgments, and to incorporate new thought patterns into their personas. Through the exchange of ideas and beliefs with others on a personal and professional level, new information can be developed and made applicable in practice. A key component of an engaging virtual learning dynamic is fostering peer-to-peer participation in conversations with students.

On the other side, faculty development is required to improve the integration of e-learning even more. More crucial than simply being at ease with technology is teaching students pedagogical approaches suitable for online courses [13]. ICT integration in learning is effective for the success of digital-based teaching and learning [8]. Moreover, professional development training programs for teachers also played a key role in enhancing students' quality of learning. The necessary technical support must be in place to work effectively in the online environment; teachers' training in the use of technology customized to their specific online teaching needs and designed to form collaborative communities of practice was highly recommended. Furthermore, to improve learning, faculty members must take a proactive role in self-directed learning [26].

Methodology

This study used the descriptive-correlational design as it measures the degree of the relationship between the variables. The descriptive correlation design was employed to describe the nature of a situation as it existed at the time of the study and to explore the effects of phenomena. Without changing or modifying the variables in any way, descriptive research was done to observe and characterize a research subject or problem. It is appropriate in this study because the goal was to investigate faculty readiness to flexible learning and to identify predictors of readiness. It is also used to determine the extent to which different variables are related to each other in the population of interest [27]

Participants

Faculty members of Eastern Samar State University Guiuan campus are the respondents of the study. The researchers employed the total enumeration as the sampling procedure. Hence, the sample size is quite manageable. A total of 102 survey questionnaire was retrieved, tallied, and interpreted.

Instruments of the Study

One set of a survey questionnaire was used in the study, divided into two parts. The first part determined the faculty profile concerning their academic rank, educational attainment, and years of service. The second part measured the level of readiness of faculty members for flexible learning. Relating to faculty readiness, the variables that were assessed were course content, course rapport, time management, and technical competence. The instrument's content was validated by experts in education and information technology to ensure its adaptability to the local environment; thus, the adoption is based on foreign studies. For this study, the computed Cronbach's values are 0.77, 0.88, and 0.79, which are considered acceptable.

Procedures

Permission to conduct the study was obtained from the university research office. Upon receiving the approval, the researchers handed the instrument to the faculty members. However, for those faculty who preferred answering them online, the researchers encoded the instrument into a Google Form and sent it to them using the link. The questionnaire that was personally handed out by the researchers was collected personally. However, those that were sent through a link from the Google forms were automatically transported to Excel for tabulation. The data was tallied and tabulated. Frequency counts, percentages, and means were used to analyze the data. Moreover, one-way ANOVA, Pearson's correlation, and regression analysis were used in testing the hypotheses.

Results

This section presents the analysis and interpretation of data based on the information gathered from the faculty profile and their level of readiness, as well as on course content design, course rapport, time management, and technical competence. The data were presented using a descriptive method of analysis to guide readers towards a better understanding.

Faculty Profile. Table 1 shows the profile of the faculty members in terms of their academic rank, educational attainment, and years in teaching.

Table 1: Faculty Profile of Eastern Samar State University Guiuan Campus

		Frequency	Percentage
Academic Rank	Full Professor	0	0%
	Associate Professor	7	6.9%
	Assistant Professor	17	16.7%
	Instructor	46	45.1%
	Lecturer	32	31.3%
Educational Attainment	Doctorate	11	10.8%
	Master's	63	61.8%
	Bachelor's Degree	28	27.5%
Years in Teaching	0-5	47	46.1%
	6-10	34	33.3%
	11-15	9	8.8%
	More than 15	12	11.8%

N = 102

As shown in Table 1, more than half of the faculty members obtained the minimum requirement of educational qualification. The group possessing the highest percentage are those who have obtained their master's degree, with a total percentage of 61.8%. Of the remaining respondents, 27.5% of them have bachelor's degrees; this may be because some of them are still finishing their master's degree programs, and 10.8% are holders of a doctorate. Most of the faculty have the academic rank of instructor with a frequency of 46 (45.1%), followed by lecturers with a frequency of 32 (31.3%). A frequency of 17 (16.7%) occupying the assistant professor academic rank and 7 (6.9%) for the associate professor.

It is also reflected that the majority of faculty have been in service for at least five years, with a frequency of 47 (46.1%), followed by six to ten years, with a total frequency of 34 (33.3%); 12 (11.8%) have been in service for more than 15 years, with a frequency of 9 (8.8%) for those who have been in service for eleven to fifteen years.

Level of Readiness. The faculty members are ready on the items of technical literacy, personalizing instruction, facilitating student-student interaction, and facilitating teacher-student interaction. While the items - digitalization, dispositions, planning flexible activities, planning flexible assessment, facilitating student-content interaction, implementing flexible learning, evaluating, and reflecting, and flexible routines - are slightly ready, overall, faculty members are slightly ready to teach flexible learning, which means that only 50–74% of the faculty are ready for flexible learning. It is important in this case to recognize the need for the faculty to be equipped with the necessary knowledge and skills in using various methods in flexible

learning to appropriately provide holistic academic development, understand how to best use technologies, and, most importantly, develop an understanding of how to develop an effective flexible learning environment [7].

Course Design. In this aspect, the result implied that faculty members need assistance to improve their skills in using the online teaching methods to deliver their instruction to students while ensuring that quality education is still provided. Overall, 75–99% of the faculty members can do all the tasks involved in designing course content. Course content design entails not only anticipating students' questions and preparing materials, course lectures, activities, and assessments in advance, but also providing clear expectations of assignments and/or activities. It needs to be organized into a structure, a course syllabus, and a course guide to define requirements [19]. Moreover, the success rates of online learning focus on course design and instructor–student interaction [2].

Course Rapport. Faculty members can effectively communicate with students by sending reminders and announcements via email. However, they need to be assisted with the use of web-conferencing tools for the delivery of instructions. In total, 75–99% can do all the tasks in developing course rapport with the students to make the instruction more active and meaningful. Rapport is necessary in distance education because of the absence of face-to-face communication. Improving rapport with online students may lead to improvements in student success. It represents a simple, instructor-driven intervention that can significantly improve online retention and grades [9].

Time Management. Faculty members can benefit from scheduling time to design the course prior to delivery (for example, a semester before the class). However, they have problems with the use of facilitation strategies to manage time spent on the course (e.g., discussion board moderators, collective feedback, grading scales). Time management is a skill that must be learned and improved for online learning to be successful [28]. Instructors need to develop new time management skills when transitioning to online teaching [34].

Technical Competence. Highest percentage of faculty members are doing well in creating, editing, and managing files using computers. but fewer in number when it comes to creating and editing videos for online instruction. From this finding, it is implied that faculty members need assistance in learning

how to develop the skill of video editing, which is useful in the conduct of flexible learning. Technical support must be in place to work effectively in the online environment. Also, faculty members must be required to have more trainings in the use of technology customized to their specific online teaching needs, designed to form collaborative communities of practice.

Difference between Faculty profile and Level of Readiness to Flexible Learning Management System. The succeeding tables present the one-way ANOVA result of determining if there is a significant difference between the profile of the faculty and its level of readiness. The presentation is organized from academic rank to years of teaching experience.

Table 2: ANOVA Table of Faculty Level of Readiness to Flexible Learning Management System by Academic Rank

Variable	Academic Rank	N	Mean	F	p
Readiness	Professor	0	0	.743	.529
	Associate Professor	13	3.57		
	Assistant Professor	17	3.74		
	Instructor	44	3.76		
	Lecturer	28	3.86		

Note: N= number of samples; F= F-test

Table 2 shows that there is no sufficient evidence to support the alternative hypothesis that at least one academic rank category is different ($F=.743$, $p=.529$). The result further implied that academic

rank has nothing to do with the level of readiness of the faculty members to teach flexible learning.

Table 2.1: ANOVA Table of Faculty Level of Readiness to Flexible Learning Management System by Educational Attainment

Variable	Educational Attainment	N	Mean	F	p
Readiness	Doctorate	11	3.89	.584	.560
	Master's	63	3.72		
	Bachelor's	28	3.82		

Note: N= number of samples; F= F-test

Table 2.1 shows that there is insufficient evidence to support the alternative hypothesis that at least one educational attainment category is different ($F=.584$, $p=.560$). The result signifies that

educational attainment has nothing to do with the level of readiness of the faculty members to teach flexible learning.

Table 2.2: ANOVA Table of Faculty Level of Readiness to Flexible Learning Management System by Years of Teaching

Variable	Years of Teaching	N	Mean	F	p
Readiness	0-5	47	3.82	.457	.713
	6-10	34	3.75		
	11-15	9	3.59		
	More than 15	12	3.71		

Note: N= number of samples; F= F-test

Table 2.2 shows that there is no sufficient evidence to support the alternative hypothesis that at least one year of teaching has difference ($F=.457, p=.713$).

As indicated by the result, years of teaching have nothing to do with the level of readiness of the

faculty members to teach in a flexible learning management system.

Relationship between and among the independent variables to Level of Readiness.

Table 3.0 illustrate the summary of the relationship among measures for all subjects of the study.

Table 3: Pearson Product-Moment Correlation Among Measures for All Subject of The Study

Variables	1	2	3	4	5
1. Course Content		.778**	.817**	.727**	.670**
2. Course Rapport	.778**		.743**	.670**	.580**
3. Time Management	.817**	.743**		.723**	.602**
4. Technical competence	.727**	.670**	.723**		.473**
5. Readiness	.670**	.580**	.602**	.473**	

Note: ** $p < .01$

As shown in table 3 that level of readiness has a positive relationship to course content ($r = .670, p < .01$), course rapport ($r = .580, p < .01$), time management ($r = .602, p < .01$), and technical competence ($r = .473, p < .01$).

It is also noted that all measuring variables are highly correlated with one another having all the

$p < .01$. Correlation analysis indicated a positive relationship of all the variables to faculty readiness.

Regression Analysis for the Level of Readiness.

Table 4.0 shows the result of the regression analysis for the level of readiness to determine which of the variables predicts faculty level of readiness.

Table 4: Regression Analysis for Variables Predicting The Level of Readiness

Variable	B	SE	β	t	P
Constant	.914	.339	-	2.69	.008
Designing Course content	.517	.150	.511	3.45	.001
Course rapport	.143	.136	.131	1.05	.296
Time management	.137	.119	.161	1.15	.252
Technical competence	.175	.184	.103	2.84	.005

Note: B= Beta, SE = Standard error, β = Standard coefficients Beta

$R = .683, R^2 = .467, F(4, 97), p = .000$

Table 4 indicates a significant relationship between course content and level of readiness ($B = .517, SE = .150, \beta = .511, t = 3.450, p = .001$) and technical competence ($B = .175, SE = .184, \beta = .103, t = 2.842, p = .005$), therefore, course content and technical competence are predictors to faculty level of readiness to flexible learning management system. The regression analysis, however, shows no relationship between faculty level of readiness to course rapport ($B = .143, SE = .136, \beta = .131, t = 1.05, p = .296$) and time management ($B = .137, SE = .119, \beta = .161, t = 1.15, p = .252$). It denotes that course rapport and time management is not a predictor of faculty level of readiness to flexible learning management system.

Conclusion

Faculty members are slightly ready for the flexible learning management system approach; this is maybe because they are adjusting to learning and navigating ways to conduct the said approach. Excellently, they can use emails to send announcements and reminders to the students and

use them as a medium of communication to keep everyone connected. They can write measurable learning objectives and organize their learning materials into modules or units. However, full attention must be given to the needs of the faculty members on the use of the different teaching strategies in the online environment, as well as on the use of web-conferencing tools and creating and editing videos, which are significant in the conduct of a flexible learning management system. The literature provides substantial evidence on the efficacy of empowering faculty in the use of technology and other means in implementing the flexible learning management system approach.

The major concern of the faculty members is how to effectively integrate technology into the delivery of instruction. Thus, heads of educational institutions must invest in faculty development using technology in flexible learning, specifically for the different learning platforms and other media tools that can effectively enhance the delivery of instruction, not merely focusing on printed materials

but adapting to the trends to equip faculty members with the needed skills in the new educational environment. Accordingly, develop a positive attitude towards technology in the teaching process by making a continuous effort to improve their technological skills. Also, explicate the benefits of this new paradigm to the teaching process. Most importantly, a flexible learning management system must include the necessary equipment for faculty to deliver their lessons effectively and efficiently to learners. The same research must be conducted with a larger scope and number of respondents. Furthermore, another set of variables may be used for another investigation of faculty readiness.

Discussion

The main purpose of the study is to measure the level of readiness of the faculty members of ESSU Guiuan to adopt a flexible learning management system and to determine the predictors of readiness as it serves as a basis for the development of an action plan for the conduct of instruction in the new normal. Most of the faculty members are slightly ready for the flexible learning management system approach. It was revealed from the findings that they can write measurable learning objectives and organize instructional materials into modules or units. They can also use email to send announcements and reminders to students, as well as to respond to questions and provide assistance. Furthermore, faculty members can schedule time for designing the course assigned to them before its delivery. They have the knowledge of basic

computer operations to create and edit documents and manage files and folders for easy access and retrieval.

However, they need assistance in enhancing their skills in using the different teaching methods in an online environment, perhaps because they are adjusting and starting to learn how to navigate online platforms for delivery. Aside from how they can apply the different teaching strategies online, they also need some assistance in using the different tools in web-conferencing and other available technology for managing their time well and facilitating online learning. More so, of creating and editing videos for developing instructional material. According to the findings, faculty profile in terms of academic rank, educational attainment, and years of teaching make no significant difference in their level of readiness. All the measuring variables of course design, course rapport, time management, and technical competence are highly significant to faculty readiness. However, only course design and technical competence are good predictors of readiness.

From the findings of this research, it is evident that there is a big need to provide programs and activities that can help faculty members be effective in the delivery of their instruction in the flexible learning management system. Thus, the following is the proposed action plan:

Key Areas	Objective/s	Activities	Person/s Involved
Course Design	Design effectively a hybrid learning course material.	Conduct seminars, workshops, and trainings on the following: (1) Designing learning activities that provide students opportunities for online interaction. (2) Instructional development emphasizing course structuring considering selecting of topics, organization, and sequencing, selecting of teaching strategy, and creating a schedule, (3) Designing an effective learning interaction from learners to content, learners to instructor, and learners to learners	▪ Administration ▪ Faculty members ▪ Curriculum Committee
	Improve instructional delivery in an online learning	▪ Develop the skills in creating online quizzes and examinations, assignments, managing grade online, uploading and downloading videos.	
Technical Competence	Improve faculty confidence in the use of ICT in the teaching-learning process.	Facilitate a training workshop on the following: (1) Refresher course on Basic computer operations including the use of power point presentation, and Microsoft excel. (2) Using the online learning platforms such as google classroom, teachmint and others; including the use of drop box and google drive in saving for a large file. (3) Creating and editing videos using different tools. (4) Accessing and sharing open educational resource files.	

Conflict of Interest

There is no conflict of interest between the authors in this manuscript.

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