E-Readiness for Learning Management Systems of a Higher Education Institution

Jonathan S. Dela Cruz, Ana Sheryl Lynn S. Catura
Bicol State College of Applied Sciences and Technology, Philippines
jsdelacruz@biscast.edu.ph, aslcatura@biscast.edu.ph

Abstract –*This research aimed to investigate e-readiness for a web-based classroom in a state college in the Philippines utilizing observations from the faculty and students. Specifically, it determined the level of readiness of faculty and students to a learning management system, compare the level of readiness of the two groups, and propose an instructional and learning environment through a virtual classroom. Two instruments were utilized and administered to 48 faculty members and 65 students to determine their readiness to the concept of a virtual classroom as an emerging trend in classroom management and as part of the driving tool for quality management in the area of instruction. Results show that the faculty members were eager to adopt the concept of virtual classroom since they have the technical access and the necessary computer skills. But they are doubtful on the availability of a reliable internet connection and computer accessories like headphones, microphones and webcams. Students reported a moderate readiness for the learning methodology. But they manifested the proper motivation towards the innovation. Between the groups, there was no significant difference in their reported levels of readiness. Various components from the results were considered for the determination of tools and features of the learning management system. College domain was integrated with the Google Suite and utilized its services together with the online classroom suited for the institution which can be accessed through an Astean account. The platform utilized the hybrid approach exercising blended learning and online activities. A further study which evaluates the effectiveness of the approach to the faculty is recommended as well as an investigation on its impact to the students.*

Keywords – *blended learning, learning management system, classroom management*

INTRODUCTION

In education, quality classroom management focuses with the enhancement of the teaching-learning process. Among the factors affecting this process is the learning environment in the institution [1]. Researchers analyzed the development of the learning environment management system in the schools and used these as guidelines for the betterment of the learning environment. The utilization of information technology as one of the aspects for the development of learning environment has changed the culture of teaching-learning process [2].

The rapid pace of technological and economic advancement poses a challenge to educational institutions which demands quality teaching and learning processes, thus for the institution to adapt with these changes it must embrace e-learning opportunities. E-learning provides flexibility and conveniencefor both the teacher and learner since it provides easy access to education. With e-learning, anyone can learn beyond the confines of time and place [3].

A Learning Management System (LMS) helps to augment educational needs of both teacher and learner. Every educator and learner deal with it as an all-in-one platform allowing them to manage their needs in any condition. Based on the framework of an e-learning system, significant instructional activities such as instructional management, collaboration, assessment and guidance are used toefficiently addresseducational needs.[4] For example, using the electronic mail or email as means of communicating with students, online module preparations, and digital class record are just basic ingredients of implementing LMS on a digital age. However, flexibility and deeper technical ideas can bring a real experience of online approach to teaching and learning. Inclusion of various kinds of multimedia lectures such as videos (e.gYouTube, EdTV, and other video streaming platform), audio in various forms is just one of simple ways of spicing up lectures in the module. LMS has also the capability of setting up means to have communications with their teachers and each other. [5]And most importantly, they use it for conducting online quizzes, submissions of homework and

assignment preparations, chat activities and discussion groups.

Nowadays, many higher education institutions are utilizing the use of LMS since it provides for flexible teaching and learning. There are three aspects which highlight the use of online learning: Pedagogical Improvement, Increased Access and Flexibility and Cost-Effectiveness.[6] Some LMS's can be developed intentionally based on specific pedagogical strategies and some are used freely that have no pedagogical strategies being used at all. Moreover, LMS's can emphasize from a pedagogical point of view a more learner-entered approach or teacher-centered approach. Access is one of the factors affecting the growth of learning environments that is why LMS makes learning possible regardless of whether the learners have most of their learning experience away from teachers or other learners. Practicality dictates that education must be cost-effective.Online learning is one of the best cost-effective solutions in higher education as it provides an opportunity for reaching a large, globally dispersed audience in a short period of time with consistent content delivery.

These features of LMS pave the way for this higher education institution to standardize its instruction mandate according to its quality management system. In addition it was proven by an experimental study that LMS has a positive contribution to quality teaching and learning process [7]. Furthermore LMS presents opportunities for the institution to adapt with the rapid pace of technological and economic advancement happening in the country. Also LMS shows promising results when it is combined with an advanced collaborative tool in web-based teaching of programming languages [8] But the faculty and students, as the direct implementors and receivers must embrace the new innovations brought by technology integration for it to be successful [9],[10].

Online teaching and learning readiness or e-readiness of both teacher and student is imperative for e-learning to become successful. Through completing this lesson, instructors will develop effective online courses and direct students to productive and successful online learning experiences. E-readiness is the extent to whichusersare prepared to apply theire-learning experience to actual e-learning systems [11].

In coping up with times, there are numerous studies done globally to measure e-readiness of schools and universities, particularly for teachers [12]. It is also noted that since online instructors' attitudes towards the e-learning system have focused on opinions and perceptions of its performance, their level of e-readiness can influence their actual use and application of technology tools needed to assist online learners, and is reflected in successful course outcomes and user satisfaction [13].

Student e-readiness is as important tobetter understand how to achieve effective online learning. It is indispensable torecognize what dimensions of online learning readiness college students should possess and what dimensions were possibly omitted in past research. Similarly to the teachers, learners' perceptions of the Internet shape the learners' attitudes and online behaviours [14].

OBJECTIVES OF THE STUDY

This research investigated e-readiness for a web-basedinstructional and learning environment to promotequality management systems, utilizing observations from the faculty and students. Specifically, it determined the level of readiness of faculty and students to learning management system and blended learning, compared the level of readiness of faculty and students, and developed an instructional and learning environment through virtual classrooms.

MATERIALS AND METHODS

The study involved determining the readiness for online classrooms among teachers and students. Moreover, results served as importantinputs to be able to provide a responsive virtual media for teaching and learning.

Research Design and Instrument

The survey method was used to evaluate the level of readiness of teachers and students to online learning. Two questionnaires were adopted to measure the readiness of the two groups of respondents. The teacher readiness instrument was adapted from Gay [12] which was judged reliable as all variables had an alpha coefficient greater than .70. The student readiness questionnaire was adapted from Hung [15] with 0.727 to 0.871 reliability of the items, showing it to be an acceptable value.

For faculty readiness for online learning, the instrument contained dimensions on: *Technical readiness, Lifestyle readiness and Pedagogical readiness*. It consists of 17 statements as indicators for all the dimensions. A four-point Likert rating scale was used for the different indicators. Data from the survey werecoded and entered as: 3.51 to 4.0-Strongly

19

P-ISSN 2362-8022 | ASEAN Citation Index | E-ISSN 2362-8030
Asia Pacific Journal of Education, Arts and Sciences, Volume 7, No. 4, October 2020 Part II

Agree(SA), 2.52 to 3.50 – Agree(A), 1.51 to 2.50-Disagree(D) and 1.0 to 1.50-Strongly Disagree (SA).

The student questionnaire on readiness consisted of indicators on: Computer/Internet self-efficacy, Self-directed learning, Learner control (in an online context), Motivation for Learning (in an online context), and Online communication self-efficacy. A five-point Likert rating scale was used for the respondents to rate the statements. Data from the survey were coded and entered as:4.51 to5.0 -Strongly Agree (SA), 3.51 to 4.50 – Agree(A), 2.51 to 3.50 – Uncertain (U), 1.51 to 2.5 –Disagree(D) and 1.0 to 1.5 -Strongly Disagree(SD).

Research Participants

Since the College of Arts and Sciences served as the pilot college for the implementation of an on-line classroom, its 48 faculty membersanswered the questionnaires online. On the other hand, survey questionnaires were administered to 65 students, also from the College of Arts and Sciences, and students of the faculty-respondents.

Data Analysis

Statistical treatment such as weighted mean was determined to establish the observations of teachers and students. T-test test for independent samples was used for determining difference of levels of readiness of faculty and students.

Since the groups were surveyed using two (2) different instruments, but with similar content, the student readiness indicators were classified into technological, lifestyle and pedagogical dimensions, similar to the faculty readiness indicators. Notably, the instruments used two different scales, a 4-point scale for the faculty and 5-point scale for the students. To be able to compare the two sets of data, scores were converted into z-scores to be able to compare them [16].

Data analysis was conducted and became the basis for the development of an online teaching and learning platform. Suggestions and recommendations were also solicited from the respondents for the improvement of the system.

RESULTS AND DISCUSSION

Table 1 shows the level of readiness of faculty to online classroom or virtual learning environment on the readiness scales. Among the three, teachers report the highest level of readiness in terms of pedagogy (3.51), while technical (3.37) and lifestyle (3.38) readiness were at almost the same level.

Table 1. Readiness of Teachers for On-line Learning along the 3 Dimensions

Dimensions	**WM**	**VI**
Technical Readiness	3.37	A
Lifestyle Readiness	3.38	A
Pedagogical Readiness	3.51	SA
Overall WM	**3.42**	**A**

Ratings for technical readiness shown in Table 2 shows teachers perceived themselves as knowledgeable in accessing online help and receiving emails (3.69). Though high ratings were given to computer skills of teachers, lower ratings were found on access to technology like webcams, microphones, etc. (2.96) and a reliable internet connection (3.04). While a good internet connection is needed for online classrooms, there is a national problem in the country because of the weak internet connections.

Table 2. Technical e-Readiness of Teachers

Statement	WM	VI
I know how to access the online help desk	3.69	SA
My computer setup is sufficient for online learning	2.96	A
I have access to software such as word processor, spreadsheet, or browser	3.55	SA
I have access to a printer	3.5	S
I receive emails sent to my online campus email address	3.69	SA
I have access to the Internet for substantial periods of time, perhaps 45 min or so, at least 3 times a week	3.16	A
I have access to a dedicated network connection or have an Internet Service Provider/ISP	3.04	A
Average WM	**3.37**	**A**

As to Lifestyle readiness, teachers rated this also as agreeable (3.38), reported in Table 3. Among the indicators, communicating with persons by using electronic technologies such as e-mail, text messaging and voice mail was rated highest (3.68). With the popularity of gadgets nowadays, whether among teenagers or adults, this is expected.

In terms of adequacy of time and place to work on online coursework, teachers rated these lowest (3.15 and 3.21). They see a slight concern on finding time to participate on online discussions. This may be common to teachers considering that they are burdened with a lot of paper works in schools. And at some point they have distinguishable differences in their views of technology and computers. They tend to self-assess their acceptance and usage behavior of

20

P-ISSN 2362-8022 | ASEAN Citation Index | E-ISSN 2362-8030
Asia Pacific Journal of Education, Arts and Sciences, Volume 7, No. 4, October 2020 Part II

the technology, believing they have a specific technology in mind. [17]

Table 3. Lifestyle e-Readiness of Teachers

Statement	WM	VI
I have a private place in my home or atworkandthatI can use for extended periods	3.21	A
I have adequate time that will be uninterrupted in which I can work on my online courses	3.15	A
I routinely communicate with persons by using electronic technologies such as e-mail, text messaging and voice mail	3.68	SA
I have persons and/or resources nearby who will assist me with any technical problems I might have with my software applications as well as my computer hardware	3.56	SA
I value and/or need flexibility. For e.g., it is not convenient for me to come to campus two to three times a week to attend a traditional class	3.31	A
Average WM	**3.38**	**A**

Among the scales, teachers rated pedagogical readiness highest with 3.51 (strongly agree), as reported in Table 4. This consistent with findings from other researches [12] which also showed that among the scales, pedagogical readiness was rated highest.

Table 4. Pedagogical e-Readiness of Teachers

Statement	WM	VI
When I am asked to use technologies that are new to me such as a fax machine, voice mail or a new piece of software, I am eager to try them	3.53	SA
I am a self-motivated, independent learner	3.4	A
It is not necessary that I be in a traditional classroom environment in order to teach	3.52	SA
I am comfortable providing written feedback rather than giving immediate verbal feedback	3.56	SA
I am proactive with tasks; tending to complete them well in advance of deadlines	3.52	SA
Average WM	**3.51**	**SA**

The highest indicators are: being comfortable providing written feedback rather than giving immediate verbal feedback (3.56) and eagerness to try new technologies (3.53). Interestingly, self-motivation scored the lowest (3.4), though still agreeable. It also showed that most teachers are motivated to course participation or interaction. This may be due to the school's continuous support for its faculty's capacity-building and growth. According to research as part of motivation, school improvement is one of the factors to model changes in school's capacities and growth [18].

Table 5. Students' e-Readiness for On-line Learning along the 5 dimensions

Dimensions	WM	VI
Computer/Internet Self-efficacy	4.02	A
Self-directed learning	3.84	A
Learner control (in an online context)	3.68	A
Motivation for learning(in an online context)	4.41	A
Online communication self-efficacy	3.90	A
Overall Weighted mean	**3.97**	**A**

As shown in Table 5, students generally have a high level of readiness of for online classroom. Among the dimensions for online classroom, students rated highest their motivation for learning which show the positive attitude of students towards this innovation (4.41). The lowest rated dimension was on learner control (3.68). This is somehow parallel to a study in which findings show that exposing learners to a new classroom management system, an online classroom, made them delighted, though they felt instrumental to the successful use of the platform [19]. Students valued how Google Classroom made it easy to access all the materials that were required for the course.

Table 6. Computer/Internet Self-Efficacy Readiness of Learners

Statement	WM	VI
I feel confident in performing the basic functions of Microsoft Office programs(MS Word, MS Excel, and MS PowerPoint).	4.05	A
I feel confident in my knowledge and skills of how to manage software for online learning.	3.75	A
I feel confident in using the Internet (Google, Yahoo) to find or gather information for online learning.	4.26	A
Average WM	**4.02**	**A**

The respondents agreed on the readiness of learners in terms of Computer and internet self-efficacy (4.02) in Table 6. It is also noted that there is an acceptable confidence of students in using the Internet i.e. Google, Yahoo (4.94). This shows also a moderate level of technology ability and skills which is necessary for students' readiness of working with computers and Internet access. In the online learning environment, students need access to educational content, do learning activities, participate in synchronous and asynchronous discussions and need

tools and computer software and should also have access to these tools, and have the skills to work with them. Unlike previous studies where students rated this scale the highest [15]. This may due to the poor state of internet connection generally felt around the country.

On self-directed learning, students were agreeable on all of its indicators (3.84), as reflected in Table 7. Personal goals for learning as well as carrying out their study plans were scored higher than time management. A study supports this result of students in higher education have moderate levels of readiness along self-directed learning.[20] Considering that e-learning largely involves self-study, and access to various electronic sources, and time of the study, and multi-media format, self-directedness is essential. Students who have enough self- motivation and responsibility for learning are needed in this learning system [21].

Table 7. Self-directed learning readiness of Learners

Statement	WM	VI
I carry out my own study plan.	3.8	A
I seek assistance when facing learning problems.	3.91	A
I manage time well.	3.67	A
I set up my learning goals	3.94	A
Average WM	**3.84**	**A**

Among the dimensions, students' self-ratings yielded significantly lower mean scores for learner control thanthe other dimensions (3.68). Specifically, they indicated that they (the students) get distracted by other online activities when learning online i.e. instant messages, Internet surfing (3.43).This is similar to other research findings [15]. Thus, it is important that student should develop time-management skills.They should possess self-discipline toorganize study habits anddevote adequate time to the online class, to join online discussions, and to submit their requirements on time.

Table 8. Learner control (in an online context) Readiness ofLearners

Statement	WM	VI
I can direct my own learning progress.	3.84	A
I am not distracted by other online activities when learning online(instant messages, Internet surfing).	3.43	U
I repeated the online instructional materials on the basis of my needs.	3.78	A
Average WM	**3.68**	**A**

In terms of motivation for learning, students rated themselves agreeable with a weighted mean of 4.41, as pointed out in Table 9. These results indicate the depth of students' interest in online classroom. Several studies explain students' motivation. Studies showed that individual interest, external motivation, intrinsic motivation, transformation of information into knowledge, and depth of study are major factors in determining the student's motivation. [22]

Table 9. Motivation for Learning (in an online context) Readiness of Learners

Statement	WM	VI
I am open to new ideas.	4.44	A
I have motivation to learn.	4.47	A
I improve from my mistakes.	4.38	A
I like to share my ideas with others.	4.38	A
Average WM	**4.41**	**A**

Moreover, students are more confident in using internet to find or gather information for online learning. Learners with a strong sense of efficacy are more likely to challenge themselves with difficult tasks and be intrinsically motivated ("Self-efficacy," n.d.). This shows a positive learning environment/online classroom while avoiding any setbacks from any possible challenges against aggressive changes in learning management system. This also reflects that students are more confident expressing themselves through posting messages and text using online tools; however are slightly hesitant posting questions or inquiries in the online discussion.

Table 10. Online Communication Self-Efficacy Readiness of Learners

Statement	WM	VI
I feel confident in using online tools (email, discussion) to effectively communicate with others.	4.0	A
I feel confident in expressing myself (emotions and humor) through text.	4.02	A
I feel confident in posting questions in online discussions	3.67	A
Average WM	**3.90**	**A**

Overall, teachers and students manifested moderate levels of readiness to online classrooms. In a similar light, results show that there is a clear acceptability of augmenting the traditional class with LMS.

22

P-ISSN 2362-8022 | ASEAN Citation Index | E-ISSN 2362-8030
Asia Pacific Journal of Education, Arts and Sciences, Volume 7, No. 4, October 2020 Part II

Table 11. Difference on Overall Readiness of faculty and students to On-line Learning

	Group	Means	Means (z-scores)	T	Sig (2-tailed
E-readiness	Faculty	3.41	0.015	.067	.53
	Student	3.97	-0.008		

The results of the t-test for independent samples are shown in the tables. Table 11 reports the comparison of the overall readiness of faculty and students in online learning. With 45 faculty members and 65 students (df=111), results how that there is a no significant difference between the level of readiness of faculty and students since computed p-value (.53) is much higher than set significance level of 0.05. Particularly, both faculty and students have agreeable levels of readiness to online learning.

Delving into the three (3) specific dimensions, table 11 shows the t-test results for each dimension. The results show that in all (technological, lifestyle and pedagogical) dimensions, there is no significant difference between the levels of readiness of faculty and students since computed p-values (.508, .512 and .531) are all much higher than set significance level of 0.05.

Table 11. Difference on Levels of technological, lifestyle and pedagogical readiness of faculty and students

Dimensions of readiness	Group	mean	z-scores (mean)	t	p-value
Technological	faculty	3.37	-.0004	.020	.508
	Student	3.90	-.010		
Lifestyle	faculty	3.38	.009	.031	512
	Student	3.74	-.010		
	faculty	3.51	.070	.080	.531
	Student	4.20	-.02		

These results are important to remember since it shows that both teachers and students are in the same mind-set and attitude before embarking in a new teaching and learning methodology, which is on-line classrooms. Similar technical /technological backgrounds mean that neither group will overwhelmed by the technology. It is also critical that they have the same expectations and motivation for this innovative learning methodologies.These result validate other researches among Philippine private and public higher education institutions on the above average readiness of both faculty and students to e-learning [23].

Previous studies though, indicated difference between perceptions of faculty and students to some form of technology used in e-learning, and that teacher believe test students are into use of technology for purposes other than learning. [24]. The current study showed that both teacher and students look into technologies as aids to learning rather than distractions.

Learning Management Systems

In creating an online classroom and emails utilized by faculty members and students, the study made use of the school's (BISCAST) own domain to be incorporated with Google Suite. Using this customized domain brings credibility to the platform and boosts the morale of the BISCAST community. It even gives its website an undiluted brand [25]. Teachers and learners were required to acquire an *Astean* account (account@astean.biscast.edu.ph) to be connected to the BISCAST domain and to the learning management environment.It also provides them with all the resources and tools available. As such, teachers and learners can work anywhere, anytime, and on any device. The tools encourage collaboration, creativity, and critical thinking, and let teachers work one-on-one or with the whole class.

Utilizing inputs from the e-readiness survey results, seminar-workshops were conducted for teachers on theGoogle classrooms. They were oriented on a blended teaching approach that incorporates Google's technology platforms effortlessly incorporated into curriculum and classroom experience. Furthermore, this online learning management program facilitates or replacements for other learning and teaching methods, such as linear learning, group learning, flipped classroom, or synchronous or asynchronous learning.For students, orientationon the use of the onlineclassroomwere conducted by the teachers.

CONCLUSION AND RECOMMENDATION

Quality education can be achieved through the innovation of a learning management system. The presence of online classrooms benefits both teachers and learners in tertiary education. Technology integration to the teaching-learning process strengthens collaboration among students which can be facilitated by anyone enrolled in the virtual classroom and allows for better planning of topics, easier discussions, and more efficient evaluation.

Determining the e-readiness of both teachers and students is essential to come up with a successful LMS. This study showed that teachers are willing to embrace the new technology since they see the future of education as relying largely on web-based instruction. They also reported an acceptable level of technology skills in manipulating the simple operations in the internet like sending and answering emails, using the word processor and spread sheets.

Students are similarly motivated to engage in online learning, though they recognize the need to avoid distractions when they are surfing the internet. But a common concernby both teachers and students aboutonlinelearning is the access to areliable network and internet service provider.

This study showed that application of techniquesinvolving the use of technology canpromotean innovative teaching and learning experience, highly appreciatedby both the teachers and students. As technology transforms possibilities in schools—enabling innovative for classroom techniques, teachers can promote more and productive, and meaningful classroom experiences.Additionally, the LMS is a notable support and tool to the school's quality management systems. It shall facilitate the conduct of classes even if conditions are not good for face to face instruction or if the weather is not conducive for students to come to school. It supports individualized instruction since students will learn at their pace, thus lessening the stress among the challenged learners.

A follow-up study is recommendedto evaluate the effectiveness of thisinnovation. A constant improvement and evaluation cycle shallform part of the implementation of theLMS to fine tune the methodology to maximize its benefits.

REFERENCES

[1] Stukalina, Y. (2010). Using quality management procedures in education: Managing the learner-centered educational environment, *Technological and Economic Development of Economy, 16*(1), 75-93. https://www.researchgate.org

[2] Wirussawa, S., Tesaputa, K. &Duangpaeng, A. (2016). An effect of the learning environment management system toward student quality of Thai Secondary Schools. *International Education Studies, 9*(5) 235-246 http://pdfs.semanticscholar.org

[3] Epping, R. (2010).Innovative use of Blackboard® to assess laboratory skills. QUT FaST Science Educators' Symposium: Selected papers. *Journal of Learning Design, 3*(3), 32–36.http://files.eric.ed.gov

[4] Thuseethan, S., Achchuthan, S., &Kuhanesan, S. (2015).Usability Evaluation of Learning Management Systems in Sri Lankan Universities. *Global Journal of Computer Science and Technology, 15*(1), 14-25.

[5] Kadir, A. Z. A. & Aziz, N. S. (2015).Learning management system of higher education institution, *International Journal of Science Technology and Engineering.2*(3)158-162.

[6] ATES, Reviewed. (2009). The handbook of blended learning: Global perspectives, local designs. The Turkish Online Journal of Distance Education.10.John Wiley & Sons, Inc.

[7] Weaver, D., Spratt, C., &SidNair, C. (2008). Academic and studentuse of a learning management system: Implications for quality. *Australasian Journal of Educational Technology, 24*(1) 30-41.

[8] Cavus, N. (2007). The effects of using learning management systems on collaborative learning for teaching programming languages. Unpublished doctoral dissertation, Near East University, Nicosia, Cyprus.

[9] Beatty, B., & Ulasewicz, C. (2006). Faculty perspectives on moving from Blackboard to the Moodle learning management system. *Tech Trends, 50*(4), 36-45.

[10] Allias, N. A. & Zainuddin, A. M. (2005). Innovation for better teaching and learning: Adopting the learning management system. *Malaysian Online Journal of Instructional Technology, 2*(2)27-40.

[11] Akaslan, D. & Law, E. L.C. (2011). Measuring teachers' readiness for e-learning in higher education institutions associated with the subject of electricity in Turkey. Paper presented at the IEEE EDUCON Education Engineering 2011, Amman, Jordan.

[12] Gay, G. (2016).An assessment of online instructor e-learning readiness before, during, and after course delivery.Journal of Computing in Higher Education. 28. 199-220.

[13] Hung, W.H., Chang, L.M., Lin, C.P. & Hsiao, C.H. (2014). E-readiness of website acceptance and implementation in SMEs. Computers in Human Behavior, 40, 44–55.

[14] Tsai, C.C., & Lin, C.C. (2004). Taiwanese adolescents' perceptions and attitudes regarding the Internet: exploring gender differences. *Adolescence, 39*(156), 725–734.

[15] Hung, M.L., Chou, C., Chen, C.H., & Own, Z.Y. (2010). Learner readiness for online learning: Scale development and student perceptions. *Computers & Education, 55*(3), 1080–1090. https://doi.org/10.1016/j.compedu.2010.05.004

[16] Standard Score. https://statistics.laerd.com/statistical-guides/standard-score.php

[17] Holden, H & Rada R. (2011). Understanding the Influence of Perceived Usability and Technology Self-Efficacy on Teachers' Technology Acceptance.

Journal of Research on Technology in Education, 43:4, 343-367, DOI: 10.1080/15391523.2011.10782576

[18] Thoonen, E. E. J., Sleegers, P. J. C., Oort, F. J., Peetsma, T. T. D., &Geijsel, F. P. (2011).How to improve teaching practices: theroleof teacher motivation, organizational factors, and leadership practices. *Educational Administration Quarterly, 47*(3), 496–536. https://doi.org/10.1177/0013161X11400185

[19] Heggart, K. R., &Yoo, J. (2018). Getting the most from Google classroom: A pedagogical framework for tertiary educators. *Australian Journal of Teacher Education, 43*(3).

[20] Rasouli, A, Rahbania, Z. & Attaran, M (2016). Students' Readiness for E-learning Application in Higher Education. *Malaysian Online Journal of Educational Technology. 4*(3), 52-64

[21] Seraji, F. (2013). Identification and categorising the skills needed for the virtual student. *Journal of Training and Learning Researches. 2*, 75-90.

[22] Knowles, E., & Kerkman, D. (2007). An investigation of students attitude and motivation toward online learning. InSight: A Collection of Faculty Scholarship, 2, 70–80.

[23] Lucero, H,Victoriano, J., Carpio, J.& Fernando Jr, P.. (2019). Assessment on E-Learning Readiness of Faculty Members and Students in the Government and Private HEI's in the Philippine. *International Journal of Computing Sciences Research, 5*(1) 398-406 .

[24] Pollara, P.C. (2011). Mobile learning in higher education: a glimpse and a comparison of student and faculty readiness, attitudes and perceptions. LSU Doctoral Dissertations. 2349. https://digitalcommons.lsu.edu/gradschool_dissertations/2349

[25] Why you should use a custom domain for your website. (2015, August 18). https://internet.com/domains/why-you-should-use-a-custom-domain-for-your-website/