Readiness and Attitudes of Primary Users of E-Learning at a Medical College in the Kingdom of Saudi Arabia

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Abstract: The study aimed to assess the readiness and attitudes of primary e-learning users of Alghad International College for Applied Medical Sciences. The study was a descriptive cross sectional design and utilized correlational survey method. The participants of the study were one hundred percent (100%) of fulltime faculty members currently using e-learning at female and male Dammam campuses. Quantitative statistics, descriptive and inferential methods, were the main tools used to analyze the data. It is important to gear on the development of an improvement plan for a medical college focusing on three essential domains: enhancing skills on the use of computer, developing confidence in the use of the system, and ensuring system satisfaction among faculty members.

Keywords: Attitudes, E-learning, Medical College, Readiness.

I.   INTRODUCTION

For years, educators are challenged to keep pace with the rapid and changing learning environment. Learners in this era contribute highly to these challenges leading to notable paradigm shifts in educational system. As traditional instructional users, educators are pressured, some are forced to change from their established pedagogies and practice then adapt to the use of electronic devices, web engines, online programs, virtual equipment and other digital systems in their instruction to meet learners' style and learning demand. This colossal transition not only requires educators to use these technologies as an instructional delivery system but as an effective teaching and learning tool. Numerous literatures reported that e-learning is the new wave in learning strategy as it revolutionizes education through innovative use of modern technology (Liaw, Huang & Chen 2007; Mahdizadah, Biemans, Mulder 2008; Krishnakumar & Kumar 2011). Further, e-learning is a global and well-known phenomenon (Al-Busaidi, 2013) and its use has a political, economic, and social influence brought about by globalization, connectivity and competitiveness (Higgins, 2012). Hence, regulatory agencies recognized the value of e-learning as an essential imperative to educational system requiring and mandating schools and universities of its use.

In many countries, issues on whether electronic technology will influence learning remain open to debate (Bates & Poole 2003; Proffitt, 2008). In Saudi Arabia, e-learning platform is still at an experimental stage and has been challenged for decades (Aljaber, 2018). Since its full functioning in 2002, research studies conducted on e-learning was limited. In addition, the extremely few claimed that e-learning programs are presently available however, initiatives need improvement and others failed because institutions and its constituents were not ready for e-learning experience. To add, e-learning scheme fails to take effect because of resistance and skepticism towards new innovation (Albalawi & Badawi, 2008; Chanchary & Islam, 2011; Al-Furaydi, 2013). Given this context, the role of readiness and attitudes of educators who are primary users of this technology is vital to the current educational system.

According to Marino, Mashingaidze, & Nyoni (2013), readiness of educators cannot be overemphasized, as their role is fundamental to the adoption and use of new technologies and pedagogical methods. In this study, readiness is determined in terms of skill application and technological access. On the other hand, attitudes toward the changing paradigm of teaching and instruction must be taken into consideration. Willingness to participate as facilitator will have an effect on the online interaction with the learners (Eslaminejad, Masood, & Ngah, (2010). In this study, attitudes are described in terms of perceived self-efficacy, perceived enjoyment, perceived usefulness, behavioral intention to use e-learning, perceived system of satisfaction, and multimedia instruction; whereas, primary users are faculty members who directly utilize e-learning.

Alghad International College for Applied Medical Sciences is a leading medical school in the eastern region of Saudi Arabia and one of the pioneering private institutions in the country using e-learning. Since its initial implementation in 2018 to date, there were no evidences of observational studies conducted on e-learning. Moreover, there were no records of a prior assessment before its implementation. Govindsamy (2002) posited that the deployment of e-learning process should be framed within the context of institutional readiness inclined to understanding individual attitudes, perceptions, thoughts and considerations. Likewise, it is critical to determine beforehand whether an institution has technological and pedagogical support and lecturer capability and readiness. It is appropriate to conduct an e-readiness assessment before the adoption of an e-learning environment (Kakoty, Lal & Sarma 2011)

To add more, in a medical school like Alghad, it is given that instructors have strong background certain to their medical specialization but limited in terms to instructional experience. According to Houshmandi, Rezaei, Hatami & Molaei (2019), many faculty members in medical science universities are not familiar with e-learning, and it is imperative that before establishing any e-learning, their capabilities and weaknesses be identified and their e-learning skills are improved through necessary training.

Given the preceding rationale, this study aimed to assess the readiness and attitudes of primary e-learning users of Alghad International College for Applied Medical Sciences. To establish this purpose, the researchers addressed the following: to determine the readiness of the respondents in the use of e-learning in terms of skill application and technological access; to describe e-learning attitudes of the respondents as to perceived self-efficacy, enjoyment, usefulness, behavioral intention, system satisfaction, and multimedia instruction; to determine the relationship of the respondents' profile variables to their readiness and attitudes; to establish the degree of difference between female and male faculty members use of e-learning; and to identify the best predictor of the respondents' use of e-learning.

II.   BODY OF ARTICLE

Employing technology as teaching and learning appliances has become to an increasing extent more widespread. With its use, teaching materials are enriched and have been requested as a part of educational processes and even a priority objective (Yalman, Gonen, & Basaran, 2013). Hazendar (2012) conceived e-learning as an acceptable and comprehensive modern concept based on different electronic equipment and multimedia. Also, e-learning training is a suitable strategy for improving the teaching-learning process quality (Golzari, Kiamanesh, Ghorchian & Jafari, 2010). To define, e-learning is the use of internet technologies to deliver a broad array of solutions that enhance knowledge and performance (Liaw, et al., 2007). E-learning is a well-designed, learner-centered, interactive approach which facilitated learning environment to anyone, anyplace, anytime, by making use of attributes and resources of different digital technologies together with other measures of learning materials suited for open, flexible, and distributed learning environments (Khan, 2005)

E-learning offers opportunities to encourage education towards generating an environment where group of learners and educators can share their experiences and awareness. In e-learning, the teaching-learning process transcends the class boundaries, the physical limits of education are overcome, and learning is possible any time anywhere (Okhovati, Sharifpoor Ghahestani, Islam Nejad, Hamzezadeh Marzooni, & Motamed Jahroomi, 2005). Gulbahar (2012) enumerated advantages of e-learning such as the learner determined the time of learning; materials can be accessed anytime, anywhere via internet connectivity, and speed, time, and amount of courses can be decided by e-learners themselves. Further, materials and information is already able to be obtained and can be regenerated, efficiency of the education can be accessed immediately, courses criteria can be dependently obtained by students, teachers are obtainable permanently through email-forums, web, etc.; and instructional costs were reduced. Additionally, e-learning platform based on network

motivates accumulation of individual acquaintance sharing of knowledge amongst learners; therefore strengthen competitiveness of individuals and the group. In total, e-learning platform looks like as an advanced step towards education with high efficiency and better quality (Zabadi, & Al-Alawi, 2016).

Readiness is a powerful factor in successful e-learning implementation (Mosadegh, Kharazi, & Bazargan, 2011) and readiness of educators as most significant towards e-learning (Rasouli, Rahbania & Attaran, 2016). In this study, readiness is described in terms of users' skill application and technological access.

Rohayani, Kurniabudi & Sharipuddin (2015) depicted skills as most significant factor that influences e-learning readiness. This was similarly mentioned by Vilkonis, Bakanoveine, & Turskiene (2013) and emphasized readiness of adults to learn using e-learning is prompted by good computer literacy, by experience and other e-services. Then again, Eslaminejad, et al.,(2010) found out that academic and technical readiness is the most critical factor to implement e-learning.

In contrast, Brtichner (2003) proposed that trainers might have insufficient skills and experience to use web-based learning platforms effectively whereas; the study of Albalawi et al., (2008) revealed that 62.9% of the faculty members' overall responses to e-learning were ranging from negative to uncertain. The study of So & Swatman (2005) examined the readiness of adopting e-learning among Hong Kong's primary and secondary school teachers and found out that the teachers are not yet fully prepared to use e-learning technologies. Equally, Umar & Yusoff (2014) in their study highlighted Malaysian teachers as being highly competent in using the internet application for searching and sharing information, using the word processor, spreadsheet and slide presentation but they lacked the skills in doing the more advanced applications like producing graphics, animations and multimedia design. To discuss further, Houamandi et al (2019), stated on holding specified courses for professors were of great importance. Training courses should be practical, continuous and phase to phase and should also be constantly monitored and supported.

Conversely, researchers also claimed great concern in the use of e-learning as to the aspects of individual's required skills on information technology. Equitable access is another major challenge to e-learning and associated problems that enable teachers to use and benefit from e-learning models (Anderson & Grounlund, 2009). The study of Al-Masaud & Gawad (2014) indicated primary factors that hinders e-learning as financial support from saving advanced computers, laboratories, and building strong computer network. Also, technology support as one predictor of e-learning satisfaction has been found to have a great impact on educators' use of technology as it can boost technology usage, hence escalate the chances of integration of technology in the teaching and learning processes (Moses, Khambari, & Wong, 2008). It is learned that ICT infrastructure such as digital equipments and internet connectivity need to be ready in order to ensure the success of e-learning (Paudyai (2006). Housmandi et al, (2019) emphasized that a major issue was inadequate technological infrastructures to let e-learning experience happen. This was also pointed out by Al-Asmari & Khan (2014) that teachers' capacity building is needed to be enhanced to ensure smooth and uninterrupted electronic facilities for students. This should be a focused area to improve educational aspect and instructional design for e-learning. Furthermore, Karanja (2012) entailed sufficient training programs on how to integrate ICT in education should also be conducted to teachers and relevant officers.

Attitudes play a vital role in using technology and as a strong tool for a positive change (Krishnakumar et al., 2011). Attitude is defined by Davis, Bagozzi, & Warshaw (1989) as an affective experience toward technology. Several literatures pointed out success and effective implementation of e-learning relies much on educators' attitude toward it (Salmon, 2011, Avidov-Ungar & Eshet-Alkakay, 2011; Teo & Ursavas, 2012). Models on Technology and information also stressed importance of attitude to technology use. According to the Theory of Reasoned Action (Azjen & Fishbein, 1980), a person's behavior (usage) is predicted by his or her attitude. Complementary, Technology Acceptance Model (TAM) and Information System Success Model (DeLone & McLean, 2003) have highlighted the predictive power of attitude on the adoption and use of information technologies. Several authors in their studies identified factors contributing to educators' attitudes towards e-learning like Karaca, Can, & Yildirim (2013) and related author exploring on the same study such as Chen & Tseng (2012) and Teo, Ursavas & Bahcekapili (2011). These factors may be internal and external factors. Internal factors to e-learning describes internal belief of educators' about e-learning (Teo, 2009) whilst external factors cover organizational structure (Roger, 2003), complexity of technology (Weller, 2007) and environmental factors such as technology infrastructure and support (Chien, Wu, & Hsu, 2014). In this study, factors to investigate attitudes are relative to perceived self-efficacy, perceived enjoyment, perceived usefulness, behavioral intention to use e-learning, perceived system of satisfaction, and multimedia instruction.

Various scholars posited the importance of self-efficacy to an individual's attitudes. Bandura (1977) posited that efficacy serves as ones belief to successfully implement a behavior required to meet outcomes. Self-efficacy is defined as beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments the assumption arises that influences the aforementioned learner activities when learning online profoundly (Bandura, 1997). Likewise, Rosenstock, Strecher, & Becker, (1988) defines self-efficacy as expectations about one's own competence to perform the behavior needed to influence outcomes. Also, several authors defined self-efficacy like Schunk (1990) referring to beliefs concerning ones capabilities to attain designated level of performance. Lynch & Dembo (2004) as one component of motivation is self efficacy, Pintrich (2004) as to judgments to competence to perform task, and Cho & Shen (2013) pointing to confidence of individual about their learning and performance.

There were copious studies on e-learning related to self-efficacy. Alabdullaziz, Alanazy, Alyahya, & Gall (2011) study compared six instructor's attitudes subscales of the instructor's attitudes and perceived self-efficacy was rated the highest. The instructors felt very confident using the internet, but also expressed confidence in online instruction and using e-learning environment. This study claimed a significant relationship between the instructors' attitude in the use of e-learning and their technology experience. Self-efficacy had the strongest relationship with instructors' experiences. Instructors who were experience in using technology felt more confident in their abilities in using an e-learning environment.

Perceived self-enjoyment was also posited by other authors as relevant to e-learning. Albirini (2006) accentuated that those who have positive attitudes toward technology are more comfortable in using it and thus, prepared to overcome challenges. Additionally, researchers have repeatedly shown that the relationship between computer anxiety and its effects on computer use and computer acceptance cannot be underestimated (Ball & Levy, 2008; Van Raaij & Schepers, 2008).

Another significant factor is perceived usefulness**.** It is defined as the extent of improvement from which the instructor can adopt towards a system. When users perceive e-learning to be useful in acquiring the desired skill and knowledge, they are more likely to use the system. Previous studies have shown that perceived usefulness was positive on user's intention to use a particular system (Luan & Teo, 2009; Teo, Lee, Chai & Wong 2009).When teachers can see the benefits and satisfied with its uses, they are more likely to retain or increase the usage of the system. However, studies have found that implementation of e-learning in its various forms can be expensive to an organization due to relatively low adoption rate among users (Sawang, Newton & Jamieson (2013). This situation was also claimed by several studies claiming that despite the increase in e-learning adoption across learning institution, e-learning programs have been found to have higher failure rates when compared with traditional courses (Wu, Tennyson &Hsia, 2010); Zaharias & Polymenakou, 2009).

Similarly, behavioral intention to use e-learning is an added essential factor. Adnan & Zamari (2012) suggested that the biggest challenge to e-learning seems to be lack of competent academics, whereby nearly two third of academic members in the public universities have reported low motivation to incorporate e-learning tools in their teaching. Moreover, according to Al-Furaydi (2013), the level of computer literacy has a positive influence on the attitude toward e-learning among EFL teachers in public school. It is claimed that EFL teachers had two important issues when they adopt e-learning in their teaching such as lack of reliability of the software and lack of time.

Considering the attitudes towards e-learning, perceived system satisfaction is equally accounted of. Doll and Torkzadeh (1991) defined end-user satisfaction as the affective attitude one has towards computer application. Subsequent path analysis suggested that satisfaction leads to usage. Previous empirical researches have depicted the positive relationship between user satisfaction and user usage.(Al-Busaidi & Al-Shihi, 2012),

According to Technology Acceptance Model (Davis 1986) user's motivation can be explained through perceived usefulness, perceived ease of use and attitude toward a system. Attitude that users formed toward a system will actually determine if users will use or reject a system. This attitude in turn is influenced by two beliefs' variables namely perceived usefulness and perceived ease of usefulness. Perceived ease of usefulness is also believed to have a direct impact on perceived usefulness. These theory beliefs are directly influenced by external variables. Perceived usefulness as defined by this model suggested as the degree to which an individual believes that using a particular system would enhance his or her productivity whereas perceived ease of use as the degree to which an individual acts that using a particular system would be free of effort are the key determinants of the actual usage of particular system (Davis 1989). Findings from their studies include amongst others users' computer usage could be predicted by their intentions,

perceived usefulness acted as a major determinant of intentions to use computers and perceived ease of use was considered a relevant minor determinant of intentions to use computers. To add, Zhang (2010) found in his study that user satisfaction predicted continued usage. Satisfaction was identified as the variable with the most prominent influence on usage, Thus, the more satisfied one is with system; the more likely one is to use the system more frequently.

In terms of multimedia instruction, the study of Kisanga (2016) revealed that teachers have positive attitudes towards e-learning where computer exposure played a statistically significant contribution to their attitudes. Abdulazziz et al., (2011) in their study claimed that in terms of actual media usage, instructors reported a stronger preference for using images and colorful text. They perceived a dislike for using animation and voice media.

A number of researchers also identified the relationship of some variables on attitudes towards e-learning**.** Egbo, Okoyenzu, Ifeanacho, & Onwumere, (2011), concluded that female would accept information and communication technologies use more than males. In contrast, the study of Liaw and Huang (2011) in their findings confirmed that male owns a positive attitude toward e-learning than female. This was also pointed out by Suri and Sharma (2013) that clearly expressed no gender variations exists on the attitudes towards e-learning. The researchers posited that experiences and skills in computer is an essential factor on learners' motivation to e-learning. In the same route, Agboola (2006) in his study showed strong influences of two statistical terms such as e-learning confidence and e-learning training on readiness. In addition, Bendania (2011), forwarded that the factors related to attitudes, mainly experience, confidence, enjoyment, usefulness intention of use, motivation and whether ICT skills were all correlated. Enjoyment was predicted to be relevant to instructors' intent to use ICT while motivation was determined among students. These factors contributed highly for the use of ICT in learning. Educators seem to appreciate the value of e-learning although there are apprehensions related to the lack of clear understanding of the e-learning process and its inferences for the university and its constituents. Educators were unable to infer their competencies to execute e-learning because there is no clear definition or barometer which can be used to measure one's aptitude.

In the end, studies emphasized that there is a need to clarify the institutional agenda and inclination towards a dominant or equivalent teaching and learning modes. This is serious anomaly that has to be earnestly considered for the e-learning initiatives to be successfully implemented with positive outcomes (Ncube, Dube, Ngulube, 2014). Clear vision and strategic planning with prospective E-learners in mind are essential to make E-learning programs cost effective (Al-Shehri, 2010). Furthermore, trainings designed for users must consider their specific job performance's needs and their job satisfaction. A large amount of training and support for users are needed to help them to be comfortable with the new system (Cheok & Wong, 2015).

Methods

The study was a descriptive cross sectional design. This type of research is useful and appropriate to depict accurately responses of the participants. Through descriptive analysis, specific characteristics related to the participants can truly be identified. In this study, this research method can give answers to the readiness and attitudes of participants towards e-learning. At the same time, it established precise responses to participants' readiness in terms of skill application and technological access, and attitudes with regards to perceived self-efficacy, perceived enjoyment, perceived usefulness, behavioral intention to use e-learning, perceived system of satisfaction, and multimedia instruction. Moreover, the study used correlational survey method. Correlational research is an observational design conducted to demonstrate associations between the study variables. In relation to this study, relationship between two significant variables, readiness and attitudes were explored.

The participants of the study were one hundred percent (100%) or a total of eighty (80) faculty members of Alghad International College of Applied Medical Sciences, Dammam, Kingdom of Saudi Arabia. The participants were fulltime lecturers at female and male campuses of the college who were currently using e-learning. There were fifty three (53) or 66% female participants and twenty seven (27) or 34% male participants. In addition, the participants were distributed from the departments of the college namely as preparatory, health administration, laboratory science, medical emergency, nursing and radiological science. Aside from gender and department, participants' age was also included. All of the participants were chosen regardless of the years or semesters they had used the program. The distribution of the participants in both campuses was shown in figure 1 and 2 below:

Fig. 1 Distribution of Faculty Members (Age)

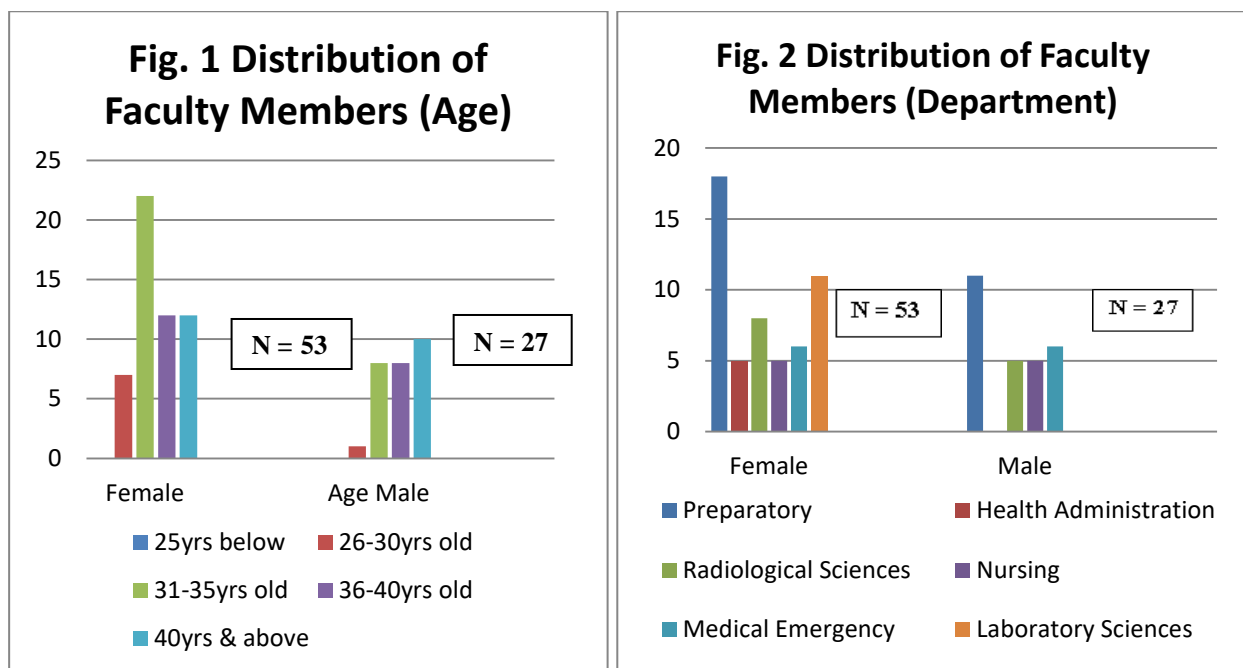Fig. 2 Distribution of Faculty Members (Department)

Figure 1 shows the distribution of faculty members in terms of age. Majority of female faculty members are 31-35 years old while most of male faculty members are 40 years and above. There are no faculty members who were 25 years and below on the time of study.

Figure 2 presents the distribution of faculty members in terms of department. As expected, majority of the lecturers are from preparatory department. Health administration and laboratory science are not offered in the male campus, thus the result.

A semi-adapted self-completion questionnaire was the main tool utilized for data collection. The first tool which determined the readiness of faculty members towards e-learning was initially used in the study of Kisanjara (2014). The second tool which identified the attitudes of faculty members towards e-learning was derived from the study of Abdulazziz et al., (2011). Readiness was claimed in the study of Kisanjara (2014) as referring to skill application and technological access while the study of Abdulazziz et al., (2011) on attitudes composed of perceived self-efficacy, perceived enjoyment, perceived usefulness, behavioral intention to use e-learning, perceived system of satisfaction, and multimedia instruction. The researchers mainly used these tools as basis to define readiness and attitudes. However, as courtesy, the researchers cited these aforementioned studies as the original source. The first tool was a yes/no questionnaire, detailing the participants' level of readiness in terms of skill application and technological access. On the other hand, the second questionnaire were composed of closed items which a participant was asked to select on a 4-point Likert scale with responses varying from 1 (strongly disagree) to 4 (strongly agree). This part of the questionnaire covered items on the attitudes of the participants towards e-learning divided into six (6) factors; perceived self-efficacy, perceived enjoyment, perceived usefulness, behavioral intention to use e-learning, perceived system of satisfaction, and multimedia instruction.

The first phase was conducted to seek approval from authorities. A study proposal and an ethical consideration report were submitted to the Scientific Research Committee of the college for review and recommendations. Specific inputs from the committee were accounted then final approval was sought by the researchers from the Vice Dean of the College. The next or second phase was performed to validate the questionnaire. To ensure relevance to participants and remove setting bias, the researchers asked three experts to appraise the items indicated on the questionnaire in terms of its suitability to the profile of participants and appropriateness to the e-learning program used by the college. The three experts were (1) Chair of the E-learning program of the college, directly responsible in training of e-learning users and execution of the program; (2) Coordinator of the Scientific Research Committee; and (3) one faculty member teaching at the college for more than five years. Some suggestions such as to simplify some words were included in the finalized questionnaire. The final tool was forwarded to the Scientific Research Committee and to the respective Deans for

approval. The last phase was accomplished to secure the distribution of questionnaire. Permission to distribute questionnaire was passed and approved, then the researchers asked for cooperation and honest response from faculty members through a cover letter. The questionnaires were distributed personally to the participants and 100% retrieval rate was achieved. The findings were collected, tallied, tabulated and interpreted. Confidentiality of data obtained was guaranteed and data was solely used for the purpose of the study.

To analyze the data, quantitative statistics were used. Descriptive and Inferential methods were used such as frequency and percentage, weighted mean, standard deviation, Pearson r, t-test, and regression analysis. To interpret the results for the attitudes of the faculty members towards e-learning in terms of perceived self-efficacy, perceived enjoyment, perceived usefulness, behavioral intention to use e-learning, perceived system of satisfaction, and multimedia instruction, the scoring scale and interpretation as presented in Table 1 was used.

Table I. Scoring Scale for Interpretation of Results

Scale	Interpretation
1.00-1.74	Strongly Disagree
1.75-2.49	Disagree
2.50-3.24	Agree
3.25-4	Strongly Agree

III. RESULTS AND DISCUSSION

Table II. Faculty Members' Readiness in using E-Learning Program in terms of Skill Application

	Female		Male		Total			
Skill Application	Yes (f)	No(f)	Yes(f)	No(f)	Yes(f)	%	No(f)	%
1. I know the basic functions of computer like its hardware components	52	1	27	0	79	99	1	1
2. I know how to use MS word, powerpoint presentations, MS excel, and the like	53	0	27	0	80	100	0	0
3. I know how to use basic operations of a computer	53	0	27	0	80	100	0	0
4. I have an e-mail account and understand its use	53	0	27	0	80	100	0	0
5. I can access and send an email with file attachments	53	0	26	1	79	99	1	1
6. I know how to use web browser	51	2	26	1	78	98	2	2
7. I know how to use resource database and access the digital library of the college	49	4	26	1	75	94	5	6
8. I have attended online courses and e-learning courses before	43	10	23	4	66	83	14	17
9. I know how to use computer utilities like program scanners, antivirus and others	43	10	25	2	68	85	12	15

Table 2 revealed the level of readiness of faculty members towards e-learning in terms of skill application. The faculty members know how to use MS word, powerpoint presentations, MS excel, and the like, know how to use basic operations of a computer, and they have an email account and understand its use (100%). They know the basic functions of computer like its hardware components and can access or send an email with file attachments (99%). They know how to use web browser (98%) and how to use resource database and access the digital library of the college (94%). However, 85% of faculty members use computer utilities like program scanners, antivirus and others yet 15% do not know how. Furthermore, only 83% of faculty members have attended online and e-learning courses before while 17% of them not.

The findings implied that faculty members would like to have the necessary skills in the use of other features of a computer and additional trainings requiring competence in online instruction. Similar points were pointed in the study of Vilkonis, et.al, (2013), and Houamandi et al (2019). Furthermore, the findings suggested that given these skills to perform

ISSN 2394-7330

International Journal of Novel Research in Healthcare and Nursing
Vol. 7, Issue 1, pp: (849-864), Month: January - April 2020, Available at: **www.noveltyjournals.com**

with the computer and their instruction they can be fully ready to use e-learning in their teaching, was supported by the studies of Rohayani et.al, (2015) and Eslaminejad, et al., (2010).

Table 3 showed the level of readiness of faculty members on e-learning program in terms of technological access. 78 or 98% of the faculty members have their own computer, they have a computer with the necessary installed software, and they can readily access a computer and internet connection at the college. They have experienced system error when using e-learning (93%). Also, faculty members of about 90% claimed they have printing access and that e-learning program always ready and available for use but 10% revealed otherwise while 67 or 84% of faculty members can access to a computer in the campus with stable internet connection while 16% cannot.

Table III. Faculty Members' Readiness in using E-Learning Program in terms of Technological Access

Technological Access	Female		Male		Total			
	Yes (f)	No(f)	Yes(f)	No(f)	Yes(f)	%	No(f)	%
1. I have my own computer	51	2	27	0	78	98	2	2
2. I have a computer with the necessary installed software	52	1	26	1	78	98	2	2
3. I have printing access	47	6	25	2	72	90	8	10
4. I can readily access a computer and internet connection at the college.	51	2	26	1	78	98	2	2
5. I have access to a computer in the campus with stable internet connection	44	9	23	4	67	84	13	16
6. E-learning program always ready and available for use	49	4	23	4	72	90	8	10
7. I experience system error when using e-learning	49	4	25	2	74	93	6	7

The findings entailed that faculty members had an access to basic technology. In addition, findings suggest that a stable and fast connectivity with the internet can bring about satisfactory interest in the use of technology and generate positive outcome in their teaching. These findings were supported by Pausyai (2006), Al Asmari et al., (2014), Al Masaud et.al, (2014) & Housmadi, (2019). Also, it means that faculty members would not like to deal with technical aspects or difficulties associated with the use of modern technology because they lack the effort and time, correspondingly declared by Al-Furaydi, (2013).

Table IV. E-learning Attitudes of the Respondents as to Perceived Self-efficacy, Enjoyment, Usefulness, Behavioral intention, System satisfaction, and Multimedia Instruction

Attitudes	Female Campus		Male Campus		Composite	
Perceived Self-Efficacy	**mean**	**SD**	**mean**	**SD**	**mean**	**SD**
1. I feel confident making online instruction	2.96	1.073	3.15	0.818	3.06	0.993
2. I feel confident using the Internet	3.43	0.866	3.59	0.500	3.51	0.762
3. I feel confident using e-learning environment	3.40	0.599	3.37	0.492	3.39	0.562
Composite (mean±SD)	3.26±0.85 (SA)		3.37±0.60 (SA)		**3.32±0.77 (SA)**	
Perceived Enjoyment	**mean**	**SD**	**mean**	**SD**	**mean**	**SD**
1. I enjoy using computers as a teaching assisted tool	3.62	0.562	3.59	0.500	3.61	0.539
2. I enjoy using e-learning environment for teaching purpose	3.51	0.575	3.33	0.620	3.42	0.593
3. I enjoy using online instruction for teaching	3.51	0.575	3.33	0.679	3.42	0.614
Composite (mean±SD)	3.5±0.570(SA)		3.42±0.600(SA)		**3.48±0.582(SA)**	

Perceived Usefulness	mean	SD	mean	SD	mean	SD
1. I believe using e-learning environments is helpful for learning	3.45	0.573	3.15	0.601	3.30	0.597
2. I believe using e-learning environments is helpful for teaching	3.49	0.575	3.11	0.628	3.30	0.621
3. I believe using online instruction is useful for teaching	3.49	0.575	3.15	0.662	3.32	0.623
Composite (mean±SD)	3.48±0.574(SA)		3.14±0.630(A)		**3.31±0.617(SA)**	
Behavioral Intention	**mean**	**SD**	**mean**	**SD**	**mean**	**SD**
1. I intend to use e-learning to assist my teaching	3.42	0.569	3.70	0.506	3.56	0.553
2. I intend to use online instruction to assist my teaching	3.47	0.575	3.22	0.577	3.35	0.584
3. I intend to use the Internet to assist my teaching	3.52	0.575	3.44	0.506	3.48	0.551
Composite (mean±SD)	3.47±0.573(SA)		3.45±0.530(SA)		**3.46±0.563(SA)**	
Perceived System Satisfaction	**mean**	**SD**	**mean**	**SD**	**mean**	**SD**
1. I am satisfied with using e-learning environments	3.45	0.573	4.07	0.729	3.76	0.651
2. I am satisfied with using MS-Word, MS-PowerPoint files as multimedia instruction	3.57	0.604	3.30	0.608	3.44	0.615
3. I am satisfied with using online instruction	3.43	0.537	3.59	0.577	3.51	0.556
Composite (mean±SD)	3.48±0.571(SA)		3.65±0.638(SA)		**3.60±0.607(SA)**	
Multimedia Instruction	**mean**	**SD**	**mean**	**SD**	**mean**	**SD**
1. I like to use voice media instruction	3.36	0.709	3.11	0.751	3.24	0.728
2. I like to use colorful text media instruction	3.62	0.527	3.26	0.525	3.44	0.551
3. I like to use image media instruction	3.72	0.557	3.44	0.506	3.58	0.545
4. I like to use animation media instruction	3.57	0.572	3.48	0.506	3.62	0.549
Composite (mean±SD)	3.57±0.591(SA)		3.32±0.572(SA)		**3.47±0.593(SA)**	

mean and standard deviation

Interpretation: x̄ = 3.25-4.00 (Strongly Agree/SA); x = 2.50-3.24 (Agree/A); x = 1.75-2.49 (Disagree/D); x = 1.00-1.74 (Strongly Disagree/SD)

Table 4 presented attitudes of faculty members towards e-learning. In terms of self-efficacy, faculty members were confident in using the internet (3.51) and in using e-leaning environment (3.39) but less confident in making online instruction (3.06). They strongly agree that they have self-efficacy in using e-learning (3.32). Considering perceived self-enjoyment, faculty members enjoy using computers as a teaching assisted tool (3.61±0.539). They also enjoy using e-learning environment (3.42) and online instruction for teaching (3.42). Overall, they strongly agree that they enjoy using e-learning (3.48±0.582).

Equally, faculty members believed using online instruction is useful for teaching (3.32) and using e-learning environment is helpful for learning (3.30) and teaching (3.3). They strongly perceived e-learning as useful (3.31±0.617). On the other hand, faculty members intend to use e-learning to assist their teaching (3.56). They intend to use internet (3.48) and online instruction to assist their teaching (3.35). They strongly agree in their intention to use e-learning (3.46±0.563).

With regards to perceived system satisfaction, faculty members were satisfied in using e-learning environment (3.76), in using online instruction (3.51), and in using MS-Word, MS-PowerPoint files as multimedia instruction (3.44) They strongly agree that they were satisfied with the system (3.60±0.607). In view of multimedia instruction, faculty members

ISSN 2394-7330

International Journal of Novel Research in Healthcare and Nursing
Vol. 7, Issue 1, pp: (849-864), Month: January - April 2020, Available at: www.noveltyjournals.com

like to use first animation (3.62), next image (3.58), then colorful text (3.44) but last voice media instruction (3.24). Generally, they strongly agree to use multimedia in e-learning (3.47±0.593)

Highest result among female faculty members pertains to the use of image media instruction (3.72±0.557) and least in confidence in making online instruction (2.96±1.073). As to male faculty members, highest finding was revealed in terms of their satisfaction in using e-learning environments (4.07±0.729) while lowest in their belief of using e-learning environment as helpful to teaching (3.11±0.628) and in the use of voice media instruction (3.11±0,751). Worthy to note among male faculty members since they scored these items as only agree; confidence in making online instruction (3.15), using e-learning environment as helpful for learning (3.15), using e-learning environment as helpful to teaching (3.11), using online instruction for teaching (3.15), and use of voice media instruction (3.11). Both female and male faculty members rated low items certain to their confidence in making online instruction (3.06±0.999) and use of voice media instruction (3.24±0.709).

Overall, perceived system satisfaction obtained the highest composite mean (3.60±0.607) while perceived usefulness obtained the lowest composite mean (3.31±0.617).

The findings implied that female faculty members have appropriate skills in developing lectures with the use of images. They used image instruction frequently with ease as part of their regular and routine teaching tasks. This finding was in contrast with Yusuf, (2014). However, they lacked confidence in dealing with online instruction, which differ to what was suggested in the study of Abdullaziz, et al., (2011). Conversely, male faculty members had a certain level of satisfaction towards e-learning use but held less belief that e-learning could create a greater effect on teaching. It was evident that male faculty members were less confident in using e-learning. This finding was clearly in contrast with the study of Liaw et al., (2011). Moreover, they claimed that it was less useful to them.

There were no variations in between female and male faculty members in terms of making online instruction, both gender perceived they lacked the confidence in conducting it which was also evidently expressed in the study of Suri et al., (2013).This finding suggested that e-learning requires complex skills and rigorous training in order to use effectively in teaching and learning. Equally, faculty members were not used to voice media instruction; equally stressed in the study of Abdulaziziz et. al (2011).

In general, faculty members were satisfied with the use of e-learning yet doubtful with its usefulness in teaching.

Table V. Relationship of the faculty members' profile variables to their readiness towards the use of e-learning

Profile Variables	Skill Application		Technological Access	
	R	*p-value*	r	*p-value*
Gender	0.434	0.089	0.355*	0.008
Age	0.269	0.063	0.071	0.162
Department	0.582	0.037*	0.691*	0.024

*(r) = Pearson r moment correlation coefficient (*p-value<0.05are statistically significant)*

Findings from table 5 revealed that the department (p-value=0.037; 0.024) where faculty members belong and gender (p-value=0.008) were statistically significant. These profiles play critical role in their readiness towards e-learning.

The findings indicated that readiness level of faculty members differ for male and females. Female faculty members may accept e-learning in their teaching more readily but not for male faculty members or vice versa. These variations were affirmed by by Egbo et al. (2011) and Liaw et al., (2011) but dissimilarity was stressed by Suri et al., (2013). On the other hand, the findings suggested that the culture within the department influence readiness of faculty members. If most colleagues use e-learning then it is more likely that a member will use the same.

Table VI. Relationship of the faculty members' profile variables to their attitudes towards the use of e-learning

Profile Variables	Perceived Self-Efficacy		Perceived Enjoyment		Perceived Usefulness		Behavioral Intention		Perceived System Satisfaction		Multimedia Instruction	
	r	*p-value*	r	*p-value*	r	*p-value*	r	*p-value*	r	*p-value*	r	*p-value*
Gender	0.339*	0.055	0.281	0.101	0.029	0.264	0.211	0.147	0.24	0.221	0.097	0.180
Age	0.401*	0.019	0.499*	0.036	0.408	0.159	0.413	0.092	0.319*	0.014	0.028	0.236
Department	0.197	0.298	0.514	0.265	0.038	0.336	0.121	0.440	0.035	0.333	0037	0.340

*(r) = Pearson r moment correlation coefficient (*p-value<0.05are statistically significant)*

Table 6 showed that gender (p-value=0.55) was statistically significant to faculty members' perceived self-efficacy towards the use of e-learning, while age with self-efficacy (p-value=0.019), perceived self-enjoyment (p-value=0.036) and perceived system satisfaction (p-value=0.014). The findings disclosed that these variables were significant factors on the attitudes of faculty members towards e-learning. The variations were also highlighted on table 4.

The findings implied that male and female faculty members have different behavior usage towards e-learning. At the same account, young and old faculty members may have unlike level of confidence and motivation towards e-learning use. Since they are more exposed to technology use, young faculty members in general have more experienced and interest. Abdulaziz et.al (2011) pointed out those instructors who have experience in using technology felt more confident in their abilities in using an e-learning environment.

Table VII. Difference of the Use of E-learning Program between Male and Female Staff in terms of Readiness and Attitudes

Readiness	*t-value*	*p-value*
Skill Application	2.997*	0.009
Technological Access	2.650*	0.016
Attitudes		
Perceived Self-Efficacy	2.944*	0.009
Perceived Enjoyment	2.613*	0.037
Perceived Usefulness	1.713	0.149
Behavioral Intention to Use E-Learning	2.947	0.082
Perceived System Satisfaction	3.126*	0.004
Multimedia Instruction	1.134	0.256

(t) = t test (*p-value<0.05are statistically significant)

Based on the findings on table 7, there was a difference between readiness and attitudes of female and male faculty members on the use of e-learning. The difference were highly evident in terms of readiness as both skill application (p-value=0.009) and technological access (p-value=0.016) were statistically significant. In regards with attitudes towards e-learning, the difference was revealed by perceived self-efficacy (p-value=0.009), perceived self-enjoyment (p-value=0,037), and perceived self satisfaction (p-value=0.004). The findings proved what were stated in the previous tables.

Table VIII. Predictor of the Use of E-Learning

	Unstandardized Coefficients		Standardized Coefficients	t-value	p-value
	B	**Std. Error**	**Beta**		
Constant	**2.327**	**0.393**		**6.038**	**0.000**
Skill Application	**-0.565**	**0.149**	**-0.495**	**3.608**	**0.000**
Perceived Self-Efficacy	**0.204**	**0.098**	**0.212**	**2.069**	**0.040**
Perceived System Satisfaction	**0.253**	**0.119**	**0.254**	**2.029**	**0.044**

*Significant at p=value <0.05

Regression analysis in table 8 suggested that use of e-learning was governed by multiple significant predictors which include skill application (β = -0.495, p-value 0.000) for readiness; perceived self efficacy (β = -0.212, p-value 0.040) and perceived system satisfaction (β = -0.254, p-value 0.044) for attitudes. The results revealed that the aforementioned factors were considered the best predictor of readiness and attitudes of faculty members towards e-learning use. The findings indicated that given the necessary skills, confidence and satisfaction, faculty members will be ready and will have the satisfactory attitudes towards e-learning use. Predictors such as skills in the use of technology were highlighted by Rohayani, et.al (2015) and Eslaminejad, et.al (2010) while satisfaction was likewise reported by Zhang (2010). At the same accord, confidence was marked in the study of Agboola (2006).

IV. CONCLUSION

Skills in the use of computer and competence in online instruction are prerequisites for faculty members' readiness towards e-learning. Training courses and technological infrastructures are necessary to meet and create positive readiness

outcomes. Perceived self-efficacy and perceived usefulness are relatively important factors to faculty members' attitudes on e-learning use. Additionally, gender, age and department are profile characteristics significant to e-learning readiness and attitudes. Difference exists between female and male faculty members' use of e-learning on behavior usage, confidence and satisfaction. Skill application, perceived self-efficacy and perceived system satisfaction are predictors which can immensely influence e-learning use. Recommendations were geared on the development of an improvement plan for the college focusing on three essential domains: enhancing skills on the use of computer, developing confidence in the use of the system, and ensuring system satisfaction among faculty members. Profile variables; age, gender and department should be given special attention in line of the activities that will be created. This could be achieved through a well directed and rigorous staff development program. Trainings should be recent and an on-going process. Key individuals should be identified to facilitate and monitor these activities. E-learning should be made as a commitment experience and part of daily and routine teaching assignments to faculty members. Use of e-learning should be a component of faculty performance appraisal and remuneration. In addition, facilities and organizational support should be sufficient and eagerly available.

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