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RESEARCH ARTICLE

A STUDY OF E-READINESS ASSESSMENT: THE CASE OF TWO STATE UNIVERSITIES IN LUZON.

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Abstract

E-Readiness plays a crucial role in the success of E-Learning initiatives with greater reason it should be conducted in an extensive approach for Higher Education Institutions to reap the benefits E-Learning has to offer. This study explored the e-readiness of two State Universities in Luzon to provide significant information to the academic community. Data were gathered from faculty and students with the use of an E-Learning Readiness Tool. The findings related to readiness of teachers and students are discussed. Furthermore, barriers to e-learning manifested in the results and necessary actions to address these were recommended for managers.

Introduction:-

Escalating costs dictates the use of technology in higher education. Consequently, technology is also means of reducing costs under the circumstances (Eweni et al., 2013). E-learning is perceived by many as a catalyst to the growth of educational literacy in higher education. Prominent Higher Education Institutions (HEIs) such as the University of the Philippines, University of Sto. Tomas, Ateneo de Manila University, De La Salle University, and other major universities spearheaded the drive of incorporating E-Learning in the Philippines, whether with the use of prepackaged programs provided by suppliers or by creating their own (Arimbuyutan et al., 2007). According to Dacanay (2010), an important component of higher learning is to create new borderless learning environment and opportunities as well as bring dramatic changes in the global educational landscape. His research also affirmed that E-Learning facilitates the access of greater numbers of people, improve student-learning outcomes, and has the potential to contribute to lifelong development and well-being - which is the ultimate purpose of education. However, geographical location, lack of knowledge and skills to use ICT, financial constraints, pedagogical and social concerns are key concerns that affects ICT integration in Open and Distance Learning (ODL) (Bandalaria, 2007). Furthermore, training teachers and readiness of learners are also major factors that influence the success of E-Learning. E-Learning readiness assessment aids organizations in designing comprehensive e-learning strategies and effectively implement ICT goals (Kaur & Abas, 2004). For HEIs, specifically SUCs to truly benefit from E-Learning, an extensive assessment of their readiness should be conducted. The objective of this study was to profile the e-readiness of students and faculty of University of Northern Philippines (UNP) and Laguna State Polytechnic University (LSPU).

Method:-

Random sampling technique was used in gathering data. The distribution of respondents was determined using the Slovin's equation. The total sample size of UNP involved 382 students and 111 teachers while LSPU's respondents

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included 271 students and 53 teachers. The study employed a quantitative (questionnaire) research design. The rubrics used were adapted from Mercado (2008). Technology skills, attitude, and technology access was dealt in the aspect of determining the E-readiness of students and teachers. Assessment of technology skills of teachers and students focused on basic computer skills, basic internet skills, and literacy on software application. On the other hand, the assessment tool for teachers' attitude serves as checklists for teachers who are referred to as technology enablers to reflect on their teaching style and strategies, abilities, motivation, and time management. The assessment tool for students' attitude dealt on areas of the individual learners with respect to study habits, abilities, motivation, and time management. Faculty and students' technology access were assessed based on the ability to avail of the following resources such as computers, internet connectivity, and other relevant tools. The questionnaires were disseminated to the target respondents in the different colleges and centers. The Teacher and Student Attitude Assessment Tool of Mercado (2008) didn't specify any quantitative scale to use so the researcher adopted a 5-point scale to differentiate the levels teachers' and students' attitude into: 1, 2, 3, 4 and 5, which respectively denotes never, seldom, about half the time, usually and always. For the results garnered, the following norm of interpretation was arbitrarily set for data analysis is presented below:

Quantitative Scale	Statistical Limit	Descriptive Equivalent
1	1.00-1.79	Never
2	1.80-2.59	Seldom
3	2.60-3.39	About half of the time
4	3.40-4.19	Usually
5	4.20-5.00	Always

Results:-

Technology Skills of the Faculty.

Technology access is a basic requirement for online learning. It is necessary for learners and lecturers alike to have a stable Internet connection and dependable computer for these are the primary instruments in learning and teaching. Table 1 shows the distribution faculty based on technology skills such as basic computer skills, basic internet skills and literacy on online tools and other productivity tools. Furthermore, ranking has been employed since only the 'yes' response was presented among each item in the survey questionnaire. For ease of interpretation, the highest frequency response among the respondents is ranked first and the lowest frequency response is ranked least.

Table 1:-Faculty Profile based on Technology Skills

		UNP			LSPU		
		f	**%**	**Rank**	**f**	**%**	**Rank**
COMPUTER BASIC SKILLS	1. I know the basic function of computer hardware components (CPU and monitor) including its peripherals like the printer, speaker, mouse, etc.	103	92.79	**3**	49	92.5	**3**
	2. I know how to save/open documents to form a hard disk or other removable storage device.	107	96.40	**1.5**	52	98.1	**2**
	3. I know how to turn on and shutdown the computer properly.	107	96.40	**1.5**	53	100	**1**
	4. I am comfortable with things like installing software and changing configuration settings on my computer.	62	55.86	**4**	35	66	**5**
	5. I know how to resolve common hardware or software and changing configuration settings on my computer.	56	50.45	**5**	34	64.2	**4**
INTERNET BASIC SKILLS	1. I have an email address and I can open/send an email with file attachments.	99	89.19	**2**	50	94.3	**1**
	2. I am familiar with online etiquette.	90	81.08	**4**	47	88.7	**3**
	3. I know how to surf the Internet and navigate the web pages (go to next or previous page).	102	91.89	**1**	46	86.8	**4.5**
	4. I know how to download files using any browsers (Internet Explorer, Mozilla).	92	82.88	**3**	49	92.5	**2**
	5. I know how to resolve common errors while surfing the Internet such as "page not found" or "connection time out".	82	73.87	**6**	43	81.1	**5**

	6. I am comfortable with things like doing searches, setting bookmarks, and downloading files.	84	75.68	**5**	46	86.8	**4.5**
LITERACY ON ONLINE TOOLS & OTHER PRODUCTIVITY TOOLS	1. I know how to access an online library and other resource database.	78	70.27	**6**	40	75.5	**6**
	2. I have attended online classes before.	48	43.24	**12**	20	37.7	**12**
	3. I know how to use asynchronous tools (e.g., discussion boards, chat tools.) effectively.	65	58.56	**8**	36	67.9	**8**
	4. I know what PDF files are and I can download and view them.	81	72.97	**5**	45	84.9	**5**
	5. I am familiar with word processing and use it comfortably.	92	82.88	**2**	46	86.8	**4**
	6. I am able to have several applications opened at the same time and move between them.	93	83.78	**1**	47	88.7	**3**
	7. I know how to use file compression.	72	64.86	**7**	39	73.6	**7**
	8. I know how to use spreadsheet application (Excel)	85	76.58	**4**	48	90.6	**1.5**
	9. I know how to use presentation software.	86	77.48	**3**	48	90.6	**1.5**
	10. I have used a learning management system.	63	56.76	**9**	30	56.6	**9**
	11. I have skills to modify and add content and assessment using an online learning management system.	62	55.86	**10**	29	54.7	**10**
	12. I have attended to seminars/workshop related to online learning activities.	57	51.35	**11**	26	49.1	**11**

As reflected in Table 1, 78.38% of UNP faculty have basic computer skills, 82.43% have basic internet skills, and 66.2% are literate on online tools and other productivity tools. For the LSPU faculty, 84.15% have basic computer skills, 88.36% have basic internet skills, and 71.38% are literate on online tools and other productivity tools. Results from both state universities yielded the literacy of faculty on online tools and other productivity tools the lowest evaluated dimension on technology skills. In addition, faculty from both universities have the least prior experience in online classes before, seminars/workshop related to online learning activities, and skills to modify and add content and assessment using an online LMS.

Attitude of the Faculty.

The profile of faculty based on attitude towards the characteristic of online teaching is presented in Table 2.

Table 2:-Faculty Profile based on Attitude

		UNP		**LSPU**	
		$\overline{X}$	**DR**	**$\overline{X}$**	**DR**
TEACHING STYLES AND STRATEGIES	1. I use discussion as a teaching strategy for the subjects that I teach	4.35	Always	4.11	Always
	2. I encourage independence and creativity from my student	4.37	Always	4.34	Always
	3. I facilitate and monitor appropriate interaction among students	4.34	Always	4.42	Always
	4. As a teacher, I support student-centered learning	4.41	Always	4.43	Always
	5. I am flexible in dealing with students' needs (due dates, absences, make-up exams)	4.20	Always	4.21	Always
	6. Critical thinking and problem solving are important skills for my students	4.50	Always	4.43	Always
	7. I use strategies to encourage active learning interaction, participation and collaboration among students	4.45	Always	4.40	Always
	MEAN	**4.37**	**Always**	**4.33**	**Always**
ABILITITIES	1. I use effective strategies and techniques that actively engage students in the learning process (e.g. team problem-solving, in-class writing, analysis, synthesis and evaluation instead of passive lectures	4.13	Usually	4.34	Usually
	2. I encourage learning through interaction	4.32	Always	4.19	Usually
	3. I provide timely, constructive feedback to students about assignments and questions	4.18	Usually	4.32	Always
	4. I use appropriate strategies designed to accommodate the varied	4.13	Usually	4.28	Always

	talents and skills of my students				
	5. I provide student-centered lessons and activities that are based on concepts of active learning and that are connected to real-world applications	4.30	Always	4.23	Always
	6. My teaching goals and methods address a variety of student learning styles	4.30	Always	4.21	Always
	7. As a teacher, I view myself as facilitator	4.37	Always	4.26	Always
	8. I immediately consult with students to correct problems and keep them on task	4.20	Always	4.04	Usually
	9. I use the Internet to locate resources for teaching	4.06	Usually	4.11	Usually
	10. I work well with students with different cultural background	4.19	Usually	4.34	Always
	11. I communicate with students very well	4.42	Always	4.40	Always
	12. I have very good reading comprehension skills	4.36	Always	4.15	Usually
	13. I am able to condense multiple perspectives into a coherent discussion	4.24	Always	4.04	Usually
	14. I can work independently, without the traditional class arrangement (students & teacher in the same class at the same time)	4.22	Always	4.09	Usually
	15. I can often complete difficult tasks on my own even if others do not provide support and encouragement	4.14	Usually	3.66	Usually
	16. I am able to comfortably work online / I feel I will be able to comfortably work online	4.09	Usually	3.81	Usually
	MEAN	**4.23**	**Always**	**4.15**	**Usually**
MOTIVATION	1. I am able to comfortably communicate almost entirely through writing	3.97	Usually	4.21	Always
	2. I am able to establish effective environment for student-teacher and student-student interaction	4.29	Always	4.32	Always
	3. I am capable of self-discipline	4.48	Always	4.04	Usually
	4. I am able to work in a non-structured environment	4.20	Always	4.34	Always
	5. I assume responsibility for preparation and presentation of learning tasks	4.31	Always	4.04	Usually
	6. I have the ability to experiment with a new pedagogical approaches	4.11	Usually	3.64	Usually
	7. My interest in online teaching is motivated by the flexibility it will give me to decide when I do my work	4.00	Usually	3.45	Usually
	8. My interest to teach online is motivated by the opportunity for me to pursue personal interests that are not work-related	3.72	Usually	3.57	Usually
	9. My interest to teach online is motivated by the opportunity to have more free time for other professional activities (attending conferences, consulting, etc.)	3.68	Usually	3.64	Usually
	10. Having a more convenient way to teach highly motivates me to teach online	3.80	Usually	4.53	Always
	11. I am committed to teaching	4.47	Always	4.30	Always
	12. I am highly motivated and enthusiastic	4.42	Always	4.28	Always
	MEAN	**4.12**	**Usually**	**4.03**	**Usually**
TIME MANAGEMENT	1. I set a goal before starting a task	4.30	Always	3.53	Usually
	2. I can dedicate 4 to 6 hours a week (any time during the day or night) to participate in the online teaching process	3.68	Usually	3.72	Usually
	3. I am willing to log on and contribute to your online classroom discussions and interact with students online	3.81	Usually	3.25	Usually
	4. I am willing to devote more time to an online class than an onsite class	3.77	Usually	3.94	Usually
	5. I am able to create schedules for myself and stick to them	4.06	Usually	3.84	Usually
	MEAN	**3.93**	**Usually**	**3.66**	**Usually**
	OVERALL MEAN	**4.16**	**Usually**	**4.04**	**Usually**

Table 2 shows attitude of faculty of both universities. UNP faculty evaluated themselves with a mean of 4.37 in teaching styles and strategies, 4.23 in abilities, motivation with a mean of 4.12, and 3.93 mean for time management. A mean of 4.33 for teaching styles and strategies, 4.15 mean for abilities, 4.03 for motivation, and 3.66 mean for time management manifested in LSPU faculty. Teaching styles and strategies were evaluated highest in both state universities which indicate…

Technology Access of the Faculty.

The ranking method is used for tabular presentation in order to show respondents who answered 'yes' on Technology Access with respect to the profile of the faculty. Table 3 shows the distribution of faculty based on technology access such as computers, internet connectivity and tools.

Table 3:-Faculty Profile based on Technology Access

		UNP			LSPU		
		f	**%**	**Rank**	**f**	**%**	
COMPUTERS	1. I own a computer	91	81.98	**2**	50	94.3	**1**
	2. I have access to dependable computer.	92	82.88	**1**	48	90.6	**2**
	3. I have access to a computer with the necessary software installed	88	79.28	**3**	45	84.9	**3**
	4. A printer is attached to my computer.	78	70.27	**4**	30	56.6	**4**
INTERNET CONNECTIVITY	1. I have / I am willing to obtain access to a computer and Internet connection at home?	94	84.68	**1**	49	92.5	**1**
	2. I have access to a computer in campus or Internet cafes with stable Internet connection.	82	73.87	**2**	33	62.3	**2**
TOOLS	1. I have one of these Java-enabled web browsers, Netscape TM 6.2 (PC and MAC). or 7.0(PC): Internet Explorer 5.0 or higher	70	63.06	**2**	29	54.7	**2**
	2. I have a virus protection on my computer.	92	82.88	**1**	49	92.5	**1**

Great majority of faculty from UNP (78.6%) and LSPU (81.6%) have access to dependable computers. Meanwhile 79.28% faculty respondents of UNP and 77.36% of LSPU faculty have access to internet connection. In addition, majority of UNP (72.97%) and LSPU (73.58%) faculty have tools installed on their computers. Furthermore, results show that most faculty from both state universities are willing to obtain access to a computer and Internet connection at home.

Technology Skills of the Student.

The distribution of students based on technology skills on basic computer skills, basic internet skills, literacy on software application is presented in Table 4. As gleaned from the table, ranking of respondents who answered 'yes' is employed in order to show the highest and lowest response among items on Technology Skills among students.

Table 4:-Student Profile based on Technology Skills

		UNP			LSPU		
		f	**%**	**Rank**	**f**	**%**	**Rank**
COMPUTER BASIC SKILLS	1. I know the basic function of computer hardware components (CPU and monitor) including its peripherals like the printer, speaker, mouse, etc.	357	94.69	**3**	258	95.2	**3**
	2. I know how to save/open documents to from a hard disk or other removable storage device.	366	97.08	**2**	262	96.7	**2**
	3. I know how to turn on and shutdown the computer properly.	371	98.41	**1**	267	98.5	**1**
	4. I know how to resolve common hardware or software problems or I can access a technical support in case I encounter a problem.	240	63.66	**4**	139	51.3	**4**
BASIC INTE	1. I have an email address.	354	93.90	**1**	261	96.3	**1**
	2. I can/send an email with file attachments.	325	86.21	**5**	236	87.1	**4**

	3. I know how to log in to the internet service provider (ISP).	332	88.06	**3**	198	73.1	**5**
	4. I know how to navigate the web pages (go to next, or previous page)	340	90.19	**2**	243	89.7	**2**
	5. I know how to download files using any browsers (Internet Explorer, Mozilla)	328	87.00	**4**	242	89.3	**3**
	6. I know how to resolve common errors while surfing the Internet such as "page not found" or "connection timed out".	293	77.72	**6**	188	69.4	**6**
	7. I know how to access an online library and other resource database.	275	72.94	**7**	145	53.5	**7**
	8. I have attended online classes before.	197	52.25	**8**	82	30.3	**9**
	9. I have previously joined in online discussions and online forums.	193	51.19	**9**	91	33.6	**8**
ON	1. I know what PDF files are and I can download and view them.	229	60.74	**5**	161	59.4	**4**
	2. I am familiar with word processing and use it comfortably.	326	86.47	**2**	225	83.0	**1**
LITERACY SOFTWARE APPLICATION	3. I am able to have several applications opened at the same time and move easily between them.	325	86.21	**3**	210	77.5	**3**
	4. I know how to use file compression.	266	70.56	**4**	148	54.6	**5**
	5. I know how to use spreadsheet application (Excel).	329	87.27	**1**	212	78.2	**2**
	6. I have attended seminars/workshops related to online learning activities.	180	47.75	**6**	96	35.4	**6**
					175.33	64.7	

As reflected in Table 4, most students from UNP (87.3%) have basic computer skills. 76% .7 have basic internet skills and 72.21% literate on selected software applications. Great majority of the respondents from LSPU (85.42%) have basic computer skills while majority have basic internet skills (69.13%) and are literate on selected software applications (64.7%). However, prior experiences on attending online classes before, online discussions and online forums, and seminars/workshops related to online learning activities were the least experienced by students from both state universities.

Attitude of the Students.

The profile of students based on attitudes on selected dimensions such as study habits, abilities, motivation, and time management is presented in Table 5.

Table 5:-Student Attitude

		UNP		**LSPU**	
		$\overline{X}$	**DR**	$\overline{X}$	**DR**
STUDY HABITS	1. When I have an important assignment, I get it done ahead of time.	3.73	Usually	3.95	Usually
	2. I prefer to figure out instruction for assignment by myself, I prefer to study or work alone.	3.54	Usually	3.91	Usually
	3. I look forward to learning new skills and master them quickly.	3.62	Usually	3.92	Usually
	4. As a learner, I am highly independent.	3.50	Usually	3.65	Usually
	5. I am able to refrain from distraction and stay on task while working or studying.	3.43	Usually	3.59	Usually
	6. When asked to learn new technologies, I do not put it off or avoid it.	3.41	Usually	3.75	Usually
	7. I can analyze class materials and formulate opinions on what I've learned.	3.59	Usually	3.77	Usually
	8. I am determined to stick to students despite challenging	3.40	Usually	3.73	Usually

	situations.				
	9. I do not need direct lecture to understand materials.	2.98	About Half of the Time	2.77	About Half of the Time
	MEAN	**3.47**	**Usually**	**3.67**	**Usually**
ABILITIES	1. I am able to express my thoughts and ideas in writing.	3.68	Usually	3.81	Usually
	2. I am as self-starter.	3.47	Usually	3.50	Usually
	3. I am able to communicate effectively with others using online technologies.	3.64	Usually	4.00	Usually
	4. I take responsibility for my own learning.	3.89	Usually	4.04	Usually
	5. Taking responsibility for staying in comfort with my instructor would be easy for me.	3.57	Usually	3.66	Usually
	MEAN	**3.65**	**Usually**	**3.80**	**Usually**
MOTIVATION	1. I consider flexibility in time as an important motivating factor in taking an online class	3.46	Usually	3.18	About Half of the Time
	2. I am highly motivated and enthusiastic to take an online course	3.27	About Half of the Time	2.94	About Half of the Time
	3. I enjoy learning that is both interesting and challenging, and I am motivated in such situations to go beyond the minimum requirements	3.71	Usually	3.76	Usually
	4. I would be able to remain motivated even though the instructor is not online at all times	3.31	About Half of the Time	3.29	About Half of the Time
	5. I set a goal before starting a task	3.72	Usually	3.98	Usually
	MEAN	**3.50**	**Usually**	**3.43**	**Usually**
TIME MANAGEMENT	1. Considering my professional and professional schedule, I am able to spend significant time and energy to engage in online learning class	3.41	Usually	3.25	Usually
	2. I do not have trouble getting things done on time	3.44	Usually	3.47	Usually
	3. I am able to organize my time well so that works and tasks don't buildup	3.60	Usually	3.56	Usually
	4. I can sacrifice personal time to complete assignments and readings	3.85	Usually	3.78	Usually
	5. I get things done without having to be directed by others	3.64	Usually	3.51	Usually
	6. I finish things that I start	3.88	Usually	3.26	Usually
	MEAN	**3.63**	**Usually**	**3.47**	**Usually**
	OVERALL MEAN	**3.56**	**Usually**	**3.59**	**Usually**

Both state universities elicited a usually rating on study habits, abilities, motivation, and time management. Students from LSPU ($\overline{X}$=4.00) are more adept in communicating effectively with others using online technologies than students from UNP ($\overline{X}$=3.64). However, being motivated and enthusiastic to take an online course revealed the lowest means from both UNP ($\overline{X}$=3.27) and LSPU ($\overline{X}$=2.94) in the motivation dimension. Moreover, there is a need to improve the study habits ($\overline{X}$=3.47) of UNP students and motivation ($\overline{X}$=3.43) of students from LSPU since these are the lowest areas compared to other attitude dimensions respectively. Motivation of students of both state universities have the lowest mean evaluated compared to other student attitude dimensions.

Technology Access of the Students.

Table 6 reveals the distribution of students along technology access on computers, internet connectivity and tools. The highest percentage response on each of the following dimensions is presented based on the ranking method to conveniently show the items with highest as well as the lowest responses.

Table 6:-Student Technology Access

		UNP			LSPU		
		f	**%**	**Rank**	**f**	**%**	**Rank**
COMPUTERS	1. I own a computer	184	48.81	**3**	139	51.3	**3**
	2. I have access to dependable computer.	216	57.29	**2**	154	56.8	**2**
	3. I have access to a computer with the necessary software installed	220	58.36	**1**	174	64.2	**1**
	4. A printer is attached to my computer.	153	40.58	**4**	83	30.6	**4**
INTERNET CONNECTIVITY	1. I have / I am willing to obtain access to a computer and Internet connection at home?	259	68.70	**1**	197	72.7	**1**
	2. I have access to a computer in campus or Internet cafes with stable Internet connection.	217	57.56	**2**	136	50.2	**2**
TOOLS	1. I have one of these Java-enabled web browsers? Netscape TM 6.2 (PC and MAC). or 7.0(PC): Internet Explorer 5.0 or higher	167	44.30	**2**	110	40.6	**2**
	2. I have a virus protection on my computer.	209	55.44	**1**	158	58.3	**1**

Table 6 show the technology access of students. The majority of them have access to computers with necessary software installed (UNP = 50.59%, LSPU = 50.74). Also, majority of the students (UNP = 62.3%, LSPU = 61.44%) shares their willingness to obtain access to a computer and internet connection at home. However, only a substantial percentage of students (UNP = 49.21%, LSPU = 49.5%) have virus protection and java enabled browsers.

Discussion:-

According to Rogers (2002) barriers towards successful and efficient adoption of technology comprises of internal and external sources. Internal sources are related to the faculty members' actual competency level of the emerging technologies and their attitudes toward technology while external sources include: the inaccessibility and unavailability of the needed software and hardware, the lack of associated technical and institutional support, and finally the lack of time and funding across internal and external sources. Literacy of UNP and LSPU faculty on online tools and other productivity tools were reported to be the lowest among technology skills. In addition, they have the least prior experience in online classes, attending seminars/workshop related to online learning activities, and skills to modify and add content and assessment using an online LMS. Al-Oteawi (2002) stressed that quality staff professional development programs is a requirement for achieving successful integration of technology into education.

There is a lack of clear consensus on the attitude and ability of academic staff in higher education despite e-learning's popularity (Newton, 2003). For faculty attitude, faculty from both state universities evaluated felt that they are able to comfortably work online/will be able to comfortably work online was evaluated least in the abilities dimension. Interest to teach online is motivated by the opportunity to pursue personal interests that are not work-related, interest to teach online is motivated by the opportunity to have more free time for other professional activities (attending conferences, consulting, etc.) were the items with the least mean in the motivation dimension. The willingness of UNP faculty to devote more time to an online class than an onsite class and LSPU faculty's willingness to log on and contribute to online classroom discussions and interact with students online received the lowest mean in time management dimension. The results are supported by Newton (2003) where increased time commitment for academic staff (both development and delivery time) is one of five distracting factors. According to (Kosaket al, 2004), the attitude of faculty towards online instruction affects their willingness to teach online. Therefore it is important to analyze faculty attitude any institution to develop strategies towards use of technology (Rogers, 1995). Chaney found out that faculty are less likely to teach online if they don't had appropriate training. These problems can be addressed through faculty development. However, negative attitudes prevail when faculty were mandated to attend development programs with the expectation that they would apply e-learning knowledge in a newly implemented platform (Weaver, Robbie, and Borland). Strategies to overcome faculty development issue include offering faculty compensation and incentives, acknowledgement of the skills, promotion and tenure, and allowing sufficient time to prepare for online instruction. As explained by Selwyn (2007), negative attitudes towards technology can be influenced by a number of factors such as limitations in national and institutional policies and

management practices. Alenezi, (2012) added poor Internet infrastructure, lack of distance learning education, and lack of support to be major barriers. Further, cultural and technical barriers are identified as predominant among many barriers to e-learning (Berge, 1998; Berge &Mrozowski, 1999). Cultural factors include resistance to innovation and change, and negative attitude towards technology, while the technical factors cover technology reliability, connectivity, adequate infrastructure and technical support issues.

Recent researches indicated that lack of knowledge and skills is the most apparent inhibiting factor in e-learning (Al-Sarrani, 2010). There are also evidences that has shown limited use of educational technologies in university teaching (Juvancic, Mullins, Zupancic, 2012; Schoonenboom, Roozen, Sligte and Klein, 2004; Selwyn, 2007). More than 72% of faculty from both state universities have access to dependable computers, internet connection, and have tools installed on their computers. For faculty, the use of technologies presents a real challenge in examining their culture of teaching (Travis & Price, 2005). Ertmer explained that e-learning first order barriers are usually described as resources related barriers in which are easy to measure and eliminate once funded. Lack of e-learning resources can be easily addressed though their inclusion in state universities' departments' Project Procurement Management Plan (PPMP).

Student characteristics such as computer self-efficacy, Internet self-efficacy, computer experience, Internet experience, computer anxiety, and attitudes toward e-learning are regarded as a critical success factor in e-learning in developing countries (Bhuasiri et al., 2012; Chu & Chu, 2010; Chiu & Wang, 2008; Fuller et al., 2006; Pituch& Lee, 2006; Shih et al., 2006; Sun et al., 2008). Most students from UNP have basic computer skills. Great majority of them have basic internet skills and majority are literate on selected software applications. Great majority of the respondents from LSPU have basic computer skills while majority have basic internet skills and are literate on selected software application. However, prior experiences on attending online classes before, online discussions and online forums, and seminars/workshops related to online learning activities were the least experienced by students from both state universities. The study showed that students have basic knowledge or skills but not yet advanced. This indicate the long path for students to have decent skills to use an e-learning system.

Quality and perceived ease of use of e-learning courses, functionality of e-learning platforms, and the level of student computer skills influence student attitudes (Aixia&Wang; 2011). Being motivated and enthusiastic to take an online course revealed the lowest means from both state universities in the motivation dimension. Moreover, there is a need to improve the study habits of UNP students and motivation of students from LSPU since these are the lowest areas compared to other attitude dimensions respectively. Motivation of students of both state universities have the lowest mean evaluated compared to other student attitude dimensions. According to Bishop (2006), other factors such as goals, beliefs, or values can affect the learners' attitude. He further explained that when learners' needs are not met they would likely not participate in e-learning activities because of the negative attitude towards the technology. Students' perceived self-efficacy, enjoyment, and usefulness of using e-learning also plays a role (Liaw& Huang, 2011). Students' attitudes whether positive or negative directly affects behavior and therefore the use of the technology, no matter the level of technology (Liaw, Huang, & Chen, 2007). In turn, positive student attitudes and behaviors towards e-learning are to the acceptance and e-learning readiness (Lim, Hong, & Tan, 2008; Selim, 2007).

A purpose for studying students' attitudes toward e-learning is that they might reflect the learners' subsequent use of the technology (Smith, Caputi&Rawstorne, 2000). 51% of students from both state universities have access to computers with necessary software installed. In addition, majority of the students shares their willingness to obtain access to a computer and internet connection at home. There is a connection between students' attitudes and their computer usage experience. Two aspects of computer experience directly affects the learners' attitude: a) subjective experience, which relates to the feelings and thoughts of the learners toward their computer usage; and b) objective experience, which relates to individual computer interaction (Smith, Caputi, &Rawstorne, 2000).

Conclusions/Recommendations:-

State universities invest in automation and technologies to offer the best education to stakeholders yet assessing barriers to e-learning is not conducted. The results above saw same patterns from both state universities. Both faculty and students manifested least skills and attitude necessary for successful e-learning implementation. The above results support the claim that e-learning has not been accepted by faculty and students. Barriers to e-learning manifested through the results. In light of the results of this study, the researchers recommends the development E-learning framework that addresses implementation issues in SUCs. Furthermore, building E-learning culture,

training all faculty and students on e-learning management systems, developing efficiency of infrastructure, technical support allocation, and focusing on faculty incentives should be the focus in the implementation and operation. Finally, barriers to E-learning should be addressed by managers to better prepare for whatever E-learning has to offer in the future.

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