An Assessment of E-Learning System for Instructors and Students of Panpacific University

Jane M. Fernandez\textsuperscript{a),} Gina Lee M. Santos\textsuperscript{b),} and Wennielyn C. Javier\textsuperscript{c)}
Panpacific University, Philippines
Email: janefernandez2122@gmail.com\textsuperscript{a),} ginalee.punp@gmail.com\textsuperscript{b),} javierwennielyn@gmail.com\textsuperscript{c)}

Abstract

Through teaching innovations, E-learning play a vital role in education. The researcher attests by determining the e-learning systems influence on students and instructors. In order to know the perceptions of the students and Instructors the researcher conducted a survey regarding their current experiences. The main purpose of the study was to investigate the impact of e-learning used by the School of Computer Studies at Panpacific University. This study will detail the e-learning impacts which had on Instructors and Student participant’s performance about the level of user satisfaction and productivity, utilization and problems encountered. The study found out that the use of e-learning systems shows a positive effect on student learning. Instructors utilized e-learning system as presentation and preparation tool in teaching and learning. Most instructors positively confirm that e-learning supports teaching and learning effectively implemented.

INTRODUCTION

One of the trending educational tools in the market today is the use of E-learning as an alternative to the traditional learning. With the advancement in technology, learners should be exposed not only to printed texts, but those integrated with elements such as images, sounds and videos in digital format.

E-learning connects two areas like learning and with the use of technology. In achieving knowledge, a combination of learning and used of educational technology is a component of the learning process. E-learning systems has faster delivery cycle time than traditional classroom-based instruction because system combined with tools such as writing technologies, communication technologies, visualization and data storage [1]. Traditional conducting of classes inside the class is the common practice of some schools, however, with the emergence of computer technology and internet the traditional approach is already start evolving into e-learning [2].E-learning is the newest model in the modern education, With the new approach and environment for learning the used of electronics networked allowed learners to interact between instructors, teachers and peers and will receive individualized support that is suitable for the students [3]. E-learning will also support the scheduling and time management for the learning process of the learners.

This research study assessed the impact of the e-learning system used in the School of
Computer Studies for Panpacific University. The main purpose of this study is to evaluate the learner’s perception of the frequency and nature of use of e-learning, Instructors satisfaction with access to e-learning resources and Instructors views on the impact of e-learning on learners’ experiences of higher education.

The traditional process of teaching in other developing country has been started to evolve with the new technologies and other learning tools [4]. Study showed that the learning process in Ajman University with the used of Learning Management System there is a positive response and increase collaboration of learners and peers [5]. With the use of information and communication technology e-learning has been started to develop because it helps a lot especially on distance learning where e-learning is one of the solutions. Colleges and Universities use e-learning to improve the classroom experience and to deliver over the Web. E-learning is a learning process that is increasingly being used in institution however e-learning is still at the primary stage and the adoption of e-learning continues to rise [6].

Nowadays, the use of electronic learning is not restricted to the students. Educators and institutions can also realize the great benefits from the adoption of e-learning programs like students can perform better when online learning is incorporated because the student can study the lesson in advance and will increased interaction and collaboration of students, peers and instructors compared to traditional learning. The use of e-learning can lower the operating cost while also lowering costs associated with the production of activity materials, hand-outs and laboratory manuals. Today’s students and instructors engaged to work on their mobile devices and other digital tools. By incorporating technology in our daily activities, classroom instruction, educational materials it can give more improvements in student learning [7]. The use of e-learning has a great help rather than the traditional techniques [8]. The challenges of educators and learners is the lack of knowledge and skills of how to use the e-learning tools, however proper dissemination, focused, more time and efforts in using the e-learning and with the help of the top management for proper implementation with enough physical infrastructure will create a better opportunity for the user [9].

E-learning offers many opportunities for students in their learning process, but it has challenges for Instructors who forced to create new teaching methodologies [10]. Information technology tools for e-learning are available on the Web, however engagement and more practice in using the e-learning will have a better opportunity to become an effective learner. [11].

Thus, this paper presents the results of the study and their indications for the impact of e-learning system on students and Instructors for the School of Computer Studies at Panpacific University.

**METHODOLOGY**

This study was conducted in order to assess the impact of e-learning system used by instructors and students of Panpacific University. In order to gather the necessary data, the researchers utilized the descriptive survey method. It is applicable on this study primarily
because it describes the influence of E-learning system to institution instructors and students using quantitative data. The respondents of the study came from the 5 instructors and 80 students of School of Computer Studies at Panpacific University. A questionnaire was used to gather data for this study. The tool used for this research has been lifted from the study “Impact of e-learning in Further Education: Survey of Scale and Breadth” [1]. The data gathering tool consists of the demographic profile of the respondents, questions on how e-learning system is being utilized, the number of occurrences in utilizing the e-learning system, the teachers’ insight on the use of e-learning and the level of satisfaction. The researchers will then give the questionnaire among the respondents, give them an ample time to answer it and retrieve the data gathering tool upon completion. The researchers then tabulated the data; interpreted the data. Response to the questionnaires by the respondents was statistically analyzed; descriptive statistics which is the frequency count and percentage distribution was used to statistically quantify the satisfaction and impact of using e-learning for teachers and students.

RESULTS AND DISCUSSION

Table 1. Learners’ insight for the number of occurrences based on how e-learning is used

| use of e-learning to:                      | Constantly % | Frequently % | Occasionally % | Never % | No response % |
|------------------------------------------|--------------|--------------|----------------|---------|---------------|
| Present written work/data Research topics | 20           | 42           | 35             | 0       | 0             |
| Submission of work assignment on time    | 47           | 29           | 22             | 0       | 2             |
| Participation in classroom activities    | 25           | 45           | 22             | 0       | 3             |
| Organize activities                      | 29           | 50           | 13             | 0       | 3             |
| Consultation to teachers                 | 27           | 34           | 30             | 3       | 3             |
| Collaboration for class activities       | 20           | 46           | 31             | 0       | 0             |

Table 1 shows, that most students utilize e-learning system to submit their assignments or work all the time which represents 47% of the respondents as supported in the study entitled ‘Submission of work assignment on time’ that the application of e-learning helped the students in doing their homework’s efficiently and effectively [12]. It also noticeable that students perceived to be that they are well organized in their work as they responded frequently (50%). Students occasionally present written work/data research topic to the e-learning system they used most probably because they want to personally interact with the instructor. It is also worth noting that students collaboratively work with peers in the classroom.

Table 2. Frequency of use of e-learning by Instructors

| use e-learning to:                      | Constantly % | Frequently % | Occasionally % | Never % | No response % |
|------------------------------------------|--------------|--------------|----------------|---------|---------------|
| make course materials available to learners | 76           | 19           | 4              | 0       | 0             |
| discuss information in the class         | 74           | 19           | 4              | 0       | 0             |
As gathered in table 2, the instructors mostly utilized e-learning to prepare and present their lessons. It is noticeable that 76% constantly teachers perceived to be that e-learning is used to make course materials available to students and present it to the class through these students understanding to their lessons are being developed. Additionally, 50% frequently give one-to-one consultation to students in the classroom. One feature of the e-learning is the notes in which it gives the students an avenue to discuss and solve their academic concerns. Thus, learning is implemented in this very effective medium [13].

Table 3. Instructors’ insight for the number of occurrences based on how e-learning is used

| Students use of e-learning to:                     | Constantly % | Frequently % | Occasionally % | Never % | Don’t know % | Not applicable % |
|--------------------------------------------------|--------------|--------------|----------------|--------|-------------|-----------------|
| Discuss written work/data                         | 12           | 63           | 25             | 0      | 0           | 0               |
| Research topics                                   |              |              |                |        |             |                 |
| Create visual presentations                       | 35           | 50           | 13             | 0      | 0           | 0               |
| Submit homework’s’ on time                       | 44           | 50           | 6              | 0      | 0           | 0               |
| Engage with the subject in the classroom          | 65           | 31           | 6              | 0      | 0           | 0               |
| Work collaboratively with peers in the classroom  | 38           | 38           | 25             | 0      | 0           | 0               |
| Catch up on missed lectures                       | 44           | 31           | 25             | 0      | 0           | 0               |

Table 3 shows that 65% instructors perceived to be that most learners utilized e-learning system for them to be engage with the subject in the classroom. Students also used it in presenting their output such as researches and other written works to help them collaborate with each other. It is also being noticed that students used the e-learning system to catch up with their lessons. However, working collaboratively of students to their peers is occasionally practiced. E-learning provided new form of leaning where it uses internet technologies. It does not require attendance of the teacher and the students in the educational activities at the same time [13].

Table 4. Instructors’ approval with access to e-learning resources

| Enough resources to                             | I have enough access % | I have less access % | I have no access % | Unsure % |
|------------------------------------------------|------------------------|----------------------|--------------------|---------|
| Design research and make lessons                | 68                     | 31                   | 0                  | 0       |
| Share course materials with colleagues          | 55                     | 38                   | 5                  | 0       |
Table 4 shows the satisfaction if instructors in terms of the access of e-learning resources. It can be observed that 68% of the instructors had enough access to e-learning system for them to design their research and make their lessons. However, they have less fulfilment with the use of e-learning to communicate and provide support for their learners. It is evident that learning experiences of the students were efficiently and effectively enhanced with the used of e-learning[14].

| Teaching activity                                      | Very effective% | No Change % | Less effective% | unsure % | Not applicable % |
|--------------------------------------------------------|-----------------|-------------|-----------------|----------|------------------|
| Make course materials available to learners            | 80              | 6           | 0               | 0        | 0                |
| Course materials sharing with colleagues               | 65              | 15          | 15              | 0        | 0                |
| Lesson plan preparation                                | 70              | 15          | 6               | 0        | 0                |
| Medium of communication to the students                | 60              | 20          | 0               | 0        | 3                |
| Management of individual activities of the students    | 61              | 17          | 12              | 0        | 3                |
| give one-to-one consultation to students in the classroom | 45              | 25          | 11              | 0        | 4                |

Table 5 shows that instructors have most similar views on the impact of e-learning in teaching and learning activities. Most of the instructors responded that e-learning have helped them in making the course materials in their subject available to students which they find it more effectively. Additionally, Instructors perceived to be that communicating with students outside the classroom and sharing course materials to their colleagues the impact of e-learning is more effective. On the other hand, there is a small percentage of instructors who perceived on the impact of e-learning less effectively in managing individual student activities and outputs and giving them assistance one-to-one.

Table 6. Instructors’ views on the effect of e-learning on learners’ experiences

| Learning activity                                      | Very effective% | No change% | Less effective% | Don’t know% | Not applicable% |
|--------------------------------------------------------|-----------------|-----------|-----------------|-------------|-----------------|
| Doing research                                         | 65              | 6         | 0               | 0           | 6               |
| Reinforce their knowledge                              | 60              | 10        | 0               | 6           | 0               |
| Develop their understanding of the subject             | 75              | 10        | 0               | 0           | 0               |
| Work independently Contact me with queries             | 60              | 10        | 6               | 0           | 0               |
| Engage with the subject in the classroom               | 60              | 0         | 13              | 5           | 0               |

It can be gleaned in table 6, that instructors view on the impact of e-learning on learners’
experiences shows that, it developed students understanding of the subject more effectively which represents 75% of the total response. It also impacts the students conduct of research, helped reinforcement in their knowledge, create visual presentations more effectively. Exercises and activities provided in the system made the students self-reliant, involved in working collaboratively and have good time management [16]. E-learning became an effective tool in training teachers. It helps to improve the teaching strategies and learning process of the learner [17].

| Table 7. Instructors’ perceptions on the possible advantage of e-learning |
|---------------------------------------------------------------|
| E-learning has the possible advantage to:                  | Strongly Agree % | Agree % | Uncertain % | Disagree % | Strongly Disagree % |
| Provide flexibility in learning process                      | 90               | 6       | 0           | 0          | 0                   |
| Provide students better understanding to the lessons         | 78               | 11      | 4           | 4          | 0                   |
| Provide students better employability                        | 55               | 38      | 4           | 4          | 0                   |
| improve communication of teachers and students.              | 79               | 10      | 4           | 0          | 0                   |
| Identify learning to individual learners’ needs               | 73               | 25      | 0           | 0          | 0                   |
| save lecturers’ time by using online resources               | 80               | 19      | 0           | 0          | 0                   |

Table 7 shows, most respondents strongly agreed that e-learning have a higher possibility to enhance the teaching and learning experience in all the aspects listed in table 7. Ninety (90%) of the respondents strongly agreed that e-learning provides flexibility in the learning process. Also, 80% have strong belief that e-learning help students better understand their lessons, improve how staff communicate with learners and saved lecturers time by using online resources. Importantly, E-learning improves the educational system as it provides better teaching and learning experiences. It bridges a way to alleviate barriers to education as it delivers new and creative method to implement educational practices [16].

**CONCLUSION**

Based on the findings presented through interpretation and analyzed data gathered, the researcher found out that the used of e-learning for Instructors had aided them to be more effective on their teaching strategy. Many Instructors point out that e-learning had helped them to prepare their teaching and learning scheme. And also they used this application to prepare their presentational tool to be more effective in giving lessons and learning materials to their students. E-learning tools also aid instructor in strengthening the interface between learners and lectures. Based on the result of the survey, noticeably fewer indicated that e-learning tools helped them as a medium for assisting and handling learning more effectively. However, numerous instructors stated that this particular tool had helped instructors in preparing learning materials and presentation to be more convenient of work in strengthening and developing knowledge. Based on the result of the survey, it shows that fewer instructors point out that this tool helped both instructors and students in undertaking collaborative activities. E-learning system also helped the students to submit their assignments or activities on time. It also noticeable that students perceived to be well organized in their work. It is also worth
noting that students collaboratively work with peers in the classroom. To increase the possible use of e-learning, the faculty must attend training and workshop for the new multimedia technologies in creating their teaching materials for the learners and to improve services as well as collaboration [18]. Greater use of e-learning tools by instructors for sharing educational materials and developing understanding requires good access. The benefits of e-learning tools, such as improved performance, engagement in school activities, increased motivation, and development of other skills like interpersonal communication, let particular indirect ways in which this certain tool may impact on achievement, contribution and retention [19].

REFERENCES

[1] Aparicio, M., Bacao, F., & Oliveira, T. 2016 An e-Learning Theoretical Framework. Educational Technology & Society, 19 (1) 292–307.
[2] S. Alkhalaf, T. Alhussain, & S. Drew Assessing the Impact of e-Learning Systems on Learners: A Survey Study in the KSA, Procedia - Social and Behavioral Sciences Volume 47, 2012, Pages 98-104".
[3] Tao, Y. H., Yeh, C. R., & Sun, S. I. 2006. Improving training needs assessment processes via the Internet: system design and qualitative study. Internet Research, 16 (4), 427–49.
[4] Wang, Y. S., Wang, Y. M., Lin, H. H., & Tang, T. I. 2003 Determinants of user acceptance of Internet banking: An empirical study. International Journal of Service Industry Management, 14, 501–519".
[5] Shishakly, R. 2016 Significance of Learning Management Systems (Moodle) on the students of Ajman University, United Arab Emirates. IAMURE International Journal of Education, 18(1). Retrieved from http://ejournals.ph/form/cite.php?id=11654
[6] Holmström, T. and Pitkänen, J. 2012 E-learning in higher education A qualitative field study examining Bolivian teachers’ beliefs about e-learning in higher education.
[7] Qiyun Wang, Zhiting Zhu, Li Chen, Hanbing Yan 2009 E-learning in China, Campus-Wide Information Systems, Vol. 26 Issue: 2, pp.77-81, https://doi.org/10.1108/10650740910946783.
[8] George Macgregor, James Turner 2009 Revisiting e-learning effectiveness: proposing a conceptual model, Interactive Technology and Smart Education, Vol. 6 Issue: 3, pp.156-172, https://doi.org/10.1108/17415650911005375.
[9] Sukanya Sawang, Cameron Newton, Kieren Jamieson 2013 Increasing learners’ satisfaction/intention to adopt more e-learning. Education + Training, Vol. 55 Issue: 1, pp.83-105, https://doi.org/10.1108/00400911311295031.
[10] Christina Mainka, Angela Benzies 2006 E-learning: vision to reality, Interactive Technology and Smart Education, Vol. 3 Issue: 2, pp.101-111, https://doi.org/10.1108/17415650680000056.
[11] Mohammad, M. 2012 The impact of e-learning and e-teaching, International Science Index, Educational and Pedagogical Sciences Vol:6, No:2, 2012 waset.org/Publication/194.
[12] Yacob, A. et al. 2012 Student Awareness Towards E-Learning In Education, Procedia - Social and Behavioral Sciences 67 ( 2012 ) 93 – 101
[13] Yucel Seda A 2006. E-Learning Approach In Teacher Training. Turkish Online Journal of Distance Education-TOJDE,ISSN 1302-6488 Volume: 7 Number: 4 Article: 11.
[14] Garrison, R. & H. Kanuka. 2004 Blended learning: Uncovering its transformative
potential in higher education, Volume 7, Issue 2, 2nd Quarter 2004, Pages 95-105
[15] Wu, J., Tennyson R, & Lih. 2010. A study of student satisfaction in a blended e-learning system environment, Volume 55, Issue 1, August 2010, Pages 155-164.
[16] Tegenge, K. 2014, The Influence of E-Learning on the Academic Performance of Mathematics Students in Fundamental Concepts of Algebra Course: The Case in Jimma University , Ethiop. J. Educ. & Sc. Vol.9 No. 2.
[17] Ghavifekr, S. & Rosdy, W.A.W. 2015 Teaching and learning with technology: Effectiveness of ICT integration in schools, International Journal of Research in Education and Science (IJRES), 1(2), 175-191.
[18] Barbara M. Olds, Colorado School of Mines. 2010. Effective strategies to Assess the Impact of e-learning
[19] Rachel Harris, John Hall and Alison Muirhead, with Erica McAteer, Seb Schmoller and Graham Thorpe. Impact of e-learning on learner participation, attainment, retention, and progression in Further Education: report of a scoping study.