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Perception of Using Information and Communications Technology (ICT) In the Academic Purposes among Students in a Selected IPTS

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Abstract

Information and Communications Technology (ICT) are a diverse set of technological tools and resources used for creating, storing, managing and communicating information, and to support learning and research activities. This review summarizes the relevant research on the use of information and communication technology (ICT) in education. The purposes of this research are to determine the perception of using ICT in the academic purposes among students at UNITAR International University. This study discussed about how Information and Communications Technology (ICT) can help university students in their e-learning process in class. This research used qualitative design to investigate the perception of using ICT among university students based on helps them in e-learning process, and support knowledge. This research was carried out at UNITAR International University with ten (10) students. The data analysis is divided by three section as background of respondent, help their e-learning process, and support knowledge. There are a lot of possibilities that using ICT give a positive perception from students in academic performance. The current research also found that students could manage their time, make them interesting and focus in class. ICT also give the students many benefits for their learning process.

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Key word: Information and Communications Technology, student expectations, perception, consideration

1.0 INTRODUCTION

One of area that has received little research is that of the perception of Information and Communication Technology (ICT) in learning process. The increasing use of ICT that is the use of the internet, personal computers, email, etc., in learning process has a growing impact on higher education, both academically and financially. In the university undergraduate classroom ICT has become accepted as an effective aid in learning (Mueller, Jones, Ricks, Schlegelmilch & Van Deusen, 2001; Sherblom, 2010). There has been a strong effort in recent years to incorporate ICT into the classroom and encourage ICT implementation into the curriculum (Jamieson-Proctor, Watson, Finger, Grimbeck & Burnett, 2007; Meyer & Xu, 2009).

Information and Communications Technology (ICT) are a diverse set of technological tools and resources used for creating, storing, managing and communicating information, and to support learning and research activities (Vajargah, Jahani & Azadmanesh, 2010). The use of the Internet and other information and communication technologies (ICT) in higher education locally and globally has been phenomenal. This is predicated on the rapidly changing environmental dynamics, globalization, demand for ICT and life-long learning as well as competition among private and public institutions (Collis & van Der Wende 2002; James 2008). This rapid migration into the digital age calls for the adoption of ICT by higher educational institutions due to its potential effect on educational, social and economic dynamics. The educational benefits of ICTs in learning are well catalogued (Tok & Sora 2013; Yunus, Nordin, Salehi, Embi & Salehi 2013; Mullamaa 2010; Pretorius, Steyn & Johnson 2012; James 2008.). Such benefits include their impact on catalyzing teaching practice thoughts; language acquisition; motivating learners; enhancing students' academic performance and enhancing pedagogy (Jaffer, Ng'ambi & Czerniewicz 2007).

Information and Communication Technologies (ICT) are generally accepted as a modern instrumental tool that enables the educators to modify the teaching methods they use in order to increase students interest. Its general definition covers any product that will store, retrieve, manipulate, transmit or receive information electronically in a digital form. It consists of hardware, software, networks and media for collection, storage, processing, transmission and presentation of information (voice, data, texts and images) (World Bank, 2002).

The use of online learning in the Internet era is not new. Developing online learning has helped education providers to improve the efficiency and effectiveness (Puzziferro & Shelton, 2014; Su et al, 2014; Park & Lim 2015). Online learning system can referred to as electronic learning (e-learning)) and their use in managing the process of teaching and learning through information and communication technology (ICT) has become standard practice by many education providers worldwide.

From a survey carried on Divine Word University students, results showed that a number of students use their computers for other activities apart from academic work such as graphical software, listening to music, and playing PC games. (Kolodziejczyk, 2009). Information and Communication Technology (ICT) plays a vital role in the development of any nation. It has been an instrument for achieving social, economic, educational, scientific and technological development (Adedeji,2010).

ICT has greatly influenced the educational sector especially on teaching, learning and research. The application of Information Communication Technology (ICT) is not only emphasised in corporative business and the industrial sector, but it is an essential part of education at all levels (Allen,2011). Therefore, this research discussed to identify how ICT can help university students in their e-learning process in class and how ICT can help university students to support knowledge in learning process outside of class.

2.0 Litertaire Review

This theory as proposed by Albert Bandura (1963) focuses on the learning that occurs within a social context. It considers that people learn from one another, including such concept as observational learning, imitation and modeling. It serves as a bridge between the Behaviorists learning and the Cognitive theories, which maintained that learning has to be represented by a permanent change in behavior (Behaviorist) and that cognition plays a role in learning from perception to problem-solving ability. This theory can relate with the perception of using ICT in academic purposes among students. From the modeling is one the process that an individual learn from other person that it presenting the behaviors and they take it into character. It can relate seen in figure 1 that explain how basically an individual learning their behavior according the Albert Bandura theory.

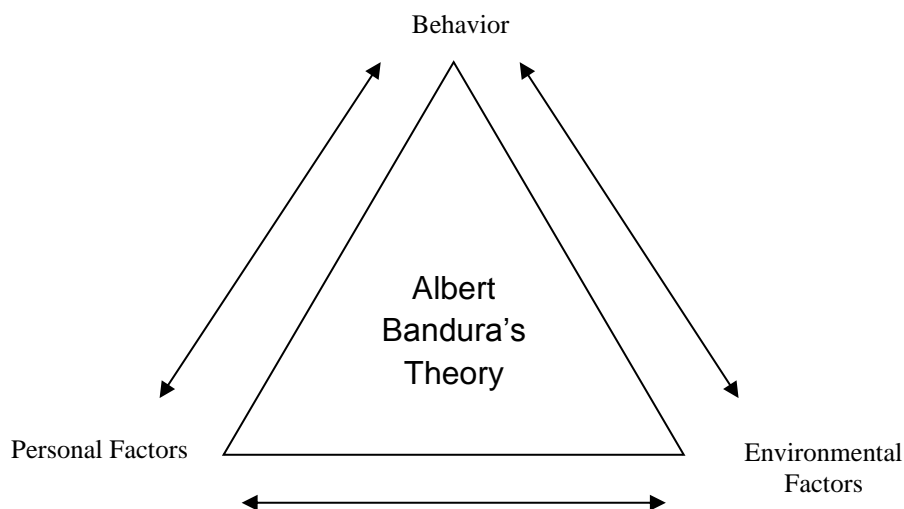


Figure 1: Social Learning Theory

From the figure 1, can see how individual learning behaviors related with environment. Personal factors in the figure can related with their own character or attitudes individuals towards certain behaviors. This process include from own personal perception towards behaviors had been influenced by other peoples. The environment can relate to an individual situation.

The situations refer to an individual presenting behaviors been influenced by environment. For example, students in class bring their tab or laptop in class automatically others people can influence or follow the same character to bring their tab or laptop in class. Typically this situation happens on the students who always follow the environment and others people behavior. This theory can relate to the perception of using ICT in the academic purposes. Among students they used the ICT by influence or observing other people and environment for now days by using ICT for their learning process. In conclusion, personal aspects, environment can influence an individual perception and attitudes towards using ICT in academic purposes. This situation can give more positively result because students used ICT for academic purposes.

Based on the research framework, this section will present the previous research studies related to determine students perception of using ICT in the academic purposes among students. E-learning technologies such as Moodle can greatly support and enhance teaching and learning activities. Moodle provides a rich set of features designed to allow participants learn by constructing and sharing their knowledge within a Moodle course learning space (Daniel, 2009) from Divine Word University.

Students are now more frequently engaged in the meaningful use of computers (Castro Sánchez and Alemán 2011) from National Institute of Education, Singapore. They build new knowledge through accessing, selecting, organizing, and interpreting information and data. Based on learning through ICT, students are more capable of using information and data from various sources, and critically assessing the quality of the learning materials.

ICT develops students' new understanding in their areas of learning (Chai, Koh and Tsai 2010). ICT provides more creative solutions to different types of learning inquiries. For example, in a reading class, e-books are commonly used in reading aloud activities. Learners can access all types of texts from beginning to advanced levels with ease through computers, laptops, personal digital assistants (PDAs), or iPads. More specifically, these e-books may come with some reading applications, which offer a reading-aloud interface and relevant vocabulary-building activities.

Education providers have pushed to integrate the latest technologies into their study modes, content delivery, management and curriculum. Alas and Anshari (2014) from University Brunei Darussalam noted that e-learning is able to connect diverse audiences, who all have the same access to high-quality learning.

Technology requires participants to be present at the same time, for example to participate in video conferencing, internet radio, and live streaming. The other form of online education technology is adaptive learning, whereby the online education system modifies the presentation of each student's contents in response to observed aspects of student academic performance (Venkatesh et al. 2014) ICT offers students the opportunity to browse for information quickly and allows them collaborate on projects in the learning process. However they should view ICT as a means to enhance their learning process.

ICT tends to expand access to education. Through ICT, learning can occur any time and anywhere. Online course materials, for example, can be accessible 24 hours a day, seven days a week. Teleconferencing classrooms allow both learner and teacher to interact simultaneously with ease and convenience. Based on ICT, learning and teaching no longer depend exclusively on printed materials. Multiple resources are abundant on the Internet, and knowledge can be acquired through video clips, audio sounds, visual presentation and so on. Current research has indicated that ICT assists in transforming a teaching environment into a learner-centered one (Castro Sánchez and Alemán 2011) from National Institute of Education, Singapore.

Information Technology and Communication (ICT) has made learning easier in Universities in terms of communication between student peer and student to instructor (Valasidou and Bousiou, 2005 as cited in Mbah, 2010). It is seen that ICT develops student's knowledge and research enhancing their creativity and thinking capability, thus enabling them to communicate and collaborate in learning environment made much easier with ICT.

Ozad (2010) from University of Ibadan explored the use of the internet in tertiary media education. It was suggested that in addition to using the internet as a source to get information. McMahon's study (2009) showed that there were statistically significant correlations between studying with ICT and the acquisition of critical thinking skills. A longer exposure in the ICT environment can foster students' higher critical thinking skills. Thus, schools are strongly advised to integrate technology across all of the learning areas and among all learning levels. Where this is done, students are able to apply technology to the attainment of higher levels of cognition within specific learning contexts.

Researchers Mercier et al. (2006) examined the perception of sixth and eighth grade students regarding knowledgeable computer users in which students answered liker-responses to questions about their involvement with computers. Further, they were asked to describe their perception of what a "knowledgeable computer user" would typically look like through a drawing and using words.

Following on, the use of multimedia equipment such as projectors, video players and LCD screens has made learning more motivated engaging students in the learning process as images and video in a lecturer allows a student to digest knowledge effectively (Oshinake & Adekunmisi, 2011) from Divine Word University. Similarly, video streaming sites such as YouTube also makes it easier for instructor to share video tutorials or lecturer via YouTube where students can download and watch. Also, students get to watch tutorials and lecturer from other universities across the world.

3.0 Research Methods

In this research the researcher is using a qualitative research design which is by interview respondents. The respondents are from UNITAR International University. Using qualitative analysis of written answers given by respondents where some questions in questioner is open and also given of learning by using ICT. The selection of the participant was based on random sampling. The sampling designs are collected by the sample name, gender, course, and semester. A question is based from two dependent variable, which is the questions are:

- i) Did ICT helps university students in e-learning process?
 - a) How the usage of ICT helps you in e-learning process
 - b) How ICT can help you to improve your academic purposes?
 - c) What the advantages and disadvantages of using ICT in your e-learning process?
 - d) Do you perceive the e-learning process can help you in class?
- ii) Did ICT helps university students in support knowledge?
 - a) What are the ways that can help university students in using ICT to support of understanding knowledge?
 - b) How ICT help you to do it assignment in learning process?
 - c) How learning process in using ICT can help you to manage time management?
 - d) What makes you feel agreeable for use ICT in learning process?

3.1 Random Sampling

For the respondent of the research was based on random sampling its means the researcher choose from the undergraduate students from faculty FEH and FBTA. The researcher interviews the respondent at UNITAR library and UNITAR cafe. Time duration for interview will take 10-15 minutes. The sample of the research was chosen from the undergraduate students at UNITAR International University. The research sample consisted of 10 participants from the undergraduated students from the faculties Faculty Business Technology Accounting (FBTA), Faculty Education Humanities (FEH), and do an interview were distributed to them in order to complete the research. The instrument that was used in this research namely interview question divided by four parts of questions:

- (a) Background of respondent
- (b) Help e-learning process
- (c) Understanding knowledge

The three (3) research parts were developed by three questions in each section. The background questionnaire was focused on perception of using ICT in the academic purposes among students in a selected IPTS.

4.0 Analysis Data

This research was carried out at around UNITAR International University in Petaling Jaya, Selangor. A total of ten students from difference faculty based from random sampling are selected research sample. The background of respondent in term of name, age, gender, course, semester and faculty.

Table 1.0: Distribution of Responding According to Gender

Gender	Frequency	Percentage
Male	4	40%
Female	6	60%
Total	10	100%

4.1 How ICT Helps University Students in Their E-Learning Process

Overall the respondents answered that they have used ICT for study, doing an assignment, get less bored, and manage time management, easy for them to get information from other resources and to attract focus in class.

4.1.1 ICT helps respondents for their study matters.

From the research done, there are five (5) respondent have answered that they used ICT for their study matters. All of them claimed that ICT helps them to doing an assignment and manage their time and easy to get information.

"For me it easy to search information like when I do an assignment it's can help me improve my academic and helps me in using e-learning process." [R1, 23]

“Easy for me to search information by using google, the information can get from your finger so, it’s help me to get an information to finish an assignment. e-learning process also easy for me to get information and attract me focus in class.” [R5, 22]

“For academic purposes really helps me because I can get a resources certain medium that I used BLOG, GOOGLE, PDF and YOU TUBE so, It’s can help me easy to search information and to finish my assignment.” [R7, 23]

“For academic purposes ICT is one process the simple way to finding info and complete assignment or any forum to discuss anyhting to add some new knowledge. Helps me to get less bored and interesting.” [R8, 23]

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“For academic purposes it’s can help me to search information from google. For example, to do it an assignment so, easy for me to used google just type the key words point then, I can get that information. Then, I just read and choose a suitable point to finish my assignment.” [R9, 23]

4.1.2 UNIEC VIRTUAL helps students learning in class and off campus

From the research done, there are four (4) respondent have answered that they used UNIEC VIRTUAL for their learning in class and off campus. All of them claimed that ICT helps them everywhere they can study.

“I think ICT can help me where I’m not absent in class. For example, other than lecturer, online teacher help students get easily to understand more info with virtual or some videos that can explain easily to be understand.” [R8, 23]

“In my university, we have one software that university provide we call UNIEC. In UNIEC the lecturer give a notes about the subject and if I absent class I can refer the notes from the UNIEC. [R1,23]

“For example, in UNITAR they provide UNIEC VIRTUAL if I absent I can find the notes or assignment from UNIEC. ICT it’s really helps in making our learning system more smooth.” [R7,23]

“For me, when I absent a class I still can studies because the lecturer already put it notes in UNIEC so, I just download for my study. For me using ICT really helps me whether I’m not attend a class I still can get a notes and can study by myself. “ [R10,23]

4.2 What are the Ways That Can Help University Students in Using ICT to Support in Knowledge Outside Of Class?

Overall the respondents answered that they have used ICT helps them to get information outside of class because the respondent also can more understanding where the respondent learn outside of class. So, all information can just get by searching from Google and You Tube to help respondent understand the theory and calculation. ICT was an easy system, simple and there are no problems to get a lot of information and the students are comfortable to used ICT as a medium for their studies.

4.2.1 Respondent used ICT to help their understanding better

From the research done, there are six (6) respondent have answered that they used ICT to help them in support knowledge especially in their studies outside of class. All of them claimed that ICT helps them to get information from others resources to help the respondent understand in their studies.

“Search the information from the Google to support my knowledge to explain more details about the point. It’s helps me to get more point to helps me in support knowledge” [R1,23]

“As I said when I used a Google I can get a point and the will give example of the ellaboration on that point. It’s easy for me to more understand and helps me in support my understanding about academic.” [R2,18]

“I think by using ICT outside of class also can help me to support my understanding for example I can easy to learn about theory and to get more information because I can explain more better.” [R9, 23]

“ICT can support my understanding for example I have an idea but don’t know to ellaborate more detail so, I used Google to get more information. I no need to meet my lecturer just by using a Google I can learn” [R10,23]

“Easy to find the kind of information and now just used Google in your fingertips where your outside of class and type all meet and assist get me in learning and prepare information for assignment.” [R5, 22]

“Basically, like I said just now to get informtion from the Google easy to support my understanding it’s more detail.” [R6,23]

4.2.2 ICT can help students as a communication tools

From the research three (3) respondents that answered in ICT can help students as a communication tools. All of them claimed that using ICT help students as a communication tools to get more knowledge.

“Usage of ICT helps me in e-learning process for example by using a slide, video and by using a you tube to search for get an information it’s can make me more interesting by using a slide an video in learning process.” [R4,22]

“If we talk about ICT it’s really connect with internet so I can get unlimited resourses and really helpfull to get attention from students. For example, I search information from the BLOG , google and video from You Tube, the video have a sounds to attract me in learning process to support my understanding”. [R7, 23]

“For me using ICT can helps me to more understanding because it’s more interesting and give me easy to find information about my studies. ICT also as method to allow lecturer and students to communicatefrom different location to send and share information, For example to search information by using Google and YouTube to support my understanding.” [R10, 23]

4.2.3 Get fast information and unlimited resources

From the research done, there are four (4) respondent have answered that they used ICT can get fast information and unlimited resources. All of them claimed that ICT can access in your finger all information you can get.

“I think ICT really help me manage time because when I have a WIFI and I can found the point around half an hour because can search faster. Some I have two assingment I can finish it early.” [R2, 18]

“We have to see how we used. Sometimes it helps to accelerate our search to get information. For me using ICT very easy and quick to find learning materials.” [R3, 21]

“ learning using ICT like electronic library that make people searching for some info to make easily and help to minimize the time from spending to much for some information that needed. It’s make students easier to used and get an unlimeted resourcers.” [R8, 23]

“For me by using ICT it can get fast information and limited and then all information already on internet. Can save our time.” [R7, 23]

Based on the results, ICT helps the respondent for the study matters for their learning from the findings that the researcher found the respondent agree by using ICT can helps respondent manage their time to study, easy for them to get information from other resources and can make respondent interesting to study. From that it’s can helps improve academic purposes among university students.

Through ICT, learning can occur anytime and anywhere. Online course materials, for example, can be accessible 24 hours a day, seven days a week. Multiple resources are abundant on the Internet, and knowledge can be acquired through video clips, audio sounds, and visual presentation. That discussion supported by Castro Sánchez and Alemán (2011).

ICT also help respondents learning in class and off campus. From the findings that the researcher found the respondent agrees by using ICT can help respondents study in class and off campus because by using online education can make the respondent more understanding. Then, if the respondent absent class the respondent still can study by using online education or video conferencing with their lecturer so, the respondent can get full information for their learning process.

Technology requires participants to be present at the same time, for example to participate in video conferencing, internet radio, and live streaming. The other form of online education technology is adaptive learning, students opportunity to browse for get information quickly and allows them collaborate on projects in the learning process as stated by Venkatesh et al. (2014).

For help learning process outside of class, ICT helps them to get information outside of class because the respondents also can more understanding where the respondents learn outside of class. So, all information can just get by searching from Google and You Tube to help respondent understand the theory and calculation. ICT was an easy system, simple and there are no problems to get a lot of information and the students are comfortable to used ICT as a medium for their studies.

Following on, the use of multimedia equipment such as projectors, video players and LCD screens has made learning more motivated engaging students in the learning process as images and video in a lecturer allows a student to digest knowledge effectively. Similarly, video streaming sites such as YouTube also makes it easier for instructor to share video tutorials or lecturer via YouTube where students can download and watch. Also, students get to watch tutorials and lecturer from other universities across the world as stated by Oshinake & Adekunmisi, (2011).

5.0 Conclusion

The study found perception of using ICT in the academic purposes among students more give a benefits to the students to improve their academic purposes and participant can more interesting to studies because the students think by using ICT can make their study easy and smooth. Then, by using e-learning process helps more students to improve their academic purposes when using study matters can manage their time, make the students interesting, more focus in class and easy to find information quickly.

References

- Alas, Y., & Anshari, M. (2014), Constructing Strategy of Online Learning in Higher Education: Transaction Cost Economy, arXiv preprint arXiv: 1411.4345
- Castro Sánchez, J. J. and Alemán, E. C., 2011. Teachers' opinion survey on the use of ICT tools to support attendance-based teaching. *Journal Computers and Education*, vol. 56, pp.911-915.
- Chai, C. S., Koh, J. H. L. and Tsai, C.-C., 2010. Facilitating preservice teachers' development of technological, pedagogical, and content knowledge (TPACK). *Educational Technology and Society*, vol. 13, pp.63-73
- Chavez, C. (2011), "Students take flight with Daedalus: Learning Spanish in a networked classroom", *Foreign Language Annals*, vol. 30, no.1, pp. 2737
- Daniel, M. (2009, November). E-learning @ Divine Word University : Contemporary PNG Studies : DWU Research Journal, 11,p.65. Retrieved May 1st, 2014,
- Department of Education and Employment (DEE). (2001), "ICT Access and Use", Report on the Benchmark Survey. Retrieved March 20, 2006
- Jaffer, S., Ng'ambi, D. & Czerniewicz, L.2007. The role of ICTs in higher education in South Africa: One strategy for addressing teaching and learning challenges. *International Journal of Education and Development using Information and Communication*,3 (4), 131-142.
- Jamieson-Proctor, R., Watson, G., Finger, G., Grimbeek, P., & Burnett, P. C. (2009). Measuring the use of information and communication technologies (ICTs) in the classroom. *Computers in the Schools*, 24(1), 167-184. doi: 10.1300/JO25v24n01_11
- Kolodziejczyk, I. (2009, November). ICT for Education- The way ahead, but how? pp.31-33. Retrieved May 1st 2014.
- Mueller, C. B., Jones, G., Ricks, D. A., Schlegelmilch, B. B., & Van Deusen, C. A. (2010). Information and communication technology in the classroom: An empirical study with an international perspective. *Journal of Teaching in International Business*, 12(3), 21-41. Retrieved from EBSCOhost.
- Ozad, A.B., & Adekunmisi, S.R (2010). Use of Multimedia for Teaching in Nigeria University System: A case Study of University of Ibadan. *Library Philosophy and Practice*. Retrieved April 27th, 2014.
- Oshinake, A.B., Adekunmisi, S.R. (2011). Use of Multimedia for Teaching in Nigerian University System: A case Study of University of Ibadan. *Library Philosophy and Practice*. Retrieved April 27th, 2014.
- Puzziferro, M., & Shelton, K. (2014), A model for developing high-quality online courses : Integrating a system approach with learning theory.
- Tok, BR & Sora M. 2013. Perspective of emerging integrating technology (ICT) in learning and teaching. *International Journal of Information and Education Technology*, 3 (2) 282-285.
- Torenbeek, M., Jansen, EPWA & Hofman, WHA (2011). Predicting first-year achievement by pedagogy and skill development in the first weeks at university. *Teaching in Higher Education*, 16 (6), 655-668.
- Tutgun, A., Deniz, L., & Moon, M. K. (2011). A comparative study of problematic internet use and loneliness among Turkish and Korean prospective teachers. *Turkish Journal of Educational Technology*, 10(4), 14-30.
- University of the Free State (2012). Strategic plan 2012-2016. Retrieved 11 May 2014 from http://www.ufs.ac.za/dl/userfiles/Documents/00001/931_.pdf
- University of Venda (2012). Univen Strategic Plan 2012. Retrieved on 11 May 2014 from <http://www.univen.ac.za/index.php?Entity=StrategicPlan>
- Vajargah KF, Jahani, S & Azadmanesh, N. 2010. Application of ICTs in teaching and learning at university level: The case of Shahid Beheshti University. *The Turkish Online Journal of Educational Technology*, 9 (2), 33-39.
- Venkatesh, V., Croteau, A. M., & Rabah, J. (2014), Perceptions of effectiveness of instructional uses of technology in higher education in an era of Web 2.0. In *System Sciences (HICSS)*, 2014 47th Hawaii International Conference on (pp.110-119). IEEE.