

Learners' Accessibility and Adaptability to Technology

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ABSTRACT

This paper aims to describe the dynamics of learners in the use of technology specifically the internet, social media, and mobile devices in class and how they adapt to new technology and access information given of a new learning environment. This study used the qualitative method and an interview guide validated by identified experts was used to gather data from the twenty participants using purposive sampling. Results revealed that learners used technology as portal of knowledge wherein they can store and share documents, access lecture materials, view class announcements and submit class activities. The availability of online information motivates the learner to learn new concepts, and thereby promoted self-directed and independent learning. Learner shares significant information wherein they collaborate and interact online using chat, messages, video call, and email. Unnecessary information on social media like spam, advertisements, negative post tends to distract the learners which lead them to wrong information. Since this study focused on the learners, a similar study is also recommended that will focus on the dynamics of teachers in the use of educational technology to describe their experiences, and how they adapt to the paradigmatic shift in instruction. It is also recommended to include ethical use of technology and social media.

Introduction

The advancement of technology today has a great impact on the global economy, which is powered by technology, fueled by information, and driven by knowledge (Tinio, 2002). Technology has powered the paradigmatic shifts in education from

teacher-centered into student-centered approach. Fadel (2006), cited the three important roles of technology in the transformation of school. First, it is a learning tool for relevant and rigorous learning, thus it promotes a student-centered environment. Second, it serves as a data tool for education to fully understand the educational and

instructional decision making. Third, it is an enabling force behind globalization, and students must understand its role in the social, cultural, political, civic, and economic systems transformation.

Nowadays, learning institutions are already adapting the educational technologies to innovate the teaching and learning process and to suite the learning styles of the learners. The learners of today's generation are considered millennials; they multitask, they communicate intensively using social networking, they are technology-savvy, and with every gadget imaginable almost becoming an extension of their bodies (Safer, 2008).

In fact, Abadiano (2014), formulated the Information Sharing Theory which states that "Information Sharing is maximized when the content is significant and the netizens are motivated in the context of multi-social media sites and platforms." The internet, social media, and mobile devices are now being utilized in instruction since the learners are attached to technology. They can easily use it to access learning materials, collaborate, interact, and communicate with their classmates, teachers, and parents (Cheal, 2012). Using the computers, internet and social media, learners can avail of the free and updated information, research about their subjects, and exposed to new learning concepts. Instead of just receiving knowledge, students now are capable of constructing their own ideas and knowledge with the teacher as the guide, and an environment that will provide them with the necessary resources for independent learning.

Literature Review

Today's generation of students whose entering higher education is considered digital natives, they belong to the generation of millennials who consider technology as a part of their lives (Buzetto-More, 2012). According to Pew Survey last March 2015,

Internet has seen as positive influence on education, and education is also associated with internet use rates. In the survey, those with secondary or higher education were more likely to access the internet than those with less than a secondary degree. Data from the Philippines showed that 40 percent are more likely to access the internet, 64 percent is from age 18-34, and 67 percent are secondary or more. In 24 nations surveyed including the Philippines, majority said that the internet has a good influence on education in their country.

Online classrooms provide convenience, currency of material, flexibility, personalized learning, increased students' engagement, and feedback over a traditional classroom. Educators are increasingly adopting the use of educational technologies such as online classrooms, and social media to supplement teaching and learning in both online as well as traditional classroom learning environments.

With the development of educational technologies, teaching and learning process are more enhanced, delivery of course materials are faster, and students are more engaged with each other. They can easily share ideas and be more create. They can create a better way to communicate with their teachers, peers, and especially to their parents.

There had been so many success stories that educational technologies enhanced the teaching and learning outcomes. However, these only focused on the effects of the use of educational technologies in instruction. A variety of researches about the use of social media and online classroom had been conducted, how it improves instruction, its advantages to the learners, and how it improved the learning outcomes. But few studies had been conducted about how the learners adapt to these new tools, how they embrace technology as a part of teaching and learning process, and if these tools are found useful in their course. This study may contribute knowledge in the field of

online learning and is crucial for curriculum planning. Feedback from the learners on the implementation of educational technologies is essential for a curriculum design, and this will result to a better teaching strategy that will suit the learning style of each learner and adapt to the changing educational system from the traditional face-to-face instruction to online learning.

There is a significant gap of knowledge among previous studies since most of the studies focused only on the effect of technology in the learning process. The design of online learning systems served as a repository of learning materials without taking into consideration the users perception on the use of these tools. This motivated the researcher to conduct a study on the dynamics of learners in an online classroom and social media to address the gap and focus on how learners adapt to alternative learning, and how do they adjust to the new learning environment. Further investigation is a must if these innovative learning tools are really acceptable to them. This study may suggest improvements to the providers of educational technology to cater a feature based on the end user's perspective to suite the learning styles of the learners.

Purposes of the Research

This study aims to describe the dynamics of learners in the use of technology specifically the internet, social media, and mobile devices in class, which sought to establish knowledge on the following scenario:

1. How do learners collaborate and interact?
2. What are the features that interest or disinterest the learners?
3. How do educational technologies improve the learning process?
4. How can the dynamics of the learners in the use of educational technologies be best described?

Methodology

Research Design

Qualitative research was chosen for this study since it is effective in obtaining specific information about the behaviors, experiences, opinions, values, and social contexts of particular populations (Denzin & Lincoln, 2011). Since the researcher aimed to describe and understand experiences, ideas, beliefs and values of learners, qualitative method was appropriate for this study.

For the present study, the researcher described the dynamics of the learners in using educational technology by asking the following *how* and *what* questions: (a) How the learners collaborate and interact? (b) How does educational technology improves the learning process? (c) What are the features that interests or disinterest the learners?

Study Context

The study was conducted at the newly converted university located at Brgy. Igtuba, Miagao, Iloilo, situated in the first district of Iloilo. The university offers academic and technological degree programs, and each program is accredited by the Accrediting Agency of Chartered Colleges and Universities in the Philippines (AACUP). These programs are the B.S. Information Technology, B.S. Hotel and Restaurant Technology, Teacher Education, Bachelor of Industrial Technology, and B.S Automotive, Electrical, and Electronics Technology.

Participants

The participants in this study included B.S. Information Technology fourth year students who enrolled in research course, and teacher education and third year college students who enrolled in educational technology course with an age range between 19-20 years old. The students were officially enrolled on the second semester

A.Y. 2015-2016, with a Google Classroom account, and each of them is a member of the Social Media Page. Twenty participants or up to the point of saturation were selected using purposive sampling. A selection criteria includes being regular students based on their enrolment record, members of the class social media page, and had an account in an online classroom and also an active users based on how updated their profile account. Aside from being regular users of internet and social media, the participants were also smart phone users and most of them were engaged in mobile games, and social media applications.

Instrument

The instrument used in this study includes an interview guide and an audio-recorder. It is highly valuable too; to record all conversations during the interview. Interviewing was the primary data source for this study, and to ensure that the content of the research instrument is valid, it was presented to three experts for content validation.

Data Collection

The research steps conducted for this study ensured that the result produced consistent data in accordance with the purpose of the study. Upon the approval of the study, the participants were identified from the B.S. Information Technology, and Teacher Education Program. A letter of request was given to the Campus Administrator to conduct the study. After the approval of the Campus Administrator, the researcher personally gave a letter of invitation to the participants for the schedule of the interview indicating the date, time and venue. Two sets of interview were conducted on March 17, 2016 from 1:00 P.M. to 5:00 P.M. for B.S. Information Technology students, and March 22, 2016 from 1:00 P.M. to 5:00 P.M. for the Teacher Education students. The interview was held at the University Library Office.

A twenty-minute in-depth (semi-structured) interview was held with the participants, and interviews were audio-recorded. During the interview, the participants were relaxed and answered the questions with utmost confidence. The researcher created a friendly atmosphere where their trust was gained. All their responses were transcribed, and the participants gave their respective transcript for member-checking, and verified the content of the transcription. Lastly, the researcher coded the data for emergent themes.

Data Analysis

In the analysis of qualitative data, a formal system was developed which helped the researcher to easily obtain the meaning of the data. These systems followed the approach of Rubin and Rubin (1995) for qualitative data analysis. Coding techniques were employed to find and mark the underlying ideas in the data. Similar kinds of information were grouped together in categories, and different ideas were related to one another to form a theme.

This research followed the Connor and Gibson (1995) six steps guide to qualitative data analysis. These include the following steps:

Step 1: Organizing the data. In this step, audio tapes from the interview were reviewed, and transcripts were transferred to a word processing application. Open coding was used to ensure proper organization of transcripts.

Step 2: Finding and Organizing Ideas and Concepts. In this step, the researcher searched for words/phrases that were frequently used, embed the meaning of the words/phrases, and organize these ideas into codes or categories.

Step 3: Building Over-Arching Themes in the Data. In this step, data were grouped

into meaningful themes and patterns using thematic analysis.

Step 4: Analyzing the data in the findings to ensure its reliability and validity. To increase the creditability and trustworthiness of the study's findings, triangulation, member checks, reflexivity, engagement, maximum variation and rich description were performed and conducted by the researcher.

Step 5: Finding Plausible and Possible Explanations of the Findings. In this step, a summary of findings and themes were made, the findings were compared to available literature in order to find possible explanations and validation.

Step 6: Verification and Conclusion Drawing. In this step, a reasonable conclusion was drawn by interpreting the meaning of the findings, determining how these findings answered the research question(s), and obtained implications from the findings.

Ethical Consideration

In order to safeguard the rights of the informants of this study, an informed consent form was given to the informants together with the discussion of the nature of the research study. Participation in the research study is completely voluntary and each participant has a consent form. Authorization to access private information was included in the consent form and private information was disclosed only to the researcher.

Results and Discussion

A descriptive analysis of transcripts using open coding revealed that seven major themes characterized the participants' responses to the use of online classroom and social media. Themes, however, are not to be interpreted as independent from each other but as complementary aspects of a unified

pattern. Table 1 shows the result of the transcript and the extracted insights based on its frequency.

Table 1
Transcript Result

Initial Coding	Final Coding
Download Lesson Submit Projects Check Announcements Share Documents Upload Reports Browse Lecture Materials	Portal of Information
Useful Easy to use Convenient Easy to Adapt Easy to Learn New ways of Learning	Adaptability to New Technology
Easily access lecture materials Access the lesson and catch up with the lesson even if you missed the class Access class information anywhere using the internet and mobile phone You can interact with the class online even at home	Accessibility
Motivated to learn Excited to use and learn Can be useful in career Inspired to learn	Motivational Learning
Promote independent learning self-directed learning student-centered learning Learn on my own Availability of information and references online explore online	Independent Learning
Document sharing Notifications news feeds discussion group/chat/video conference You can ask the group if you have questions about the lesson Post Comments Chatting	Significant Information Sharing
Spam Unnecessary Information Annoying Information Disturbing Advertisements	Atrocious Information

The seven themes from the transcripts of the participants were:

- Theme 1: Portal of Information
- Theme 2: Adaptability to New Technology
- Theme 3: Accessibility
- Theme 4: Motivational Learning
- Theme 5: Independent Learning
- Theme 6: Significant Information Sharing
- Theme 7: Atrocious Information

Theme 1: Portal of Information.

The participants used the internet and social media as portal of information where they can store and share their document, access lecture materials, view class announcements, and submit class activities. The instructor also uploads the lecture materials, assignments, activities, and post class announcements.

Most of the participants described it in the following terms:

So, as a student it is really useful for us to use online classroom and social media in the sense that all our lessons on that particular day are already uploaded in the internet and at the same time it is easier for us students to gain more knowledge and at the same time we can share information to other students about our lessons.

Theme 2: Adaptability to New Technology.

The significant experiences of the participants on the use of internet, social media, and mobile device revealed that integrating new technology in instruction was easy to use. Since they were used of technology, they can easily adapt to the new learning environment.

Here is some of the response:

Okay, the first time I'm confused on how it works, how it will affect us, but then later on after the orientation I also adapt on how to use the Google in the classroom,

then I find it very interesting and easy to communicate.

Theme 3: Accessibility.

The participants found it convenient and accessible because the course materials were already uploaded and available online. They can access it anytime and anywhere using the internet or mobile devices.

Here is some of the response:

In online classroom, I feel comfortable and convenient even if I have work; even I am busy and cannot go to school to pass my requirements.

Theme 4: Motivational Learning.

The more the participants were exposed to new technology, the more they were motivated to learn. With the use of the internet and social media in class, they developed the interest to learn more, explore, and they show eagerness to learn. They were motivated to learn and study since the use of educational technologies helped them in acquiring the knowledge and skills in their subject matter.

Some of the thoughts expressed below:

Yes, number one factor is, it is one of the great tool in terms of researching, you can gather a lot of information a lot of observation and many others that can help you in progressing your study.

Theme 5: Independent Learning.

The availability of class materials online promotes self-directed and independent learning. The participants can access the materials posted by the teacher even if they missed the class but still catch up with the lesson. They have to access the material and study it, and they even study in advance. They were notified with the latest activities posted by the teacher

and their classmates ahead of time. The activities provided enabled them to learn at their own pace.

Some of the participant's response:

Very useful when it comes to distance learning coz you can interact with your teacher even though you are not facing each other and you are aware about the content of the topic to be discussed next meeting.

Theme 6: Significant Information Sharing.

Significant information was shared online by the participants. They collaborated and interacted through chat, group message, email, and even video call. They also shared their documents, group projects, and communicated with their teacher and classmates.

Here is some of the information they shared online:

I collaborate of course using facebook whenever I ask them about the assignment, the deadline.

Theme 7: Atrocious Information.

It revealed that atrocious information tends to distract the participants and it led them to wrong information. Unnecessary information, spams, advertisements on social media was considered irrelevant and annoying by the participants.

Here are some of the features of social media that disinterests the participants:

Yes in Facebook, there is no filterization or something like spam and unnecessary information

Conclusion

This study describes the dynamics of learners in the use of technology specifically the internet, social media, and mobile devices in class and how they adapt to new technology and access information given of a new learning environment.

Based on the findings of the study, the learners were exposed to information shared online, accessed them on their own way and they were free to open it without restrictions. Although they were given open access to these materials, there was no guarantee to monitor whatever sites they open in the internet. They were also prone to atrocious information in social networking sites. Since the internet and social media were the sources of information, its capability was abused by those who would like to spread malicious information. This caught the users unaware of the information they opened and shared online.

Since the learners belong to the millennials, they are technology-savvy and multitasker, they can easily adapt to new technology, and exposed to the latest information online. The use of internet, social media, and mobile device in class is acceptable to them, useful in the learning process and the use of technology motivated them to learn and develop independent learning. They share significant information, collaborate and interact with their peers, although they are distracted by atrocious information found in social networking sites.

Recommendations

Based on the findings of the study and conclusions drawn, the following are the recommendations for further improvement of the study:

1. Since this study focused on the learners, a similar study is also recommended that

will focus on the dynamics of teachers in the use of educational technology to describe their experiences, and how they adapt to the paradigmatic shift in instruction. It is also recommended to include ethical use of technology and social media.

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References

- Abadiano, M. (2014). The dynamics of netizens' information-sharing in social media: Why do we share information in social media? *International Journal of Interdisciplinary Research and Innovations* ISSN 2348-1226 Vol. 2, Issue 3, pp: (30-55). Retrieved 14 December 2015 <http://researchpublish.com/journal/IJIRI/Issue-3-July-2014-September-2014/0>
- Buzzetto-More, N. (2012). Understanding social media. In C. Cheal, J. Coughlin, & S. Moore (Eds.), *Transformation in teaching: Social media strategies in higher education* (pp. 1-18). Santa Rosa, CA: Informing Science Press.
- Cheal, C. (2012). *Transformation in Teaching: Social Media Strategies in Higher Education*. Santa Rosa, CA: Informing Science Press
- Connor, H. O. & Gibson, N. (1995). A step-by-step guide to qualitative data analysis. *A Journal of Aboriginal and Indigenous Community Health*.
- Denzin, N. K. & Lincoln, Y. S. (2011). *Introduction: The discipline and practice of qualitative research*, in N.K. Denzin & Y.S. Lincoln (eds.), *Handbook of Qualitative Research*, (2nd ed.). Thousand Oaks, CA: Sage.
- Fadel, C. (2006). *Technology in schools: What the research says*. Retrieved 31 March 2016 www.cisco.com/web/strategy/docs/education/TechnologyinSchoolsReport.pdf
- Rubin, H.J. & Rubin, I.S. (1995). *Qualitative interviewing: An Art of Hearing Data*. Thousand Oaks, California: Sage.
- Safer, M. (2008). *The "millennials" are coming*. Retrieved 2 April 2016 <http://www.cbsnews.com/news/the-millennials-are-coming/>
- Tinio, V. (2002). *ICT in education*. Retrieved 28 March 2016 <http://www.apdip.net/publications/iespprimers/eprimer-edu.pdf>