

Article

Internet Shop Users: Computer Practices and Its Relationship to E-Learning Readiness

Jasper Vincent Q. Alontaga

Educational Leadership and Management Department, De La Salle University, 2401 Taft Avenue, Manila 0922, Philippines; jasper.alontaga@dlsu.edu.ph

Received: 6 January 2018; Accepted: 22 March 2018; Published: 9 April 2018



Abstract: Access to computer technology is essential in developing 21st century skills. One venue that serves to bridge the gap in terms of access is internet shops (also known cybercafés or internet cafés). As such, it is important to examine the type of activities internet shop users engage in and how they develop and relate to their e-learning readiness. This study examined the profile, computer practices and e-learning readiness of seventy one (71) internet shop users. A researcher-made internet shop computer practice questionnaire and an e-learning readiness questionnaire adapted from Watkins, Leigh and Triner (2004) were utilized. Results revealed that most internet shop users are adolescents and also have access to technology at home. Computer practices of users in internet shops involve primarily browsing and communicating activities more than playing activities. Internet shop users also rated themselves as ready for e-learning, with females having significantly higher e-learning readiness than males. Browsing activities had positive correlation with communicating and playing activities. Playing activities had negative correlation with e-learning readiness. These results indicate the viability of internet shops as avenues for learning. It is recommended that teachers optimize this by engaging students in e-learning activities involving online research and collaboration, and referring students to online educational game-based resources.

Keywords: internet shop users; computer use; e-learning readiness; internet café

1. Introduction

21st century students are referred to as digital natives since they were born in the age of Information and Communication Technologies (ICTs). For these so-called millennials, they use computers for most of the activities of traditional childhood, such as play, socialization, communication and even learning [1]. But the advent of the cyber age resulted in a digital divide, especially in a developing country where access to computer technology is limited, due primarily to financial constraints. In the Philippines, the rampant emergence of internet shops is a testament to how important computer and internet access are for Filipinos. However, even if it serves as an avenue to close the digital divide in terms of access, it is important to also examine how the activities that users engage in these establishments relate to developing their e-learning readiness. What users do in internet shops is important in determining the potential and value of internet shops as an environment for learning and how internet shop users are shaped as e-learners.

1.1. Computers, Internet and Learning

Information and Communication Technology (ICT) refers to a range of electronic tools for storing, displaying and exchanging information and communications [2]. Although ICT is not limited to computer technology, computers are seen as the dominant technology nowadays. Computers are becoming more and more integrated into the curriculum and even becoming the source of the knowledge themselves. This is especially true when one accesses the internet. According to UNESCO,

the internet can serve as a knowledge database (a pathway to real-world experience and encyclopedia of global knowledge), as a search engine (a meaningful searching and researching tool of learning information), as an online community (a portal for social construction and collaborative creation), and a management tool (a tool to increase the effectiveness and efficiency of virtual learning environment). In a virtual environment the focus moves from the teacher to the content and learning [3]. Thus, learning becomes available anytime and anywhere.

1.2. Internet Shop Use in the Philippines

One avenue to promote equitable computer and internet access to bridge the digital divide is the internet shops. Internet shops are places that combine reasonably priced access to the Internet with some food and beverage services. These are businesses that offer access to computers and the internet on a drop-in basis for hourly fees [3]. They are a success since in a developing country, the tendency is towards increased concentration of information flows to urban and central areas [4]. In the Philippines, telecommunications and internet connection is operated and provided by private companies [5]. This is the reason for the large number of internet shops in the country.

Most internet users are young male students who do not have computer and internet access at home [6]. Most of their use was for social networking, watching videos, searching information and emails. They also mentioned some consequential effects of cyber café usage on health, responsibilities, relaxation, and socialization. The Asian Institute of Journalism and Communication in their report to the UNICEF found out that 45% of internet shop users were 12 to 19 year olds. They found out that grade school students prefer to access the internet at home rather than in internet café, whereas high school boys prefer going to the internet shops. The respondents mentioned that they use internet mostly for communication purposes like chatting, maintaining their social networking sites and online gaming. Most cyber cafe users are also single college students 19 years and below [7].

1.3. Internet Shops as a Learning Environment

Although internet shops emerged primarily as entertainment hubs, they can offer opportunities for ordinary people to obtain access to information and opportunities to communicate. They can function as centers for support, education and learning about new tools and therefore could help people to overcome skill deficits. And especially for the youth, they can serve as places for informal learning even if the reason for visiting the internet shop is not to learn something.

How internet cafes can serve as a supportive educational arena has been examined in [3]. They looked into the unexpected educational impacts of an internet café set up by a NGO in an urban slum in Kenya. Their main question is whether an internet café can be a learning area, create ICT-awareness and enhance abilities of its clients to be an active part in the society. They found out that the ambition of the internet shop owners was initially for education, or a charity purpose. But due to problems in management, sustainability and financial loss for a long period of time, this later changed to a more profit-making purpose. Thus, it became more a place to earn incomes, but also improve the computer literacy of the community. Interviewing adolescent customers, mostly boys, they found out that their main use of the cyber café is social media, particularly Facebook. They mentioned that the communicative language used in social media differs between the youth depending on the context and who they communicate with—English was used in the global context whereas Kiswahili was used in regional level and tribal language in local level communication. Overall, the cyber café helped in increasing access to the internet and communication for the teenagers, as well as the competencies to use them. They also gained a general increased computer awareness and idea of the opportunities that could be opened up. And of course, it brought about an interest in English in them. Finally, the study mentioned that the main advantage in cyber cafes is that tutorial support from peers and the management is easily available. Recommendations include exploring possible integration of a computer school with the internet café.

In another study, the role of internet shops in Asia and Africa as a venue for learning and developing human resources was investigated [4]. The representative country for Asia was Indonesia, and Tanzania for Africa. In terms of ICT, Indonesia is better than Tanzania—they have more internet users, internet cafes, internet subscribers and internet hosts. It was found that the majority of the Indonesian respondents were students compared to professionals for Tanzania, and they spend more in the internet cafes. In terms of internet knowledge and English proficiency, the Tanzanian respondents are slightly better. What is common between the two countries is that the majority of their respondents are males and their computer knowledge is of a similar level. Overall, the main impression was that most internet café users are well-educated. The research also discussed the internet use in both countries—with seeking information, email and chatting as top activities. As such, it was determined that the internet cafes served as venues for competence development. This is true since most of the training of the users on how to use the internet has taken place in the cafes, where they have learned by themselves, supported by friends and staff. One interesting finding from the study is that the use changes over time, being more serious or useful after a period of time. The research also examined the barriers for internet use, which turned out to be access speed and price. One interesting barrier identified in Indonesia was the lack of useful local information on the internet. Finally, the researchers ended by saying that internet cafés today are the main access point to computers and to the internet in developing countries. They are perceived as suitable and economically acceptable sources of information and have the potential to be suitable arenas for human resources. One recommendation was to examine the non-users of internet cafes and compare them with the results of the study.

1.4. E-Learning and E-Learning Readiness

E-learning or electronic learning is the use of ICT to mediate asynchronous as well as synchronous learning and teaching activities [8]. In the Philippines, the concept of e-learning is relatively new due to the lack of infrastructure and high cost of internet access [9]. Public education specially suffers from shortages or lack of computers and internet access [2].

Aside from lack of access to technology, the readiness of students is seen as an obstacle for e-learning. E-learning presents an entirely new learning environment for students, thus requiring a different skill set to be successful [10]. They should possess technological skills and relationships, as well as skills related to interpreting the online video/audio and internet discussions [11]. Aside from this, the New Media Consortium identifies critical thinking, research, and evaluation skills as important skills for students, since they will need to sort through increasing volumes of information from a variety of sources [12]. E-learning also requires the students to be more independent. As such, they have to be highly motivated and committed to learning, with less social interaction with peers or an instructor [13]. Only when students develop these skills will e-learning be successful.

The literature confirms the possible role and value of internet shops as an environment for learning. It is clear that the heart of computer use in internet shops is social interaction—via games and social media. Though a lot of studies have looked into the practices of internet shop users, little research has delved into the academic outcomes of internet use on children. Locally as well, no study has looked into relating the computer practice in internet shops to various aspects of e-learning readiness. It was the goal of this research to fill this gap by presenting the computer use in internet shops and e-learning readiness of internet shop users in the case of the Philippines.

2. Methodology

2.1. Conceptual Framework

The research study is anchored on the concept of Sey & Fellows that access to ICT leads to an increase in IT knowledge and aspirations [14]. Media-related activities affect the development of individuals. Even in the primarily social and entertainment based venue of an internet shop, certain

forms of learning are gained and skills are developed. In this study, it is proposed that computer practice in internet shops relates to e-learning readiness (see Figure 1).

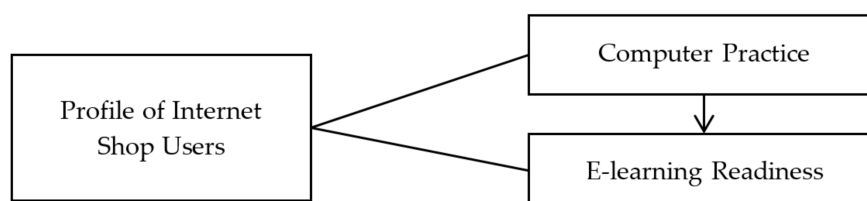


Figure 1. Conceptual paradigm for computer practice of internet shop users and its relationship to e-learning readiness.

Specifically, the type of activities a user engages in shapes their readiness for e-Learning. In the study, computer practice includes playing, browsing, communicating and learning activities. Playing activities covers the entertainment aspect of internet shop use such as gaming, listening to music and watching videos. Browsing activities covers exploring the internet for information such as news, current events and products. Communicating activities covers various forms of collaboration online such as social networking, chat and email. Learning activities covers the academic activities such as research and accomplishment of assignments.

On the other hand, e-learning readiness is based on the concept of Watkins, Leigh, & Triner that covers technology access, online skills and relationships, motivation, online video/audio, internet discussions and success factors [11]. Lastly, an individual's computer practice and e-learning readiness is influenced by various characteristics (such as age, sex, educational level, and school type) and his computer access (at home, in school and in the internet shop).

2.2. Research Objectives

The study aimed to answer the following questions:

- (i) What is the profile of internet shops users in terms of:
 - (a) Age
 - (b) Sex
 - (c) Year level
 - (d) School type
 - (e) Computer access at home
 - (f) Computer access in school
 - (g) Frequency of computer use in internet shop
- (ii) What activities do they engage in internet shops, in terms of:
 - (a) Playing
 - (b) Browsing
 - (c) Communicating
 - (d) Learning
- (iii) What is the e-learning readiness level of internet shop users, in terms of:
 - (a) Technology access
 - (b) Online skills and relationships
 - (c) Motivation

- (d) Online video/audio
 - (e) Internet discussions
- (iv) What is the relationship between the profile of internet shop users, their computer practice and their e-learning readiness?

2.3. Materials and Procedures

The study was a descriptive research whose main objective is to describe the profile, computer practice, e-learning readiness of internet shop users, and the relationships between them. A one-shot survey design was used for this purpose. Seventy one (71) internet shop users served as participants for the study. The participants were high-school students currently enrolled in schools. Internet shops were visited and purposive sampling was used to select the participants. Ethical clearance was secured through an assent form.

The primary instruments used for the study are the computer practice in internet shop questionnaire and the e-learning readiness questionnaire. The computer practice in internet shop questionnaire was a researcher-made questionnaire that is divided into three parts. The first part includes demographic information of the participants and their computer access at home and in school. The second part contains information on frequency of internet shop access. These sections served as the basis to determine the profile of internet shop users. The third part includes a list of activities that the participants will rate from 1—"I don't do this" to 5—"I always do this" according to their actual practice. The activities fall into four types of computer use, namely playing, browsing, communicating, and learning activities. On the other hand, the e-learning readiness questionnaire is adapted from Watkins et al.'s e-learning readiness self-assessment [11]. The last section on success factors was removed since the participants never had e-learning courses. The questionnaire was validated by an educational technology expert and piloted.

Various statistical treatments were employed depending on the nature of the problems in the study. For the profile of the participants, their responses were tallied and frequencies computed. For the participants' computer practice and e-learning readiness, their responses were tallied and the mean was used as the measure of central tendency. *T*-test and analysis of variance was used to determine significant differences in their computer practice and e-learning readiness based on their profile. Correlation was also used to determine the relationship between their computer use and e-learning readiness.

3. Results

3.1. Profile of Internet Shop Users

Most of the respondents were 13 years old (53%), with age ranging from 11 to 20 years old. There were 44 male (61.97%) and 27 female (38.03%) respondents. They expressed having technology devices at home specially internet connection (85.92%), laptop computer (76.05%) and desktop computer (67.61%).

In a week, they spend less than five hours on the computer for school related tasks (67.61%) as well as for personal tasks (39.44%). This result is similar to their expressed computer use in schools which is also less than five hours for school related tasks (85.07%) and for personal use (65.67%). Their computer use at home is varied from browsing (84.51%), to playing (80.28%), learning (77.46%) and communicating (76.06%), whereas their computer use at school is mostly for learning (94.37%).

The majority of the respondents expressed going to internet shops once/twice a month (46.97%), once a week (18.18%) or 2–3 times a week (15.15%). They prefer going in the afternoon (58.14%) with someone (73.24%) usually for an hour session (33.85%). The internet shops they go to have more than fifteen computer stations (65.22%) and costs Php 20.00 rent per hour. Proximity to their home (23.19%) and fast connection speed (16.90%) are the most important reasons for them to go to an internet shop, whereas privacy (12.86%) and security (11.59%) are the least important reasons.

3.2. Computer Practices in Internet Shops

Table 1 outlines the respondents' computer use in internet shops. Overall, the respondents mentioned that they sometimes engage in all the various types of computer use. Looking at the specific activities they would often engage in involve communicating by going to social networking sites like Facebook, Twitter, and so on (4.07); doing their assignments/homework (3.61) for learning; and browsing in terms of surfing the internet to learn more about something that interest them (3.58) and seeking/finding information on different things (3.42).

Table 1. Summary of computer use in internet shops.

Computer Use	Average	Verbal Interpretation
Learning Activities	2.96	I sometimes do this
Playing Activities	2.92	I sometimes do this
Browsing Activities	3.09	I sometimes do this
Communicating Activities	3.01	I sometimes do this

These results validate the study of Hansson and Wihlborg that social networking is the activity often engaged in by internet shop users [3]. It is important to note that none of the activities under playing registered as a practice often done by internet shop users. Moreover, playing activities as a whole got the lowest rating (2.92). This suggests that students do not primarily go to internet shop to simply play, as might have been previously perceived. Browsing activities (3.09) were rated as the highest area, suggesting the viability of internet shops as possible avenues of informal learning.

3.3. E-Learning Readiness of Internet Shop Users

Table 2 outlines the respondents' e-learning readiness. All items were rated as either agree or strongly agree by the respondents, indicating an adequate level of e-learning readiness among internet shop users. Technological access area was the highest (3.31). Under this e-learning aspect, having access to a computer with internet connection was the highest rated item (3.46). The next highest rated items both fall under technology skills and relationships (3.17)—having the basic skills to operate a computer (3.31) and being able to communicate effectively with others using online technologies (3.28). Lowest rated items were remaining motivated even though the instructor is not online at all times (2.87) under the motivation area and being able to take notes while watching a video on the computer (2.91) under the online video/audio area.

Table 2. Summary of E-learning readiness of internet shop users.

E-Learning Aspect	Average	Verbal Interpretation
Technological Access	3.31	Strongly Agree
Online Skills and Relationships	3.17	Agree
Motivation	2.94	Agree
Online Video/Audio	3.01	Agree
Internet Discussions	3.09	Agree

Overall, these results suggest that the respondents are ready for e-learning. This can be explained with their nature as millennials and technology natives. Though they might require motivation, the respondents have adequate access, skills and rated themselves capable of handling online content and discussion.

3.4. Relationship between Computer Practice and E-Learning Readiness

Table 3 reveals that browsing activities have a very strong positive correlation with communicating activities (0.410); as well as a positive correlation with playing activities (0.265). This means that that

respondents' who engage in browsing activities in internet shops also tend to engage in communicating and playing activities. This suggests that they seek out sites that enable them to talk with other users or look for gaming sites. Social networking sites that was mentioned by majority of the respondents as the site they often go to, for example, include these features of browsing, communicating and playing. This can explain the appeal of social networking sites to internet users.

Table 3. Correlation table of computer practice and e-learning readiness.

	(i)	(ii)	(iii)	(iv)	(v)
(i) Learning Activities	-				
(ii) Playing Activities	0.218	-			
(iii) Browsing Activities	0.223	0.265 *	-		
(iv) Communicating Activities	0.088	0.153	0.410 ***	-	
(v) E-learning	0.129	-0.318 **	0.056	0.219	-

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Conversely, Table 3 also reveals that playing activities have a strong negative correlation with e-learning readiness (-0.318). This means that respondents who engage more in play activities in internet shops are less ready for e-learning. Specifically, playing activities have a negative correlation with e-learning readiness in the aspects of Technological Access (-0.29); and a strong negative correlation with Technology Skills and Relationships (-0.34) and Online Video/Audio (-0.31). This suggests that users who often go to internet shops for purpose of playing activities have lower e-learning readiness.

3.5. Factors Affecting Computer Practice and E-Learning Readiness

Table 4 reveals positive correlation of browsing activities with age, and hours spent on the computer. It suggests that older respondents and those who spend more time on the computer tend to engage in browsing activities. Looking at the t -test results, there seems to be no significant difference in the browsing activities of males and females. Additionally, those who spend more time for school related tasks also tend to engage in communication activities.

Table 4. Correlation table for factors affecting computer practice and e-learning readiness.

	LA	PA	BA	CA	E-Learning Readiness
Age	-0.006	-0.180	0.243 *	0.196	0.226
Hours spent at home for school related tasks	0.002	-0.086	0.360 **	0.302 *	0.283 *
Hours spent at home for personal use	-0.171	-0.084	0.246 *	0.204	0.157
Hours spent at school for school related tasks	-0.084	-0.182	0.311 **	0.006	-0.184
Hours spent at school for personal use	-0.050	-0.196	0.269 *	0.108	-0.031
Frequency of internet shop visit	0.001	0.254 *	-0.012	0.014	-0.332 **
Time of renting	-0.175	-0.148	-0.006	-0.087	0.234 *
Hours of rent	-0.028	0.504 ***	-0.174	0.061	-0.273 *
Number of computer units	-0.078	0.170	-0.031	0.224	0.013
Rent amount	0.185	0.389 ***	0.099	-0.145	-0.009
Company	-0.118	-0.010	0.050	-0.001	0.165

Legend: LA—Learning activities; PA—Playing activities; BA—Browsing activities; CA—Communicating activities.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

In terms of e-learning readiness, hours spent with the computer at home for school related tasks and time respondents go to internet shops correlate positively with e-learning readiness. Looking at the t -test results, the e-learning readiness scores of females were significantly higher than the males ($p = 0.002$). Looking further at the analysis of variance (ANOVA) results though, there seems to

be no significant difference in the e-learning readiness of users depending on the time they go to internet shops.

On the other hand, playing activities is very strongly correlated to hours of rent and rent amount; and correlated to frequency of internet shop visits. This means that respondents that stay longer and frequent internet shops tend to engage in playing activities. They are also willing to pay more to engage in playing activities. But in terms of e-learning, these respondents are also the ones that tend to have lower readiness.

Number of computer units and company did not correlate to any of the computer practices and e-learning readiness. This means that the kind of activities that respondents engage in internet shops is not affected whether they go alone or with someone in the internet shops, and by the number of computer units available in the internet shops.

4. Conclusions

The study looked into the computer practices of internet shop users and their relationship to users' e-learning readiness. Most internet shop users are adolescents who also have access to technology at home. In terms of computer practice, internet shop users often engage in browsing and communicating activities more than playing activities. In terms of e-learning readiness, internet shop users rated themselves as having adequate access, skills and capable of handling online content and discussion. Specifically, females had significantly higher e-learning readiness than males. Browsing activities had positive correlation with communicating and playing activities. Playing activities had negative correlation with e-learning readiness. Several factors were also revealed as correlating with browsing and playing activities, and e-learning readiness.

For schools and teachers, it is recommended to engage students in e-learning activities, specifically those that involve online research and collaboration. This is to optimize the students' online access outside the school and internet shops' viability as a learning environment. Additionally, since playing activities correlate negatively with e-learning readiness, students can be referred instead to online educational game-based resources as better alternatives that will both appeal to them and still develop their e-learning readiness.

For researchers, since this study is limited in terms of the number of participants, it is also recommended to replicate the study in a larger sample. An even distribution in terms of the respondents' age group can be ensured in order to contest age as a factor affecting computer practices and e-learning readiness. Additionally, a comparison of high school and college students' computer practices and e-learning readiness can be conducted. Since the respondents are also adolescents, future research can also explore the computer practices and e-learning readiness of younger children. Further examination of gender as a factor can also be done. Finally, qualitative data can be collected through interviews to validate the results on the quantitative data and shed more light on the internet shop users' computer practices as they relate to users' e-learning readiness.

Acknowledgments: This work is funded by the University Research Coordination Office of De La Salle University—Manila, Philippines.

Conflicts of Interest: The author declares no conflict of interest.

References

1. Asian Institute of Journalism and Communication. Survey on Internet Access and Use by Filipino Schoolchildren. Final Report for UNICEF. Available online: http://www.ajc.com.ph/survey_internet_access.pdf (accessed on 3 December 2014).
2. United Nations Educational, Scientific and Cultural Organization (UNESCO) Bangkok. ICT in Education Programme. Available online: www.unescobkk.org/education/ict (accessed on 19 November 2014).

3. Hansson, P.O.; Wihlborg, E. Internet case as a supportive educational arena—A case study from the urban slums of Kibera, Nairobi, Kenya. In Proceedings of the 5th International Technology, Education and Development Conference, Valencia, Spain, 7–9 March 2011; pp. 5966–5975.
4. Furuholt, B.; Kristiansen, S. Internet cafes in Asia and Africa—Venues for education and learning? *Open J. Syst.* **2007**, *3*. Available online: <http://ci-journal.net/index.php/ciej/article/viewArticle/314/320> (accessed on 29 March 2018).
5. Minges, M.; Magpantay, E.; Firth, L.; Kelly, T. *Pinoy Internet: Philippines Case Study*; International Telecommunications Union: Geneva, Switzerland, 2002.
6. Bringula, R.P.; Basa, R.S.; Enriquez, J.B.R.; Natanauan, A.C.; Bonifacio, J.; Manua, M. The purposes and effects of cyber café usage in Manila. *Int. J. Interdiscip. Stud. Commun.* **2013**, *7*, 1–14.
7. Bringula, R.P.; Bonifacio, J.; Natanauan, A.; Manuel, M.; Panganiban, K. Pattern of internet usage in cyber cafes in Manila: An exploratory study. *Int. J. Cyber Soc. Educ.* **2012**, *5*, 149–162. [[CrossRef](#)]
8. Naidu, S. *E-Learning: A Guidebook of Principles, Procedures and Practices*; Commonwealth Educational Media Center for Asia: New Delhi, India, 2006.
9. Arimbuyutan, R.; Kim, S.; Song, J.; So, W. A study on e-learning for Philippines. *Int. J. Multimedia Ubiquitous Eng.* **2007**, *2*, 49–54.
10. Romiszowski, A. How's the E-learning Baby? Factors Leading to Success or Failure of an Educational Technology Innovation. *Educ. Technol.* **2004**, *44*, 5–27.
11. Watkins, R.; Leigh, D.; Triner, D. Assessing Readiness for E-Learning. *Perform. Improv. Q.* **2004**, *17*, 66–79. [[CrossRef](#)]
12. New Media Consortium. *Horizon Report*; 2007. Available online: <https://files.eric.ed.gov/fulltext/ED505099.pdf> (accessed on 11 June 2014).
13. Huynh, M.Q.; Umesh, U.N.; Valachich, J. E-Learning as an Emerging Entrepreneurial Enterprise in universities and firms. *Commun. Assoc. Inf. Syst.* **2003**, *12*, 3.
14. Sey, A.; Fellows, M. *Literature Review on the Impact of Public Access to Information and Communication Technologies*; Working Paper Series of the University of Washington's Center for Information & Society: Seattle, WA, USA, 2009.



© 2018 by the author. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<http://creativecommons.org/licenses/by/4.0/>).