[Araştırma Makalesi / Research Article]

BRIDGING THE DIGITAL GAP AMONG THE UNIVERSITY STUDENTS THROUGH THE USE OF INTERNET-IN-THE-WALL

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ABSTRACT

The purpose of this study is to investigate the access and usage of the Internet-in-the-Wall (IW) as it could help bridge digital divide or gap among the university students. The literature review reveals that the issues of physical access, financial access, and cognitive access are the aspects of digital divide that can be identified among the university students and therefore it is required to have an interdisciplinary understanding of the problem of digital divide. This research adopted a qualitative research approach and interviews were used to elicit data from the field. Findings revealed that the university students accessed the IW for the main reasons of academic, entertainment or social media. The study again showed that the IW was an indispensable tool in the academic life of many students as it enabled them to access online books and resources to complete assignments, register their semester courses online, stream academic videos, visit news sites for updates, and many more. Finally, the study revealed that many students have some computer skills that make it easier for them to operate the IW.

Keywords: *Internet-in-the-Wall, digital divide, the university, students, UEW*

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ÜNİVERSİTE ÖĞRENCİLERİ ARASINDAKİ DİJİTAL FARKLARIN İNTERNET KULLANIMI İLE GİDERİLMESİ

ÖZ

Bu çalışmanın amacı, Duvarda İnternet'e (IW) erişiminin ve kullanımının üniversite öğrencileri arasındaki dijital uçurumu kapatmaya nasıl yardımcı olabileceğini araştırmaktır. İncelenen literatüre göre, fiziksel erişim, finansal erişim ve bilişsel erişim konuları, üniversite öğrencileri arasında tanımlanabilen dijital bölünmenin yönleridir ve bu nedenle dijital bölünme sorununun disiplinler arası bir anlayış ile incelenmesini gerektirir. Bu çalışma için nitel bir araştırma yaklaşımı benimsenmiş ve sahadan veri elde etmek için ağırlıklı olarak görüşmeler kullanılmıştır. Bulgular, üniversite öğrencilerinin IW'ye çeşitli akademik, eğlence veya sosyal medya nedenlerinden dolayı eriştiklerini ortaya koymuştur. Bu çalışma, ödevlerini tamamlamak için çevrimiçi kitaplara ve kaynaklara erişmelerine, dönem derslerini çevrimiçi kaydetmelerine, akademik videolar yayınlamalarına, güncellemeler için haber sitelerini ziyaret etmelerine ve daha pek çok şeye olanak sağladığı için IW'nin birçok öğrencinin akademik yaşamında vazgeçilmez bir araç olduğunu bir kez daha göstermiştir. Son olarak, bu çalışma birçok öğrencinin IW'yi kullanmalarını kolaylaştıran bazı bilgisayar becerilerine sahip olduklarını da ortaya koymuştur.

Anahtar kelimeler: Duvarda Internet, dijital uçurum, üniversite, öğrenciler, UEW

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1. Introduction

Seminal works in the field of digital divide have repeatedly cited diverse indicators as causes of the inequality of use and access to digital technologies and the internet (Van Dijk & Hacker, 2003; Norris, 2001; Wilson, 2006; Yu, 2006; Ricoy, Couto, & Feliz-Murias, 2013). These indicators vary from socio-economic and demographic factors to issues of policy and infrastructural development (Yu, 2006). This has attracted a number of scholars or researchers from various academic disciplines such as from the field of social sciences to more technical disciplines to try and look into the problem of digital divide and propose solutions for it (Kularski & Moller, 2012). From the literature reviewed, issues of physical access, financial access, and cognitive access as the aspects of digital divide can be identified among the university students and therefore requires an interdisciplinary understanding of the problem of digital divide.

The university students around the globe can be said to be technology savvy yet differences in computer and internet access and usage prevails amongst them. Oyedemi (2012) argues that the university students in the developed world have more access to the internet than their counterparts in the developing world

suggesting a digital divide scenario on the global front. Santos, Azevedo, & Pedro (2013) add that there are differences in the possession of IT skills even among tertiary students who may have received a uniform technology education.

Ricoy, Couto, & Feliz-Murias (2013) also agree that digital divide exists among the university students especially in the case of freshman year. They explain further that digital divide among the university students can present itself in two forms, that is, in the acquisition of digital devices and the use of digital devices. Economic constraints prevent some students from acquiring the latest technologies and that means they will also lack the skills in operating these new devices (Ricoy et al., 2013). On the other hand, students who can afford or have access to various kinds of modern technologies stand a good chance of acquiring skills in operating them all (Ricoy et al., 2013). Ricoy et al (2013) argue that educational institutions are unable to afford the latest technologies that may alleviate the technology gap among students and that makes the issue of digital divide more pronounced in an educational setting.

This study is purposed to discover the potential of the Internet-in-the-Wall (IW) in bridging digital gap among the university students. Pee, Kankanhalli, & On Show (2010) argue that a public internet facility like the IW has the potential to bridge the technological gap between the ‘‘haves’’ and ‘‘have-nots’’ and it therefore deserves considerable attention from researchers. The study used the case of University of Education, winneba (UEW) where there is an Internet-in-the-Wall facility that serve its large student population in various ways. It is worth mentioning here that this is a contextually-based study which elicited information from viewpoints peculiar to individual participants who could be subjective, as such, qualitative approach was more appropriate.

This study was necessitated by the fact that few research works (e.g., Pee et al., 2010) have ever come close to our topic, thus, this work will add to the few existing literature and will guide policy makers and educational administrators in formulating measures to tackle digital divide.

The remaining sections of this study is organised as follows: Definitions and justification for the interdisciplinary nature of digital divide/gap; emergence of Internet-in-the-Wall; history of UEW’s Internet-in-the-Wall; method; results; and finally, a discussion will be added.

1.1 Main Questions/Statement of Purpose.

This study aims to examine the potential of the Internet-in-the-Wall (IW) in bridging digital gap among the university students. The main questions driving this study are:

i. What are the purposes for which the university students access the IW?
ii. How does the IW affect academic activities of the university students?
iii. What computer skills do the university students possess?

2. Definitions and Justification for the Interdisciplinary Nature of Digital Divide/Gap

Digital divide/gap has got so many definitions and meanings in the literature.

In the past, digital divide meant the incongruity in access to the internet among households (Pierce, 2018). However, the earliest known definition of digital divide was in 1994 (Merriam Webster, n.d.) and it was defined as the inequalities between those who have computers and internet access and those who do not. According to Van Dijk (2006), digital divide can generally be defined as the gap between individuals who have access and individuals who do not have access to latest technologies.

Castells (2002) defines digital divide as a sort of inequality pertaining to internet access among social groups. He continues to add that ensuring equal access to the internet in this post-modern age is critical to resolving the issue of digital divide.

Selwyn (2004) has a political definition for digital divide as the perceived difference between citizens who are ‘‘connected’’ and those citizens who remain ‘‘disconnected’’ from technology, information, and post-modern society. Selwyn (2004) argues that digital divide could be a political issue and that the political decision to provide general access to IT infrastructure and the internet can bring many citizens to the digital age thereby narrowing the gap between the so called ‘‘connected’’ and ‘‘disconnected’’ citizens. Norris (2001, p4) succinctly defines digital divide as ‘‘any and every disparity within the online community.’’ This could mean any form of inequities associated with access and the use of the internet.

Wilson (2006) defines digital divide as inequalities between populations with regards to access, distribution, and use of information technologies. According to Wilson (2006), there are six (6) demographic dimensions of the digital divide: Gender, geography, income, education, occupation, and ethnicity. All these demographic factors create certain stratification processes that produce classes of winners and losers of the information society. Again, digital divide has eight (8) aspects according to Wilson (2006). Knowledge of the aspects of digital divide can enhance one's understanding of the context from which one may be considering digital divide. Physical access (access to ICT devices), financial access (cost of ICT services relative to annual income), cognitive access (ICT skills), design access (usability), content access (availability of relevant applications and information online), production access (capacity to produce one's own content), institutional access (availability of institutions that enable access), and political access (access to the governing institutions where the rules of the game are written) make up the eight aspects of digital divide (Wilson, 2006).

Other definitions consider digital divide as the differences in access and use of computers and the internet at various levels such as personal or individual level, household level, company level, and regional or country level. For instance, Cilan, Bolat, & Coskun (2009) as cited in Bach, Zoroja, & Vukšić (2013) define digital divide as access and usage differences in IT between individuals, firms, regions, and countries. Again, digital divide refers to ''the gap between individuals, households, businesses and geographic areas at different socio-economic levels with regard to both their opportunities to access information and communication technologies (ICTs) and to their use of the Internet for a wide variety of activities (OECD, 2006).

From a more social perspective, digital divide is a situation where the poor and minorities in the society are unable to access computers and the internet, and are unable to acquire the skills to use information technologies meaningfully (Attewell, 2001). The traditional definition of digital divide as any disparity between individuals who have access to IT and those who do not is limited and needs to be reconsidered as it excludes factors that are pertinent for a comprehensive understanding of the concept (Stellefson, Chaney & Chaney, 2008). Digital divide definitions should therefore be revised to capture the issue of usability, content availability, and social divides that bring about inequalities in the digital world (Stellefson et al., 2008).

Kularski and Moller (2012) posit that the digital divide issue is of interest to many academic disciplines and there are unique reasons why a particular discipline may decide to study digital divide. The social sciences for instance, may decide to conduct enquiries into digital divide for the reason being that the divide reflects and highlights issues of social inequalities (Kularski & Moller, 2012). More specifically, a political scientist or a policy maker will have an interest in digital divide due to the political significance of the internet and how it should function in a country (Kularski & Moller, 2012). Also, Selwyn (2004) argues that at present, there have been calls by stakeholders, policy experts, and politicians to tackle the issue of social exclusion in all its forms in the western society. He adds that the prominence and urgency to rid the western society of all kinds of social exclusion has prompted discussions on digital divide and has called for policies to look in that direction as well. This is one way digital divide has crept into political discourses and has set the tone for political scientists to conduct enquiries into the problem of digital divide. Digital divide is also of concern to the more technical disciplines such as Information and Computer Sciences; thus, making the study of digital divide interdisciplinary (Kularski & Moller, 2012).

3. Emergence of Internet-in-the-Wall

Internet-in-the-Wall (IW) is generally a facility where the public can access information and services on the internet. Several authorities have various definitions for the IW based on the different names that have been assigned to the facility. In this study, the researcher agrees with Schware (2007) that the term is imprecise and will therefore consider Internet-in-the-Wall as a facility […] referred to differently as telecenters (TCs), information kiosks, internet access points, community technology centres, internet kiosks, and cybercafés. Other names incorporate telecottage, telekiosk, teleboutique, phoneshop, infocentre, digital clubhouse, tele-village, and cybercafé (Arko, Owusu, & Kwadzo, 2019).

IWs have been set up in different nations to help advancement in schooling, administration, and society. For instance, in Nigeria, the Owerri Digital Village was started in 2001 to furnish young people with technology tools and assets to enhance learning (Ugwuegbu, 2003). In India, the Prime Minister's Office started the Warana Wired Village Project to enhance the activities of cooperative societies by providing horticultural, medical, and educational data to

seventy (70) towns (Das and Narayanan, 2005). In the advanced world also, the public authority of Denmark supported a few public undertakings to expand internet use among older populace (Jaeger, 2004). In North America, Canadian libraries give web access to about 8% of the Canadian public (Umbach, 2004).

Studying Internet-in-the-Wall is also important because unlike personal computers, they are installed at public locations and shared among rather than owned by individual users. Issues like convenience of location and price of access are likely to be some of the setbacks for using a public internet facility (Pee et al., 2010). That notwithstanding, various reasons have been assigned for establishing Internet-in-the-Wall or a public internet facility:

1. Enhance access to information technologies. Individuals who do not own ICT devices can visit these centres to use them;
2. Provide work for individuals;
3. Provide opportunities for workers who reside in far-away places a fully equipped environment to work online; (Arko, Owusu, & Kwadzo, 2019).

4. History of UEW's Internet-in-the-Wall

UEW's Internet-in-the-Wall (IW) is a modern internet facility placed at vantage points inside the university's main campus (North) in Winneba. The facility was put up and commissioned under the administration of the erstwhile vice-chancellor of the university, Professor Asabere Ameyaw (Agyare, 2019). Agyare (2019) stated in an interview that; a large number of the university students either do not have a personal computer or have challenges accessing the internet for academic motives and it is in this view that the university management decided to erect an IW to correct this deficiency in the university's education system. The management decided to site the IWs at visible locations on the university campus and halls of residence where students can easily access them (Agyare, 2019). The rationale for putting up the IW is thus highlighted below:

1. Aid students in their research activities where they may need access to the internet;
2. Enhance access to the Student Information Portal (SIP) without much of a difficulty;

3. Encourage students to exchange information via E-mail and student portals (Agyare, 2019).

The IW is embedded with a desktop screen, a keyboard, and a mouse that operate on an Intel Core (II) Duo Processor, and has a limited user account which is Read Only (Agyare, 2019).

4. Method

The purpose of this study is to discover the potential of the Internet-in-the-Wall in removing digital gap among the university students. We must say here that this study adopted the qualitative approach and the interview method was used. Most leading researchers in social research recommend that research about opinion or experience should employ qualitative interviews in order to find out values or influential factors which the respondents are aware of but unknown to the investigator (Guba & Lincoln, 1994). The interview type was mainly semi-structured. The use of interview guide served as a guideline and helped to structure the discussion to some extent.

In an attempt to realise the objective or purpose of the study, the researcher solicited opinions of students on various issues surrounding the topic. Open-ended questions were put to respondents (students) in an interview to ascertain their level of IT skills or knowledge, how they are able to interact with the IW and whether it is serving their needs or not, and how they view digital divide and solutions to it.

The researcher came out with the final set of interview questions - after subjecting initial draft of questions to thorough reading and revision on multiple times - that were all self-explanatory and could generate relevant responses from interviewees or respondents to satisfy the research objective or purpose.

For instance, the first question was put this way: Would you say you agree with my above definition of digital divide? If not, what do you understand digital divide to mean or include? This question was to test respondents' knowledge of digital divide since the term is a nascent one and many people may not be familiar with it. The second question that was used in the research was: Do you have access to digital technologies like laptops, desktop/PC, tablets and smartphones, etc.? Respondents' access to any of the digital technologies was deemed necessary

as that may have an influence on the opinions given by them and hence needed to be measured. The third question was put as: How has access to these digital devices affected your academic activities on campus? The researcher wanted to know if the use of digital devices were beneficial or detrimental to students' academics in any way. The fourth question was: What do you think would be some of the causes of digital divide/gap among students in UEW? The researcher asked this question with the intention that students or respondents may be able to identify some factors they see to contribute to digital gap in the university.

The researcher posed the fifth question to know if respondents have any IT skills and whether they are able to operate the IW without any form of guidance. The question was: Are you able to use the Internet-in-the-Wall on your own? And what ICT skills do you possess? It could be easier or difficult to interact with the user interface of the IW, the researcher therefore wanted to find this out by posing the sixth question: How do you perceive the user content/interface of the Internet-in-the-Wall? How did you find out about the existence of this computer terminal? This was the seventh question. By asking this question, the researcher wanted to know how popular the IW is among respondents.

The eighth question asked for the rationale behind the use of the IW by students or respondents, the question was: For what purposes do you often use the Internet-in-the-Wall? (academics/ research, social media connectivity, online trading, others). The ninth question was about duration or how long students or respondents use the IW when they visit it. The question was posed as: How long (in hours/minutes) do you spend using this facility?

The tenth question sought to know the frequency at which respondents access the IW as it asked: How often do you make use of the Internet-in-the-Wall?

The eleventh question asked: In what ways has the Internet-in-the-Wall served your academic needs on campus? By asking this, the researcher simply wanted to know how useful the IW has been to students' academic life. Another question was: What do you think are some of the measures that can be put in place to ameliorate the digital divide situation in UEW? By posing this as the final question to respondents, the researcher wanted them to suggest ways to narrow the digital gap especially on UEW campus.

The sample size for the research was fifteen (15) respondents. Sample sizes are usually small in qualitative research (Patton & Cochran, 2002). Attempt was made to get an equal distribution of male and female participants. For this

study, the target population was students in the university. The samples for this study were picked through convenience sampling technique where members of the sample are chosen based on their relative ease of access.

The data collection took place between February and March, 2019. Before initiating interviews, the research was explained again in brief, and students were given the opportunity to ask questions or raise any queries they had, though none were raised. The researcher always give a copy of the interview guide to every student he interviewed to fill the demographic section. Questions were asked in the order arranged on the interview form or guide. Normally the researcher allows some time for the respondents to think about the question before they start talking. Verbal consent was obtained for recording the interviews. The interviews ranged in duration from 20 – 25 minutes.

The data was collected from both primary and secondary sources. The secondary data was based on books and journal articles that were drawn from UEW Library and online academic databases such as ERIC and Google Scholar. In-depth interviews, specifically semi-structured type, constituted the method that was used to collect the primary data for the study. All the interviews were audio-taped. The audio-recordings were transcribed and later classified under themes generated during data analysis.

About ethical consideration, the researcher always identified himself to potential respondents by showing his student ID card and an official note from his department that gave him the right to interview students. Before the start of every interview, the researcher made it clear to students that they can withdraw their contribution to the study anytime they wish and that their responses will be taped and stored confidentially for later analysis. The validity and reliability of this research was ensured through data triangulation. Both primary and secondary sources of data were used in this study to counter the effects of bias, inaccuracies, and inconsistencies in data gathering or reporting and to give more confidence to the findings of this research. Also, direct quotations from respondents were included in the results analysis to enhance the internal validity of the study.

5. Results

This section first described the attributes/demographics of the participants. It also presented the findings/results of the various themes. Much of this section consists of verbatim quotes of the interviewees; at times, they are quoted

extensively, to maintain the integrity and fullness of interviewees' expressions, thereby keeping comments in context. Through coding and analysis processes, common themes and sub-themes have emerged from interviewee transcripts. The researcher took a sample size of fifteen (15) respondents/interviewees.

5.1 Demographic Profile of Respondents.

The following socio-demographics were analysed; gender, age, level of student/ respondents, program/department and period of computer use/ownership.

The researcher discovered that, out of the 15 interview guide administered, 11 of the respondents were males representing 73% of the total population sampled, while 4 of the respondents were females representing 27% of the total population sampled. It can thus be said that male respondents out-numbered the female respondents in this study. The age distribution indicates that all 15 respondents of the total population sampled fell within the age range 20-30 years, representing 100%. There was no age recorded under the following age ranges; below 20 years (0%) and above 30 years (0%).

The evidence gathered from the field showed that 3 respondents representing 20% were in level 100, 1 respondent representing 6.6% was in level 200, 3 respondents also representing 20% were in level 300, 7 respondents (47%) out of the total population (15) sampled were in level 400. Finally, there was 1 respondent (6.6%) in level 800 whom the researcher interviewed.

Again, through data gathering, it was revealed that 4 respondents representing 27% of the population sampled were political science major students, 2 (13.3%) respondents were geography major students, again, 2 (13.3%) respondents were economics major students, and 2 respondents representing 13.3% of the population sampled were history major students. 3 students representing 20% of the total sample were social studies major students, and finally, 2 respondents from the special education department represented 13.3% of the population sampled.

Data gathered from the field revealed that 5 of the respondents representing 33.3% of the population sampled had used and owned computer(s) for a period of 1-2 years. Again, 3 respondents representing 20% of the population sampled said they had used and owned computer(s) for a period of 3-5 years. 7 respondents representing 47% of the population sampled had also used and owned computer(s) for a period of 5 years and above. Finally, there was no figure

recorded for the ‘‘none’’ section. All the respondents seem to have owned or used computer(s) in one way or the other.

Summary of respondents’ demographics is given in table 1.

Table 1. Summary of Respondents’ Demographics

	Descriptors	**Frequency**	**Percentage (%)**
Gender	Male	11	73
	Female	4	27
Age	Below 20	0	0
	20-30	15	100
	Above 30	0	0
Level of Student	100	3	20
	200	1	6.6
	300	3	20
	400	7	47
	800	1	6.6
Program/Department	Political Science	4	27
	Geography	2	13.3
	Economics	2	13.3
	History	2	13.3
	Social Studies	3	20
	Special Education	2	13.3
Period of Computer Use/Ownership	1-2 years	5	33.3
	3-5 years	3	20
	5 years and above	7	47
	None	0	0

Source: Field Data, 2019

5.2 Rationale(s) for Using the IW.

For what purposes do you often use the internet-in-the-wall? This was the nature of question that interviewees responded to under this theme.

11 out of 15 interviewees admitted to using the IW for academic and research purposes only:

''For academic purposes'' (Interviewee no. 1)

''To search for academic information and to browse'' (Interviewee no. 6)

''Usually, for academic purposes and to do research'' (Interviewee no. 7)

''For my academic work, more especially, when I run out of internet bundle on my phone'' (Interviewee no. 11)

''To do research on assignments'' (Interviewee no. 12)

Two interviewees used the internet facility to access academic resources online and to connect with people on social media:

''Academic work and access to social media'' (Interviewee no. 4)

''Sometimes, academic purposes; other times, to check social stuffs le football matches'' (Interviewee no. 2)

Finally, two interviewees used the facility to connect on social media platforms only. For instance:

''Social media; facebook and others'' (Interviewee no. 5)

''Social media'' (Interviewee no. 3)

5.3 IW and Its Impact on Students' Academics.

This theme discusses how beneficial the Internet-in-the-Wall has been for students with respect to their academic activities.

11 out of 15 interviewees descanted their experiences with the Internet-in-the-Wall and how the facility has helped to improve their academic activities on campus:

"I search for books online to read. I also browse and search for videos on how things are done; particularly, I watch videos on graphic designing. One problem is that, I cannot download anything on my drive and take it home. I haven't seen any port on the device where you can insert your flash drive. But there's a Bluetooth connection which you can use to download files onto your personal device" (Interviewee no. 2)

> *"It has improved my academic performance like in doing research work, downloading files that I can read to solve my assignments and research work"* (Interviewee no. 4).
>
> *"The Internet-in-the-Wall has helped me to gain access to files to do assignments and long essays. It also gives me access to global news"* (Interviewee no. 5).
>
> *"It significantly improved my academic performance especially in level 100 when I was a regular user"* (Interviewee no. 6).
>
> *"The facility has helped me to get access to Wi-Fi, so that I can learn on my own. It has also improved upon my research"* (Interviewee no. 9).
>
> *"For me, I will give it 35%. It has improved my research tasks; and it has also given me knowledge about things that I didn't know when I began using the Internet-in-the-Wall"* (Interviewee no. 12).
>
> *"For me, I use the Internet-in-the-Wall to register my semester courses online; and also, to look up my academic results''* (Interviewee no. 15)

Four (4) interviewees expressed dissatisfaction with the use of the Internet-in-the-Wall arguing that for the most times the IW is faulty or underperforming, as a result, the facility is either having little or no impact on their academics:

> *"It would've improved my academic activities if the internet connection was a little faster; since it's slow, it has not improved my academic activities in any way"* (Interviewee no. 13).
>
> *"The internet is not even working; and it's my first time here, I have achieved nothing with it so far"* (Interviewee no. 14).
>
> *"For that one, what I've observed is that, anytime you access it, you can't download or retrieve any file from it, so most at times, you just have to go through these files whilst they are on display. Actually, I don't benefit from it academically. And I can't stand there and learn at once, you know*

learning is a process. You can't just stand there and read everything and it just sticks. I just acquire some little information and then leave" (Interviewee no. 7).

5.4 ICT Skills of Students.

Under this theme, interviewees were queried to ascertain the nature of ICT skills they possess.

9 out of the 15 interviewees said they possess several ICT skills like typing, surfing the internet, information retrieval and literacy skills, MS office know-how and so on:

"I can access the internet, download files, MS word, PowerPoint, others" (Interviewee no. 4)

"Typing, surfing the net, a whole lot" (Interviewee no. 5)

"Browse the net, MS word" (Interviewee no. 6)

"Typing, use of MS word, excel, and publisher'' (Interviewee no. 7)

"I can type, efficient with MS office" (Interviewee no. 8)

"The ones I was taught here (ICT course in level 100); excel, word, typing and printing" (Interviewee no. 13)

Five (5) interviewees mentioned they know only one ICT skill:

"Just typing" (Interviewee no. 11)

"Typing" (Interviewee no. 12)

"I can type" (Interviewee no. 15)

"I'm a fast typist" (Interviewee no. 10)

One interviewee in level 100 admitted to having no ICT skill:

"No ICT skill; I'm yet to learn any" (Interviewee no. 14)

6. Discussion

Investigation into the purposes for which students access the Internet-in-the Wall (IW) revealed two major indications. The first was that students accessed the facility for academic reasons. The study revealed a sizeable number of students that heavily relied on the IW to accomplish their academic tasks. According to Agyare (2019), the IW was put up primarily to enhance or support students' academic activities; therefore, the research outcome adequately fulfils this objective. The other indication was that students accessed the IW for

entertainment purposes, and for connecting to relatives and friends on social media platforms. The social life of students is an important aspect of their education, and the IW has enabled them to fulfil that part as well.

The researcher again took a deep dive to know how the IW was impacting on students' academic activities. The emphasis here is on academics. The case chosen for the study was an academic environment and it called for the researcher to look into the influences the IW was having on the academic wellbeing of students. The most part of the research outcome showed that the facility has been very useful to students' academics. Differences in physical access or ownership of computer that would have left many students struggling in their academics will now be a thing of the past, thanks to the availability of the IW. Many students descanted they are able to use the IW to google online academic materials, e-books, and articles. Also, they were able to stream academic videos and documentaries, get news updates as well as register their courses online at the beginning of every semester, and to look up their formative and terminal evaluation results. However, a handful of students expressed their dissatisfaction with the IW citing reasons of machine faultiness or slow internet bandwidth.

Digital divide in its contemporary meaning touches on the usage differences among technology users. One of the most important aspects of inequality of use has to do with differences in computer skill levels as it becomes one of the focal areas of consideration in this study. The researcher therefore investigated the ICT or computer skills of students or users of the IW. Findings revealed that majority out of the total respondents admitted to knowing more than a single ICT skill and this made it easier for them to use the IW. Few possessed just a single skill. Therefore, knowledge of the use of computer among the university students is very encouraging. Ricoy et al (2013) argue that the university students who have access to different kinds of digital technologies are able to learn the skills to operate each one of them. It is therefore accurate to conclude that a good number of our participants had access to different kinds of digital devices and may have learnt how to use the devices thereby equipping them with the several ICT skills they possess today.

One slight outcome that should not be overlooked has to do with freshly admitted students who have limited experiences with the computer or possess no ICT skills. This outcome reinforces the finding made by Ricoy et al (2013) in their study that suggests that digital divide is especially prevalent among freshly

admitted university students. The result from this study may seem negligible considering the case or number, but it is a crucial factor to consider if we desire an absolute win in the war against digital divide. To this end, there is the need to intensify ICT education at the basic level even before learners come up to the tertiary level.

The study is limited in scope. It considered the responses of UEW students located on the university's main campus – North. As such, the conclusion from this study cannot be extended to all university students. Generalisations from this study should therefore be done with caution.

This study explored the usefulness of Internet-in-the-Wall in addressing the problem of digital gap. Digital divide or gap, as seen from the literature, may require an interdisciplinary understanding to fully appreciate the problem, therefore, we encourage researchers from other fields to conduct similar studies to support the claims made in this work.

REFERENCES

Agyare, R. (2019, May 15). *History of UEW's internet kiosk*. (O.A.Yedidia, Interviewer).

Arko, A.B., Owusu, B., & Kwadzo, G. (2019). Bridging the Digital Divide through Korea Cooperation. *African and Asian Studies*.

Attewell, P. (2001). Comment: The first and second digital divides. *Sociology of education*, 74(3), 252-259.

Bach, M. P., Zoroja, J., & Vukšić, V. B. (2013). Determinants of firms' digital divide: A review of recent research. *Procedia Technology*, 120–128. doi:10.1016/j.protcy.2013.12.013

Castells, M. (2002). *The internet galaxy*. Oxford: Oxford University Press.

Cilan, C.A., Bolat, B.A., & Coskun, E. (2009). Analyzing digital divide within and between member and candidate countries of European Union. *Government Information Quarterly*, 26(1), 98-105.

Das, D. K., & Narayanan, K. (2005). Information and communication technology (ICT) and India's development: Achievements and challenges ahead. *Journal of Services Research*, Special Issue, 93-108.

DiMaggio, P., Hargittai, E., Celeste, C., & Shafer, S. (2004). From unequal access to differentiated use: A literature review and agenda forresearch on digital inequality. In K. Neckerman (Ed.), *Social Inequality*. New York, NY: Russell Sage Foundation.

Guba, E.G., & Lincoln, Y.S. (1994). Competing paradigms in qualitative research. In N.K. Denzin, & Y.S. Lincoln (eds.), *Handbook of qualitative research*. Thousand Oaks, CA: Sage Publications.

Hargittai, E., & Shafer, S. (2006). Differences in actual and perceived online skills: The role of gender. *Social Science Quarterly*, 87(2), 432-448.
Jaeger, P. T. (2004). Beyond section 508: The spectrum of legal requirements for accessible e- government web sites in the United States. *Journal of Government Information*, 30(4), 518- 533.

Kularski, C. & Moller, S. (2012, December 14). *The digital divide as continuation of traditional systems of inequality.* Retrieved from https://papers.cmkularski.net/documents/20121214-2699.pdf

Merriam-Webster. (n.d.). Digital divide. In *Merriam-Webster.com dictionary*. Retrieved from: https://www.merriamwebster.com/dictionary/digital%20divide

Norris, P. (2001). *Digital divide: Civic engagement, information poverty, and the internet worldwide.* New York, NY: Cambridge University Press.

OECD (2006, January 4). *Digital divide.* Retrieved from OECD Glossary of Statistical Terms - Digital divide Definition

Oyedemi, T.D. (2012). Digital inequalities and implications for social inequalities: A study of internet penetration amongst university students in South Africa. *Telematics and Informatics 29*, 302–313.

Patton, M.Q., & Cochran, M. (2002). A guide to using qualitative research methodology. *Medecins Sans Frontiers.* Retrieved from; http://fieldresearch.msf.org/msf/bitstream/10144/84230/1/Qualitative%20research%2 0.pdf (Accessed 10.5.2014).

Pee, L. G., Kankanhalli, A., & On Show, V. C. Y. (2010). Bridging the digital divide. *Journal of Global Information Management*, 18(1), 15–38. doi:10.4018/jgim.2010091102

Pierce, J. (2018). Digital divide. *Wiley Online Library*, https://doi.org/10.1002/9781118978238.ieml0052

Ricoy, M-C., Couto, M. J., Feliz-Murias, T. (2013). The digital divide among university freshmen. *Turkish Online Journal of Educational Technology*, 262-268.

Santos, R., Azevedo, J., & Pedro, L. (2013). Digital divide in higher education students' digital literacy. *Worldwide Commonalities and Challenges in Information Literacy Research and Practice*, 178–183. doi:10.1007/978-3-319-03919-0_22

Schware, R. (2007). *Scaling up rural electronic governance initiatives: Proceedings of the 1st international conference on theory and practice of electronic governance*, 355-356, Macao.

Selwyn, N. (2004). Reconsidering political and popular understandings of the digital divide. *New Media & Society,* 341-362. doi:10.1177/1461444804042519

Stellefson, M., Chaney, B., & Chaney, D. (2008). The digital divide in health education: Myth or reality? *American Journal of Health Education,* 106-112.

Ugwuegbu, N. (2003). Owerri digital village. In A. Badshah, S. Khan, & M. Garrido (Eds.), *Connected for development: Information kiosks and sustainability* (*ICT task force series4)*, (pp. 213-220). New York.

Umbach, J. M. (2004). Libraries: Bridges across the digital divide. *Feliciter*, 50(2), 44.

Van Dijk, J. & Hacker, K., (2003). The digital divide as a complex: dynamic phenomenon. *The Information Society*, 19 (4), 315–326.

Van Dijk, J.A.G.M. (2006). Digital divide research, achievements, and shortcomings, *Poetics, 34*, 221-235.

Wilson, E.J. (2006). *The information revolution and developing countries*. Cambridge, MA: MIT Press

Yu, L. (2006). "Understanding information inequality: Making sense of the literature of the information and digital divides", *J. of Librarianship and Inf. Science*, 38, 229 – 252.