CHAPTER 10

THE LAN HOUSE PHENOMENON: EXPLORING THE USES AND SYMBOLIC FUNCTIONS OF THE INTERNET AMONG THE LOW-INCOME BRAZILIAN YOUTH

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ABSTRACT

Brazil has one of the largest millennial populations in the world and offers a key case study of an important slice of time: the adolescence of millennials in the 2000s. This case study offers important insight into a unique Brazilian dynamic, the LAN house phenomenon: a Brazilian solution to spreading digital technologies to the economically disadvantaged. This chapter explores the social roles and functions LAN houses played to the Brazilian youth, ages 12–15, in the 2000s, when they were first introduced in Brazil. Three research questions guided this investigation.

RQ1. What were the main uses and gratifications of LAN house use among the youth in Brazil in the early 2000s?
RQ2. What was the social construction of "Internet" and "LAN house" among the Brazilian user of LAN houses and its potential to foster advancement?
RQ3. What key roles do LAN houses play today?

Two distinct methods of the study were employed: a survey and textual analysis. The results showed that Brazilian youth used the LAN houses to check Orkut (a social network site), e-mails and the Microsoft System Network (MSN chat),

download music and play games. The internet was mostly perceived to have a negative influence, have bad content and serve as a distraction. With the changes in telecommunication and mobile use, the LAN houses have diversified their services, still offering opportunities for gaming and socialization, but also catering to older and working class by providing services such as government document digitalization and preparation. This case study has implications or the introduction of digital technologies to adolescent populations in the growing economies and developing nations.
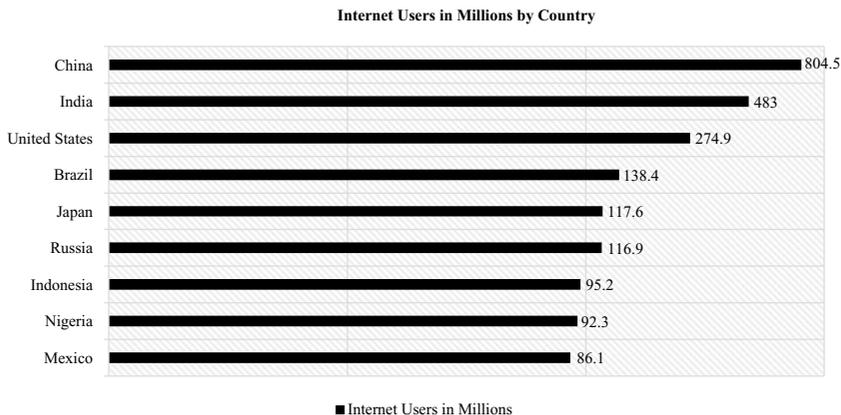
Keywords: LAN House; internet; Brazilian youth; internet cafés; Orkut; social media

INTRODUCTION

As developing countries continue to confront basic problems such as education, poverty, housing, and basic health care, there is still an international effort to attend to the issues surrounding the digital divide, the uneven distribution and access to communication technologies between any distinct group. In Brazil, for example, the marginalized population (e.g., lower income) is deprived not only of proper services for their basic needs such as health or education but also from access to technology and the internet (Nemer & Reed, 2013). The internet continues to intensify globalization and so the assumptions of the internet's potential to remove not only geographical obstacles for global integration but also economic growth (Gibbs, 2003). With a large millennial population, Brazil stands as a unique case study that shows how creativity, entrepreneurial spirit, and a collective-oriented culture intersected in the early 2000s to foster the growth and popularity of LAN houses to spread the internet and digital technologies to the economically disadvantaged.

Although it originated in the United States, the internet's use has spread quickly throughout the world (Raacke & Bonds-Raacke, 2008). The International Telecommunication Union (ITU) estimates that at the end of 2018, 51.2% of the global population, or 3.9 billion people, was using the internet. Young people aged 15–24 years continued to be the forefront of internet adoption around the world and approximately 830 million young people were online (ITUNews, 2018).

According to the Brazilian Institute of Geography and Statistics, Brazil, the South American giant, has 116 million people connected to the internet representing 64.7% of the population. Consistent with the global generational trend, 85% of the young people aged 18–24 in Brazil are connected, making the most connected age range. While there are numerous studies on different aspects of youth life in Brazil (e.g., youth violence), more research on other dimensions of youth, including access and use of the internet, is needed. Research should especially point out ways that the low-income sectors of society appropriate new technologies (Pedrozo, 2013), which the present chapter aims at exploring. Brazil ranks fourth in with the highest number of internet users, outranked by China (1st), India (2nd), and United States (3rd) (Fig. 1).

Internet Users in Millions by Country

Country	Internet Users in Millions
China	804.5
India	483
United States	274.9
Brazil	138.4
Japan	117.6
Russia	116.9
Indonesia	95.2
Nigeria	92.3
Mexico	86.1

■ Internet Users in Millions

Fig. 1. Countries with the Highest Numbers of Internet Users in 2018 (Millions).

Brazil's trajectory to becoming one of the most connected countries in the world is best explained by Brazil's internet adoption in the early 2000s and the role the LAN houses served. LAN houses played an important role in Brazil providing access to the internet to almost 40 million Brazilians, including 74% of all Brazilians in the D and E classes (lowest income brackets). According to the Internet Management Committee, among the population aged 10–15 years, only 25% have access to the internet in their schools and, the majority, 61%, accessed the internet at LAN houses. The rate of users who accessed the internet at LAN houses increased from 30% in 2006 to 49% in 2007, while the number of those who accessed the internet from home remained at 40%. Regarding computer ownership, 24% of the population owned computers at home. The proportion of household with computers increased due to the "Computer for All" program in which taxes were reduced to enable the Class C to purchase computers at a lower cost (Brazilian Internet Steering Committee, 2008a, 2008b).

As the access to the internet improved over time due to programs like the "Computer for All" and access through LAN houses, what were the uses and gratifications in using a computer and the internet among the youth? How was computer and internet access appropriated? Did LAN houses play any role in the social upper mobility of their uses? The purpose of this chapter is three-fold: First, it explores the social roles and functions LAN houses played to the Brazilian youth, ages 12–15, in the 2000s, when LAN houses were first introduced. Secondly, it examines the youth's social construction of LAN houses and their perceived notion of the correlation between technology exposure and their social–economic upward mobility. Thirdly, the chapter explores the functions and uses of the LAN houses today.

This chapter is organized as followed: First, it will provide a summary of the internet access in Brazil in the 2000s, followed by an overview of the correlation between social and economic status and internet access, and the role the LAN houses played. It will also summarize the uses and gratification theory followed by the methodology, findings, analysis, and implications.

Internet Access in Brazil in the 2000s

In early 2000, the internet was somewhat distant for most people in Brazil and internet connections were made via noisy telephone lines. For those who had access, it was done primarily after midnight and weekends for lower costs, and the speed was 56 kbps. Internet access continued to grow around the world in the 2000s and "digital divide" became a common theme among scholars, activists, politicians, and other organizations. The number of people who accessed the internet reached 34% in 2007, a 6% increase from 2006. More than half of the Brazil population, 53%, indicated have used a computer although only 40% are regular computers users. Among the barriers for computer ownership, 78% said the high price is the problem and 58% said the high price for internet access; 55% indicated the lack of computer knowledge (Brazilian Internet Steering Committee, 2008a, 2008b).

By 2007, 25% of the Brazilian population 16 years of age used the internet to communicate with the government and education level, income and social class were attributes that contributed to the usage of the federal government's electronic services. Approximately, 10% of households in class D and class E owned a computer, compared to 46% of class C, 86% of class B, and 98% of class A.[1] By 2008, The Brazilian Institute of Geography and Statistics (IBGE) estimated that 56 million people aged 10 years and older accessed the internet at least once. According to IBGE, between 2005 and 2008, the internet grew 75.3%, from 20.9% to 34.8%.

Despite the decline in the number of users accessing the internet via LAN houses, they were still the second largest providers of public access to the internet in Brazil (35.2%), after home, the main provider. Of the 56 million people who accessed the internet, 47.5% did so from more than one location, the most cited being the home (51.1%).

Age was found to impact the location of internet use. The youngest users, aged 10–17 years, accessed it mainly in LAN houses (53.3%) and home (43.1%); while people aged 40 years or over, accessed primarily from home (78.6%) and workplaces (50.9%). Between 2005 and 2008, the 15–17-year-old group had the highest percentage (62.9%) of people who accessed the network, had the highest increase compared to 2005, when it was 33.7%.

While the younger and more educated were the most connected, access between 2005 and 2008 also grew among those less educated. Among those with 15 years or more of study, the percentage of network users were 80.4. Generally, internet users were more educated (10 years of study on average) than those who did not use it (5.5 years of study).

The reasons why Brazilians accessed the internet were also observed. In 2005, the numbers showed that the main reason was education or learning. In 2008, 83.2% accessed the internet to communicate with others. Interestingly, the years between 2005 and 2008 were also impacted by telecommunication infrastructure. Broadband use and access doubled, and the rate of mobile phone use also grew from 36.6% to 53.8%.

Internet Use and Social-Economic Disparities in Brazil

Despite having one of the most sophisticated banking systems in the world, Brazil still has millions of citizens technologically excluded, with crumbling

services in thousands of municipalities. Internet lags behind as a result of socio-economic, educational, and demographic inequalities that still prevail placing the Brazilian population in an unfavorable position. This is partially a result of high computer cost, poor internet connections, and the lack of familiarity with technology. As with many other disparities, there is a correlation between digital exclusion and other forms of inequalities such as social, economic, educational, and demographic (Pedrozo, 2013). The highly uneven income distribution made Brazil a two-facet nation with two economies and societies: The first is a relatively wealthy population of about 30 million, which has the income, education, and infrastructure to participate in the modern information world. The second is a poor population of about 140 million, which lacks the income and access to the necessary infrastructure to participate (Tigre, 2003).

In general, the LAN houses were the main means of access to the internet for classes C, D, and E.[2] Both IBGE's census and studies conducted by the Brazilian Internet Steering Committee substantiated the correlation between income, internet access, and the use of LAN house. Here are some basic facts from the Brazilian Internet Steering Committee (2008a, 2008b):

- Smaller the population's income, the higher the use of the LAN houses.
- Seventy-eight percent of the participants who indicated to earn up to one minimum wage used the LAN house to access the internet.
- Sixty-seven percent of the participants who indicated to earn between one and two minimum ages used the LAN house to access the internet.
- Fifty-five percent of the participants who indicated to earn between two and three minimum ages used the LAN to access the internet.
- Forty-two percent of the participants who indicated to earn between three to five minimum wages used the LAN house to access the internet. Only 30% of the participants who indicated to earn more than five minimum wages used the LAN houses to access the internet.

Today, having a computer at home has become increasingly affordable for the growing middle class and around 14 million PCs are sold each year in Brazil, often paid in installments. It was estimated that by 2014, there were 140 million PC units in Brazil. Internet access is also on the rise: 74 million Brazilian used it and 3G has contributed significantly to the growth of broadband access among the less affluent, both for computer and mobile access. Out of 215 million cell phones in Brazil, 25 million already have 3G access, according to the Brazilian Agency of Telecommunications Anatel (2011).

The impact of the disparity of socio-economic status and internet access, particularly on young people and on society, has been drawing the attention of specialists and researchers. Looking at the marginalized population in Brazil from the perspective of the marginalized "have-nots" may offer a different understanding of the functions of technological use, political processes, social tensions, and cultural values, especially of those experiencing digital inequalities (Nemer & Reed, 2013, p. 2). Some scholars have even argued that considering the penetration and use of LAN houses in the 2000s, these venues became the socio-technology means

for financial and technological inclusion (See Marcel, 2011). This is one of the questions this current chapter seeks to explore – the extent that internet access leads to upper mobility of some sort.

The LAN House Phenomenon

The advent of the internet revolutionized the communication sphere and the LAN houses played a crucial role in Brazil, especially for the poorer communities (Heim, 2011). With some similarity to cybercafés,[3] which gained popularity in the United States, United Kingdom, and other countries, Brazilian LAN houses are spaces where computers are available for internet access and are connected in a network. "LAN" stands for local area network; "house" was a Brazilian adoption, perhaps to denote an extension of a house where people gather to socialize.

In LAN houses, computers are typically placed next to one another (Pereira, 2007) and have newer and faster computers available that are more suitable for gaming and faster internet access. LAN houses served as key locations for thousands of Brazilians who, otherwise, had no access to the internet; hence, LAN houses gained great popularity in the poorest areas of Brazil where marginalized residents could not afford personal computers and internet access (Nemer & Reed, 2013). Particularly for the younger generation, LAN houses played a significant role in providing internet access for lower-income children and teenagers (Lemos, 2010).

The Brazilian Association of Digital Inclusion (ABCID) estimated that 108,000 LAN houses were active in Brazil (Lemos, 2010) by the mid-2000s. Forty-eight percent of internet users in Brazil used LAN houses as the primary means to connect to the internet, compared to 42% at home and 4% through free public access centers (Lemos, 2010). *Rocinha*, one of the biggest favelas in the world located in Rio de Janeiro, there were approximately 130 LAN houses.

The symbolic importance of LAN houses in Brazil in the 2000s permeated other Brazilian life spectrums and the trend was noteworthy. In fact, many LAN houses offered a special area for children's birthday parties (Lemos, 2010). While there are an estimated 108,000 LAN houses in Brazil, the number of bookstores were below 3,000. LAN houses in Brazil helped boost the digital entertainment industry and served as meeting points and gaming centers. It is important to note that while LAN houses were key for internet access for those without computer and internet access at home, these establishments were not free; they were for profit. Prices ranged as low as R$0.50 to R$ 1.00 an hour; in some instances, more than R$ 2.00 an hour.

The ABCID estimated that about 85% of the LAN houses were part of the informal sector. Fewer than 1% have a formal business permit and most of these LAN houses were on the fringes of the formal economy. In general, "LAN houses were created and managed by community leaders and micro-entrepreneurs, and these spaces typically used to turn into reference points in the communities in which they operated, offering a high-value, high-impact public service" (Marcel, 2011, para. 6). The owners of LAN houses, in general, are nano-entrepreneurs working in an informal economy. Nano is often referred to as business smaller

than microbusiness with low overhead and small-level investment that can make the business profitable right away. Ninety percent of all LAN houses were unlicensed. LAN houses first appeared in South Korea in 1996 as an entertainment option, as net gaming houses sponsored by the government using LAN technology. Contrary to South Korea, there were fewer investments in internet connectivity from the Brazilian government and the telecommunication industry.

Many scholars would argue that LAN houses played a role in the growth and development of Brazil. Soares and Joia (2014a, 2014b) contended, for example, that LAN houses had a social function because had the power to democratize the access to the internet. The scholars went on to argue that LAN houses promoted access of the underprivileged to a range of important community services previously inaccessible to them. In fact, in *Paraupebas*, in the state of Pará, known for the worlds' largest iron and mine, 85% of the population used LAN houses due to lack of residential internet. *Xexéu*, in the border between *Pernambuco* and *Alagoas,* used to be a village of enslaved Africans in the fugitive route toward *Quilombo of Palmares*, had 15,000 inhabitants, no banking agencies but more than 10 internet access centers. It is clear that a LAN house alone is not actually a digital inclusion agent, despite its relevance to regions with lower rates of income because most of LAN houses users are still denied full digital inclusion.

Uses and Gratification Theory

Internet access and the penetration of LAN houses were well documented in Brazil in the 2000s; however, an interpretative approach from the user's standpoint offers an additional explanation for use and function of the internet and LAN houses among the youth. Grounded in the socio-psychological tradition with an objective inclination, the Uses and Gratification theory is an audience-centered approach that helps researchers analyze why and how people actively seek out media to satisfy specific needs. Often characterized as a "bona fide home-grown communication theory with intrinsic social-psychological roots," (Lin, 1996a, 1996b, para. 1), researchers use the Uses and Gratification theory to study mediated-communication situations via a single or multiple set of psychological needs, psychological motives, communication channels, communication content, and psychological gratifications within a particular or cross-cultural context," (Lin, 1996a, 1996b, para. 1). Katz (1959) originally offered five key assumptions: (1) people use media for their own purposes; (2) people seek to gratify needs; (3) media compete for our attention and time; (4) media affect different people differently; and (5) people can accurately report their media use and motivation. For more than 50 years, researchers have compiled lists of motives to consume media. One of the most comprehensive typologies of media uses and gratifications was proposed by Rubin (1981), which offered eight motivations of television viewing motives: passing time, companionships, escape, enjoyment, social interaction, relaxation, information, and excitement.

With the rise of the internet and social media, studies are now emerging to explore new uses and gratification that are specifically attributed to the new

media. Several studies explored the Uses and Gratifications of social media. Chen and Kim (2013) found that social network users seek to gain a sense of community and participate in online discussions, going to SNSs for entertainment and pleasure. Another gratification south is self-presentation, which was also identified in previous research on online photo, albums, blogs and social network sites. Pai and Arnott (2013) examined the user's motives for adoption and using social networking sites. The scholars found that belonging, hedonism, self-esteem, and reciprocity are the four main values users attain through social networking sites adoption. Quan-Haase and Young (2010) used Uses and Gratification to examine what types of needs different media fulfill among undergraduate students from Facebook and instant messaging. Use a factor analysis of gratification, they found six key dimensions: pastime, affection, fashion, share problems, sociability, and social information. The scholar found that Facebook is about having fun and knowing about the social activities occurring in one's social network. Smock, Ellison, Lampe, and Wothn (2011) found that users' motivations for using Facebook predicted their use of different features such as status updates and wall posts but featured that shared similar capabilities did not necessarily share underlying motivations for use. Krause, North, and Heritage (2014) applied Uses and Gratification theory to examine motivations for using music listening applications on Facebook. A principal axis factor analysis identified three different motivations for this usage, namely entertainment, communication, and habitual diversion gratifications.

Rathnayake and Winter (2018) argued that social media's uses and gratifications can be classified as either user-oriented or platform oriented. User-orientation puts less emphasis on the features or affordances of the platform while platform-orientation uses and gratifications take into consideration the features of the platform or the affordances they offer. The current study will seek to explore both the user-orientation and the platform orientation in Brazilian's youth use of LAN Houses and the internet. Despite the highly-criticized theoretical simplicity and methodological limitations, the uses and gratification provides researchers with an initial reference on which to conduct empirical studies which bring us closer to the uses and reasons for use of communication media.

In summary, previous studies were able to show the growth and prevalence of internet access in Brazil and the importance of LAN houses. What has not been fully explored is the uses and gratifications of LAN houses use among youth and their utilities almost 20 years later. Thus, three main questions will guide this investigation:

Research Questions

RQ1: What were the main uses and gratifications of LAN house use among the youth in Brazil in the early 2000s?
RQ2: What was the social construction of "Internet" and "LAN house" among the Brazilian user of LAN houses and its potential to foster advancement?
RQ3: What key roles do LAN houses play today?

THE STUDY

The current study explores the main uses and gratifications of the internet and LAN houses among the Brazilian youth in the past 20 years. To answer the three research questions, two distinct methods of the study were employed: a survey and textual analysis. The survey was used to answer *RQ1* and *RQ2*, and the textual analysis was used to answer *RQ3*. While the study is not formally labeled as longitudinal, analysis of data collected in the mid-2000s and 2019 was used to answer the questions.

Method I: The survey was administered in the suburbs of Rio de Janeiro, Brazil, from October 19 to December 7, 2008. The instrument comprises 10 questions, including demographic questions. The survey was sent to 50 LAN house users aged 12–23 years old. The non-random sample was selected using a combination of convenient and network sampling technique and the return rate was 27 (54%). Sixty-five percent (17) was female and 35% (9) was male. While most of the sample (56%) was not able to identify their families' social class status through income, 30% indicated not making more than two minimum wages per month (approximately $235 dollars at the current exchange rate of March 2019). As it relates to computer ownership, 15% indicated having a computer at home; 50% had broadband internet (7) and 35% indicated having dial-up internet access (5). A consent form was given to participants which explained the purpose of the survey, how it was going to be used, that the survey was going to be kept anonymous and confidential and how to contact me. The nominal questions were calculated using frequency distribution and the open-ended questions were coded using Glaser and Strauss' constant comparative analysis technique (see Glaser & Strauss, 2012).

Method II: A sample of 30 LAN houses' Facebook pages was observed between March 9 and March 10, 2019. The non-random sample was selected by searching Facebook pages using the keyword "LAN House" and searching under the Pages category. To guide the observation, a questionnaire with four questions were used. The average number of likes was 1,474 and most pages in the sample included photos of the establishment and provided a summary of the services provided. A checkbox was used to record the services, and the findings represented the services articulated in the "About Me" section or the services disclosed through the profile pictures.

THE LAN HOUSE USE AMONG YOUTH OF THE 2000s

All the youth surveyed used LAN house regardless of their computer ownership or internet access at home. Fifty-three percent used on the weekend, and 47% between two to five times a week. When asked about the frequency per day, a vast majority checked least once a day, as Table 1 shows.

These results were consistent with previous findings of the prevalence of LAN houses in the 2000s. When asked the reasons why they used LAN houses, the reoccurring reasons were: to check Orkut (a social network site), e-mails, and

the Microsoft System Network (MSN chat), download music and play games, which are consistent with at least two Rubin (1981)'s motives to use media: social interaction (Orkut, e-mails, MSN chat) and enjoyment (gaming and music downloads) as Table 2 shows.

BRAZILIAN'S USES AND GRATIFICATIONS FOR USING LAN HOUSES IN THE EARLY 2000s (*RQ1*)

LAN houses in Brazil in the 2000s served a very important socio-technological function. They were popular among both who did not access at home, but also common among those who had access. The main activities the youth engaged in while visiting LAN Houses were to check Orkut, check e-mails and use MSN chat, as previously noted, are consistent with the Uses and Gratification's social interaction and enjoyment motives. Orkut and e-mails, specifically, were observed in all sample participants.

Table 1.   The Frequency of LAN House Use Per Day in the 2000s.

Frequency	Hours	Frequency	Week
One hour/day	42% (12)	Every day	37% (10)
Two hours/day	22% (6)	2–3 Times Per Week	26% (7)
Three hours/day	18% (5)	4–5 times a week	3.7% (1)
More than 3 hours/day	18% (5)	Weekends	33.3% (9)
	N = 28		*N* = 27

Table 2.   Activities Brazilian Youth Performed in LAN Houses in the Early 2000s.

Activity	Yes	No	Sometimes (once or twice a week)	Response count
Check e-mails	100% (11)	–	–	11
Check Orkut	100% (24)	–	–	24
Use instant Messengers	95.2% (20)	4.8% (1)	–	21
Play games	66.7% (8)	25.0% (3)	8.3% (1)	12
Surf different websites	66.7% (6)	33.3% (3)	–	9
Download music	63.6% (7)	36.4% (4)	–	11
Download programs	57.1/% (4)	42.9% (3)	–	7
Read soap operas review	33.3% (2)	66.7% (4)	–	6
Homework	20% (1)	80% (4)	–	5
Look for job	20% (1)	80% (4)	–	5
Access pornography	20% (1)	80% (4)	–	5
Pay bills	–	100% (5)	–	5
Read magazines	–	100% (5)	–	5
Read newspapers	–	100% (5)	–	5

When probed on the reasons why Brazilian youth preferred the LAN house instead of their own homes, the reoccurring reasons were: lack of computer access, privacy, overall LAN house enjoyment and socialization with others. The lack of computer access at home was a top motivator to visit the LAN house. Not having a PC at home was the most reoccurring reason, followed by high cost and inoperable computers, which is consistent with previous claims that LAN houses provided access to those who, otherwise, did not have a computer and/or internet access at home. It is pivotal to also note that (1) not having PC at home; (2) the cost-effectiveness of accessing the internet; and (3) having a broken PC at home emerged as the main reasons why. Nevertheless, LAN houses were still preferred, even when computer and internet access was available at home, in some cases. Socialization also emerged as a key motivator to use the LAN house.

Orkut

Social networking websites are used regularly by millions of people and have created new ways for users to communicate and share information. Social networks such as Facebook, Orkut, MySpace, Flickr have attracted millions of internet user who are involved in blogging, participatory book review, networking and photo sharing. Before Facebook, Twitter, or Pinterest, there was Orkut, a social network launched in 2004 by Google engineer Orkut Büyükkökten, same year Facebook was launched (News 18 India, 2014). Orkut was one of the most popular social network sites in Brazil in the early 2000s, whose users declined in 2010 due to the popularization of Facebook, Twitter, and LinkedIn. Widely used in Brazil and India, Orkut's main goal was to help its users create new friendships and maintain relationships. On Orkut, users shared photos, were members of communities and discussed issues. In 2010, 70% of Orkut users were between 18 and 30 years of age and half of the users were Brazilians. As with other forms of media, Orkut also drew the attention of the academic community who looked at several aspects of Orkut use including the performances of black identity (see de Melo & Lopes, 2013) and Orkut's uses and gratifications (see Mantovani & Junior, 2013). In all, Orkut played a vital role in the socialization of the Brazilian youth to the new media technology. It was important not only to introduce the Brazilian youth to the social networking sites, but it served as the first platform that, somewhat, gave voice to a class that, otherwise, did not have much voice through traditional media.

MSN Chat

Similar to Orkut, the pursuit of socialization in the early 2000s was also achieved through Microsoft' Windows Live Messenger (MSN) launched in 1999. It reached popularity when the tool, which had to be downloaded, started to accept GIFs and emojis. By 2008 when MSN was the first program to allow instant messaging, it had 250 million users around the world. MSN was not just a message program; it a platform that allowed users to chat, play games, transmit videos through webcams. In 2008, MSN had more than 34 millions of users in Brazil, around 85% of all internet users. With the introduction of cell phones and decline of use, MSN was deactivated, and their users were migrated to Skype in 2013.

THE SOCIAL CONSTRUCTION OF "INTERNET" AND "LAN HOUSE" AMONG THE BRAZILIAN YOUTH USER OF LAN HOUSES AND ITS POTENTIAL TO FOSTER ADVANCEMENT (*RQ2*)

The second question aims at examining the social construction of "Internet" and "LAN Houses" and their potential to foster advancement according to through the lenses of the Brazilian youth. While there was an overwhelming assumption that the LAN houses would bridge the digital divide and give the poorer class access, there was also the popular belief that internet carried some "evil," particularly among the lower-income users. In fact, many studies examined the possible negative impact of the internet. For example, studies of internet and pornography (see Poole & Milligan, 2018; Yang, 2016) and internet gambling (see Pontes & Griffiths, 2014) emerged, among other topics.

The further explore the social construction of "Internet" and "LAN houses", an open-ended question was asked, which generated 13 themes that were coded as positive (31%), negative (55%), and neutral (14%). For the most part, the internet and its function were perceived as more negative than positive. The sample perceived the internet as having bad content, including sexual content. It was also perceived as a tool of distraction and addictive as Table 3 shows.

These findings are particularly interesting because they contradict the considerable assumption that closing the digital divide could promote "development" to the lower income. Instead, it reinforces the belief that social disparities are complex, and they must be observed as a collective set.

Mobile Phones and the Diminish of the LAN Houses

Until 2009, LAN houses were the primary point of entry of Brazilian citizens onto the Web, but with the rise of affordable smartphones, many users stopped frequenting them. Mobile phones were introduced in Brazil in 1990 and the adoption rate of cell phones increased after 1992 due to the lack of landline supply and long waiting lists. This is attributed to a major deficit in investment in telecommunication and public sector inefficiency. "In 1998, when the Brazilian telecommunications sector was privatized, mobile phones' diffusion intensified and increased, even more, when providers introduced the pre-paid carders." Between

Table 3. Brazilian Youth's Reasons to Choose LAN House in the Early 2000s.

Reasons Why They Prefer the LAN House			
Category	Code	Count	% Codes
Computer access	No PC at home	9	34.60
	Cost effective	1	3.80
	Broken PC	2	7.70
Overall socialization	Socialization	8	30.80
Privacy	Bad content		
	Overall privacy	2	7.70
Overall gratification	Enjoyment	4	15.40

Table 4. Brazilian Youth's Overall Perception and Social Construction of the Internet and LAN House in the Early 2000.

Category	Code	Frequency	% Codes
Positive (31%)	Instant messaging and social media	2	6.90
	Yes	2	6.90
	Making friends	2	6.90
	Enjoyment	1	3.40
	Job post	1	3.40
	Good content	1	3.40
Negative (55%)	Bad content	4	13.80
	Not possible to advance people	4	13.80
	Pedophile, pornography, and sexual abuse	3	10.30
	Distractive	2	6.90
	Addictive	1	3.40
	Premature dating	1	3.40
	Unknown deaths	1	3.40
Neutral (14%)	Not sure	4	13.80

Source: Data collected from current study primary research/survey.

2011 and 2013, the number of people accessing the web through their mobile devices went from 15% of the population to 31%. Mobile connectivity in Brazil is a major segment because it has greater penetration than home connectivity. Today, with wider coverage, better voice packages, and the spread of mobile broadband in urban areas, mobile operators receive a significant proportion of their revenues from voice and SMS services, especially from pre-paid subscribers (Adhikary, 2018).

Mobile internet and especially smartphones have become a viable alternative to traditional fixed-line online connections in Brazil (Adhikary, 2018). In 2016, there were 81.4 million mobile phone internet uses in Brazil, account for nearly 40% of the Brazilian population. "By 2021, these figures are forecast to increase to 112.7 million and 51.8 percent respectively" (Statista, 2016, para. 2). Checking and sending e-mails is the most popular mobile activity of mobile phone owners in Brazil and WhatsApp is the leading mobile app for an instant message with 93% reach. The LAN houses that are still operating today are, therefore, compelled to diversify their businesses and offer new services in order to stand out in a market where demand was once much higher than supply.

Facebook

Social media continues to be popular in Brazil. Brazilian consumers are also some of the highest social media users globally and WhatsApp is the top social media messaging app in the country (Adhikary, 2018). There were nearly 100 million social network users in Brazil in 2016; by 2021, the figure is forecast to increase to 114 million. Of all social media, Facebook ranked second with a 79% reach, followed by YouTube and Instagram. Facebook is the leading social network in Brazil, with a penetration rate of 40.8% and expected to increase to nearly 50% by

2021. Popular among Brazilians aged 20–29, Facebook accounts for 36% of the user based in the country. As of January of 2019, the leading countries Facebook users in millions are India (300), United States (210), Brazil (130), Indonesia (130), and Mexico (86). Other social leading social networks in Brazil include WhatsApp, as already mentioned. Twenty-nine percent of the population uses WhatsApp, Facebook Messenger, Google Plus, and Instagram.

Key Functions of LAN Houses Today (RQ3)

With the advancement of mobile technology and telecommunication infrastructure, and home internet access, in what ways did the LAN houses adapt and adjust to the changes over the years? To answer this question, a textual analysis of LAN houses was employed.

The findings revealed that internet access and gaming are still the main services offered at LAN houses. However, to remain relevant to the growing number of people who access the internet from their home computers or mobile devices, today's LAN houses offer a number of other additional services including printing, computer maintenance, photocopying, document preparation, web design, etc., as Fig. 2 shows.

This is consistent with Marcel (2011)'s notion of LAN houses as high-impact public service. This is particularly relevant when, in addition to internet access and gaming, LAN houses started to cater to an older age bracket by offering document preparation (e.g., application, governmental forms, etc.), curriculum writing, computer training, and graphics services in general. It is also interesting to note another aspect of today's LAN houses. They started to look like popular internet cafés in other countries which resemble lounges. As Lemos (2010) pointed out, LAN houses in the early 2000s permeated other spectrums of Brazilian life which then, included birthday parties in some cases. To remain relevant, LAN
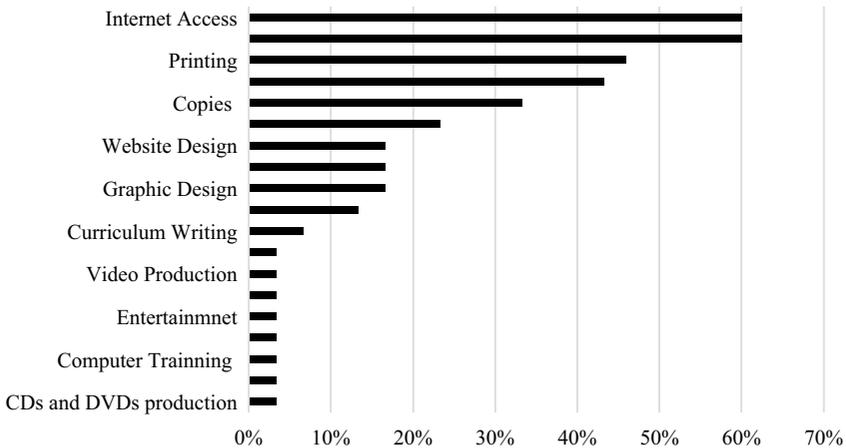

Fig. 2.   Services Offered by LAN Houses in 2019.

Table 5. Examples of LAN Houses and Their Featured Services on Facebook.

JP LAN House e *Informática* PA	Internet, computer maintenance and computer sales
LAN House Studio	Gaming.
Wolf LAN House	Computer service and repair.
Evolution LAN House	Gaming and entertainment.
Winner LAN House	Gaming and internet.
Atomic LAN House	Business card design, posters, and other services.

Source: Data collected from current study primary research/survey.

houses offer other services appropriate to today's needs, including the digitalization and preparation of government documents.

To explore the use of LAN houses, Mozilla and the Ford Foundation in 2015 conducted a study with LAN houses with 30 LAN house users. They found conflicting findings, which represents the diversity and complexity of the LAN houses landscape in Rio de Janeiro. In some places, LAN houses had a poor reputation, were extensively frequented by men and offered unrestricted access to pornography and violent content, which caused parents to be deeply concerned with their children's presence in LAN houses. While some LAN houses are seen as places of perversion and violence, others have succeeded in building strong relationships with their communities. It is important to note, however, that the majority of LAN houses observed by tried to implement online courses at some point, with the idea that it would offer a new, much-needed service to customers. Regardless of a few exceptions, these courses have no success and are not adapted to this population.

Another point that is worth making is that in today's LAN houses, extra services are a necessity as they attract more adult clientele. When some LAN houses invest in printers, photography, and design work, other LAN houses are still deeply rooted in the video game world, which ensures a regular clientele. These LAN houses have become entertainment place for neighborhoods in which there is a lack of activities for the youth. LAN Houses in which video games are dominant may represent an important opportunity for digital inclusion projects since they are filled with young people who have time to discover new things. As it relates to gender, "while some young women do play video games or use social media in LAN houses, they are still underrepresented in this male-dominated environment." In summary, the LAN House currently plays a new role; it serves as a digital convenience agent. The LAN houses owners have a new attribute, a digital dispatcher, promoting and exercising the role of processing, expediting, and sending documents of its users by digital means.

LAN HOUSE USE AND IMPLICATIONS IN OTHER COUNTRIES

The successful adoption of information technology in worldwide is one of the most pressing developmental issues (Kim, 2000) and internet penetration has varied widely around the world. This is partially due to the fact that the diffusion of the internet (and its digital divide) often occurs at the intersection of

both international and national differences in socioeconomics, technological, and linguistic factors. Telecommunication policies, infrastructures, and education are prerequisites for marginalized communities to participate in the information age (Chen & Wellman, 2004). Additionally, a key consideration when pushing internet penetration in any country is the implementation of a universal "Internet inclusion policy" (Curran, 2017). Universal service policies ensure the availability, affordability, and accessibility of telecommunication services (Curran, 2017). Similar to Brazil's case, LAN houses or internet cafés sprouted in various parts of the world giving users access to the internet. In many countries around the world, digital inclusion was found at these internet cafés, libraries and other public spaces (Clark, 2013). However, as was also the case in Brazil, internet cafés ability to continue to contribute to the development or fully eliminate digital divide around the world is uncertain partially for two reasons: first, internet cafés numbers are decreasing worldwide; second, their ability to foster more than just the superficial access is questionable.

The number of internet cafés worldwide is decreasing with the increase in mobile use (Purnell, 2013). For example, as early as 2013 in Rwanda, a café owner only had 10 visitors per day. Internet cafés in India also started to decline and some in the southern city of Mysore, similarly to Brazil, started to sell stationery or sweets instead of the web. Some have diversified their services to include flight bookings, mobile phone cards, and other gadgets and accessories. Internet café use has also declined in Thailand and even in more developed markets like South Korea, fewer people use the internet cafés for online gaming (Purnell, 2013).

Internet café's ability to contribute to development outcomes has come into question in recent times (Clark, 2013). The digital divide is a phenomenon linked not only to internet access but also the usage and benefit (Funchs & Horak, 2008). Mwesige (2004) examined the prospects and problems of internet use and access in Africa with a focus on an internet café in Uganda. The scholar found that while cyber cafés have brought the internet closer to more people in developing countries, these initiatives especially those commercially based only increased the digital divide. In Indonesia, users access the web from internet cafés for instrumental purposes, like seeking information, while in Tanzania, users spend more resources for online recreation (Furuholt, Kristiansen, & Wahid, 2008). The scholar also found that education and internet experience is important for enhanced social gains from public internet access (Furuholt et al., 2008). Likewise, smartphone adoption does not necessarily mean consumers can overcome the digital divide to enjoy the internet's full potential (Purnell, 2013).

CONCLUSION

This chapter showed the importance of the LAN house phenomenon during the formative years when Brazilian millennials came of age in the digital world. To date, LAN houses continue to have the potential to expose the youth to the internet, increasing the overall number of individuals who have access to the internet. However, with the introduction of broadband internet, smartphone

use, telecommunication policies, and better infrastructure, more and more people have access to the internet at home, decreasing the relevancy of the LAN houses and internet cafés use. However, this is not to underestimate the role that LAN houses and internet cafés play to decrease the digital divide. LAN houses and internet cafés are still relevant in rural areas and areas where reliable and fast internet access is not readily available. Internet cafés, LAN houses, and other public spaces like libraries continue to serve a vital role in exposing those without access to the internet. In addition, LAN houses and internet cafés have been able to provide other services that may continue to contribute to development overall. The LAN houses in Brazil, for example, are adapting to the changes and needs of today's youth and offer more than just gaming and internet. For example, they offer services related to digitalization of official documents, resume preparation, copying as well. This perhaps serves as an indicator that internet cafés and LAN houses will continue to serve a societal purpose in the digitalization of society worldwide. Future studies could continue to examine the evolution and adaptation of LAN houses. Future studies could also use a quantitative method to explore further correlations around internet use and other variables. Future studies can also look at how identities are created through social network sites.

NOTES

1. Brazil has established a socio-economic classification of its population, with categories ranging from A to E, where A represents the richest households and E represents the poorest (Brazilian Internet Steerring Committee, 2008a, 2008b).

2. In Brazil, official statistics divide the society into five classes, E being the poorest. The C class, often called "the new middle class" by the media, includes people with an individual monthly income of US$188–815 (R$300–1,300) (Heim, 2011).

3. Cybercafés and internet cafés are used interchanbly to describe Internet centers around the world. LAN houses will be referred to these centers in Brazil.

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