PUBLIC ACCESS TO INFORMATION & ICTs
PHASE II REPORT

Brazil

Prepared for the University of Washington,
Center for Information & Society.

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Preliminary version: Feb 15, 2008
Draft 1: June 15, 2008.
Final Report: August 15, 2008

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Recommended citation:

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1 Extended Executive Summary

1.1 Research Project Overview

This research focuses on the public access to information and communication landscapes in 24 countries, with specific focus on public libraries, to understand the information needs of underserved communities, public access to information and communication venues, and the role of ICT.

Through field research in 24 countries conducted by local research partners, and cross-country comparative analyses based on common research design elements (see list of countries and research design overview in Appendix), the project aims to contribute to the knowledge in the field of information and ICT for development. Of particular interest and value are: the comparative look at key venues (libraries and other), and the mix of depth of in-country knowledge with breadth of global comparison to elicit success factors and scenarios to understand how diverse populations can and do access and use ICT to improve their lives. All outputs of this research will be broadly disseminated to interested stakeholders and placed in the public domain.

1.2 Introduction

In recent years, Brazil has undertaken substantial efforts to provide the public with access to information and communication technologies (ICT) to help further the country's social and economic development. A national mobilization towards "digital inclusion" is currently taking place, in both government and civil society. This movement includes initiatives to promote ICT access in underserved communities, tax deductions to reduce computer prices, and investment in telecenter and school IT lab creation via national policies. In addition, an entrepreneur-driven boom in cybercafés—mostly located in low income neighborhoods–has drastically altered the internet access landscape in the country. For this study, three main venues for public access to information and communication were investigated: public libraries, telecenters, and cybercafés. These categories were chosen based on the quantity of centers, the type and extent of network partners involved and the degree to which they serve or have the potential to serve the underserved population. For this report, Brazilian researchers have aggregated results from previous studies, policy documents, and their own research from venue visits, surveys and interviews to explain how ICT is accessed by people in these centers and how meaningful use and social appropriation of information and technology happens.

Since the early 1990s nonprofit, community-based organizations have been growing in quantity and in quality, creating a vibrant third sector in Brazil. The government has placed great trust in these organizations to promote ICT access in underserved populations, through various partnerships with NGOs to create telecenters for the poor. In Brazil, telecenters are places for public access to ICT, consisting of a room—open to the general public--with computers connected to the internet, and usually located in NGOs or grassroots organizations inside low income communities. To create a telecenter, an NGO usually establishes a partnership with donors, funders or knowledge partners requiring unique networks of collaboration to maintain these centers. For example, GESAC is an initiative from federal government that offers free internet access for NGOs and schools. CDI and Pensamento Digital are examples of NGOs that refurbish computers, donate them to grassroots organizations to create telecenters, and offer continuous training or

professional development for educators from these telecenters. Some municipalities like Sao Paulo and Porto Alegre have their own telecenter programs in partnership with NGOs located in underserved communities. The municipality donates computers, supports internet connection fees, and pays small wages to local youth that work as instructors or educators inside the telecenters. The federal government has a variety of initiatives that creates networks of telecenters and follows the same framework of partnerships and roles.

While the majority of Brazilian telecenters offer free access to the internet, they limit users to a certain amount of time. Often times, educational activities are given priority over others; for example, people using the telecenter for school research are generally given more leeway than those going to chat online. On the other hand, most telecenters struggle to sustain themselves and maintain trained staff, as skilled operators typically leave for the private sector. Most importantly, telecenter use--despite government efforts--remains low, accounting for less than 6% of the internet access in the country.

Cybercafes are private centers created by small entrepreneurs. They offer users access to the internet and several software programs for unlimited time periods, as users pay (by time) for their use. There are no access restrictions; users have freedom to navigate social networking websites and chat online. Many cybercafes are located in medium and low income communities, and are often not legally registered. Typically, they offer access to newer, high quality computers and are sustainable due to the fees they charge for access to their equipment. Cybercafes are often open day and night, and weekdays and weekends, making them especially available to users. However, in some cases, the cybercafe environment is not ideal for children, as centers might be integrated with restaurants or bars that sell liquor. Cybercafes also do not offer courses, though operators usually offer help, albeit limited, to non experienced users. As a result, the environment is far less tutored than that of telecenters in community based associations (places that offer daycare, afterschool activities, adult education, etc). The Brazilian Association of Cybercafes estimates that 58,000 cybercafes are in operation in Brazil.

Public Libraries are regulated and supported by government. There are 5,097 public libraries in Brazil, located in 4,700 of the 5,500 municipalities (85% coverage). There is weak political will to invest in new libraries or ICT development. Based on data gathered through interviews and surveys, researchers estimate that less than 15% of Brazilian Public Libraries offer ICT Services. There is also a concentration of library quantity and quality in Southeastern Brazil. Furthermore, most libraries are located in city centers or near government buildings and do not necessarily serve underserved groups. It is worth noting that the data in this research do not factor in the 46,000 school libraries in Brazil that exclusively serve schoolchildren.

During this study researchers implemented surveys on 1,284 users and interviewed 43 venues operators in the five Brazilian regions. Results bring to light important trends, discussed below.

1.3   Country Overview

In the last few years, the economic situation in Brazil has improved in many respects. Rates of economic growth have been unprecedented, when compared to recent decades. Even considering the prospect of global stagflation, with rising food and fuel prices, Brazil has continued its era of growth. Brazil's annual inflation rate is 6.5%, a rate that worries economists but is still lower than that of other major emerging markets. So far, rising market competition has guarded against the return of high rates of inflation. Brazil is blessed with vast resources (timber, fresh water, gold and the world's largest cache of iron ore). While most of the world is running out of arable land, Brazil has more than 70 million hectares still to plow. The country has also announced massive oil finds in deep water reserves that may total 30 billion barrels, the largest discovery in the Western Hemisphere in three decades. Moreover, Brazil is the only country producing cost-efficient bio-fuels without affecting its food supply.
 Brazil has one of the most diversified economies in the developing world, exporting iron ore, steel and soybeans, but also small commercial jets, banking services, custom made buses, fine paper, and equipment for air conditioning. Brazil's foreign reserves have risen from $ 16 billion in 2002 to more than $ 200 billion and Brazil has attracted $35 billion in direct foreign investment in 2007, 100% more than in 2006 (International Monetary Fund). Receiving more foreign direct investment than all nations but China, Brazil is the only BRIC country with both an established democracy (like India) and no rebel province. Its per capita income of $8,446 (IBGE,2007) is far higher than in India ($1,100) or China ($3,000) (CIA Fact Book).

Poverty, however, remains a concern, especially in metropolitan areas, and great demand exists for projects aiming to improve the quality of life and educational attainment of the population. While in upper class malls, book sales are on the rise, there appears to be little political will for the creation of new public libraries or the improvement of existing facilities. Crumbling infrastructure, a chaotic public health system and high widespread functional illiteracy threaten Brazil's competitiveness. However, recent research conducted by Fudaçao Getulio Vargas (FGV) in six metropolitan areas shows that the number of poor has decreased, and there has been a growth in the number middle and upper class families as well. The growth of the former has been attributed by FGV not to temporary relief, as seen in the 1960s and 1970s, but to the increasing number of formal jobs. As a result, the social mobility observed in Brazilian metropolis should continue.   And as the purchasing power of lower classes increases, paid venues like cybercafes have become more affordable possibilities for ICT access. In this context, many entrepreneurs from low income neighborhoods have purchased computers and installed them in a room or a garage, connected them to the internet, and charged affordable fees for access.

ICT expansion benefits from freedom of expression in the country and a thriving NGO sector. Based on multilateral, transparent and democratic principles, the coordination and integration of internet service activities in Brazil is controlled by the Brazilian Internet Steering Committee (CGI.br), a multi-stakeholder organization comprised of members of the government, the business sector, non-profits and the academic community. ICT also counts on the increasing number and the quality of NGOs in the country, as the government implements

a great part of its social assistance policies and informal education programs through partnerships with nonprofits. In this context, the national government has chosen to emphasize the creation of telecenters, in partnership with NGOs, as its primary ICT promotion initiatives aimed at underserved communities. NGOs are selected after sending proposals to benefit their communities with telecenter-facilitated ICT access and services. The political will to create and support telecenters is stronger than that of other venues, and a variety of initiatives to create and support telecenters are being developed by several ministries, municipalities and government-owned corporations. However, there is no political will in the federal government to equip libraries with ICT, nor is there an effort to partner with or support cybercafes.

Federal initiatives to create telecenters in low income communities exist in several ministries--a fact that has drawn criticism from those advocating a unified policy. But despite some public administration disadvantages associated with decentralization, the plurality of federal telecenter programs has contributed to horizontal--as opposed to vertical--ICT integration into society (as advocated by recognized authors such as Castelles).

1.4   Research Rationale, Sample, and Methods

This study was conducted by a team of researchers working in Brazil for Fundação Pensamento Digital in collaboration with the Center for Internet Studies from University of Washington. The guiding research question for this study was: **What are the information needs and opportunities to strengthen institutions that offer public access to information and communication, especially to underserved communities, and especially through the use of digital ICT?**

Working under the assumption that computers alone do not constitute "access", and based on instructions from the University of Washington (UW), the local team designed and conducted research to best respond to local context and needs, in a way that capitalized on the local team's expertise and networks. As stated above, Brazilian researchers chose to investigate libraries, telecenters and cybercafes due to their quantity, type and extent of network partners involved, and the degree to which they serve or have the potential to serve the underserved population. School and university libraries and computer labs were not investigated in this research because the majority of them either do not offer open access to the public or are not visited by the underserved population.

During the **first phase** of the research individual interviews were conducted to gather information from experts, policy makers, government representatives and venue network coordinators. Secondary literature, including the CGI study on ICT use in Brazil, government documents and websites, and studies on Brazilian poverty, social research methodology, and urban definitions were also reviewed. In consultation with the UW team, a preliminary report was produced over a period of two months. Preliminary reports from the 25 countries were then analyzed by UW to look for early indications of gaps, similarities, trends and opportunities, and to inform the direction of phase two of the research process. During the **second phase** of research, the local team interviewed 43 operators in libraries, telecenters, and cybercafés and surveyed 1284 users in those venues.

Venues were selected using purposive non-probability sampling. In this technique, which was chosen due to time and budget constraints, researchers establish the sampling criteria based on their informed judgment. In each of the five Brazilian regions (South, Southeast, North, Northeast and Center-west), a representative state was selected for this study, and eight to nine venues (approximately three for each venue category) were visited. All centers were officially located in urban areas, according to Brazilian law, but fully one-third of venues were located in small, primarily agricultural towns which would qualify as "rural" by most definitions. The final report presented here was written according to UW guidelines to further facilitate cross-country analysis.

1.5   Information Needs of Underserved Communities

This research makes clear that initiatives that contribute to the improvement of literacy and a culture of reading are greatly needed. The Brazilian government has not invested in spacious public libraries, like those in developed countries such as the United States, and the notion of a library as a "reading sanctuary," common to other countries, does not exist in Brazil. As a result, cultures of reading and searching for written information are present mainly in populations with more schooling.

As mentioned in 3.2.2 Capacity, The struggle to develop human capacity in Brazil is deeply engrained in the challenges facing the education system. While 93 % of school-age children are now attending school, the quality of public basic education remains a serious problem. For example, the results from Brazilian participation in PISA, the OECD Program for International Student Assessment (www.pisa.oecd.org) were disheartening. Among 40 participating countries in 2003, Brazil ranked 37th in reading and 40th in mathematics. The National Assessment of Basic Education shows that students are not developing necessary skills in reading, writing and mathematics. The national Functional Literacy Index also provided sobering results. Among the population of 15 to 64 year olds in 2007, 7% are illiterate, 25% are barely literate, 40% are basically literate, and 28% fully literate

Brazilian researchers identified four main types of information needs in underserved populations. **First, initiatives to improve literacy are needed.** Promoting social and economic development is mostly impeded by the inability of low income populations to take advantage of information, and not so frequently by their access to it. Initiatives that contribute to the improvement of literacy and a culture of reading are greatly needed. **Second, underserved communities need readable summaries of research on inequities and their potential solutions.** Brazilian universities have produced significant research on social development and educational improvement. But results from these studies are usually not accessed by school coordinators, teachers, NGO leaders or policy makers. **Third, better mechanisms must be devised for informing the population about educational opportunities and future job opportunities.** Aside from formal schooling, there are a variety of social and educational programs promoted by governments (federal, state and municipal) and NGOs designed to strengthen development opportunities in low-income populations. Many of these programs are community based and are free. The key challenge—aside from expanding the scope of these programs—is to inform underserved populations of their existence. **Finally, the government**

must improve its delivery of health promotion information. With regard to information delivery, the Brazilian government has made significant strides in the fight against HIV/AIDS and dengue fever, mostly through TV, radio and newspaper campaigns. However, more work is needed to adequately deliver information to the public about chronic diseases and diseases of poverty, such as diarrhea, malnutrition, malaria and tuberculosis.

1.6 Strengths, Weaknesses, and Opportunities in Key Public Access Venues

Each of the studied venues has associated strengths and weaknesses. Public libraries are sustainable but do not attract the underserved population. They are also not properly equipped with ICT infrastructure. Telecenters target underserved communities and their operation—usually by community members—is an example of citizenship and entrepreneurship, but they do not provide qualified staff to guide users in their search for information. Cybercafes also serve poorer populations, have good computers, fast internet, and are sustainable, but they do not have staff or courses designed to help users navigate the web. In an ideal world, public access venues would incorporate the sustainability and infrastructure of cybercafes, the community appropriation and social approach of telecenters, and the qualified personnel observed in libraries.

There are several factors impeding such a perfect combination from happening. First, the government is keen on promoting telecenters as its venue of choice, and has been reluctant to support ICT development in libraries or cybercafés. Second, because the IT sector currently offers numerous employment opportunities, qualified staff are more likely to seek out jobs in the private sector than in libraries, cybercafés and telecenters. Third, while most Brazilians are willing and able to engage in communication-related ICT activities, they are less likely to appropriate information online. Until the functional literacy rate improves, or multimedia expands, most information will remain of little use to the 72% of Brazilians who are not completely literate. The government has also failed in many respects to inculcate a culture of reading in the general public. Fourth, literacy issues aside, many users do not understand how effectively integrate ICT into their lives or their work--either because they are not trained to use it, or they cannot imagine the possible benefits. Nor do venue operators understand the broader potential for technology to empower users to innovate and use technology in creative ways (for general and educational purposes).

These challenges are not insurmountable and present numerous opportunities for ICT and public access venues in Brazil. For instance, public access venues could play a much more central role in improving the literacy rate and IT skills of the Brazilian population. More proactive centers, with skill-development workshops and an expanded focus on guiding users, stand to benefit underserved communities immensely, better preparing them for an information-driven society. The development of IT skills (web design, software development) in public access venues would help employment prospects for underserved youth—especially considering the exploding IT job market in Brazil. By targeting populations with locally relevant content (i.e. "how to search for cooking recipes" or "introduction to family health" for mothers), these activities could also serve to help integrate ICT use into the daily lives of people not accustomed to its benefits. Most importantly, these programs would help to promote

reading and information appropriation, aiding those with reading difficulties to improve their ability to comprehend written information.

There are already interesting examples of initiatives that promote skill-building via ICT. For example, *Rede Le*, or Network Read is a project that currently benefits 18 centers for literacy and digital inclusion in the state of Minas Gerais. Network Read promotes the collective production of knowledge via internet-facilitated cultural exchange among several communities. In particular, the network aims to create a social space for communication--the goal being to stimulate the development of existing local activities. ICT, therefore, has become a resource for producing cultural goods.

While creating the perfect combination of the three venue categories may not be possible, increased collaboration among venues is indeed promising. For example, it may be possible to use existing resources from programs intended for the creation of telecenters to create telecenters inside existing public libraries. A library in the state of Bahia has succeeded in using this approach to acquire computers with investment of the program Identidade Digital. This program donates computers to create telecenters and financially supports the telecenters, covering costs related to internet access and operator salary. Arcas das Letras, another program explained in 2.1.2, installs micro-libraries in rural community associations. There is also an opportunity to stimulate private investment by offering tax deductions for the creation and maintenance of libraries, and the payment of venue staff.

1.7 Salient Findings

During this study researchers surveyed 1,284 users and interviewed 43 venues operators in the 5 Brazilian regions. Results bring to light important trends. According to center operators, people typically use the library and telecenters for educational purposes, while those who use cybercafés do so for entertainment. Across all categories, operators believe that users rarely access agricultural or health-related information (See Chart 3.4.1.2). Users, however, conveyed a different picture. Only 35% stated that they visit libraries for educational purposes. More drastically, only 14% of telecenter users said they used the internet for education, compared to the 40% of operators who believed their constituents relied on telecenters for such activities. The self-report data suggests that in telecenters, users seek entertainment more often than the operators believe they do.

To generalize a bit, library users are most commonly female (54.4%), between 15 and 18 years old (26.7%), and visit the library frequently (29.9%) to look for education- (34.8%) and news-related (21%) information. Both library staff and library users are much more likely to have college degrees than their counterparts in other public venues. For the most part, libraries do not have ICT infrastructure, but in those that do, users often surf the web and check their emails—especially in the north and center-west regions, where telecenters often exist within library buildings. Main barriers mentioned by users were, in order of magnitude: inadequate content, training, and operating hours .

With regard to telecenters, users are most commonly female (55.3%), between 15 and 18 years old (36.3%) and are frequent visitors (44.2%), especially in the center-west. Unlike libraries, telecenter users primarily seek entertainment-related information (42.7%) and frequently visit the social networking site Orkut (28.8%, higher in south), or play games (21.3%, higher in southeast). Main barriers mentioned by users were, in order of magnitude: inadequate operating hours, training, and content .

In cybercafés, users are most commonly male (67.1%, especially in center-west), between 15 and 18 years old (40.1%), and are frequent visitors (44.1%). Entertainment-related activities (43.7%) predominate, including Orkut (28.9%) . The main barrier mentioned here was cost (28.4%).

Overall, government and civil society have partnered to create a thriving, diverse ICT access landscape in Brazil. The result of these efforts has been to stimulate interest--especially among youth--in ICT. Even in underserved neighborhoods, adolescents are often able to easily upload and download music and pictures and create profiles for social websites like Orkut. Moreover, some internet-enabled NGOs are using ICT in the social projects that they develop (e.g. sewing and cooking cooperatives, daycare, dance, music, etc.). Finally, educators or instructors are using ICT at telecenters to network with other NGOs, plan their activities and communicate their achievements and challenges. Thus, access to ICT is being created and enhanced with public policies, private initiatives and telecom agreements with the government.

Sufficient content also exists. E-government services are available and growing, and plenty of content in Brazilian Portuguese is available on the internet. For example, over 400,000 articles are published on Wikipedia in Portuguese. What is missing, perhaps, is content that accounts for low-functional literacy levels in the general population. In short, there are public policies, political will, and the participation of multiple sectors in society designed to promote both ICT access and content creation.

What is lacking is capacity—the capacity to use ICT and to appropriate and interact with information. In all researched venues, there are few services—courses, workshops, tutorials, assistance--to address this need, perhaps due to the Brazilian concept of "service," or cultural role attributed to these venues. We observed that people do not necessarily view public access venues as sources for information, but rather as resources for communication. Even libraries are not succeeding in attracting large segments of the population, though no doubt their insufficient budget and local culture are partly to blame for the nonexistence of services that promote reading.

It is in light of these findings that researchers have suggested the following recommendations.

1.8   Key Recommendations

In essence, we must continue to support policies that expand ICT access, but we must also pause to think about how to best help underserved communities use ICT-enabled information. In this context, there is clearly a need to

invest in initiatives that effectively attract community members to public access venues and that successfully promote reading among underserved communities. We need to transform venue operators from passive facilitators of ICT access to active agents of change—those who work to promote reading and information appropriation and who understand their community's needs.

Venues themselves also need to be more community oriented by tailoring their activities to local populations. In libraries, this could mean changing the geographical model from one, centrally-located library to many smaller, community-based branches. In developed countries such as the United States, community-based libraries already play important community roles by hosting storytelling, author readings, parenting workshops, and art lessons. In Brazil, this role could be expanded to include ICT-related activities such as collaborative writing workshops, blog and website creation, image editing, and presentation production.

Therefore, it is necessary to fund community-based services in venues and the personnel needed to properly carry them out. Significant financial resources would be required to train and hire qualified staff to host and promote these activities, but if clear goals, and proof of their attainment, are established, sustainability is possible through government, NGO, and private sector funding. Given the reduction in poverty in the country, users could also be charged a small monthly fee for access to such services (See 5.2.1 for a more detailed project proposal).

Other important forward-looking steps include: creating ICT courses based on modules, which engage users in a variety of skill-building exercises; bringing the Arca das Letras model to scale by installing microlibraries in telecenters throughout Brazil; encouraging schools to open their libraries and computer labs to the public and to interface with families in the community; and helping cybercafés adopt educational goals, relieving them of their association with video games and enabling them to participate in the information-based transformation of Brazilian society.

2 Methodology

To describe the Brazilian landscape on public access to information, Brazilian researchers investigated three significant categories of venues in the country: libraries, telecenters and cybercafes. These categories were chosen based on the quantity of centers, the type and extent of network partners involved and the degree to which they serve or have the potential to serve the underserved population.

Public Libraries exist in large numbers, are sustainable and rely on qualified human resources. While they primarily serve middle and upper class populations, they also have the potential to reach underserved populations with specialized programs. **Telecenters** are created by harnessing a fascinating network of partners, including local governments, NGOs, and the private sectors; most centers are housed and maintained by NGOs, which incubate cultural and social movements, implement public policies, serve low-income communities and aim to democratize access to information and communication technology. Finding ways to pay and train venue operators are the main challenges facing telecenters. **Cybercafes** (also locally known as LAN houses), have expanded rapidly during the last three years: among Brazilian internet users, 49% accessed the Internet from a paid center in 2007 (versus 30% in 2006 and 19% in 2005). This growth was even bigger in poorest regions of the country. Cybercafes facilitate access but do not generally offer guidance or training to users.

 School libraries and computer labs—the latter of which receives significant government investment--were not investigated in this research because the majority of them do not offer open access to the public. University libraries do offer public access to ICT, but they are seen as elite venues are not visited by the underserved population and were also not studied.

2.1.1 Venues studied

Enter the details to complete the table based on the venues studied in this country (more details will be filled in other sections):

	Public Libraries	Telecenter	Cybercafe	
Total number in country	5,097	13,351	58,000	
A. # in urban location	estimated 4870	NA	NA	
% offering ICT	<15%	100	100	
Total # of people served (annual)	NA	NA	22,000,000	
B. # in non-urban location	0	0	0	
% offering ICT				
Total # of people served (annual)	0	0	0	

Comments (comment especially on definition of urban/non urban in the country):

- According to Brazilian legislation (dated to 1938, when the country was mainly rural) all towns with local government representation (municipal headquarters)are considered urban--even small towns. Area and main economic activity are not factored in. Researchers and policy makers criticize this legislation, arguing that small agricultural settlements should be considered rural, as their urban status prevents them from receiving government benefits directed at rural development. (Reis, 2006)

  As a result of this definition, there are virtually no public access venues in non urban areas. There is no available data, however, to confirm this fact.

- All centers we studied are located in urban areas, according to Brazilian law. But in the second phase of this survey, at least one-third of included venues were located in small, primarily agricultural towns.
- The percentage of libraries offering ICT services could not be precisely defined for the whole country because individual municipalities control ICT access and the National System of Libraries does not keep track of this data. For the state of Rio Grande do Sul, one of Brazil's most developed states, 15% of libraries are equipped with ICT. As a result, we have estimated that less than 15% of libraries are equipped with ICT throughout the country.
- Cybercafe users make up 49% of the 45 million internet users in Brazil.

2.1.1   Other experiences of public access to information that are not quite "venues"

Basic information about other experiences with potential to make a difference to the public access landscape (tea rooms, Wi-Fi hotspots, coffee houses, web information portals) although they are not quite a "public information venue" in the sense defined for this study (see research design document for definition).

Other public access experience #1:   Arca das Letras (Language Bookshelf)

Arca das Letras (Languge Bookshelf) is a program implemented by Ministry for Agricultural Development, that donates 220 books, in a special bookshelf made of wood, to community associations located in rural areas. This program especially benefits communities waiting to receive land from "agricultural land reform" and indigenous communities, both of which have few other resources to books and libraries. Arca das Letras also trains volunteers to promote reading in the communities. Since 2003, 4,812 bookshelves have been distributed in1,600 counties. Despite donating few books (220), this low cost initiative has shown significant results in increasing the habit of reading in benefited communities. Importantly, books are locally relevant, and often cover specific themes that interest the community (agricultural techniques, children's reference books, romance, poetry , etc). In Onze Negras, a rural area of Pernambuco in the Northeast, youth line up to borrow books, especially when the local school encourages students to read. On Fridays, children borrow books, read them over the weekend and later discuss them in the classroom.
One student expressed her enthusiasm for the program in an interview with *Nova Escola* magazine.

"When we didn`t have the bookshelf we had to travel for half an hour in a van to do research. When we read we develop our mind!" Juliana Silva

Total number in country: 4,821

% offering ICT access: 0

% in urban location: 0

Comments on how it is influencing public access venues in the country:

The *Arca das Letras* experience is an important example of a low cost solution to promote information access in rural areas. With community-specific content, people are more interested in reading books and school dropouts have decreased (according to community leaders reporting to Nova Escola magazine).

These bookshelves could be donated to telecenters or NGOs that host telecenters in small towns located in areas with rural activities.

Other public access experience #2:   Library Truck

Description :

   Library Truck is an initiative supported by Petrobras (national oil company) and implemented by the NGO Leia Brasil (Read Brazil). Trucks with 20,000 books circulate 50 public schools located in four states. Schools receive the library truck every two months. The visits are compared to a Trojan Horse. When a library truck parks in front of a public school schools engage in intense activities to promote reading, involving all school subjects and teachers, families and community members. For each visit, an average of 400 books are borrowed and circulated among students and local people interested in reading.

In contrast to regular school libraries, library trucks have higher records of visits and borrowed books. They also disseminate books in urban and rural areas, especially where local libraries frequently do not have good selections of books and do not promote reading effectively.

     Total number in country: 50

     % offering ICT access: 0

     % in urban location:

Comments on how it is influencing public access venues in the country:

 The library truck is influencing regular libraries to promote reading programs and influencing schools to dedicate more time to reading activities. This initiative shows that large, static collections of books are less useful than small collections combined with community-relevant activities and the mobilization of educational institutions and local communities.

2.1.2   Other existing public access venues, not included in this study

Basic information about other public access venues **not** included in the study (e-tuktuk, school or other private libraries not open to the public, health centers, etc), although they could play a role in public access information in the country. Indicate rationale for NOT including them in the study.

Other venue not studied #1:   Libraries in public schools

     Total number in country: 41.951

     % offering ICT access: NA

     % in urban location: NA

Description of the Venue:

   Libraries located in schools are used mainly by schoolchildren. They are important because there are many of them, they are spread throughout the country, and they are sustainable. Currently, they do not serve their community and few of them are equipped with computers, but they have the potential to implement public programs to provide access to information, with or without ICT.

Reason why it was not included in the study:

   They are used mainly by schoolchildren and teachers; they do not promote public access to information

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Other venue not studied#2:   Schools computer labs

   Total number in country: 15.119 (2007)

   % offering ICT access: NA

   % in urban location: majority of them

Description of the Venue:

   Computer labs in schools are created by Proinfo, a Ministry of Education program. by installing an average of 12 computers per school. According to A Rede magazine, there were already 20,000 labs installed in public schools as of April 2008, benefiting all public high schools in Brazil (14,000) a portion of public middle schools.

The creation of computer labs in schools and their connection to broadband internet is the primary public policy planned by the federal government to promote public access to information and communication technology.

On the 8th of April of 2008, the president launched the program "Broadband at schools", which will revolutionize education and the learning process in Brazil. It will also radically change the current scenario of access to the ICTs, especially because the majority of Brazilian internet users is between 10 and 24 years old. This initiative will enable all students from public elementary and high schools in the urban areas of the five major regions of Brazil to have access to broadband Internet until the end of 2010. According to the agreement between the Federal Government and the Telephone companies, this represents access to 83% of public school students enrolled in over 56 thousand schools within the urban network for the next 17 years. The goal is that 40% of the public elementary schools included in the program have computer labs with access to broadband connections to the Internet yet in 2008. In the following year, a further 40% of the schools will benefit and, in 2010, the remainder 20% will be covered. This service should benefit 37.1 million students

when it's fully established. Initially the connection speed provided will be of 1 megabit and in 2010 it will go up to 2...

From the 142 thousand Brazilian schools only 8% have Internet connection with speeds of over 512 Kbps. In order to change this reality we've created the program "Broadband at school". This program is a result of the combined efforts of several ministries and sectors of the federal government, in partnership with telephone companies. Amongst these sectors there are the Presidency, the Civil House, the Secretariat of Communication (Secom), the National Telecommunications Agency (Anatel), the Ministries of Education, Communication, Planning and Science and Technology.
(Santos, 2007)

For the first time in history, half of the population has access to a computer, according to an article based on research conducted by Internet Steering Committee during 2007. The article was written by Rogério Santanna dos Santos is Secretary for Logistics and Information Technology from the Ministry of Planning, Budget and Management, and board member of the Brazilian Internet Steering Committee.

Reason why it was not included in the study:

Computer labs located in schools were not included in the study because most of them are not open to the community; that is, they give access to their students during school hours. But recently, government leaders in ICT have been considering opening these labs to the community after school hours and during weekends. This idea has already been implemented by some schools participating in the *Escola Aberta* (open school) program., which aims to extend school facilities to the community. While opening up ICT access presents some challenges related to teacher and staff shifts, it also is a huge opportunity to maximize the results of public investment in ICT access.

Other venue not studied#3: One Computer per Child Project

UCA – one computer per student program. Inspired by the MIT-based OLPC (One Laptop per Child), the Brazilian government created its own program to explore one-to-one computing possibilities in schools. As of 2007, there are five trial schools using low cost laptops from several manufacturers: the OLPC XO, Intel Classmate PC and Encore Mobilis. In 2008, the government expects to acquire and distribute 150,000 laptops for 300 schools in every state. Government officials expect to make a bid soon, as the Ministry of Education has already secured a budget for the pilot program.

More Information: contact project manager: Jose Luiz Aquino, President Lula's Advisor for UCA project: jl.aquino@planalto.gov.br

2.2 Inequity Variables

2.2.1 Socio-economic status

According to ABEP (Associação Brasileira das Empresas de Pesquisa www.abep.org) socio-economic status is calculated by combining the household head's education level and the household's possession of appliances possession, both of which are given scores. The overall calculated score is used to generate the household's economic social class (A, B, C, D, E).

Livia Sobotta, adviser to President Lula on Digital Inclusion, stated that members of Class A and B usually access ICT from home and work; class C benefits from tax deduction programs that promote computer purchases and public access venue creation; and classes D and E mainly depend on public access venues to access information.

78% of people not owning computers responded that costs were too high to purchase one. 58% of people not connected to the internet at home also cited costs as their primary barrier (CGI, 2007).

Poorer people were more likely to use cybercafes than their rich counterparts. Among internet users earning less than the minimum wage, 78% declared they access the web through paid public access centers. By contrast, only 30% of those who earned more than five times the minimum wage relied on cybercafés. (CGI, 2007)

how you addressed it in this stud y: We have focused the research on initiatives that aim to promote information access in underserved communities, where the majority of inhabitants belong to class C, D and E. We selected our venues by looking for organizations specifically serving these populations. Despite challenges associated with to gathering information about cybercafes, they were selected for this research because they serve the poorest populations.

University libraries were not considered because people belonging to D and E classes generally do not visit them. Although cybercafés are still locally known as LAN houses, we consider them a public access venue because of their popularity in underserved communities.

2.2.2 Educational level

Educational level is closely related to socio-economic level.

Paid public access centers(cybercafes) are used mainly by less educated people: for example, 64% of users in elementary school, 53% of students in high school and 54% of adults with less than an elementary school education used cybercafes in 2007. By contrast, only 27% of the users with university degrees used these venues. (CGI,2007)

how you addressed it in this study: We focused on venues that serve underserved populations.

2.2.3 Age

Most internet users in Brazil are between 10 and 24 years old.

According to survey conducted with 1284 users from the studied venues, the majority of them are between 15 and 35 years old. (65 to 68%, varying among venues). Taking users between 36 to 60 years old, libraries have the highest percentage of users (15% compared to 5% in Telecenters and 3% in Cybercafes).

In some Brazilian states legislation technically forbids unaccompanied children under 12 from visiting cybercafés but cybercafes we visited were generally full of children.

how you addressed it in this study .

2.2.4 Gender

Gender research shows small gender differences among internet users in Brazil: 42% of men and 39% of women use the internet. More women access the internet from home than men; the reverse is true for cybercafés. (CGI, 2007)

how you addressed it in this study:

2.2.5 Location

This is a good place to offer further details on the urban/peri-urban/non-urban definitions and relevance in your country, among other location variables.

The 5 official regions that divide the Brazilian territory are the main location variable assessed in this research. The Northeast is the poorest region and the second most populated; the Southeast and South regions are the most developed areas, together accounting for 56% of Brazilian population; the North and Center-west regions are home to just 15% of Brazil's inhabitants.

Only 11% of households in the Northeast own computers, compared to 29% ownership in the South and Southeast regions.

By region, the proportion of people who have accessed the internet is: Southeast, 43%; Northeast, 33%; South, 46%; North, 32%; and Center-west,45%.

 See comments in 2.1.1 for the Brazilian definition of "urban" areas.

how you addressed it in this study: In this study, researchers selected 8 to 9 centers in each Brazilian region to study in the second phase. At least one-third of the selected centers were located in small agricultural towns, which approximate "non urban" locations.

2.2.6 Other inequity variable

2.3 Data Gathering Techniques

Describe the different data gathering techniques you used to conduct this study. Provide specific examples and sample selection criteria.

2.3.1 Literature review

Describe the type and approximate number of documents reviewed. Include detailed references of the most useful ones. Include valid links for all online sources.

> 37   number of documents reviewed.

Researchers reviewed a variety of documents including research conducted by the Brazilian Internet Steering Committee (CGI) and articles published in the introduction to the CGI research. Academic articles about poverty, social research methodology, and urban versus rural definitions were also consulted. The Digital Inclusion Map created by IBICT guided us in the beginning of this investigation. We also consulted ministry and government agency websites to review public policies about information and ICT programs and announcements. Magazines with a focus on ICT for development and education were also useful for the research. Finally, the national statistic institutes IBGE and INEP were consulted as well.

Most useful bibliography:

- ABEP - Associação Brasileira das Empresas de Pesquisa - www.abep.org

- ABINE – Associação Brasileira da Industria de Elétricos e Eletrônicos - www.abinee.org.br

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    o   <www.ibge.gov.br/>. Acesso em jan/08.

- Instituto Brasileiro de Informação em Ciência e Tecnologia – IBICT. Disponível em <http://www.ibict.br/noticia.php?id=144>. Acesso em dez/07.

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- Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira – INEP. Disponível em <http://www.inep.gov.br/>. Acesso em jan/08.

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WAISELFISZ, Julio Jacobo. Mapa das Desigualdades Digitais. Rede de Informação Tecnológica Latino-Americana - RITLA. 1ª edição. 2007.

2.3.2   Individual interviews

Describe the type and approximate number of individuals you interviewed. Include detailed contact information for the most useful ones (indicate for which topic, if appropriate). Discuss how representative is this sample of people you interviewed in relation to different opinions and perspectives in the country.

49   number of individuals interviewed.

Describe

2.3.2.1 Individual interviews during **first phase** of the research were conducted to gather information from experts, policy makers, government representatives and venue network coordinators.

❑ **Anaiza Gaspar – Coordinator of the Digital Inclusion Map, an Ministry of Science and Technology   program.   http://inclusao.ibict.br Contact info: anaiza@ibict.br, phone: 55 61 32176439, cellphone: 61 95567461**

❑ **José Avando – Director of the Association of Telecenters for Information and Business, an organization created to manage the digital inclusion program created by Ministry of Industry Commerce and Development.   http://www.telecentros.desenvolvimento.gov.br;**

Contact Info: jose.avando@atn.org.br phone (61) 3965-3309 (61) 3965-3399, address – SCS Quadra 02, Edifício Anhangüera, Sala 304 - 70315-900 Brasilia DF – Brazil

❑ **Mario Brandão – President of Associação Brasileira de Centros de Inclusão Digital – ABCID –National Association of Centers for Digital Inclusion. Area of expertise: Paid access centers. www.abcid.org.br address of the association: Rua Moreira, 73 – Abolição – Rio de Janeiro/ RJ – CEP 20751-190 – Brazil. Phone; 55 2187676799 or 55 21 25998863**

❑ **Morgana Marcom – Coordinator from the state public library system in Rio Grande do Sul Contact info: Rua Riachuelo, 1190 - Centro Porto Alegre - RS 90010-273 Tel.:(0xx51) 3224-5045 / 3286-3677 / 3225-9426 Telefax:(0xx51) 3225-9411 E-mail:bpe.direcao@via-rs.net; bpe@via-rs.net; sebp@via-rs.net**

- **Ilce Gonçalves Milet Cavalcante - Coordinator of the National System of Public Libraries**
  Contact info:Rua da Imprensa, 16 - 11 º andar
  Rio de Janeiro - RJ - 20030-120
  Telefax:(0xx21) 2210-1134
  E-mail:ilce@bn.br

- **Jéferson Dos Santos Assunção – General Coordinator of Books and Reading – Ministry of Culture**
  Brasília
  Tel: (61) 3316-2099
  Fax: (61) 3224-5829
  E-mail: jeferson.assumcao@minc.gov.br

- **Kevin Krieger – Chief Secretary of Human Development in Porto Alegre; person in charge of the Telecenter Program supported by the municipality in partnership with grassroots organizations. kkrieger@gmail.com**

2.3.2.2 During **second phase** of research, we interviewed 43 operators in libraries, telecenters, and cybercafés.

Venues were selected using purposive non-probability sampling. In this technique researchers establish the sampling criteria based on their informed judgment. We chose this technique because of our limited time and budget.

According to Gil (2007) purposive sampling *(amostragem por tipicidade)* is done by selecting a subgroup of the population which, based on available information, may be considered representative of the general population. This technique requires that researchers have considerable knowledge about the local population and selected group.

The criteria established by Brazilian researchers are based on the division of Brazilian territory in 5 official regions (South, Southeast, North, Northeast and Center-west). In each region, a representative state was selected, with additional consideration given to logistical constraints (i.e. the availability of local researchers to implement interviews and surveys).

In each of the 5 regions, interviews were conducted with 8 to 9 operators from local venues. Researchers aimed for 3 telecenters, 3 libraries and 3 cybercafés in each state. Although at least one-third of the selected venues were located in small municipalities, all venues were located in urban areas according to Brazilian legal definitions.

The distribution of selected venues is as follows:

Region:	South	Southeast	Center-west	North	Northeast
State:	Rio Grande do Sul	Sao Paulo, Minais Gerais	Mato Grosso	Bahia	Para

Libraries:	3	3	3	2	3
Telecenters:	3	3	2	3	2
Cybercafes	3	3	4	3	3

When less than 3 centers were researched for a particular venue, researchers were unable to find more centers of that kind in their municipalities.

2.3.3 Group interviews and focus groups

Describe the type and number of group interviews or focus groups you conducted. If available, include detailed contact information for the most useful informants (indicate for which topic, if appropriate).

0 number of group interviews or focus groups.

2.3.4 Site visits

Describe the number and location of site visits you conducted. If available, include detailed contact information for the most useful informants (indicate for which topic, if appropriate).

46 number of site visits.

Three sites were visited during the first phase to create the "Cases" for each venue. During the second phase, researchers visited 43 sites to implement the survey provided by the University of Washington

Library Venues: 14 public libraries, from 5 Brazilian regions; 445 library users.
SOUTH REGION
- Biblioteca Municipal Josué Guimarães – Porto Alegre/RS, survey with 30 users..
- Biblioteca Pública do Estado – POA RS, 30 users.
- Biblioteca Municipal Caldas Júnior – Espumoso/RS, 34 users .

SOUTHEAST REGION
- Biblioteca Infanto-Juvenil Monteiro Lobato – São Paulo/ SP, 30 users
- Biblioteca Municipal Prof. Ernesto Manuel Zink – Campinas/SP, 30 users.
- Biblioteca Municipal José Alexandre Moraes – Cambuí-/ MG, 35 users.

CENTER-WEST REGION
- Biblioteca Pública de Sinop – Sinop/MG, 30 users.
- Biblioteca Pública do Estado do Mato Grosso – Sinop/MG, 30 users.
- Biblioteca Pública de Cárceres – Cárceres/MG, 30 users.

REGIÃO NORDESTE
- Biblioteca Pública do Estado da Bahia – Salvador/BA , 50 users.
- Biblioteca Infantil Monteiro Lobato – Salvador/BA, 35 users.

NORTH REGION

- Biblioteca Municipal de Santarém – Santarém/ PA, 49 users.
- Biblioteca do Instituto Cultural Boanerges Sena - Santarem/PA, 23 users.
- Biblioteca Municipal de Belterra – PA, 09 users

Telecenters: 13 centers in 05 Brazilian regions; 394 users

SOUTH REGION

- Telecentro Ilha Grande dos Marinheiro – POA/RS, 44 users.
- Telecentro Casa Brasil – POA/RS, 31 users.
- Telecentro Banco do Brasil – Espumoso/RS, 30 users.

SOUTHEAST REGION

- Telecentro Biblioteca Pedro da Silva Nava – São Paulo/ SP, 35 users.
- Telecentro Centro de Formação para Trabalho e Cidadania – Campinas/ SP, 30 users.
- Telecentro Comunitário Prof. João Lázaro Simões – Córrego do Bom Jesus/ MG, 32 users.

CENTER-WEST REGION

- Telecentro CAD – Sinop/MG, 30 users.
- Telecentro ADECOM – Sinop/MG, 30 users.

NORTHEAST REGION

- Telecentro OAF Casa Brasil – Salvador/ BA, 09 users.
- Telecentro CESEP CDI – Salvador/BA, 51 users.
- Telecentro Identidade Digital – Santa Bárbara/BA, 52 users.

NORTH REGION

- Telecentro Cultural de Suruacá – Santarém/PA, 13 users.
- Telecentro Cultural de Maguari – Belterra/PA, 07 users.

Cybercafes: 16 centers in the 05 Brazilian Regions; 444 users.

- Lan House R&E – POA/RS, 34 users.
- Lan House Morro da Cruz – POA/ RS, 30 users.
- Lan House Espumoso – Espumoso/ RS, 30 users.

REGIÃO SUDESTE

- Lan House Jardim Colombo – São Paulo/ SP, 32 users.
- Casa da Vó – Campinas/ SP, 30 users.
- Speed Café – Cambuí/ MG, 35 users.

- **REGIÃO CENTRO-OESTE**
- Cyber Net Play – Sinop/MG, 30 users.
- Ciber Matrix – Sinop/MG, 30 users.
- Ciber Net Point – Sinop/MG, 30 users.
- Ciber Arena – Cárceres/MG, 30 users.

- **REGIÃO NORDESTE**
- Lan House Spell - Salvador/BA, 27 users.
- Lan House Evolution – Salvador/ BA, 35 users.
- Ciber Net – Santa Bárbara/ BA, 29 users.

- **REGIÃO NORTE**
  - Ciber Capuccino - Santarém /PA, 17 users.
- Ciber Global - Santarém/PA, 16 users.
  - Ciber Navegando.com - Belterra/PA, 09 users.

Total: 43 centers and 1283 users

The sample selection criteria is described in 2.3.5 - Surveys

2.3.5   Surveys

Describe the location and number of respondents to surveys you conducted for this study. Indicate their relative distribution across venues (for example, 30% in telecentres, 20% in cybercafés, 50% in public libraries), and how they were selected.

Describe the venues, their locations and the sample size for each:

2.3.5.1 Survey implemented during **first phase**:

	Public Libraries	Telecenters	Venue 3
# of **urban** venues surveyed	05	06	0
# of **non-urban** venues surveyed	0	0	0
# of respondents in **urban** venues	05	06	0
# of respondents in **non-urban** venues	0	0	0

Survey description and comments:

During first phase of this research a survey was implemented to gather information from telecenters and libraries. The instruments were created by local researchers with the intent to respond to Venue Specific Assessment, as requested in first phase forms(see Appendices C and D). Questionnaires were sent by e-mail accompanied by a letter introducing the research and requesting participation. When there was no response by e-mail, Brazilian researchers made phone calls to reach the experts and ask them to respond the survey.

To research telecenters, we selected the 12 largest networks of telecenters (telecenter program) in the country (according to MID IBICT, 2007), and asked their coordinators to respond to a series of questions. Contacts were made by phone and questionnaires were sent by e-mail. We contacted 12 telecenter programs, but only 6 responded the survey.

A similar process was developed with libraries, but the sample definition was different. Because libraries are organized by state library systems,

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researchers planned to implement the survey with the coordinator of the
library system from each one of the 27 Brazilian states.
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The instruments were developed based on questions from *Form 4*(first phase)
that could not be answered based on existing secondary research. Two specific
questionnaires were created, one for telecenters and another for libraries.

2.3.5.2   Survey implemented during **second phase**:

	Public Libraries	Telecenters	Cybercafés
# of **urban** venues surveyed	14	13	16
# of **non-urban** venues surveyed	0	0	0
# of respondents in **urban** venues	445	395	444
# of respondents in **non-urban** venues	0	0	0

Survey description and comments:

Venues were selected using purposive non-probability sampling. In this
technique researchers establish the sampling criteria based on their informed
judgment. We chose this technique because of our limited time and budget.

According to Gil (2007) purposive sampling *(amostragem por tipicidade)* is
done by selecting a subgroup of the population which, based on available
information, may be considered representative of the general population. This
technique requires that researchers have considerable knowledge about the
local population and selected group.

The criteria established by Brazilian researchers are based on the division of
Brazilian territory in 5 official regions (South, Southeast, North, Northeast and
Center-west). In each region, a representative state was selected, with
additional consideration given to logistical constraints (i.e. the availability of
local researchers to implement interviews and surveys).

Region:	South	Southeast	Center-west	North	Northeast
State:	Rio Grande do Sul	Sao Paulo, Minais Gerais	Mato Grosso	Bahia	Para
Libraries:	3	3	3	2	3
Telecenters:	3	3	2	3	2

| Cybercafes | 3 | 3 | 4 | 3 | 3 |

Of the 43 centers where surveys were implemented, 32.5% were libraries, 30.3% were telecenters and 37.2% were Cybercafes. These numbers approximate the researchers' 1:1:1 sampling goals.

Proportion of centers researched in relation to the country total:

	Libraries		**Telecenters**		**Cybercafés**
Total	**5,097**	**Total**	**13,351**	**Total**	**58,000**
# Researched	**14**	**N° researched**	**13**	**N° researched**	**16**
% of Total	**0.27%**	**Percentage**	**0.07%**	**Percentage**	**0.02%**

2.3.6   Other data gathering techniques

Other Data Gathering Technique 1: Simple Observation Technique

   During visits to telecenters, libraries and cybercafés, when implementing surveys researchers also used the simple observation technique. We looked for venue characteristics such as: how active or spontaneous the users were; what kind of activity they were engaged in; whether groups of children were visiting libraries on school trips; the age of book collections in libraries; and the age of computers in cybercafés and telecenters.

2.3.7   Most useful contacts

List here some of the most knowledgeable and useful contacts that can provide additional information and insight, in case someone else wants to gather additional information about this topic in the country.

> Paste contact details here: name, position, organization, contact info, area of expertise of knowledge.

   Name: Cezar Alvarez

Role: Special Advisor to President Lula

Comments: Responsible for Digital Inclusion Programs, all venues related to Digital ICT.

Contact: cezar@planalto.gov.br; Tel:: 55 61 34111663; fax: 55 61 33224894.

Name: Rogerio Santanna dos Santos

Role: Secretary of Logistics and Information Technology in the Ministry of Planning

Comments: responsible for government initiatives related to refurbishing computers and issues related to broadband infrastructure.

Contact: rogerio.santanna@planejamento.gov.br; Tel: number 55 61 3222056; fax: 55 61 3221393

Name: José Avando

Role: Director of the Association of Telecenters for Information and Business

Comments: an organization created to manage the digital inclusion program created by Ministry of Industry Commerce and Development.

http://www.telecentros.desenvolvimento.gov.br

Contact: jose.avando@atn.org.br; Tel: (61) 3965-3309, (61) 3965-3399;address: SCS Quadra 02, Edifício Anhangüera, Sala 304 - 70315-900 Brasilia DF – Brazil

Name: Anaiza Gaspar

Role: Coordinator of the Digital Inclusion Map initiative

Comments: an IBICT program in the Ministry of Science and Technology. http://inclusao.ibict.br

Contact: anaiza@ibict.br; Tel: 55 61 32176439; Cell: 61 95567461

Name: Mario Brandão

Role: President of Associação Brasileira de Centros de Inclusão Digital – ABCID –National Association of centers for Digital Inclusion.

Comments: Area of expertise is paid access centers throughout the country. www.abcid.org.br

Contact: Rua Moreira, 73 – Abolição – Rio de Janeiro/ RJ – CEP 20751-190 – Brazil; Tel: 55 2187676799 or 55 21 25998863

Name: Celso Fernandes

Role: General coordinator of CDI – Committee for Democratization of Information Technology, www.cdi.org.br

Comments: an NGO that refurbishes computers and delivers them to other NGOs and promote training. Based in Rio de Janeiro but oversees activities in many states of Brazil and in other Latin America countries.

Contact: 55 21 91145509 .

Name: Nivaldo Tadeu Marcusso

Role: Director of Fundacion Bradesco

Comment: Foundation of the biggest private bank in the country, with initiatives to create and maintain telecenters and promote IT use in schools; Area of expertise: telecenters and schools in the country.

Contact: nmarcusso@fundacaobradesco.org.br; Tel:: 55 11 36842922; fax 55 11 36845191

Name: Anamarcia Vainsencher

Role: Publisher of A Rede magazine

Comment: focus on the use of ICT for development. All kinds of venues throughout the country. www.arede.com.br

Contact: anamarcia@momentoeditorial.com.br ;Tel: 55 11 31247444;Cellphone 55 11 83728703

Name: Carlos Afonso

Role: Director of RITS, Rede de Informacoes para o Terceiro Setor

Comments: NGO with focus on providing information for NGOs; www.rits.org.br; represents the third sector in the Brazilian Committee for Internet Governance (www.cgi.br); Area of expertise: information for the third sector, internet governance, telecenters, national and international

Contact:

Name: Tadao Takahashi

Comment: Pioneer in Brazilian IT development, responsible for internet and digital inclusion policies during the Fernando Henrique Presidency. Coordinated the creation of the Green Book and the White Book, two publications from 2001-2002 to organize and establish priorities for the information society in Brazil; Researcher

Contact: tadao.takahashi@uol.com.br; Tel: 55 21-9188-1357.

Name: Morgana Marcom

Role: Coordinator of the public libraries system in Rio Grande do Sul state

Contact: Rua Riachuelo, 1190 – Centro, Porto Alegre – RS, 90010-273, Tel.:(0xx51) 3224-5045 / 3286-3677 / 3225-9426, Telefax:(0xx51) 3225-9411, E-mail:bpe.direcao@via-rs.net, bpe@via-rs.net. sebp@via-rs.net

Name: Ilce Gonçalves Milet Cavalcante

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Contact:Rua da Imprensa, 16 - 11 º andar, Rio de Janeiro - RJ - 20030-120
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Name: Jéferson Dos Santos Assunção

Role: General Coordinator of Books and Reading – Ministry of Culture
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2.4 Research Trustworthiness and Credibility

2-3 paragraphs

Describe any steps you took to minimize your own bias in conducting this study, and to increase the credibility and trustworthiness of the results you are presenting.

Fundação Pensamento Digital is an organization that creates and supports telecenters in partnership with many institutions, rendering us prone to biases. Nonetheless, we ensured our credibility by including few venues that we have already worked with in the study sample and expanding our sample to include 43 public access points and 1284 users, across all of the five Brazilian regions. We also included several team members that were not involved with initiatives at the Foundation. Many of our researchers are social scientists, having backgrounds in scientific methodology and thought. Moreover, our connection to the telecenter world helped us contact policy makers, government officials, NGOs and community leaders, all of which made our research more comprehensive.

We also consulted a large number of government and NGO documents and academic articles to provide us with additional context on public access venues and associated barriers and opportunities related to ICT use.

2.4.1 Research limitations

Describe important limitations you encountered in conducting this research, and limitations in drawing generalizations or broader conclusions based on the findings you report.

Despite our large samples size (five times UW's required sample size) our sampling technique limited the usefulness of statistical analyses, which were not performed. We were also unable to gather some important data, such as the stratification of cybercafés by region, or the precise percentage of libraries with ICT access.

In our analysis, we fed data into Excel spreadsheets, which ultimately proved cumbersome given our large data set. In retrospect, we would have used more appropriate software to process our survey results.

Given the complexity of the data, we imagine that the University of Washington will have difficulties doing cross analyses among countries. Looking at the overall study, we believe that creating an online repository for all data from all countries would have been more useful.

2.4.2   Team qualifications

1 paragraph

Description of the research team and its qualifications to undertake this study.

MARTA VOELCKER – Project coordinator; Ph.D. in Information Technology for Education in progress; also holds MA in Social Psychology and BA in Administration with specialization in Nonprofit Management; is social entrepreneur and co-founder of Fundacao Pensamento Digital, an organization she has managed since 2000; acknowledged as a Most Promising Social Entrepreneur, by the NGO Digital Partners (Seattle, WA 2003); manages several programs through Fundacao Pensamento Digital which was recognized as Best NGO for Digital Inclusion in Brazil by the telecom company Telemar in 2005. Establishes and manages partnerships with private corporations like Dell Computers, Microsoft and others, with federal, state and municipal governments (including secretaries of education), as well as universities such as UFRGS, USP, UFRJ, UNB. Research coordinator

ANA CLAUDIA ALVES – Social scientist; manages Digital Cooperation Network Program at Fundacao Pensamento Digital. Coordinated data gathering in the 5 regions of Brazil the organization and information summary.

GABRIEL NOVAIS – MA in International Educational Policy at Stanford University, USA in progress; BA from Stanford in Human Biology; has worked on and researched educational initiatives in Brazil, South Africa, and the USA; contributed to the elaboration of reports, especially executive summary, findings, and recommendations; responsible for English revision.

GABRIELA SANCHEZ – BA in Library Science, Researched public libraries during first phase

SUSANA SEIDEL – M.A, student in Social Psychology; BA in Mathemathics; Researched telecenters during first phase

BRUNO FAGUNDES SPERB – Psychologist; fluent in English. Research collaborator at Cognitive Studies Laboratory at UFRGS. Researched cybercafe venue and contributed to English translation during first phase

DANIELA STEVANIN HOFFMANN – Ph.D. student in Information Technology for Education; also holds M.A. in Social Psychology and BA in Mathematics; Fluent in English; Research collaborator at the Cognitive Studies Laboratory at UFRGS. Researched libraries and contributed to English translation during first phase

MÁRCIA CRISTINA ALVES – Social scientist studying job market studies ; responsible for data collection in South region; has a BA degree in Social Science from PUC; helped organize survey data and create graphics during second phase;

LUCIO JOSE DUTRA LORD – Social scientist, professor of sociology at UEMG University; Ph.D. in Social Sciences in progress; holds M.Ed.; responsible for state research on higher education; coordinated data collection in the Center-west region during second phase

ÂNGELA VIEHMAYER GAUDÊNCIO – Social scientist working with riverine communities in Para; CEO of an NGO in that state; holds a BA degree in Sociology from UERJ; collected data in the North region during second phase

ELLIS MARA REZENDE – Communications College in progress at Campinas University, in the Southeast region; manages Pensamento Digital team in São Paulo, where she coordinates initiatives like the Digital Citizen Project and the Digital Cooperation Network Program.

3 Country Assessment

3.1 Overall Country Assessment

Provide a broad picture of the public access information landscape in the country, informed by the results of this research. In 2-3 paragraphs, what is your overall assessment of public access information venues in this country?

To describe the Brazilian landscape on public access to information, Brazilian researches investigated three significant categories of venues in the country: public libraries, telecenters and cybercafes. These categories were chosen based on the quantity of centers, the type and extent of network partners involved and the degree to which they serve or have the potential to serve the underserved population.

Public Libraries exist in 85% of Brazilian municipalities, are sustainable and rely on qualified human resources. While they primarily serve middle and upper class populations, they also have the potential to reach underserved populations with specialized programs. There are 5.097 Public Libraries in the country. **Telecenters** are created by harnessing a fascinating network of partners, including local governments, NGOs, and the private sectors; most centers are housed and maintained by NGOs, which incubate cultural and social movements, implement public policies, serve low-income communities and aim to democratize access to information and communication technology. Finding ways to pay and train venue operators are the main challenges facing telecenters. There are 13.357 Telecenters in the country. **Cybercafes** (also locally known as LAN houses), have expanded rapidly during the last three years: among Brazilian internet users, 49% accessed the Internet from a paid center in 2007 (versus 30% in 2006 and 19% in 2005).. This growth was even bigger in poorest regions of the country. Cybercafes facilitate access but do not generally offer guidance or training to users. Researcher estimate a total of 58.000 cybercafes in Brazil

During this study researchers conducted surveys with 1,284 users and interviewed 43 venue operators in the 5 Brazilian regions. Results bring to light important trends: to generalize a bit, library users are most commonly female (54.4%), between 15 and 18 years old (26.7%), and visit the library frequently (29.9%) to look for education- (34.8%) and news-related (21%) information. For the most part, libraries do not have ICT infrastructure, but in those that do, users often surf the web and check their emails. Main barriers mentioned by users were, in order of magnitude: not enough content, training, and operating hours. With regard to telecenters, users are most commonly female (55.3%), between 15 and 18 years old (36.3%) and are frequent visitors (44.2%), especially in the center-west. Unlike libraries, telecenter users primarily seek entertainment-related information (42.7%) and frequently visit the social networking site Orkut (28.8%, higher in south), or play games (21.3%, higher in southeast). Main barriers mentioned by users were, in order of magnitude: inadequate operating hours, training, and content .In cybercafés, users are most commonly male (67.1%, especially in center-west), between 15 and 18 years old (40.1%), and are frequent visitors

(44.1%). Entertainment-related activities (43.7%) predominate, including Orkut (28.9%) . The main barrier mentioned here was cost (28.4%).

3.2   Real Access Framework

Summarize the key findings and your assessment of each dimension in the Real Access framework used in this study. You will provide more details later.

3.2.1   Access

2–3 Paragraphs:
What is your overall assessment of ACCESS ecosystem in the country (physical access, appropriate technology, affordability)?

Data reveals a significant advancement in Internet access from 2006 to 2007. Researchers have observed marked increases in the number of internet users (35 million to 45 million), computer owners already with 24%, broadband connections, as well the use of cybercafés and free-of-charge access centers. In addition, 40% of families earning between three and five times the minimum wage own computers, up from 23% in 2006. While these increases have been observed across all socioeconomic classes, access remains skewed towards the more privileged. For example, 94% of people in Class A have used the internet, while only 17% of Class D and E citizens have gone online.

Accordingly, poorer people rely more heavily on public access (access at cybercafes reached 49% from internet acces in the country and free-of-charge facilities has doubled in the past year), while upper class citizens access the internet from home and at work. The government has no policy initiatives designed to equip significant number of libraries with computers or connect them to the internet. There has been some discussion in government circles to increase support to the creation of telecenters, but recent efforts have primarily been focused on promoting ICT access via schools, creating IT Labs. There is also a plan where government expects to purchase 150,000 educational laptops for 300 schools throughout the country in 2008—the goal begin to test the viability of one-to-one computing in Brazilian public schools.

3.2.2   Capacity

2–3 Paragraphs:
What is your overall assessment of CAPACITY ecosystem in the country (human capacity, locally relevant content, integration into daily routines, socio-cultural factors, trust in technology, social appropriation of technology)?

The struggle to develop human capacity in Brazil is deeply engrained in the challenges facing the education system. While 93 % of school-age children are now attending school. the quality of public basic education remains a serious problem. According to UNESCO, Brazil's education is inefficient, particularly in the public school network. As a result, many Brazilians are literate but not functionally

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literate—that is, they do not comprehend enough about what they read to take advantage of information available to them.

For example, the results from Brazilian participation in PISA, the OECD Program for International Student Assessment (www.pisa.oecd.org) were disheartening. Among 40 participating countries in 2003, Brazil ranked 37th in reading and 40th in mathematics. The National Assessment of Basic Education shows that students are not developing necessary skills in reading, writing and mathematics.

The national Functional Literacy Index also provided sobering results. Among the population of 15 to 64 year olds in 2007, 7% are illiterate, 25% are barely literate, 40% are basically literate, and 28% fully literate.

This context brings both challenges and opportunities for ICT use in Brazil. For the 72% of citizens who are not fully literate, extracting information from currently available content presents a challenge. But online access, in whatever form, also increases the presence of written language one's life; reading and writing skills typically improve as a result. Also, ICT allows for multimedia-based information transmission, which facilitates access for non- or semi-literate users.

> The popularity of social networking via ICT also presents opportunities. Youth, even in underserved neighborhoods, are often able to easily upload and download music and pictures and create profiles for social websites like Orkut, which can require more complex uses of ICT like HTML scripts. Moreover, some internet-enabled NGOs are using ICT in the social projects that they develop (e.g. sewing and cooking cooperatives, daycare, dance, music, etc.). Finally, educators or instructors are using ICT at telecenters to network with other NGOs, plan their activities and communicate their achievements and challenges.

3.2.3   Environment

2–3 Paragraphs:
What is your overall assessment of the ENVIRONMENT ecosystem in the country (local economy, national economy, legal and regulatory framework, political will and public support, regional and international context)?

> Brazil is the largest national economy in Latin America, the world's tenth largest economy at market exchange rates and the ninth largest in purchasing power parity. Brazil has large and developed agricultural, mining, manufacturing and service sectors. The country has been expanding its presence in international financial and commodities markets, and is regarded as one of four emerging economies, also known as BRIC countries. Brazilian exports are booming, Major export products include aircraft, coffee, automobiles, soybean, iron ore, orange juice, steel, ethanol, textiles, footwear, corned beef and electrical equipment. The biggest investment boom in history is underway; in 2007, Brazil launched a four-year plan to spend $300 billion to modernize its road network, power plants and ports. Brazil's booming economy is shifting into overdrive, with biofuels and deep-water oil providing energy independence and enabling the government to generate revenue for irrigating dry areas in the Northeast. Meanwhile, the percentage of poor people is decreasing every year, meaning greater numbers of people can buy computers. The percentage of people making US$200 or less a month less is now: 28.4% in the north; 39.7% in the northeast; 22.9% in the center-west; 19.1% in the southeast; and 19.1% in the south. (IBGE, 2007) Increased purchasing power in resulted in a 23% increase in computers sales and a 211% increase in laptop sales from 2006 to 2007. (ABINE)

> The 1995 *Lei Geral de Telecomunicações* (General Legislation on Telecommunications) created a new private model for telecommunication services in Brazil. In marked contrast from the old public model, nowadays there is vibrant competition among private companies to implement telecommunication services

in Brazil. This law has also created ANATEL, the National Agency of Communication, to regulate the telecommunication system in the country. The government gives concessions to telecommunication services via a system of public bidding. Currently, three companies share the Brazilian market for broadband; as part of their licensing agreements, they must maintain a policy of corporate social responsibility. Recently, for example, the Brazilian government negotiated with operating telecoms to extend broadband to all Brazilian municipalities, and connect, free of charge, all urban schools by 2025. By the end of 2008, 22.000 schools will receive broadband, while 55.000 schools will be connected by 2010.

There is freedom of expression in the country. Based on multilateral, transparent and democratic principles, the coordination and integration of internet service activities in Brazil is controlled by the Brazilian Internet Steering Committee - CGI.br, a multi-stakeholder organization comprised of members of the government, the business sector, non-profits and the academic community.

Since the 1990s the number and the quality NGOs has significantly increased. The government implements a great part of its social assistance policies and informal education programs through partnerships with NGOs. In this context the national government has chosen to emphasize the creation of telecenters, in partnership with NGOs, as its primary ICT promotion initiatives aimed at underserved communities. NGOs are selected after sending telecenter proposals to benefit their communities with ICT access and services. The political will to create and support telecenters is stronger than that of other venues. A variety of initiatives to create and support telecenters are being developed by several ministries, municipalities and government-owned corporations. However, there is no political will in the federal government to equip libraries with ICT, nor is there an effort to partner with or support cybercafes. The existence of a variety of telecenter programs inside federal government is the focus of some criticism (regarding the non existence of an unified policy), but in the other hand, the several ongoing initiatives to create telecenters are seen as a process where ICT enter the society through a transversal process, where technology is not seen as the goal, but as a resource to improve on going policies.

Source*: IBGE, The CIA Fact Book, Survey on use of ICT in Brazil 2007- CGI, researcher findings.*

3.3   Information Needs of Underserved Communities

Describe the specific information needs experienced by underserved populations, based on the results of your research. Who could benefit from better public access to information? This could relate to e-government services, health or agriculture information, job training, employment search, among many others. Include reference to the key inequity variables in your country.

(i)   If appropriate, indicate any specifics that apply to Digital ICT services alone.

(ii)   Indicate the sources of data for this assessment

According to center operators, people typically use the library and telecenters for educational purposes, while those who use cybercafés do so for entertainment. Across all categories, operators believe that users rarely access agricultural or health-related information (Source: Chart 3.4.1.2). When asked about barriers to information access, operators of libraries most commonly stated "not enough content"; those in charge of telecenters and cybercafés responded "operation hours" and

"lack of training," respectively.

In self-reports, users conveyed a different picture. Only 35% stated that they visit libraries for educational purposes. More drastically, only 14% of telecenter users said they used the internet for education, compared to the 40% of operators who believed their constituents relied on telecenters for such activities. The self-report data suggests that in telecenters, users seek entertainment more often than the operators believe they do.

Brazilian researchers identified four main types of information needs in underserved populations:

1. **Initiatives to improve literacy.** Promoting social and economic development is impeded by the inability of low income populations to take advantage of information, not by their access to it. Initiatives that contribute to the improvement of literacy and a culture of reading are greatly needed.
    The use of ICT in initiatives aiming to improve literacy skills in schools and telecenters could significantly help groups in need. ICT use is attractive, especially for young people, and the possibilities of authorship and interaction offered by the Internet can strongly help the development of literacy skills. (FAGUNDES, 1999)

2. **Readable summaries of research on inequities and their potential solutions.** Brazilian universities have produced significant research on social development and educational improvement. But results from these studies are usually not accessed by school coordinators, teachers, NGO leaders or policy makers.

> Over the implementation of the pilots, researchers observed how a school saturated by laptops has a variety of challenges and changes. Some of these challenges are about how to introduce the new equipment in the school institution, dealing with issues like logistics, management and maintenance. Others have an epistemological approach and can relate to school methods and innovations in pedagogic practices. Meanwhile pilots are facing such challenges; their teachers are disconnected with the researches and programs that have been promoted for more than 30 years in Brazil, regarding the use of Information Technology in education.
>
> Article describing pilot experience with one laptop per child in Brazilian School –   UFRGS, 2008

Theses, dissertations and articles are available in university libraries, but the way that they are written and the difficulties in finding them, make them unusable for the majority of the population. Although in theory university libraries are open to anyone, in practice only university students use them. The reality is that the Brazilian government has failed on two counts: to invest in public libraries and to create a national reading culture.

Granted, many studies are already posted online. But the limited literacy level of the population minimizes the usefulness of these kinds of documents. The creation of easy, understandable summaries of these studies is especially needed given government reliance on NGOs and grassroots organizations to create and implement programs to address social and economic inequities.

3. **Better mechanisms for informing the population about educational opportunities and future job opportunities.** Aside from formal schooling, there are a variety of social and educational programs promoted by governments (federal, state and municipal) and NGOs designed to strengthen development opportunities in low-income populations. These include apprenticeships, vocational courses, adult literacy programs, remedial education, and other courses offered by NGOs and universities. Many of these programs are community based and are free. The key challenge—aside from expanding the scope of these programs—is to inform underserved populations of their existence.

Teenagers in low-income communities need to be informed about free educational opportunities and their admission criteria, and associated benefits. The lack of information about these opportunities contributes to a lack of hope among adolescents in poor communities. Similar claims could be made for poorly educated adults who could take a variety of educational courses.

Moreover, once employers are made aware of government initiatives, they can contribute by setting curriculum for the courses, thereby improving the programs themselves. Finally, facilitated access to information would help program managers and government officials collaborate in the implementation of these policies.

Delivery of health promotion information. With regard to information delivery, the Brazilian government has made significant strides in the fight against HIV/AIDS and dengue fever, mostly through TV, radio and newspaper campaigns. However, more work is needed to adequately deliver information to the public about chronic diseases and diseases of poverty, such as diarrhea, malnutrition, malaria and tuberculosis. According to the Ministry of Health, diseases caused by poverty kill 226 Brazilians per day, or 82,500 people per year (News paper O Globo - Feb, 9th 2008).The Virtual Library for Health (Ministry of Health), http://www.saude.gov.br/bvs already offers a variety of information ranging from policy texts to HIV/AIDS and DST prevention campaigns. Unfortunately, this information is largely inaccessible to the general public, due to its text length and linguistic complexity. The government has also created "public health stations" in

libraries specifically designed for access to the Virtual Library for Health. There are currently 22 such stations in the country. Finally, the Family Health program assigns teams of doctors and social workers to a particular geographic area. These teams focus on health promotion, disease prevention and recovery and community health in their assigned communities. They visit low-income neighborhoods, and among other activities, deliver information to low-income community members.

The creation of rich media content for the Internet can also help people with low reading scores access information. People who struggle to read large amounts of text can benefit from information transmitted via pictures, audio, and video. Delivering information through rich media is also important for e-government initiatives, which already exist but are used by few.

An important ongoing initiative is the *Rede Le*, or Network Read--a project that currently benefits 18 centers for literacy and digital inclusion in the state of Minas Gerais. Participating organizations include the Ministry of Communication (GESAC Program), the Federal University of Minas Gerais, several NGOs and the open-source software association, all of which contribute to the integration of schools in this network. Network Read promotes the collective production of knowledge via internet-facilitated cultural exchange among several communities. In particular, the network aims to create a social space for communication--the goal being to stimulate the development of existing local activities. ICT, therefore, has became a resource for producing cultural goods.

Through this network, the telecenters are transformed into radio and TV production labs. They also produce CD-ROMs, websites, printed and on-line publications, and books and others, exploring content related to local sustainability, education, cultural patrimony, design, graphic arts, hardware maintenance and the creation of open source software. "TV Read" affords internet users access to videos produced in the program, while "Radio Read" is a platform for collective audio production, so each center can create its own radio program. Network Read users can also access online courses for publishing internet content (HTML, CSS, MySQL, PHP and Wiki). **Source: http://www.ufmg.br/rede.le/**

Source: *several sources of information described above*

Television is a primary source of information for the majority of the Brazilian population (98% of Brazilian households own a TV set.) (CGI 2007) - Due to literacy challenges mentioned above, written information, even when available, is rarely used by underserved groups. The problem is not so much related to the literacy rate per se, but rather to the low comprehension capacity among the general population. Researchers believe Brazil must work to improve the functional literacy rate while also delivering information in more visual ways (i.e. less text-heavy), by taking advantage of ICT services. The InfoBahia portal for services offered by the state of Bahia is a step in the right direction; it is mainly visual, with common services expressed by icons on the home page.

Telecenters for illiterate and semi-literate adults are also promising. As part of the Telecommunication Solutions for Digital Inclusion Project, with support from the Fund for the Telecommunications Technological Development (Funttel), the CPqD Foundation has developed a program for workers with little schooling. They created telecenters that offer special services related to social security (to help people through the process of declaring for retirement) and scheduling doctor appointments. These services were created to fill existing needs: people often must take off work to schedule an appointment with their physician, and 4,000 municipalities do not have an office to deal with social security matters. These telecenters use software to integrate with municipal and federal services, allowing adults to seek retirement and schedule appointments, all through friendly interfaces. The project is currently in pilot stages, but program managers expect to replicate it in other municipalities soon. (A Rede Magazine, 2008).

The development of literacy skills is seen as the responsibility of the educational system. Many initiatives could be better implemented by NGOs through informal educational programs, especially in telecenters. Regarding libraries, there are few initiatives to create a culture of reading. Understandable summaries of relevant research are also lacking, as described in 2.1. The content exists but is written in an academic style inaccessible to the non-researcher. Information about educational opportunities is available in several government offices, but each government department usually only promotes its own

initiative. Generally, the same rule applies to online content on government websites. In consequence, individuals have few options for receiving information about formal or informal educational opportunities. This is a problem not only for target communities but also for municipalities and state governments seeking federal funds for these kinds of programs. Many municipalities are unaware of federal funding opportunities for social-educational projects.

If appropriate, indicate any specifics that apply to Digital ICT services alone.

The use of information technology for educational purposes has enormous potential to help develop literacy skills. Unfortunately, the methods used in most school computer laboratories do not fully take advantage of this opportunity. The researchers believe that if teachers could access the knowledge produced by local research teams ICT would be used more efficiently. Most telecenter coordinators do not understand their potential role in promoting access to information or the huge potential to improve the literacy level of their users.

Source: interviews conducted in this researche; CGI 2007; A Rede Magazine, 2008

3.3.2   Key barriers to accessing the information that underserved communities need

Are the people who could benefit from this information getting access to it? Why or why not (e.g. content exists but not in the right language, print media exists but has not been distributed appropriately, digital media is available but people do not have access points, etc.)?

(i) If appropriate, indicate any specifics that apply to Digital ICT services alone.

Users responding to the survey affirmed that primary barriers were: lack of content (19%) and the lack of skills (19%) in libraries; hours of operation (24%) in telecenters; and cost (28%) in cybercafés.

Source: survey implemented in the second phase of this research

The researchers also believe that poor reading skills, insufficient access to venues and text-heavy content are other significant barriers.

3.3.3 Ways users experience different types of public access venues

Based on responses to the open question in user surveys, how do users experience different types of public access venues? Are there any trends or preferences for kinds of information, services or activities in one type of venue over another?

Users of all three venues affirmed that they also visit other venues like university libraries, school libraries, museums and theaters.

Cybercafé users mentioned that they also used school libraries, but that school libraries generally did not have enough books. so they preferred to use the cybercafes, where they could find all they needed (fast, good computers and unlimited access). Some cybercafe users also mentioned that they used the university library when they needed a larger collection of books.

Library users mentioned that they visited telecenters and school or university libraries as well.

Some public library users also affirmed that they like the library, that there are many books, newspapers, magazines, and they always find what they want, but that they were disappointed by the lack of ICT service.

Several users mentioned that school or university libraries have a better collection than public libraries do.

3.3.4 Inequity environment in the country

2-3 paragraphs

What does inequity look like in the country? Using the inequity variables described in section 2.2, provide a short overview of the main underserved groups, regions and/or other locally-appropriate segments of the population.

    (i)   If appropriate, indicate any specifics that apply to Digital ICT services alone.

The following are some general observations regarding poverty and inequality in Brazil.

- Poverty has become an urban and metropolitan phenomenon, in part because of rapid urbanization. By the end of the 1990s, 91% of Brazilian poor people lived in urban areas, many in the various violence-ridden *favelas* (slums) in metropolitan areas. There are also great differences in wealth and welfare between regions: while the northeastern region has the worst economic and social indicators nationwide, many cities in the south and southeast enjoy first-world socioeconomic standards.

- Indeed, Brazil ranks among the world's most unequal nations, according to the Gini coefficient. The following table presents Gini coefficients, by region, for 2006.

Overall	Center-West	Northeast	Southeast	North	South

				(urban)	
0.528	0.543	0.539	0.510	0.495	0.486

Income distribution is also related to ethnicity and its sociohistoric context. For example, the average annual income of black people and "pardos" (brown) is less than half of that of white people.

- Adding to the problem, inefficient public services, especially those related to security, education, health and household infrastructure, severely affect quality of life. Minimum wages fail to meet the constitutional requirements set in Article 7, Section IV, regarding living standards.

- The education system has also failed to equip many Brazilians to succeed in the workplace. While on average, working Brazilians have 7.7 years of schooling, the poorest 20% of Brazilians average only 4.7 years of schooling. According to Fundação Getúlio Vargas, however, the situation is improving. A three-year study published in 2006 showed a 33% reduction in poverty over the study period. Economic growth and national social programs like "Bolsa familia" appear to be helping.

Percentage of People with Previous Internet Access, stratified by region, schooling, and income

By region:	Northeast: 33%	South: 46%	North: 32%	Center-west: 45%	Southeast: 435
By Schooling:	Elementary: 34%	Secondary: 64%	Tertiary: 85%	None/Kindergarten: 9%	
By monthly income (R$):	<380: 16%	381-760: 28%	761-1,140: 46%	1,901–3,800: 75%	>3,801: 77%

Sources: ,IBGE; CGI Survey on the use of ICT in Brazil, 2007

3.3.5   Freedom of press and expression and the right to information

What is the overall perception of freedom of press, censorship and right to information in this country?

Full freedom of the press exists in Brazil. Censorship is limited to parental advisory warnings on TV programs and in movies. Some censorship exists regarding publicizing especially sensitive information, but compared to international standards, Brazil is generally open-minded

3.4   Charts: Information Needs, Users, and Uses

Based on the results of your research (especially user surveys and interviews with librarians and operators), complete the required data to chart the information needs of underserved communities using the following examples. Provide any explanatory comments as needed.

3.4.1.1 Users, by type of venue (data based on OPERATORES another chart with data from users follows on 3.4.1.6)

Users profile (estimated proportion of users in each category, %)		Public Libraries				Telecenters				Cybercafes				Venue 4			
		Urban		Non-urban		Urban		Non-urban		Urban		Non-urban		Urban		Non-urban	
		General use	ICT use	General use	ICT use	General use	ICT use	ICT use	General use	General use	ICT use	General use	ICT use	General use	ICT use	General use	ICT use
Gender	Male	7,1				38,5	100			53,8	100						
	Female	92,9				61,5	100			46,2	100						
Age	14 and under						100				100						
	15-35	57,2				92,3	100			69,2	100						
	36-60	42,9				7,7	100			30,8	100						
	61 and over						100				100						
Education level	No formal education						100				100						
	Only elementary					7,7	100			23,1	100						
	Up to high school	23,0				46,2	100			61,5	100						
	College or university	77,0				46,2	100			15,4	100						
Income bracket (approx)	High						100				100						
	Medium						100				100						
	Low						100				100						
Social status (approx)	High	2,9				3,8	100			7,5	100						
	Medium	22,6				15,0	100			21,3	100						
	Low	31,7				50,4	100			27,5	100						

Caste (if appropriate)	Dominant				100			100			
	other				100			100			
	other				100			100			
	other				100			100			
Ethnicity (if appropriate)	Dominant	31,2		32,7	100		28,6	100			
	other	23,3		34,2	100		27,1	100			
	other	37,3		17,5	100		23,9	100			
	other	2,1		0,2	100		1,7	100			

Source*: interviews conducted during second phase, with sample of 43 Venues, 43 operators*

Comments, including comments on other inequity variables.

The question referring to level of income, was asked without specifying ranges of income; definitions of rich and poor vary by region and can be personal.

- 15% from telecenters operators and 19% from cybercafés operators did not respond to questions referring to ethnicity , 15% did not respond refereeing to level of income

- 44% from cybercafés did not respond to questions refereeing to social status.

- 18% from cybercafes operators did not respond to question referring to ethnicity and 19% did not respond when refereeing to users' income level

3.4.1.2 Information People Seek, by type of venue *(based on OPERATORS, another chart, based on USERS follows on 3.4.1.8)*

(estimated proportion in each category, %)	Public Libraries				Telceneters				Cybercafes				Venue 4			
	Urban		Non-urban		Urban		Non-urban		Urban		Non-urban		Urban		Non-urban	
	General use	ICT use	General use	ICT use	General use	ICT use	ICT use	General use	General use	ICT use	General use	ICT use	General use	ICT use	General use	ICT use
Education	50,5				40,9	100			11,9	100						
Health	4,3				1,3	100			3,4	100						
Agriculture	1,1				0,5	100			1,4	100						
Government services	8,2				5,4	100			3,4	100						
Entertainment	12,4				32,7	100			50,3	100						
News	14,6				6,2	100			10,1	100						
Personal	5,7				10	100			15,5	100						
Other	3,3				3,1	100			4,1	100						

Source: *Interviews conducted during second phase, with sample of 43 Venues, 43 operators.*

Comments: (Include description of "other". Suggested headings based on frequently reported topics in other research and may vary across countries).

describe

3.4.1.3 Uses of ICT, by type of venue *(based on OPERATORS, another chart based on USERS follows on 3.4.1.9)*

(estimated proportion in each category, %)	Public Libraries				Telceneters				Cybercafes				Venue 4			
	Urban		Non-urban		Urban		Non-urban		Urban		Non-urban		Urban		Non-urban	
	General use	ICT use	General use	ICT use	General use	ICT use	ICT use	General use	General use	ICT use	General use	ICT use	General use	ICT use	General use	ICT use
Email	12,1				22,7	100			16,3	100						
Chat	2,1				11,2	100			17,2	100						
Web browsing	12,1				29,6	100			18,1	100						
Blogs & social networking	4,3				16,2	100			21,9	100						
Commerce & business	2,9				4,2	100			5,0	100						
Phone or webcam	0,0				1,9	100			0,6	100						
Games	1,4				14,2	100			14,7	100						
Other	7,9				0,0	100			0,0	100						

Source: : *Survey and interviews conducted during second phase, with sample of 43 Venues, 43 operators and 1284 users*

Comments: (Include description of "other". Suggested headings not exhaustive, based on frequently reported topics in other research and may vary across countries).

   For Libraries the majority of users who chose other mentioned Research

For Cybercafes 6,3% of operators did not respond.

3.4.1.4 Frequency of Use for each type of venue *(based on USERS responses)*

(estimated proportion in each category, %)	Public Libraries				Telecenter				Cybercafe				Venue 4			
	Urban		Non-urban		Urban		Non-urban		Urban		Non-urban		Urban		Non-urban	
	General use	ICT use	General use	ICT use	General use	ICT use	ICT use	General use	General use	ICT use	General use	ICT use	General use	ICT use	General use	ICT use
First visit	6,7				2,5	100			2,5	100						
Rarely (less than monthly)	11,9				4,8	100			3,2	100						
Occasional (about once a month)	11,5				2,3	100			6,5	100						
Regular (about 2-3 per month)	21,1				13,2	100			12,6	100						
Frequent (about once a week)	29,9				44,2	100			44,1	100						
Daily (about every day)	18,2				32,7	100			30,4	100						

Source: *Survey conducted during second phase, with sample of 43 Venues, 1284 users.*

Comments:

3.4.1.5 Barriers to use for each type of venue *(based on OPERATORS, another chart based on USERS follows on 3.4.1.11)*

(estimated proportion in each category, %)	Public Libraries				Telecenters				Cybercafes				Venue 4			
	Urban		Non-urban		Urban		Non-urban		Urban		Non-urban		Urban		Non-urban	
	General use	ICT use	General use	ICT use	General use	ICT use	ICT use	General use	General use	ICT use	General use	ICT use	General use	ICT use	General use	ICT use
Location, distance	7,1				4,5	100			4,8	100						
Hours of Operation	10,7				22,7	100			9,5	100						
Cost	0,0				9,1	100			28,6	100						
Lack of skills/training	7,1				18,2	100			38,1	100						
Not enough services	17,9				4,5	100			4,8	100						
Not in right language	0,0				9,1	100			0,0	100						
Not enough content	25,0				0,0	100			9,5	100						
Other	25,0				22,7	100			4,8	100						

Source: *Survey and interviews conducted during second phase, with sample of 43 Venues, 43 operator.*

Comments: (Include description of "other". Suggested headings not exhaustive, based on frequently reported topics in other research and may vary across countries).

Other:

Libraries: lack of space, lack of printing service, transport, lack of ICT equipment, bad management, bad development

Telecenters: operators qualification, few computers, people stay in lines waiting to use the service.

Cybercafes: lack of interest

N° of computes

Libraries	Telecenters	Cyber Café
Não respondeu = 35,7 1-3 = 21,4 4-6-= 21,4 7-10 = 7,1 11-20 = 14,3 21-30 = 0,0 30 or more = 0,0	1-3 = 15,4 4-6-= 0,6 7-10 = 23,1 11-20 = 30,8 21-30 = 7,7 30 or more = 23,1	1-3 = 0,0 4-6-= 8,3 7-10 = 75,0 11-20 = 16,7 21-30 = 0,0 30 or more = 0,0

3.4.1.6 Users, by type of venue *(based on users responses)*

Users profile (estimated proportion of users in each category, %)		PUBLIC LIBRARIES				TELECENTERS				CYBER CAFÉ				Venue 4			
		Urban		Non-urban		Urban		Non-urban		Urban		Non-urban		Urban		Non-urban	
		General use	ICT use	General use	ICT use	General use	ICT use	ICT use	General use	General use	ICT use	General use	ICT use	General use	ICT use	General use	ICT use
Gender	Male	45,2				43,7	100			67,0	100						
	Female	54,4				55,3	100			31,5	100						
	Outros	0,2				0,0	100			0,0	100						
Age	14 and under	16,6				25,6	100			25,7	100						
	15-35	64,7				65,7	100			68,0	100						
	36-60	15,1				5,1	100			2,9	100						
	61 and over	3,1				1,0	100			0,0	100						

Source: : *Survey and interviews conducted during second phase, with sample of 43 Venues, 43 operators and 1284 users.*

3.4.1.7 Frequency of Use for each type of venue *(based on USERS responses)*

(estimated proportion in each category, %)	Public Libraries				Telecenter				Cybercafe				Venue 4			
	Urban		Non-urban		Urban		Non-urban		Urban		Non-urban		Urban		Non-urban	
	General use	ICT use	General use	ICT use	General use	ICT use	ICT use	General use	General use	ICT use	General use	ICT use	General use	ICT use	General use	ICT use
First visit	6,7				2,5	100			2,5	100						
Rarely (less than monthly)	11,9				4,8	100			3,2	100						
Occasional (about once a month)	11,5				2,3	100			6,5	100						
Regular (about 2-3 per month)	21,1				13,2	100			12,6	100						
Frequent (about once a week)	29,9				44,2	100			44,1	100						
Daily (about every day)	18,2				32,7	100			30,4	100						

Source: Survey conducted during second phase, with sample of 43 Venues, 1284 users.

Comments:

This is the same chart as 3.4.1.4 We are repeating it here because it is mentioned in the research as 3.4.1.7. Only when we made the final edits on these forms did we realize that the requested 3.4.1.4 is the same.

3.4.1.8 Information People Seek, by type of venue *(based on USERS response)*

(estimated proportion in each category, %)	PUBLIC LIBRARIES				TELECENTERS				CYBER CAFÉ				Venue 4			
	Urban		Non-urban		Urban		Non-urban		Urban		Non-urban		Urban		Non-urban	
	General use	ICT use	General use	ICT use	General use	ICT use	ICT use	General use	General use	ICT use	General use	ICT use	General use	ICT use	General use	ICT use
Education	34,8				13,9	100			13,9	100						
Health	6,8				4,0	100			3,7	100						
Agriculture	3,1				1,0	100			1,2	100						
Government services	6,8				5,4	100			4,9	100						
Entertainment	12,0				42,7	100			43,7	100						
News	21,0				11,8	100			11,1	100						
Personal	8,0				18,2	100			18,5	100						
Other	7,6				3,0	100			2,8	100						

Source: : *Survey conducted during second phase, with sample of 43 Venues in 5 Brazilian regions and 1284 users.*

Comments: (Include description of "other". Suggested headings based on frequently reported topics in other research and may vary across countries).

Other : Curiosity, contests, news, games, research, Orkut, geography, arts, commerce, schoolwork, relationships, culture, cooking recipes

3.4.1.9 Uses of ICT, by type of venue *(based on USERS response)*

(estimated proportion in each category, %)	PUBLIC LIBRARIES				TELECENTERS				CYBER CAFÉ				Venue 4			
	Urban		Non-urban		Urban		Non-urban		Urban		Non-urban		Urban		Non-urban	
	General use	ICT use	General use	ICT use	General use	ICT use	ICT use	General use	General use	ICT use	General use	ICT use	General use	ICT use	General use	ICT use
Email	29,1				18,5	100			19,4	100						
Chat	8,0				18,4	100			19,0	100						
Web browsing	18,9				10,2	100			9,3	100						
Blogs & social networking	14,2				28,8	100			28,9	100						
Commerce & business	3,3				1,8	100			1,6	100						
Phone or webcam	0,7				0,2	100			0,2	100						
Games	13,9				21,3	100			21,0	100						
Other	11,8				0,8	100			0,7	100						

Source: *Survey conducted during second phase, with sample of 43 Venues in 5 Brazilian regions and 1284 users.*

Comments: (Include description of "other". Suggested headings not exhaustive, based on frequently reported topics in other research and may vary across countries).

Others: liguistics, research, study, books, on line classes, school works, contests, book lending , IT courses.

3.4.1.10 Barriers to use for each type of venue *(based on USERS responses)*

(estimated proportion in each category, %)	PUBLIC LIBRARIES				TELECENTERS				CYBER CAFÉ				Venue 4			
	Urban		Non-urban		Urban		Non-urban		Urban		Non-urban		Urban		Non-urban	
	General use	ICT use	General use	ICT use	General use	ICT use	ICT use	General use	General use	ICT use	General use	ICT use	General use	ICT use	General use	ICT use
Location, distance	9,5				11,3	100			10,9	100						
Hours of Operation	20,2				16,8	100			15,6	100						
Cost	7,8				29,6	100			29,3	100						
Lack of skills/training	12,0				14,8	100			14,5	100						
Not enough services	13,7				7,7	100			7,6	100						
Not in right language	15,7				1,5	100			1,4	100						
Not enough content	11,1				5,3	100			5,9	100						
Other	10,0				13,0	100			14,8	100						

Source: *Survey conducted during second phase, with sample of 43 Venues in 5 Brazilian regions and 1284 users.*

Comments: (Include description of "other". Suggested headings not exhaustive, based on frequently reported topics in other research and may vary across countries).

No barriers, not enough computers available, lack of equipment, lack of training, development, satisfaction, no barrier, slow internet, not enough time, poor service, lack or organization, small physical space.

3.4.1.11 Three MAIN Barriers to use for each type of venue (*based on USERS responses*)

(estimated proportion in each category, %)	PUBLIC LIBRARIES				TELECENTERS				CYBER CAFÉ				Venue 4			
	Urban		Non-urban		Urban		Non-urban		Urban		Non-urban		Urban		Non-urban	
	General use	ICT use	General use	ICT use	General use	ICT use	ICT use	General use	General use	ICT use	General use	ICT use	General use	ICT use	General use	ICT use
Location, distance	11,8				13,3	100			8,6	100						
Hours of Operation	13,0				24,1	100			12,8	100						
Cost	3,9				8,7	100			28,4	100						
Lack of skills/training	18,9				15,9	100			15,5	100						
Not enough services	6,6				8,5	100			5,2	100						
Not in right language	0,2				2,1	100			1,9	100						
Not enough content	18,7				14,1	100			5,5	100						
Other	26,8				13,3	100			22,0	100						

Source: *Survey conducted during second phase, with sample of 43 Venues in 5 Brazilian regions and 1284 users.*

Comments: (Include description of "other". Suggested headings not exhaustive, based on frequently reported topics in other research and may vary across countries).

Other: none barrier, it is difficult to get an available computer, lack of equipment, non qualified personal, divulgation, slow internet connection, limited time to use ICT, bad service, lack of organization, limited physical space.

What are the most salient initiatives in the country (past, ongoing, or planned) that aim to meet the information needs of underserved communities in the country? How important are they? In what ways are they successful or not? Where can more information about them be found?

(i) If appropriate, indicate any specifics that apply to Digital ICT services alone.

3.4.2.1   Past initiatives:

- Donation of refurbished computers to grassroots organizations with no particular focus on internet access.

- During 2002, when Fernando Henrique Cardoso was the president of Brazil, he called for proposals to equip a network of libraries with computers and internet connections. The initiative was supposed to be funded by FUST – a fund to universalize the access to ICT. Many proposals were submitted, but the initiative failed due to difficulties in securing funding from FUST. Following Fernando Henrique's administration, Brazil shifted its ICT policy towards access in schools and NGOs, rather than libraries.

More information:

Livro Verde and Livro Branco (Green Book and White Book) written by a joint government and NGO task force to plan ICT access in Brazil during the Fernando Henrique administration

3.4.2.2   Ongoing initiatives:

- Cybercafés – most of them are centers created by small entrepreneurs.

There is an expressive growth of the use of paid public access centers in all regions of the country. The percentage of usage in these centers has risen from 30% in 2006 to 49% in the following year, outnumbering accesses from households which remained stable at 40%. Even in the Center-west region, where a lower increase was observed, more than half of the users declared to use cybercafes, Internet cafes, amongst other paid public centers, to access the web. The North Region, presented the highest increase in the use of this type of places, 22 per cent in relation to the previous year. From the people who used Internet in the North and Northeast regions in the last year, 68% and 67% respectively accessed the web from LAN houses. This number dropped to 30% in the South region where the average income of the population is higher and where the telephone companies have the highest number of Internet connection points.

(Santos, 2007)

The CGI Survey on the use of ICT implemented by CGI during 2007 demonstrated a negative association between income and LAN house use. That is, poorer people were more likely to use cybercafes than their rich counterparts. Among internet users earning less than the minimum wage, 78% declared they access the web

through paid public access centers. By contrast, only 30% of those who earned more than five times the minimum wage relied on cybercafés. Moreover, it is important to note that cybercafés are used mainly by less-educated people: 64% of elementary school students, 53% of high school students, and 54% of people with an elementary school education or less had frequented cybercafes in 2007. This was true for only 27% of the users who had university degrees. In sum, these data show that LAN houses serve as important access venues for classes E, D and C—or the economically deprived population. For these users, the cost of connection time is low in comparison to the cost of a computer. (Santos, 2007)

- A variety of initiatives to create and support telecenters are being developed by several ministries, municipalities and the large, federally-owned corporations Petrobras (Brazilian Oil company) and Bank of Brazil. These corporations develop programs, under their social responsibility umbrella, to create and support telecenters in partnership with the civil society, usually with community organizations. Private companies from the telecommunication and IT area, like Brasiltelecom, Vivo, Oi, Microsoft and Dell, among others, support programs to create telecenters, also corporations that belong to other areas like Vale do Rio Doce (miner), Accenture (consultancy)and Petroflex (chemistry) support programs to create telecenters, always in partnership with the civil society. The National Observatory of Digital Inclusion describes the 15 programs that are initiatives from national Government to create networks of telecenters. www.inclusaodigital.gov.br The Digital Inclusion Map also lists networks of telecenters created by private corporation (like telecom companies) and networks of telecenters created by state and municipalities. http://inclusao.ibict.br

- Computers for All is a federal program intended to enable middle-class citizens to purchase computers at lower cost. Class C (middle-class) has been growing rapidly and already comprises half of Brazilian population and the vast majority of public school teachers. The program has contributed to the 4% growth in household computer purchases (24% of households owned computers in 2007). From 2006 to 2007, computer ownership among citizens earning from three to five times the minimum wage increased from 23 to 40%, the largest jump of any economic class. Regionally, the Center-West (from 19% to 26%), South (from 25 to 31%) and Southeast (from 24 to 30%) regions experienced significant jumps in computer ownership over the period. Ownership remains low in the North (13%) and Northeast (11%) and did not grow as much over the period (3% and 2% respectively). (CGI 2007)

- Computers for Inclusion is a program intended to broaden access to information and communication technologies, especially for classes D and E. As a result of the initiative, the federal government has begun supporting the development of public--free or paid—internet access centers, regardless of who maintains them. This project is an initiative from Secretariat of Logistics and Information Technology (SLTI) in the Ministry of Planning. It is restoring thousands of computers and other equipment discarded by the federal government and the private sector and donating them to digital inclusion initiatives, such as telecenters, schools and libraries. The project began in 2006 with the creation of Computer Reconditioning Centers in Porto Alegre, Guarulhos, and Gama (in the Federal district). As of February 2008, the three centers had already received 21,872 machines (computers, monitors, printers) to restore and had donated 6,752 of them to 250 projects across the country. New centers are anticipated in Belo Horizonte and Niterói as early as this year. (Santos,2007)

- Proinfo – is a program from Ministry of education, responsible for the creation of computer labs in

schools. According to the Ministry of Education, there are already 20,000 labs installed in public schools with an average of 12 computers per lab. All 14,000 public high schools and some middle schools have functioning labs. The creation of computer labs in with broadband Internet connections is the core effort planned by federal government to promote public access to information and communication technology. (Ministry of Education,2007)

- Broadband at School - In April of 2008, the president launched the program "Broadband at School", which seeks to radically change the current landscape of ICT access. The initiative aims to give all students broadband internet access (1-2 Mbps) in urban public schools in the five major regions of Brazil by the end of 2010. Currently, only 8% of schools have internet connections with speeds over 512 Kbps. The initiative anticipates connecting 83% of public school students (37.1 million students) enrolled in over 56,000 schools within the urban network for the next 17 years. The goal is to reach the 40% milestone by 2008, 80% by 2009, and the remaining 20% by 2010. This program is a result of the combined efforts of several ministries and sectors of the federal government, in partnership with telephone companies. These include the Presidency, Civil House, Secretariat of Communication (Secom), National Telecommunications Agency (Anatel) and the Ministries of Education, Communication, Planning and Science and Technology.

 (Santos, 2007)

- Telecenters for adults with little schooling. As part of the Telecommunication Solutions for Digital Inclusion Project, with support from the Fund for the Telecommunications Technological Development (Funttel), the CPqD Foundation has developed a program for workers with little schooling. They created telecenters that offer special services related to social security (to help people through the process of declaring for retirement) and scheduling doctor appointments. These services were created to fill existing needs: people often must take off work to schedule an appointment with their physician, and 4,000 municipalities do not have an office to deal with social security matters. These telecenters use software to integrate with municipal and federal services, allowing adults to seek retirement and schedule appointments, all through friendly interfaces. The project is currently in pilot stages, but program managers expect to replicate it in other municipalities soon. (A Rede Magazine, 2008).

More information:

IBICT - Map for the Digital inclusion: http://inclusao.ibict.br/mid

National Observatory for Digital Inclusion – www.inclusaodigitgov.br

3.4.2.3   Historical trends and opportunities to serve information needs

Based on the above, what is the general trend in the country in relation to provision of public access information services? Are there any important upcoming opportunities (for example, upcoming regulatory changes, infrastructure enhancements, etc) that can impact public access information (include services through libraries and other public information venues)?

i.   If appropriate, indicate any specifics that apply to Digital ICT services alone.

In the early 1990s Brazil privatized its telecommunication services, opening up access to million of Brazilians. Unlike previous years, when phones cost up to $3,000 USD and required long waits to acquire service, today people can initiate service immediately and make a simple monthly payment.

In the last five years, greater efforts have been made to create telecenters, mainly inside NGOs and with refurbished computers. Currently, public policies in this area focus on telecenter creation in low income

communities hosted by NGOs. Several programs also give money to pay educators or monitors to guide people throughout their ICT skill development. These telecenters offer some courses on IT basics and offer free use of the internet. Educators or monitors usually are local community members with little schooling. These centers are sustained as part of social projects by networks of NGO partners. The lack of clear goals in the centers and the lack of qualified personnel to run them continue to present challenges to their survival.

Paid access points have also grown, though not due to government policies, but because of private initiatives. In 2007, 49% of internet users in Brazil accessed the internet from cybercafés or paid centers. The federal government has recently partnered with telephone companies to exchange the right to service points for telephones for broadband infrastructure in all municipalities. The directive will have significant repercussions, even increasing the number of LAN houses, especially in towns in the countryside of Brazil.

In libraries, current initiatives focus on books rather than ICT infrastructure. There is a lack of effort by public library directors and the government to invest in such technologies. Some government officials are working to change the perception of libraries from a book repository to a more dynamic space—one able to host exhibitions, cafes, and internet access facilities.

Researchers affirm that cybercafes and telecenters could evolve into similar institutions, as telecenters face pressure to become self-sustainable.

Source: Ministry of Communication, CGI.br, ABCID, interviews with librarians

3.4.2.4   *Planned initiatives:*

UCA – one computer per student program. Inspired by the MIT-based OLPC (One Laptop per Child), the Brazilian government created its own program to explore one-to-one computing possibilities in schools. As of 2007, there are five trial schools using low cost laptops from several manufacturers: the OLPC XO, Intel Classmate PC and Encore Mobilis. In 2008, the government expects to acquire and distribute 150,000 laptops for 300 schools in every state. Government officials expect to make a bid soon, as the Ministry of Education has already secured a budget for the pilot program.

More Information: contact project manager: Jose Luiz Aquino, President Lula's Advisor for UCA project: jl.aquino@planalto.gov.br

- Proinfo and Broadband at School

As mentioned above, the Proinfo and Broadband at School projects will be expanded in the next few years. The initiative anticipates connecting 83% of public school students (37.1 million students) enrolled in over 56,000 schools within the urban network for the next 17 years. The goal is to reach the 40% milestone by 2008, 80% by 2009, and the remaining 20% by 2010. (Ministry of Education)

More information: Santos, 2007- article published as introduction to the Survey on the use of ICT in Brazil 2007, CGI,2008

- Federal policy to scale telecenters

The federal government is planning an initiative in partnership with municipalities, state governments and civil society aimed to increase the number of operating telecenters in the country. By making an open call for telecenter proposals , the government hopes to reach 40.000 telecenters by December 2009. This plan is coordinated by Cezar Alvarez, President Lula`s advisor for Digital Inclusion, who hopes to harness

partnerships (not yet defined) among public sector entities and NGO affiliates. The government believes that payment and training of telecenter operators challenger prerequisites for maintaining sustainable telecenters . In this context, this policy will likely aim to pay and train operators in addition to offering telecenter startup kits. As of April 2008, however, the government has not allocated funds for the project, and it is unclear which ministry will brunt the funding burden. Several ministries, including the Ministry of Culture (Program Points for Culture), the Ministry of Social Development (Casa Brazil) and the Ministry of Development (Telecenters for Entrepreneurship) already support their own initiatives.

More information:

A Rede magazine – Interview with Cezar Alvarez
http://www.arede.inf.br/index.php?option=com_content&task=view&id=1346&Itemid=99

3.5   Economic, Policy, and Regulatory Environment

3.5.1   National and local economic environment

Describe the national and local economic environment and how it affects public access to information and communication in the country.

(i) If appropriate, indicate any specifics that apply to Digital ICT services alone.

In the last few years, the economic situation in Brazil has improved in many respects. Rates of economic growth have been unprecedented, when compared to recent decades. Even considering the prospect of global stagflation, with rising food and fuel prices, Brazil has continued its era of growth. Brazil's inflation is running at 6.5%, a rate that worries economists but is still lower than all the major emerging markets. In fact, Brazil is relatively stable, as rising market competition guards against the return of inflation. Brazil is blessed with vast resources (timber, fresh water, gold and the world's largest cache of iron ore). While most of the world is running out of arable land, Brazil has more than 70 million hectares still to plow. The country has also announced massive oil finds in deep water reserves that may total 30 billion barrels, the largest discovery in the Western Hemisphere in three decades. Moreover, Brazil is the only country producing cost-efficient bio-fuels without affecting its food supply.

Brazil has one of the most diversified economies in the developing world, exporting iron ore, steel and soybeans, but also small commercial jets, banking services, custom made buses, fine paper, equipment for air conditioner. Brazil's foreign reserves have risen from $ 16 billion in 2002 to more than $ 200 billion and Brazil has attracted $ 35 billion in direct foreign investment in 2007, 100% more than in 2006 (International Monetary Fund). Receiving more foreign direct investment than all nations but China, Brazil is the only BRIC country with both an established democracy (like India) and no rebel province. Its per capita income of $8,446 (IBGE,2007) is far higher than in India ($1,100) or China ($3,000) (CIA Fact Book).

Poverty, however, remains a concern, especially in metropolitan areas, and great demand exists for projects aiming to improve the quality of life and educational attainment of the population. While in upper class malls, book sales are on the rise, there appears to be little political will for the creation of new public libraries or the improvement of existing facilities. Crumbling infrastructure, a chaotic public health system and high widespread functional illiteracy threaten Brazil's competitiveness. However, recent research conducted by Fudaçao Getulio Vargas (FGV) in 6 metropolitan areas shows that the number of poor has decreased, and there has been a growth in the number middle and upper class families as well. The growth of the former has been attributed to the increasing number of formal jobs. According to this research this is not temporary relief, which occurred during the 1960s and 1970s. The social ascension in Brazilian metropolis is a solid process that should continue.

As the purchasing power of lower classes increases, paid venues like cybercafes become more affordable possibilities for ICT access. In this context, many entrepreneurs from low income neighborhoods have purchased computers, and installed them in a room or a garage, installed internet connections and charged affordable fees for access.

Trends:

Brazil should produce and export enough food and fuel not just to offset the worst of global inflationary pressures but even to turn the price spike from a menace to a boon. *(magazine News Week*, August, 4, 2008)

The biggest investment boom in history is underway; in 2007, Brazil launched a four-year plan to spend $300 billion to modernize its road network, power plants and ports. Brazil's booming economy is shifting into overdrive, with bio fuels and deep-water oil providing energy independence and and enabling the government to generate revenue to irrigate dry areas in the Northeast and improve transport infrastructure.

The growing economy is motivating the government to increase investment in social policies such as telecenters creation in partnership with community based organizations. There are plans to call for proposals from community based organizations for telecenter creation, the winners of which will receive computers, internet connection and funds to pay operators.

Source: several above mentioned

3.5.2   National and local policy (legal and regulatory) environment

Describe salient features of the policy and regulatory framework in the country (and if applicable, locally) that affect delivery and access to information (e.g. censorship, Wi-Fi bandwidth regulation, etc). What is your assessment of the general trend on this matter?

If appropriate, indicate any specifics that apply to Digital ICT services alone.

During the military dictatorship, there was rampant censorship in Brazil. The reinstatement of democracy brought basic rights such as freedom of expression and freedom of the press. Rarely, some censorship still occurs, though usually to protect citizens against intolerance. Regardless, companies advertising products related to smoking and alcohol are required to mention health risks associated with using the products.

Since the 1990s the number and the quality of NGOs have significantly increased. The government implements a great part of its social assistance policies and informal education programs through partnerships with NGOs. In this context the national government has chosen to emphasize the creation of telecenters, in partnership with NGOs, as its primary ICT promotion initiatives aimed at underserved communities. NGOs are selected after sending proposals to benefit their communities with telecenter-enabled ICT access and services.

The new culture brought by the ICT era is enhancing the ability to share information and knowledge:

In spite of the swift growth of broadband facilities over the past three years in Brazil, access to it still prevails in higher economic potential municipalities. This represents an integral element of this economic backwardness, and contributes to deepen the country's regional differences. ADSL is the most disseminated broadband technology, and has grown significantly over the last years, both in the number of accesses and in the number of benefited municipalities. Teletime has published that, in 1993, 251 Brazilian municipalities had broadband technology available. This figure grew to 1,175, in 2004, and to 1,606 until September 2005, totaling roughly 4 million subscribers.

Rogerio Santanna, Ministry of Planning, 2006

Article published in CGI Survey 2006.

The 1995 *Lei Geral de Telecomunicações* (General Legislation on Telecommunications) created a new private model for telecommunication services in Brazil. In marked contrast from the old public model, nowadays there is vibrant competition among private companies to implement telecommunication services in Brazil. This law has also created ANATEL, the National Agency of Communication, to regulate the telecommunication system in the country. The government gives concessions to telecommunication services via a system of public bidding. Currently, three companies share the Brazilian market for broadband; as part of their licensing agreements, they must maintain a policy of corporate social responsibility. Recently, for example, the Brazilian government negotiated with operating telecoms to extend broadband to all Brazilian municipalities, and connect, free of charge, all urban schools until 2025. By the end of 2008, 22.000 schools will receive broadband, while 55.000 schools will be connected by 2010.

Other important legislation includes:

The Lei da Cultura (Culture Law), which allows 100% tax deductions for private investment in culture. This legislation strongly supports the productions of films, theater and cultural events, among them *Carnaval*. This legislation also allows tax deductions for the creation, revitalization or improvement of libraries.

The Lei da Informática- 8248 (Law on Information Technology), which forces hardware-producing companies to invest profits in research and development, thereby stimulating the development of knowledge in this area.

If appropriate, indicate any specifics that apply to Digital ICT services alone

Based on multilateral, transparent and democratic principles, the coordination and integration of internet service activities in Brazil is controlled by the Brazilian Internet Steering Committee - CGI.br, a multi-stakeholder organization comprised of members of the government, the business sector, non-profits and the academic community. Created by the Interministerial Ordinance Nº 147, of May 31st 1995 and

altered by the Presidential Decree Nº 4,829, of September 3rd 2003, the Brazilian Internet Steering Committee is responsible for promoting technical quality, innovation and the dissemination of ICT services. Since July of 2004, the representatives of the civil society are chosen democratically to participate directly in the deliberations and to debate priorities for Internet, along with the government.

> **Normative Act for the Attribution of Domain Names in Brazil:** REGISTRATION - The Brazilian Internet Steering Committee (CGI.br) is the organization responsible for the registration of Internet Domain Names in Brazil. The rules are available (in English) at : http://www.cgi.br/regulamentacao/ato-norm-ing.htm

Steering committee of Internet - www.cgi.br; National Agency for telecommunications – ANATEL – www.anatel.gov.br

Trends:

- Federal policy to scale telecenters

The federal government is planning an initiative in partnership with municipalities, state governments and civil society aimed to increase the number of operating telecenters in the country. By making an open call for telecenter proposals , the government hopes to reach 40,000 telecenters by December 2009. This plan is coordinated by Cezar Alvarez, President Lula`s advisor for Digital Inclusion, who hopes to harness partnerships (not yet defined) among public sector entities and NGO affiliates. The government believes that payment and training of telecenter operators challenger prerequisites for maintaining sustainable telecenters . In this context, this policy will likely aim to pay and train operators in addition to offering telecenter startup kits. As of April 2008, however, the government has not allocated funds for the project, and it is unclear which ministry will brunt the funding burden. Several ministries, including the Ministry of Culture (Program Points for Culture), the Ministry of Social Development (Casa Brazil) and the Ministry of Development (Telecenters for Entrepreneurship) already support their own initiatives.

More information: A Rede magazine – Interview with Cezar Alvarez
http://www.arede.inf.br/index.php?option=com_content&task=view&id=1346&Itemid=99

- The non legal status of most existing telecenters in the country means proper legislation must be drafted for these centers, which, despite being informal organizations, account for 49% of internet access in the country.

Source: ABCID – Cybercafe Brazilian Association

3.5.3   Regional and international policy (legal and regulatory) environment

Describe salient features of policy and regulatory framework in the region and internationally that affect the delivery of public access to information and communication in the country. What is your assessment of the general trend on this matter?

If appropriate, indicate any specifics that apply to Digital ICT services alone.

The fact that Brazil is a stable democracy and an economic leader in Latin America attracts investment from ICT producers and telecom companies looking for emergent markets.

Trends:

As government gives concessions to telecommunication services via a system of public bidding it ensures that telecommunication company licensing agreements include a policy of corporate social responsibility. Recently, for example, the Brazilian government negotiated with operating telecoms to extend broadband to all Brazilian municipalities, and connect, free of charge, all urban schools. By the end of 2008, 22,000 schools will receive broadband, while 55,000 schools will be connected by 2010. The extension of broadband to all municipalities will facilitate the creation of telecenters, cybercafes and internet connection to equipped libraries.

Source: Survey on ICT use n Brazil, 2007 , CGI

3.6   Collaboration Practices and Opportunities Across Venues

Linkages and collaboration between different types of venues was identified as a **strong emerging theme in the preliminary analysis**. Please provide as much detail as possible to help understand existing and potential collaboration opportunities and linkages among and between public access venues, and how they can improve the quality and relevance of information access to underserved communities.

i.   Include reference to existing as well as potential collaboration opportunities.

ii.   If appropriate, indicate any specifics that apply to Digital ICT services alone.

Collaboration among organizations, governments, volunteers and private companies to promote public access in telecenters has been successful. Located in NGOs, these telecenters are the result of a variety of donations and partnerships. NGOs receive donated equipment, are internet-enabled via government initiatives (like GSAC) or through private support, pay personnel with funds from other projects and count on volunteers for operation. They also partner with universities and other NGOs to improve access and offer courses. Thus, many partners work together to maintain community telecenters. Nonetheless, telecenters are responsible for less than 6% of internet access in the country, struggling to sustain themselves and train their workers.

Cybercafés are created by entrepreneurs and usually have no educational or social goals, but as they increase in scale they will become more important in the social context. Their strong points are

sustainability (they charge fees) and scale.

Researchers see the following possibilities for collaboration across venues:

- Collaboration between telecenters and cybercafés is promising. Exchanges between these venues could produce cybercafés that offer educational activities (courses or workshops) during off-peak hours, and telecenters could learn to stay sustainable.

- Libraries might also work with telecenters to obtain computers. In the state of Bahia, a telecenter housed inside a public library managed to receive funds from Identidade Digital. These collaborations seem obvious, but have yet to take hold elsewhere. Conversely, libraries could be installed in telecenters. Librarians could also work with telecenters to train personnel.

- All venues collaborate with schools: children access internet to do research for homework, borrow books form libraries, and participate on afterschool courses or workshops promoted in telecenters.

- According to local legislation, corporations that invest in cultural initiatives are eligible for tax deductions equivalent to 100% of their investment. Since libraries qualify as cultural initiatives, the law can serve to stimulate the creation and maintenance of new libraries--as standalone entities or within existing telecenters.

- Ministries and other government institutions could cooperate to promote digital inclusion initiatives. For example, ministries might use resources from telecenter programs to equip state and municipal Libraries.

- Cybercafes could partner with the government to further digital inclusion and to deliver assistive services for new internet users. By partnering with already existent cybercafés to develop social educational projects, government efforts could reach a much larger population.

- Governments could work with schools to open those labs to the public during non-school hours or during weekends.

The "buzz factor", i.e., public and government perceptions about what is "cool" in relation to public access venues, where to invest resources, what places to hang out in, was identified as a **strong emerging theme in the preliminary analysis**. Please provide as much detail as possible to help understand how these perceptions about what is "cool" offer new opportunities or obstacles to strengthening public access information venues in the country.

According to users, cybercafes are the "coolest" venue to hang out. Most users visit cybercafés for entertainment, their hours are extensive, and they often are associated with a food service. Importantly, there are no restrictions on the use of social networking websites like Orkut, MySpace, Facebook and instant messaging software like MSN or Skype.

At the same time cybercafés, despite their growth and significance in promoting access to internet, are still not seen by government, society and other venues as places to learn. In many cases, they remained associated with games (hence the name LAN Houses), even though providing access to the internet is their most important function.

The government and civil society like to prefer investing in telecenters hosted by NGOs. These NGOs are usually the home of several social and educational programs varying from daycare to adult literacy, with a strong focus on after-school activities. Since Brazilian students study either in the morning or the afternoon, many NGOs take care of children during non-school hours.

The government generally believes that telecenters need investment to train and pay telecenter operators; they are planning a bid to support the creation of new telecenters to attend to these issues.

The difference between "legitimate" or "non-trivial" uses of information in public access venues was identified as a **strong emerging theme in the preliminary analysis**. For example, uses of social networking spaces (Facebook and similar), blogs, chat, video games, as well as opportunities to download, install and run open source software applications in public access computers poses new challenges to traditional notions of "legitimate" information needs for development, and "trivial" uses of information for development... Please provide as much detail as possible to help understand how local definitions and restrictions based on what is "legitimate" or "non-trivial" information or communication practices offer new opportunities or barriers to public access information venues in the country.

Interviews with 43 operators form venues in the 5 Brazilian regions show that:

Libraries place restrictions on their users; "legitimate" use of ICT is focused on research and email.

Of 14 libraries, seven stated that social networking sites, downloading, using CD/DVDs, and playing games were all prohibited; of the remaining seven, three did not offer any ICT access, one affirmed that the their ICT equipment was not up-to-date enough for social use, one did not respond, and two affirmed that access to adult websites was forbidden. When

asked who decides what is allowed and what is forbidden, four operators responded that the rules were set by the state, three stated library coordinators (all in the Center West region),and three operators mentioned a need to prioritize research in the face of scarce resources.

Operators in charge of telecenters also mentioned restrictions: all affirmed a need to prohibit access to adult content. Downloading software is mostly allowed but users must ask for permission. The two centers visited in the center-west region affirmed that users can only access websites suggested by the telecenter, the intention being to focus entirely on the themes of the courses or workshops. Out of 13 visited telecenters, six have restrictions on social networking websites and six forbid game-playing. The decision-making process varies from a democratic vote among coordinators to a rule mandated by telecenter partners (cultural partners, municipalities).

In cybercafes, social networking websites were allowed in all visited centers. All operators told us that they forbid youth under 18 to access adult websites, and five out of 13 studied cybercafes forbid the installation of software; all three centers in the 3 south-east region did so. Cybercafes owners have full authority to implement their rules, although they were quick to cite the fact that they follow the legislation and seek to maintain the long-life of their computers.

3.9   Shifting Media Landscape

The ever-changing media landscape and the new opportunities brought about by new media such as mobile phones, SMS, GPS, and even renewed roles for community radio open, was a **strong emerging theme in the preliminary analysis**. Please provide as much detail as possible to help understand how these new technologies and media offer new opportunities or barriers to public access information venues in the country.

3.9.1   Mobile phones

If appropriate, describe salient uses of mobile phones, text messaging, SMS and similar technologies, in relation to public access information venues and information needs of underserved communities.

There were 130 million active mobile lines in May 2008 in Brazil (ANATEL,2008).

The use of mobile phones is rapidly increasing. According to Teleco, a telecommunication consulting company, 45 million cell phones were sold during 2007. During the first four months of 2008, 6.76 million lines were added to the mobile environment in Brazil. The Brazilian mobile phone environment has been fueled by intense competition among mobile operators (Telecom private companies). Operators are expanding to service areas throughout Brazil. Oi, for example, is now operating in Sao Paulo and Vivo is now working in the northeast, increasing competition in those regions.

3G technology is being implemented, but there are few 3G mobile phones that ANATEL allows.

Most mobile phones sold during 2008 are already GPRS

Proportion of features and kinds of mobile phones in Brazil sold in 2008 :

GPRS – 89%; EDGE - 63%; Camera – 53%; Bluetooth – 51%; MP3 – 49%; Oper.Sis. – 13%; GPS – 7%

Source: Teleco Consultancy http://www.teleco.com.br/ncel.asp

3.9.2   Web 2.0 tools and use

If appropriate, describe any salient uses of Web 2.0 tools among users of ICT in public access venues. (Web 2.0 refers to evolution of web-based communities and hosted services, such as social-networking sites, wikis, blogs and others. Wikipedia).

The main web 2.0 tool used in brazil is Orkut (23 million of Brazilian users), a social networking site owned by Google. Originally designed for the United States market, Orkut was "adopted" by the Brazilian population and is now the most visited website in Brazil. (55 percent of Orkut users are Brazilian). Children and adults alike use it to join social communities, interact with friends, and keep in touch with family. As a result of its popularity, some telecenters limit or prevent the use of Orkut, aiming to limit the use of the computers to school research and other cultural and educational activities.

Wikipedia also is growing in popularity and has over 400,000 entries in Portuguese.

3.9.3   Combination of different media

If appropriate, describe creative ways in which different media are being combined to meet information needs of underserved communities, and the ways they affect public access venues. Different media include community radio and TV, other print media, street theatre, songs, etc.

An important ongoing initiative is the Rede Le, or Network Read--a project that currently benefits 18 centers for literacy and digital inclusion in the state of Minas Gerais. Participating organizations include the Ministry of Communication (GESAC Program), the Federal University of Minas Gerais, several NGOs and the open-source software association, all of which contribute to the integration of schools in this network. Network Read promotes the collective production of knowledge via internet-facilitated cultural exchange among several communities. In particular, the network aims to create a social space for communication--the goal being to stimulate the development of existing local activities. ICT, therefore, has became a resource for producing cultural goods.

Through this network, the telecenters are transformed into radio and TV production labs. They also produce CD-ROMs, websites, printed and on-line publications, and books and others, exploring content related to local sustainability, education, cultural patrimony, design, graphic arts, hardware maintenance and the creation of open source software. "TV Read" affords internet users access to videos produced in the program, while "Radio Read" is a platform for collective audio production, so each center can create its own radio program. Network Read users can also access online courses for publishing internet content (HTML, CSS, MySQL, PHP and Wiki).

Source: http://www.ufmg.br/rede.le/

3.9.4 Other shifting media landscape examples

If appropriate, describe other new features and practices in the media landscape that affect public information venues and information needs of underserved communities.

This would be a good place to discuss innovative practices on content creation and production of new messages, media, information and knowledge that are not described elsewhere in this report.

UCA – one computer per student program. Inspired by the MIT-based OLPC (One Laptop per Child), the Brazilian government created its own program to explore one-to-one computing possibilities in schools. As of 2007, there are five trial schools using low cost laptops from several manufacturers: the OLPC XO, Intel Classmate PC and Encore Mobilia. In 2008, the government expects to acquire and distribute 150,000 laptops for 300 schools in every state. Government officials expect to make a bid soon, as the Ministry of Education has already secured a budget for the pilot program.

3.10 Health Information Needs

This is an extra contribution to other research on health information needs going on at the University of Washington, based on willing respondents to last two questions on user surveys at the public access venues.

3.10.1 Sources of health information

Where are people most successful at locating useful health information for themselves or their family (% of respondents across all venues):

84,5	22,7	58,9	11,2
clinic/hospital	friend	health worker	public access venue (library, community center, etc)

Comments: in all venues users have marked more than one choice

3.10.2 Types of health information

What types of health information do they have the most difficulty finding (% of respondents across all venues)?

78,1	81,5	30,3	97,8	12,2
disease prevention	how to locate healthcare	child health information	remedies/drugs	Other

Comments: users have marked more than one choice per question.

People face many difficulties to schedule health appointments in Brazil,: the scheduling service is open only during working hours and people have to wait in lines to schedule an appointment. This is reflected in the 81.5 % that stated "how to locate healthcare."

4 Venue-Specific Assessments

4.1 Venue 1: Public Libraries

4.1.1 Overall venue assessment

Provide a broad picture of the public access information landscape in this venue, informed by the results of this research.

2–3 Paragraphs:
What is your overall assessment of public access information in this type of venue?

There are 5,097 public libraries in Brazil, located in 4,700 of the 5,500 municipalities (85% coverage). Though public libraries are regulated and supported by government (federal and municipal), the system does not adequately invest in new libraries or ICT development. Based on data gathered through interviews and surveys, researchers estimate that less than 15% of Brazilian Public Libraries offer ICT Services. There is also a concentration of library quantity and quality in Southeastern Brazil. Furthermore, most libraries are located in city centers or near government buildings and do not necessarily serve underserved groups. It is worth noting that the data presented above do not factor in the 46,000 school libraries in Brazil that exclusively serve schoolchildren.

The National System of Public Libraries supports the creation of new libraries and coordinates the policy in the country, but each state manages its own system independently, according to its own budget. There is also a national program (Programa Livro Aberto, or, Open Book Program) that creates public libraries in towns that do not have any. To participate in the program, towns must register with the national public library system and provide specific information about their constituents.

The survey conducted for this study shows that most users are women (54.4%), between 15 and 35 years old (64.7%), and visit the libraries frequently (29.9%) or regularly (21.1%). In general, they go to the library for education (34.8%), news (21%), e-mailing (29,1%) and general web browsing (18,9%). Social networking (14.2%) and game-playing (13.9%) also appeared frequently. While users claim that hours of operation are a barrier, operators point to a lack of resources in their libraries.

4.1.2 Access

2–3 Paragraphs:
What is your overall assessment of ACCESS ecosystem in this type of venue (physical access, appropriate technology, affordability)?

During library visits, researchers noted that the libraries are generally accessible, open, and safe. The majority of libraries are also wheel-chair friendly. And while libraries frequently have computers for internal use, most libraries do not offer ICT services to their users—not even to search their collections, which are already cataloged digitally. Most users affirmed that access to the internet would help them with school work and enhance the services already offered by the library Operators noted that a more updated and relevant book collection

would also help greatly.

In libraries, current initiatives focus on books rather than ICT infrastructure. There is a lack of effort by public library directors and the government to invest in such technologies. According to interviews with experts, some government officials are working to change the perception of libraries from a book repository to a more dynamic space—one able to host exhibitions, cafes, and internet access facilities. Researchers did not identify government allocation of funds for the implementation of such ideas.

Public libraries do not charge for services.

4.1.2.1 Physical access

Describe how accessible this venue is to various population segments, differentiating by applicable Equity of Service variables (Form 1c), especially the differences between urban and non-urban settings.

If appropriate, indicate any specifics that apply to Digital ICT services alone.

All public libraries offer community members free, unrestricted access to their collections, facilities, and equipment. The federal government, through its "Open Book" program, plans to create one centrally-located public library in each Brazilian town in an effort to promote free access to information. Unfortunately, these libraries may remain inaccessible for many low-income community members, who typically live in peripheral regions.

The survey conducted for this study shows that most users are women (54,4%), between 15 and 35 years old (64,7%), and visit the libraries frequently (29,9%) or regularly (21,1%). In general, they go to the library for education (34,8%), news (21%), e-mailing (29,1%) and general web browsing (18,9%). Social networking (14,2%) and game-playing (13,9%) also appeared frequently. While users claim that hours of operation are a barrier, operators point to a lack of resources in their libraries. ICT infrastructure is available in less than 15% of libraries in the country.

4.1.2.2 Appropriate technology and services

Describe how appropriate the technologies, services and information offered in this venue are to the population, differentiating by applicable Equity of Service variables (Form 1c).

If appropriate, indicate any specifics that apply to Digital ICT services alone.

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        Most libraries do not offer ICT access. In venues where ICT is offered there is
little or no ICT training offered. With regard to access to printed information there
is support for research inside the library, but few services exist to motivate people
to read and search for information. Most users that look for information in libraries
are students.
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4.1.2.3 Affordability

Describe how affordable the technologies and services offered in this venue are to the population, differentiating by applicable Equity of Service variables (Form 1c).

If appropriate, indicate any specifics that apply to Digital ICT services alone.

As stated above, all public libraries offer free, unrestricted access to community members. Free access is the cornerstone of the "Open Book" program, to be implemented in the near future. Some libraries, however, do charge users a small, one-time registration fee.

4.1.2.4 Fees for services

What fees or other requirements exist in order to access and use the information in the venues? (registration, user fees, restrictions to certain populations)

If there are fees: What do these fees buy?

Indicate amount in local currency

Equivalent in US Dollars:

Date of estimate

and local currency name

If appropriate, indicate any specifics that apply to Digital ICT services alone.

Explain any salient differences in the services offered in different regions, sizes or other variables of significance:

4.1.2.5 Geographic distribution

What is the distribution of the venues in terms of their geographic location?

Complement any details not already included in section 2.1: Venue Selection.

Region	South	Southeast	Center-West	Northeast	North
# of libraries	1200	1787	434	1304	372
% of total (5097)	24%	35%	8%	26%	7%

TOTAL 5097

4.1.2.5.1   Map

If available, insert a map that displays the geographic distribution of this type of venue in the country (expand to the size you need).

Description of map:

- **Região Norte** (green)
- **Região Nordeste** (orange)
- **Região Centro-Oeste** (cream)
- **Região Sudeste** (blue)
- **Região Sul** (pink)

The map shows the following percentages by region:
- Região Norte (Amazonas/Pará): 7%
- Região Centro-Oeste (Mato Grosso): 8%
- Região Nordeste (Bahia): 26%
- Região Sudeste (Minas Gerais): 35%
- Região Sul (Rio Grande do Sul): 24%

4.1.2.6 Other factors affecting access

Other factors that affect equitable access to public information in this type of venue, not covered above?

If appropriate, indicate any specifics that apply to Digital ICT services alone.

4.1.3   Capacity and relevance

2–3 Paragraphs:
What is your overall assessment of CAPACITY ecosystem in this type of venue (human capacity, locally relevant content, integration into daily routines, socio-cultural factors, trust in technology, social appropriation of technology)?

Initiatives that contribute to the improvement of literacy and a culture of reading are greatly needed. The Brazilian government has not invested in spacious public libraries, like those in developed countries such as the United States. The notion of a library as a "reading sanctuary," common to other countries, does not exist in Brazil. As a result, cultures of reading and searching for written information are present mainly in populations with more schooling.

As mentioned in 3.2.2 Capacity, The struggle to develop human capacity in Brazil is deeply engrained in the challenges facing the education system. While 93 % of school-age children are now attending school, the quality of public basic education remains a serious problem. For example, the results from Brazilian participation in PISA, the OECD Program for International Student Assessment (www.pisa.oecd.org) were disheartening. Among 40 participating countries in 2003, Brazil ranked 37th in reading and 40th in mathematics. The National Assessment of Basic Education shows that students are not developing necessary skills in reading, writing and mathematics. The national Functional Literacy Index also provided sobering results. Among the population of 15 to 64 year olds in 2007, 7% are illiterate, 25% are barely literate, 40% are basically literate, and 28% fully literate

Libraries could play a much more central role in improving the literacy rate of the Brazilian population. In interviews and surveys we observed that locally relevant content is frequently not offered; few people—aside from those who read the news online--have integrated the library into their daily routine. Frequent visitors tend to be more educated, while telecenters and cybercafés remain the choice of venue for the majority of the population. There is little ICT integration into the public library system, and users of libraries with ICT access wished that library staff could assist them. According to interviews conducted in this study, most operators are not graduated as librarians but have finished college. Public library operators are typically women (93%), between 26 and 35 years old (46%) and have a college degree (46%).

4.1.3.1 Staff size

How many people work in a typical facility for this type of venue? (full time-equivalent employees or contractors; describe any significant variations; i.e., large, medium and small libraries in the country)

If appropriate, indicate any specifics that apply to Digital ICT services alone.

Researchers estimate that staff size varies between 3 and 30 employees, depending on the size of the library.

To be hired in a public library, applicants must enter a public application process.

4.1.3.2 Staff training

What is the overall capacity of the staff (i.e., librarians, telecentres operators) to help users access and use public access to information and communication services offered in this venue? Differentiate by applicable Equity of Service variables (Form 1c).

(i)   If appropriate, indicate any specifics that apply to Digital ICT services alone.

(ii) For Public Libraries, indicate if Library School training is available and/or required for librarians.

According to interviews most operators are not formally graduated as librarians but have finished a college degree. While each public library must be directed by a graduated librarian, directors usually do no serve as operators and frequently do not work in the actual library. Operators are typically women (93%), among 26 and 35 years (46%) and have finished college (46%).

Operator educational attainment varied immensely by geographical region: the majority of operators interviewed in the south (15,4%) and in the southeast (23,1%) have finished a college degree; 100% of operators from center-west region were college students; in northeast 50% were college students and 50% had finished college, and in the north region they have all just finished high school.

There is a specific training offered to the libraries users about the information recovering: how to search for, where to search, explanations of tags-system and key words. This training aims to increase users' autonomy. There is no certification for these courses.

In Brazil, colleges and universities offer schools of library science

4.1.3.3 Services offered

What kind of services does this type of venue offer to the public? (i.e., access to books, magazines; meeting and conference rooms; audio/video programs, computers, Internet, other). Include Digital ICT services if offered.

4.1.3.4 Programs for underserved communities

Describe if this venue has programs specifically intended to reach underserved communities, differentiating by applicable Equity of Service variables (Form 1c).

If appropriate, indicate any specifics that apply to Digital ICT services alone.

Researchers identified no specific programs for underserved communities in centers; programs are planned and implemented with focus on the general population.

The federal government, through its "Open Book" program, plans to create one centrally-located public library in each Brazilian town in an effort to promote free access to information. Municipalities interested in participating are required to provide a series of data about their constituents.

4.1.3.5 Relevant content

What type of locally relevant content is available? What else is needed? Who is doing it?

If appropriate, indicate any specifics that apply to Digital ICT services alone.

Available Content:

The following content was mentioned in interviews with librarians: general books, literature, school textbooks, reference material, newspapers, magazines (adults, children and teens), CDs, and books in Braille (mentioned once). Other content referring to education, entertainment, government, and local history was also mentioned.

Other Content Needed:

Surveys and interviews conducted with users and operators point to lack of relevant and

updated content as a barrier to information access in libraries. Other barriers include lack of skills and insufficient hours of operation Operators identified gaps in collection sizes and computers available

Local Initiatives to build needed content:

When asked what can be done to produce and distribute more locally relevant content, operators mentioned:

Mobilizing the local community by collecting signatures to petition for better facilities; a bigger budget to buy books; more autonomy to decide which books are purchased; assessing user needs; increasing the collection size; purchasing computers; and extending hours of operation.

Source: interviews with 14 operators from 14 libraries in the 5 brazilian regions.

4.1.3.6 Services and information available in local languages

Describe the availability of services and contents relevant to human development that are available in **local languages** in this type of venue? (i.e., info on health, education, government services, etc)

If appropriate, indicate any specifics that apply to Digital ICT services alone.

All content available is in the local language, Brazilian Portuguese. On the internet there is a vast source of content in Brazilian Portuguese too.

4.1.3.7 Types of uses

What do people USE the venues for (most frequent kinds of information and services people seek in them, activities they carry out in them)?

(i)   If appropriate, indicate any specifics that apply to Digital ICT services alone.

Refer to section 3.4 Charts: Information Needs and complement here as needed.

INFORMATIION USERS SEEK

According to

77
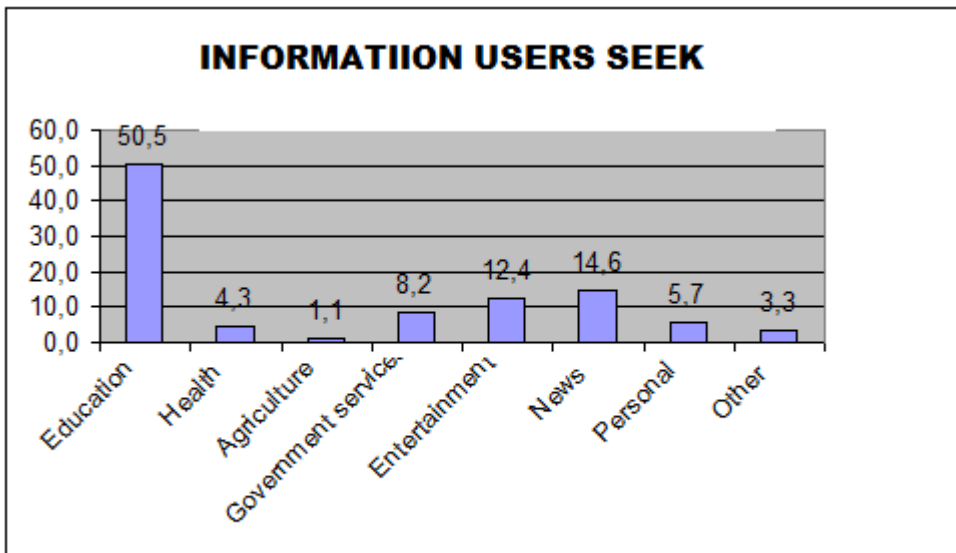
interviews conducted with operators, most users use the libraries education-related topics (50.6%) or news (14,6%).

(i) Regarding the question about activities developed inside the libraries, more than 50% of interviewed operators did not respond to this question. Those operators work in libraries that do not offer ICT services.

PERCEPTION OF ICT ACTIVITIES USERS
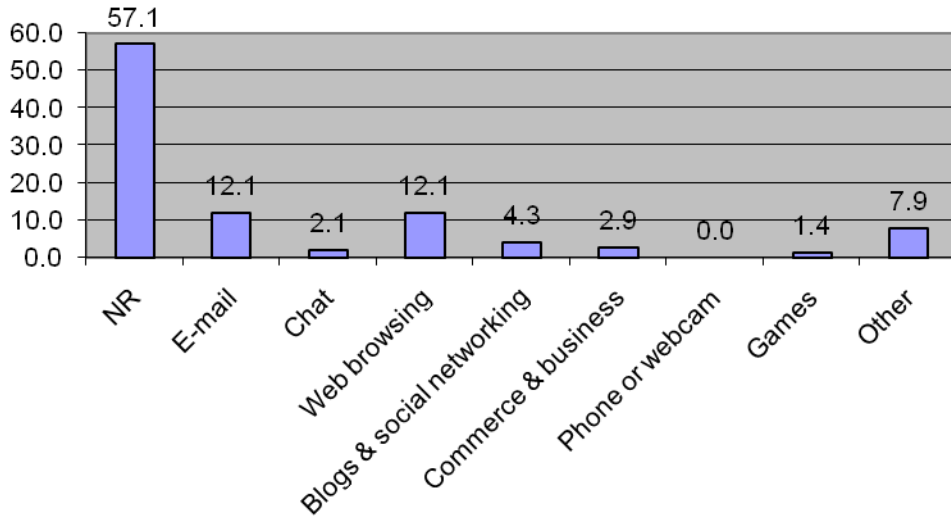
4.1.3.8 Number, type, and frequency of users

Refer to section 3.4 Charts: Information Needs. Complement here as needed.

According to survey data, 29.9% of users go to the local library frequently, while 21.1% use it regularly.

How often do you visit this location?

Chart showing Percentagem (%) by visit frequency:
- NR: 0.7
- First visit: 6.7
- Rarely: 11.9
- Occasionally: 11.5
- Regularly: 21.1
- Frequently: 29.9
- Daily: 18.2
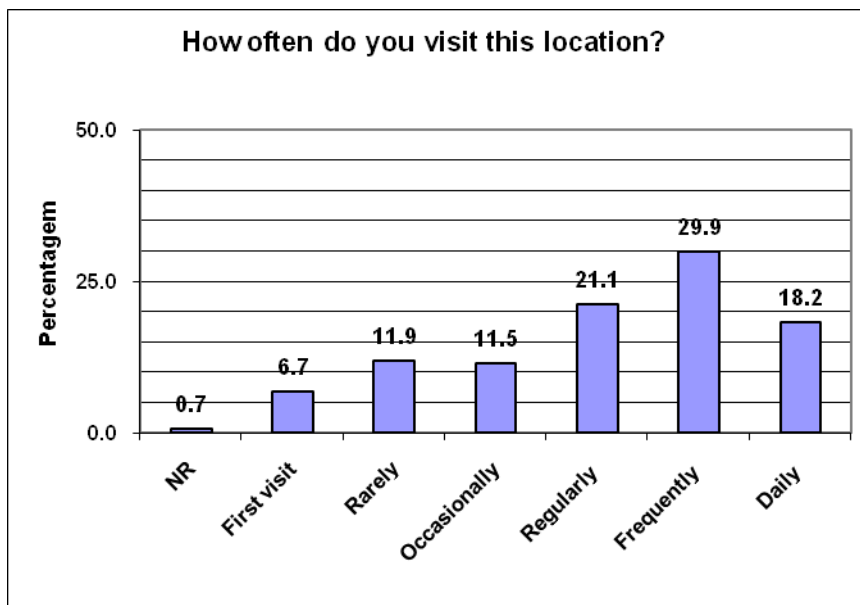
4.1.3.9 Users Capacity to use information and services offered

What is the overall capacity of the users to take advantage of public access to information and communication resources, differentiating by applicable Equity of Service variables (Form 1c)?

(i) If appropriate, indicate any specifics that apply to Digital ICT services alone.

According to survey data, library users generally have the capacity to take advantage of public access to information and communication resources, as many of them seek educational information frequently or regularly. Researchers assume that these visits are of (at least) some use for them.

Nonetheless, it is clear that library users do not represent the overall population. 77% of library users we interviewed had some college education, while only 17% of the Brazilian population is college educated. Therefore, the researchers conclude that library users do not generally come from underserved groups.

See 3.2.2 for details regarding the literacy of the Brazilian population.

4.1.3.10 Training courses for users

Describe training courses offered to the public at this venue, and if they offer some kind of testing and certification.

Training courses: In general, training courses offered to users only when libraries have ICT infrastructure in place. In these cases, "technology courses" are offered free-of-charge to users.

ICT specific training courses: use of ICT to research

4.1.3.11 Integration into daily routines

How easy is it for users to integrate the information and services offered in this type of venue into their daily lives? (offer concrete solutions to their needs and problems, make it easier to solve them at this venue than in other places)

If appropriate, indicate any specifics that apply to Digital ICT services alone.

Many users who seek educational resources and news updates appear to have integrated the library into their lives, though only 18.2% of surveyed users stated they visited the library daily.

4.1.3.12 Users perceptions about the venue

What is the general perception or opinion of the population about the venue (not necessarily its specific services, but the venue itself: i.e., what do people generally think about libraries? Are they places that are "cool" or "only for elites" etc?), differentiating by applicable Equity of Service variables (Form 1c)? This includes perception by people who do not use the venue…

(i)   If appropriate, indicate any specifics that apply to Digital ICT services alone.

Users see libraries as clean, organized and safe places with help available for accessing information and content. When located near schools, libraries are also seen as a meeting point for kids intending to study. But libraries are also seen as places with lack of content and services.

4.1.3.13 Social appropriation of information and generation of new knowledge

What activities, products and services are users undertaking that exhibit new levels of social appropriation of technologies and generation of knowledge? For example, how are users generating and disseminating new knowledge, products and services through their use of this venue? (see category 13 in Real Access Framework for Social Appropriation of Technology).

If relevant, indicate any specifics that apply to Digital ICT services alone.

Such appropriation of technology and generation of knowledge was not identified among most libraries' users.

4.1.3.14 Trust, safety, and privacy

What is the general perception or opinion of the population about the safety, security and privacy (TRUST) of the information and services offered in this venue?

The population sees libraries as safe places; most information accessed is printed information from known and reliable sources

4.1.3.15 Gaps and opportunities in information and services offered

What other information gaps and opportunities exist, which are not being met? (other information/services people need that are not being met there and could be offered, especially through Digital ICT services)

Gaps:

- There are few libraries equipped with ICT and offering ICT services

- Existing libraries promote few initiatives to develop reading skills of underserved groups.

- Lack of investment in the acquisition of books.

- There are almost no libraries located in underserved communities.

Opportunities:

- Using existing resources from programs intended for the creation of telecenters, to create telecenters inside existing public libraries. A library in the state of Bahia has succeeded in using this approach to acquire computers with investment of the program Identidade Digital. This program donates computers to create telecenters and financially supports the telecenters covering costs related to internet access and operators salary. Sims obvious, but most programs with resources to create telecenters, focus mainly in NGOs or grassroots organizations.

- Stimulating private investment by offering tax deductions for the creation and maintenance of libraries inside telecenters and the payment of qualified personal in the libraries and telecenters.

- Replicating the initiative "Arca das Letras" (see 2.1.1), to create micro-libriries inside grassroots organizations already hosting telecenters.

- While underserved groups do not improve their literacy level, the creation of rich media information to be accessed in telecenters or cell phones is an opportunity.

- Promoting activities to stimulate the use of online content in libraries with ICT infrastructure installed. For example, mothers could attend telecenter workshops about finding cooking recipes or child health while their children attend after-school activities. They could visit select websites, view previously-selected content and debate it with their peers. To build ICT skills, they could also learn to create visual presentations or they could simply print the information to bring home.

4.1.4 Enabling environment

2–3 Paragraphs:
What is your overall assessment of the ENVIRONMENT ecosystem in this type of venue (local economy, national economy, legal and regulatory framework, political will and public support, regional and international context)?

Analysis of government policies for digital inclusion reveals that ICT use in libraries is not perceived to be a solution for bridging the digital divide The national culture does not understand Libraries as the potential venue for investment in ICT for development.

Digital inclusion programs are promoted by several ministries in the federal government and by some states and municipalities. These programs focus on computers donations to schools and NGOs to create school IT labs and telecenters, respectively. Donating computers to NGOs and schools is also the trend among organizations and businesses in civil society. While the Ministry of Culture, which is responsible for the national library system, has created a national program for digital inclusion, even they choose to donate computers to NGOs over libraries. Researchers believe that these choices can be explained by a government understanding that telecenters in NGOs benefit underserved communities more than ICT in libraries do.

When a new library is created, the federal government donates books and a computer for staff use; internet access is provided by the municipality. The head librarian may apply for more computers from the federal government, but such requests are uncommon.

4.1.4.1 Local and national economy

Describe the local and national economic environment and how it affects public access to information and communication in this type of venue (refer to and complement economic summary in country assessment, section 3.5 Economic, Policy, and Regulatory Environment, calling out what is specific to this venue)

(i)   If appropriate, indicate any specifics that apply to Digital ICT services alone.

In the last few years, the economic situation in Brazil has improved in many respects. Rates of economic growth have been unprecedented, when compared to recent decades. Poverty, however, remains a concern and great demand exists for projects aiming to improve the quality of life and educational attainment of the population. While in upper class malls, book sales are on the rise, there appears to be little political will for the creation of new public libraries or the improvement of existing facilities.

Although there are national projects for distributing books to libraries, there is an evident lack of initiative regarding projects that involve new technologies—this despite the fact that nowadays, books are as important as ICTs. Therefore, it is imperative that the federal government promote technological programs, such as the "Open Book" project. According to the state library coordinator for Rio Grande do Sul ,the national government gives libraries books and a staff computer, but internet access must be provided by the municipalities. There is no specific funding for technological initiatives. In Rio Grande do Norte the state coordinator remarked that there was "no funding at all for libraries."

Researchers assume that the lack of investment in libraries is a consequence of both local cultural conceptions and public policies that give priority to schools and NGOs when it comes to investing in technology. As the economy grows, private investment combined with tax deduction possibilities, presents an opportunity to strengthen libraries by equipping them with computers, and building new facilities.

4.1.4.2 Legal and regulatory framework

Describe the legal and regulatory framework and how it affects public access to information and communication in this type of venue (refer to and complement economic summary in country assessment, section 3.5 Economic, Policy, and Regulatory Environment, calling out what is specific to this venue)

(i)   If appropriate, indicate any specifics that apply to Digital ICT services alone.

During the military dictatorship, there was rampant censorship in Brazil. The reinstatement of democracy brought basic rights such as freedom of expression and freedom of the press. Rarely, some censorship still occurs, though usually to protect citizens against intolerance. Regardless, companies advertising products related to smoking and alcohol are required to mention health risks associated with using the products.

The new culture brought by the ICT era is enhancing the ability to share information and knowledge:

In spite of the swift growth of broadband facilities over the past three years in Brazil, access to it

still prevails in higher economic potential municipalities. This represents an integral element of this economic backwardness, and contributes to deepen the country's regional differences. ADSL is the most disseminated broadband technology, and has grown significantly over the last years, both in the number of accesses and in the number of benefited municipalities. Teletime has published that, in 1993, 251 Brazilian municipalities had broadband technology available. This figure grew to 1,175, in 2004, and to 1,606 until September 2005, totaling roughly 4 million subscribers.

Rogerio Santanna, Ministry of Planning, 2006

Article published in CGI Survey 2006.

The 1995 *Lei Geral de Telecomunicações* (General Legislation on Telecommunications) created a new private model for telecommunication services in Brazil. In marked contrast from the old public model, nowadays there is vibrant competition among private companies to implement telecommunication services in Brazil. This law has also created ANATEL, the National Agency of Communication, to regulate the telecommunication system in the country. The government gives concessions to telecommunication services via a system of public bidding. Currently, three companies share the Brazilian market for broadband; as part of their licensing agreements, they must maintain a policy of corporate social responsibility. Recently, for example, the Brazilian government negotiated with operating telecoms to extend broadband to all Brazilian municipalities, and connect, free of charge, all urban schools until 2025. By the end of 2008, 22.000 schools will receive broadband, while 55.000 schools will be connected by 2010.

Other important legislation includes:

The Lei da Cultura (Culture Law), which allows 100% tax deductions for private investment in culture. This legislation strongly supports the productions of films, theater and cultural events, among them *Carnaval*. This legislation also allows tax deductions for the creation, revitalization or improvement of libraries.

The Lei da Informática- 8248 (Law on Information Technology), which forces hardware-producing companies to invest profits in research and development, thereby stimulating the development of knowledge in this area.

4.1.4.3 Political will and public support

What is the level of political will and public support for this type of venue? (refer to and complement section 3.5 Economic, Policy, and Regulatory Environment, calling out what is specific to this venue)

(i)   If appropriate, indicate any specifics that apply to Digital ICT services alone.

Analysis of government policies for digital inclusion reveals that ICT use in libraries is not perceived to be a solution for bridging the digital divide.

Digital inclusion programs are promoted by several ministries in the federal government and by some states and municipalities. These programs focus on computers donations to schools and NGOs to create school IT labs and telecenters, respectively. Donating computers to NGOs and schools is also the trend among organizations and

businesses in civil society. While the Ministry of Culture, which is responsible for the national library system, has created a national program for digital inclusion, even they choose to donate computers to NGOs over libraries. that the researchers believe that these choices can be explained by a government understanding that telecenters in NGOs benefit underserved communities more than ICT in libraries do.

4.1.4.4 Organization and networking

Describe if the facilities in this type of venue organized in any network, association or other collective body? (i.e., national public library system, telecentre franchise or network, etc)?

The national public library system directs funding to the public libraries. Although there are national projects for distributing books to libraries, there is an evident lack of initiative regarding projects that involve new technologies—this despite the fact that nowadays, books are as important as ICTs. Therefore, it is imperative that the federal government promote technological programs, such as the "Open Book" project. According to the library coordinator for Rio Grande do Sul, the national government gives libraries books and a staff computer, but internet access must be provided by the municipalities. There is no specific funding for technological initiatives.

When a new library is created, the government donates books and a computer for staff use; internet access is provided by the municipality. The head librarian may apply for more computers from the federal government, but such requests are uncommon.

The National System of Public Libraries (SBNP) is designed to promote the social role of public libraries in society. Its institutional goals include building a democratic society and developing critical thinking skills to help people exercise their citizenship. The library, therefore, is to be a tool for personal development and social transformation. Successfully attaining these goals is only possible when municipal libraries function as an integrated network throughout Brazil. Currently, integration is limited primarily to registration in the national system. Integration demands cooperation among states, counties, and municipalities

4.1.4.5 Partnerships

Describe notable public-private partnerships in support of this type of venue.

If appropriate, indicate any specifics that apply to Digital ICT services alone.

The Lei da Cultura (Culture Law) allows for 100% tax deductions for private investment in culture. We were unable to gather reliable data about library creation via this law, but we know that private sector investments have already helped to create several small libraries in NGOs (grassroots organizations).

4.1.4.6 Other environment factors

Other factors in the environment that affect access and use of information in this kind of venue, not covered above?

4.1.5   For publicly funded venues only: Revenue streams

This section is meant specifically for publicly-funded venues (public libraries, national connectivity programs, etc).

4.1.5.1 Recent changes and future trends

Describe any recent changes and anticipated future trends in the funding and revenue streams for this type of venue in the country. Have funding levels risen or decreased dramatically over the past few years? What is the outlook for the foreseeable future?

Federal policies greatly affect the amount of funding directed to public libraries. Although there are national projects for distributing books to libraries, there is an evident lack of initiative regarding projects that involve new technologies—this despite the fact that nowadays, books are as important as ICTs. Therefore, it is imperative that the federal government promote technological programs, such as the "Open Book" project. According to the library coordinator for Rio Grande do Sul, the national government gives libraries books and a staff computer, but internet access must be provided by the municipalities. There is no specific funding for technological initiatives. In Rio Grande do Norte the state coordinator remarked that there was "no funding at all for libraries."

4.1.6   Case example for public libraries

Provide a short descriptions and commentary for each type of venue, offering a realistic sense of what the venue looks and feels like in its day to day operation, the kind of people who visit, and the kind of services they receive. Also, the case example indicates what makes the case unique or what features are commonly shared with other venues. A photo and short quotes will make it even more real.

Insert Case Example and Photo here.

Case Example: Public Library of the State of *Rio Grande do Sul*[1]

Gabriela Sanchez Núñez - Librarian CRB[2] 10/1422

This case study provides context for ICT access in the Public Library of *Rio*

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[1] *Rio Grande do Sul* is a state from south of Brazil; it will be mentioned in this document as RS.

[2] CRB represents *Conselho Regional de Biblioteconomia* (Regional Council of Libraries); the associated number is the registration number of *Núñez* in this Council.

Grande do Sul (PLRS).

History

Established in 1871, the PLRS--located on *Riachuelo* Street--is currently being renovated; its temporary house is the third floor of the *Casa de Cultura Mário Quintana* (Mário Quintana[3]'s House of Culture). The renovation is part of "Programa Monumenta," a Ministry of Culture initiative designed to recoup historical buildings.

Morgana Marcon[4], the coordinator of the state library system and director of PLRS, explained in an interview that the library's history can be traced to the reign of *D. Pedro II*. On March 30, 1871, the state legislator João Pereira da Silva Borges Fortes Filho petitioned the Provincial Assembly to create an official library. By January 1877, PLRS opened to the public. Dr. Fausto de Freitas e Castro presided over the library's collection of 1,809 titles in 3,566 volumes. That year, LPRS served 1,483 users, who consulted 691 titles.

In 1906, PLRS, under the leadership of poet *Vitor Silva*, became a part of the public archive. Silva strove to modernize the collection by subscribing to the Universal Decimal Classification (UDC) method of cataloging archives. He also advocated for a new, unprecedented building.

In 1915, the library became independent and was transferred to its current address at the corner of Riachuelo and General Câmara streets, in *Porto Alegre*[5]. Its artistic style drew from positivist, neoclassical, Egyptian, gothic, and Florentine traditions. To this day, busts of positivist philosophers line its halls, its main entrance remains sculpted of gold- and marble-lined wood, and original paintings still decorate the reading room walls. The building was used to celebrate the 100-year anniversary of Brazilian independence in 1922; and in 2000, it was declared a national heritage site,

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[3] *Mário Quintana* was a famous local poet.

[4] *Morgana Marcon* agreed to help with this case and gave an interview to share information and data presented here.

[5] The city of *Porto Alegre* is the state capital from RS.

fourteen years after Rio Grande do Sul declared it a state heritage site.

Services

PLRS serves the general public, which includes frequent visitors and people just passing by. The library, staffed by two full-time employees and one trainee--is a comfortable place to sit, relax, and read a magazine or book in the collection. Importantly, the library offers television, newspaper, and internet services.

According to Marcon, digitalization of the lending process began in 1996. During that year, a multimedia section—the first of its kind in Brazil--was created. It now offers free access to the internet, as well as videos and CD-ROMs. Only printed material is charged for. In 2004, PLRS updated its computer equipment due to a high demand for emailing and internet research. According to PLRS' data, in 2006, 15,966 users used these computer-related services. PLRS therefore was able to justify its request for further funding to purchase more powerful machines and to train its staff with ICT skills.

Other services are also offered by the library. These include helping children with their school projects, Porto Alegre-related archives, meeting spaces, and workshops, among others. Users must register with the library system and prove their local residence before gaining access to these services.

Recent projects have been sponsored by private companies, through the federal and state income tax benefits guaranteed by "Lei de Incentivo à Cultura" (Incentives for Culture Law). The current renovation project aims to expand the library's ability to offer services such as exhibitions, plays, coffee shops, and to make the PLRS part of Porto Alegre's current cultural context. As mentioned above, the PLRS renovation is being funded by *Programa Monumenta*, which aims to restore the historical building and its prominent features, which include one of the state's oldest elevators, dating to 1916. Unfortunately, these recent projects do not fund ICT development.

Photo 1: Public Library of the State of *Rio Grande do Sul*, façade

Photo 2: PLRS′ reading room

An extra mini-case describing a library on southeast region – State of Sao Paulo:

The ***Biblioteca Infantil Municipal* (Municipal Children's Library)** was founded in 1936, as part of a cultural endeavor led by the director of the local department of culture, Mario de Andrade. It is the oldest children's library in Brazil and served as an inspiration for several other children's libraries throughout the state. The library began as a house on Major Sertório street, where the library promoted spaces and activities intended to attract children to reading. These included a magazine reading room, a children's newspapers, and storytelling by local authors. The population soon outgrew the space, and in 1945, the library was moved to another house on General Jardim street, where today's "Library Plaza" is located.

In its new home, library activities were expanded and in 1947, a special Braille section was created for blind children. During this time, the first conferences on child and juvenile literature were also held in São Paulo. In recent years, library collections have been further expanded and new spaces have been developed: a video room, theater, rare books section, dance floor, and arts room all make up part of the library today.

4.2　Venue 2: Venue Name

4.2.1　Overall venue assessment

Provide a broad picture of the public access information landscape in this venue, informed by the results of this research.

2–3 Paragraphs:
What is your overall assessment of public access information in this type of venue?

In Brazil, telecenters are places for public access to ICT, usually consisting of a room—open to the general public--with computers connected to the internet. In Brazil telecenters are usually located in NGOs or grassroots organizations inside low income communities. These organizations fundraise or solicit partners to create telecenters as a social benefit to the community. While the majority of Brazilian telecenters offer free access to the internet, they limit users to a certain amount of time, Often times, educational activities are given priority over others; for example, people using the telecenter for school research are generally given more leeway than those going to chat online.

The majority of telecenters in Brazil are hosted by nonprofit organizations. To create a telecenter, an NGO usually establishes a partnership with donors, funders or other partners, resulting in interesting networks of collaboration. For example, GESAC is a federal government initiative that offers free internet access to NGOs and schools. CDI and Fundaçao Pensamento Digital are examples of NGOs that refurbish computers and donate them to other NGOs to create telecenters, while also offering continuous training and/or professional development for telecenter staff. Some municipalities such as Sao Paulo and Porto Alegre, and state governments like Bahia and Sao Paulo, have their own telecenter programs. These governments partner with NGOs located in underserved communities; donate computers, supply internet connectivity and small wages for local youth that work as instructors or educators inside the telecenters. The federal government has a variety of initiatives that create networks of telecenters following the same framework of partnerships and roles.

During second phase of this research we implemented a survey in 13 telecenters in the five Brazilian regions. Results show that telecenter users are mostly female (55.3%) and young (65.7% are between 15 to 35 years old and 25.6% are under 15 years old).. Users visit the centers frequently and most users (41%) go to telecenters looking for entertainment. Regarding their activities, 28.8% of users mentioned that they use the social website Orkut, and 21% that they use games.

4.2.2　Access

2–3 Paragraphs:
What is your overall assessment of ACCESS ecosystem in this type of venue (physical access, appropriate technology, affordability)?

Brazilian telecenters offers public access to information, free of charge, but may charge small fees for some services, like printing. Users in the North and in Center-west Brazilian regions mentioned cost as a barrier to this type of venue, but venue operators told us that they do not charge for internet access--just for extra services. In the South and Southeast region users did not mention cost as a barrier, and in the Northeast region just 8% of users mentioned cost as a barrier.
Telecenters are considered safe places, as they are usually hosted by community associations that also offer daycare, after-school activities, and a variety of social-educational programs. Adult websites are forbidden and in many centers social networking websites like Orkut are forbidden as well.

In some centers (e.g. Telecenter Program initiatives in Porto Alegre) internet speed is slow, limiting the usefulness of access to the internet. Main barriers to access mentioned by users were: operating hours (24%); lack of training (15.9%), and lack of content (14.1%). During visits to telecenters, researchers observed that, in

general, access for disabled users is available

4.2.2.1 Physical access

Describe how accessible this venue is to various population segments, differentiating by applicable Equity of Service variables (Form 1c), especially the differences between urban and non-urban settings.

If appropriate, indicate any specifics that apply to Digital ICT services alone.

During operating hours, most telecenters split time between free internet access for the community (no restrictions) and guided activities with previous enrollment and set calendars. As most telecenters are housed inside low income neighborhoods, their users are typically poor. Also, because most telecenters are hosted by NGOs, many activities are offered to children already attending other programs in these NGOs (e.g. after school activities).

Telecenters are created through government programs or policies, or through large corporations (telecom, oil, finance) as part of their social investment programs. Each program typically creates a network of telecenters in several communities, with each telecenter hosted by a local community organization or, not so frequently, by a government social assistance department.

From 2000 to 2004, during the initial telecenter "boom" most telecenters were created with refurbished computers, through programs such as Telecentros (government banks Banco do Brasil and Caixa Economica). More recent initiatives including. Casa Brasil (Brazil House), Pontos de Cultura (Culture Points) and Kits for Telecenters, used new equipment. Nonetheless, refurbished computers are still seen as an important possibility for underserved communities; CRCs (centers for computers refurbishment) are government sponsored (Ministry of Planning) centers aiming to refurbish government computers and donate them to schools, libraries and telecenters.

The speed of internet connections in telecenters is frequently slower than that of cybercafes, since the connection is usually the result of partnerships between the government and telecommunication companies. When those partnerships are not updated, and internet technology improves, the connections become obsolete. On the other hand, private centers can subscribe to the latest technology from the telecoms.

Most existing telecenters are located in urban areas. The program Kits for Telecenters, an initiative from Ministry of Communication (http://www.mc.gov.br), aims to donate a telecenter creation kit to each of the 5,500 municipalities by the end of this year. Meanwhile, the Territorios Digitais Program (Digital Areas), from the Ministry for Agricultural Development focuses on telecenter creation in rural. It has been incorporated into the existing Areas of Citizenship program, which benefits 120 areas in the country with services. By 2010, all 120 areas expect to be have working telecenters.(ONID – National Observatory of Digital Inclusion www.inclusaodigital.gov.br).

According to interviews implemented with 13 operators of telecenters, predominant barriers to access are hours of operation (22,7%) and lack of training (18,2%).

The biggest barriers for users accessing
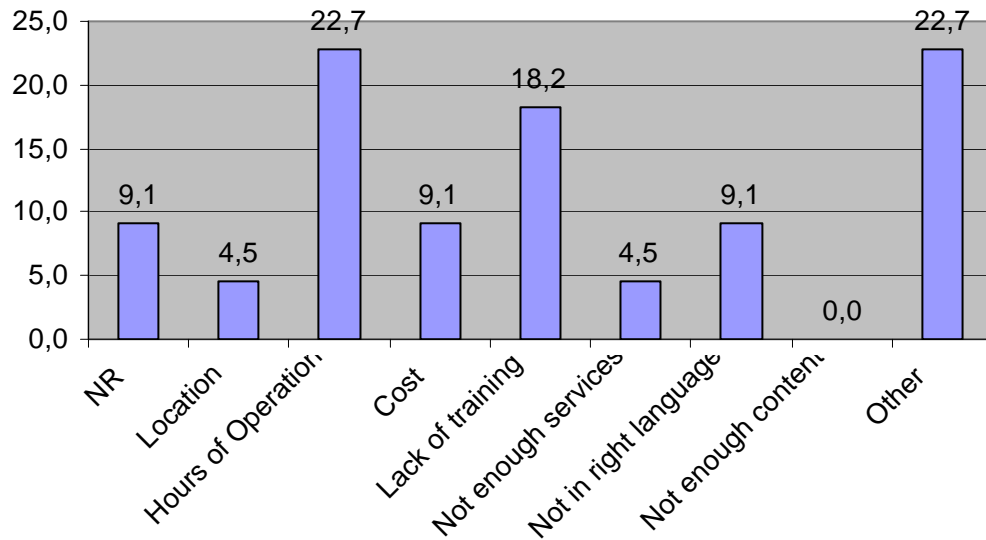
When asked about the three biggest barriers to access information in telecenters, telecenter users agreed with operators: hours of operation (24.1%) and lack of training (15.9%) were most common. They also mentioned lack of content.

Three biggest barriers for users accessing ICT services
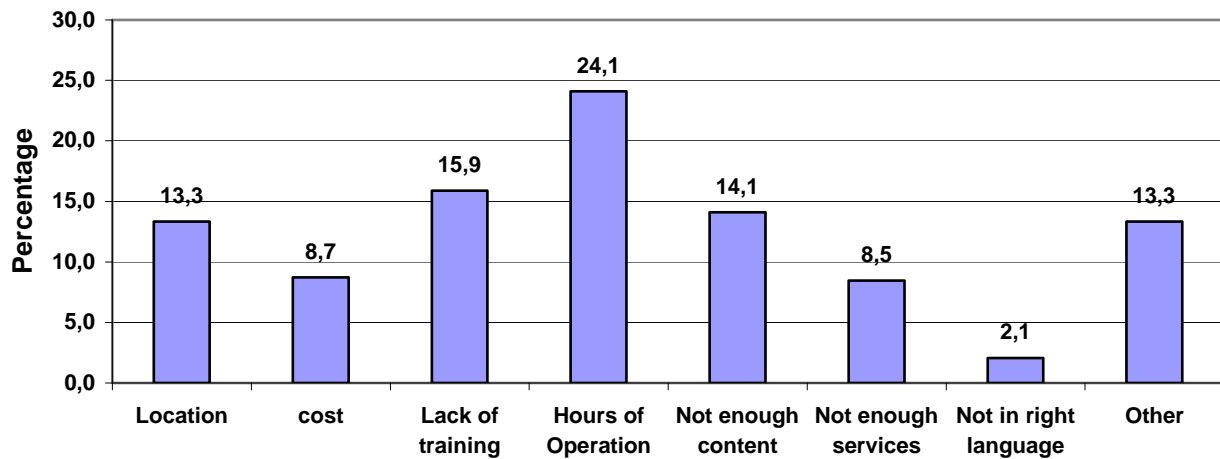
Regional differences also exist. By region the following are the most mentioned barriers to access. South: hours of operation; Northeast: training; Southeast: a lack of content; Center-west: cost and training; North: cost and lack of services. Source: Survey with users from 13 Telceneters.

4.2.2.2 Appropriate technology and services

Describe how appropriate the technologies, services and information offered in this venue are to the population, differentiating by applicable Equity of Service variables (Form 1c).

If appropriate, indicate any specifics that apply to Digital ICT services alone.

Surveys and interviews conducted during this research show that most telecenter users visit the center for entertainment and social networking. When seeking ICT access, users are much more interested in communicating than searching for information. Although activities related to networking and games are a good start, they are limited considering the potential for telecenters to further social and educational development. The infrequent use of ICT in telecenters for educational purposes can be attributed to limited reading skills among underserved populations. Moreover, the limited capacity of center operators and a lack of vision among program coordinators and policy makers impede development of ICT services. Operators do not recognize the potential to develop much more than what currently exists. Therefore, a lack of available services also contributes to the entertainment-education gap.

The researchers also believe that most users do not understand how effectively integrate ICT into their lives or their work--either because they are not trained to use it, or they cannot imagine the possible benefits. Nor do operators understand the broader potential for technology to empower users to innovate and use technology in creative ways (for general and educational purposes).

4.2.2.3 Affordability

Describe how affordable the technologies and services offered in this venue are to the population, differentiating by applicable Equity of Service variables (Form 1c).

If appropriate, indicate any specifics that apply to Digital ICT services alone.

Access to the internet is offered free of charge, but for other services such as printing small fees are charged.

Users responding to surveys in the North and Northwest regions mentioned telecenter cost as their biggest barrier. Researchers affirmed, however, that studied telecenters do not charge for access to internet. We believe users were referring to costs for services like printing or fees charged to attend courses; another possibility is that users were referring to the cost of transportation to get from their homes to the telecenter.

4.2.2.4 Fees for services

What fees or other requirements exist in order to access and use the information in the venues? (registration, user fees, restrictions to certain populations)

If there are fees: What do these fees buy?

Printing service and IT courses

Indicate amount in local currency   IT course: R$20.00; printing service: R$ 0.15 per sheet

Equivalent in US Dollars: IT course: $12.50; printing service: US$ 0.09

Date of estimate   July 15th, 2008

and local currency name   Real

If appropriate, indicate any specifics that apply to Digital ICT services alone.

Explain any salient differences in the services offered in different regions, sizes or other variables of significance:

Users from the North and Center-west regions, when responding to the survey, referred to telecenter cost as their biggest barrier.

4.2.2.5 Geographic distribution

What is the distribution of the venues in terms of their geographic location?

Complement any details not already included in section 2.1: Venue Selection.

Distribution of telecenters in the 5 Brazilian regions: South: 2164; Southeast:7492; Center-west:1147; Northeast:5562; North:1248

4.2.2.5.1   Map

If available, insert a map that displays the geographic distribution of this type of venue in the country (expand to the size you need).

7%
Amazonas

Pará

32%

6%

43%

12%

Description of map:

- ■ Região Norte
- ■ Região Nordeste
- □ Região Centro-Oeste
- ■ Região Sudeste
- ■ Região Sul

4.2.2.6 Other factors affecting access

Other factors that affect equitable access to public information in this type of venue, not covered above?

If appropriate, indicate any specifics that apply to Digital ICT services alone.

describe

4.2.3 Capacity and relevance

2–3 Paragraphs:
What is your overall assessment of CAPACITY ecosystem in this type of venue (human capacity, locally relevant content, integration into daily routines, socio-cultural factors, trust in technology, social appropriation of technology)?

Surveys and interviews conducted during this research show that most telecenter users visit the center for entertainment and social networking. When seeking ICT access, users are much more interested in communicating than searching for information. Although activities related to networking and games are a good start, they are limited considering the potential for telecenters to further social and educational development. The infrequent use of ICT in telecenters for educational purposes can be attributed to limited reading skills among underserved populations. Moreover, the limited capacity of center operators and a lack of vision among program coordinators and policy makers impede development of ICT services. Operators do not recognize the potential to develop much more than what currently exists. Therefore, a lack of available services also contributes to the entertainment-education gap.

The researchers also believe that most users do not understand how effectively integrate ICT into their lives or their work--either because they are not trained to use it, or they cannot imagine the possible benefits. Nor do operators understand the broader potential for technology to empower users to innovate and use technology in creative ways (for general and educational purposes).

Telecenters could be exploited to develop both IT and literacy skills among the underserved population. The development of IT skills (web design, software development) would help employment prospects for underserved youth. Considering the exploding IT job market in Brazil (40,000 job opportunities in 2008), telecenters stand to play an important role in complementing youth education and stimulating teens, perhaps, to go to IT-related schools and apply for acceptance to IT colleges. By offering an additional support network, free courses in the centers might also help improve the 50% dropout rate currently seen in Brazilian technical.

Telecenters also have the potential to improve reading skills among underserved youth and adults in Brazil. If staffed properly, telecenters could attract people for local workshops. For example, telecenter staff could recruit mothers who already send their children to activities hosted by the partner NGO. These activities, hosted on Saturday mornings perhaps, might feature topics such as family health or cooking, and involve a mixture of skill-building and entertainment, all geared towards increasing interest in ICT. More specifically, users would learn how to explore information on the internet, filter through it, and prepare presentations based on what they learned. Operators would be especially trained to teach limitedly literate learners and ensure that learning was mixed with pleasure..

4.2.3.1 Staff size

How many people work in a typical facility for this type of venue? (full time-equivalent employees or contractors; describe any significant variations, i.e., large, medium and small libraries in the country)

If appropriate, indicate any specifics that apply to Digital ICT services alone.

2 to 3 people work in each telecenter, working between 4 and 8 hours a day They serve in management roles, as assistants, or IT course instructors. Many of them are interns, volunteers, or employees hired by the government via a public "contest." Their schooling varies from secondary school to some college.

4.2.3.2 Staff training

What is the overall capacity of the staff (i.e., librarians, telecentres operators) to help users access and use public access to information and communication services offered in this venue? Differentiate by applicable

Equity of Service variables (Form 1c).

(iii) If appropriate, indicate any specifics that apply to Digital ICT services alone.

(iv) For Public Libraries, indicate if Library School training is available and/or required for librarians.

Most programs that create telecenters also offer training to operators. The difference in staff training varies according to the program or the network that the telecenter belongs to. Most training activities have focus in ICT skills. Operator turnover is a major challenge to the quality of services offered in telecenters. Federal government websites describe the focus of each one of the 15 national programs that create telecenters. www.inclusaodigital.gov.br

The Digital Inclusion Map, created by IBICT from Ministry of Science and Technology (www.inclusao.ibict.br), lists state, municipalities and private initiatives to create telecenters, and each one of their goals. Sometimes the training program for the staff is described.

4.2.3.3 Services offered

What kind of services does this type of venue offer to the public? (i.e., access to books, magazines; meeting and conference rooms; audio/video programs, computers, Internet, other). Include Digital ICT services if offered.

	Services Offered	Comments
1.	Internet access	
2.	ICT course	Some
3.	Community activities	In some centers; frequently charged for
4.	Printing services	Allowed in some telecenters, but with restrictions.
5.	Games	Operators available to assist
6.	Resumé/CV development	Primary mission of these centers
7.	Searches	Operators help users to use services related to Detran (State Traffic Department), Federal Tax Department, etc
8.	Online government services	Rarely available
9.	Meeting spaces	E-mail available; Orkut and Messenger are used regularly even though social networking is frequently restricted
10.	Communication tools	100%

Explain any salient differences in the services offered in different regions, sizes or other variables of significance:

In the Center-west region, visited telecenters offer mainly guided activities with almost no time available for free, unrestricted internet use. These telecenters restrict website access to those suggested by the teacher or operator during the activities.

4.2.3.4 Programs for underserved communities

Describe if this venue has programs specifically intended to reach underserved communities, differentiating by applicable Equity of Service variables (Form 1c).

If appropriate, indicate any specifics that apply to Digital ICT services alone.

Telecenters already target underserved communities, so all offered programs aim to benefit underserved communities.

4.2.3.5 Relevant content

What type of locally relevant content is available? What else is needed? Who is doing it?

If appropriate, indicate any specifics that apply to Digital ICT services alone.

Available Content:

The internet is the only source of content in telecenters. However, there is plenty of local content written in Brazilian Portuguese available on all kinds of websites (government, academic research, NGOs, wikis and commercial websites). For example, there are 420,281 articles written in Portuguese on Wikipedia.

Other Content Needed:

Nonetheless, "Not enough content" was mentioned by 14.1% of users when asked about barriers to information access. When asked about content, many users responded that they were not looking for information, but that they were social networking or just accessing e-mails.

Local Initiatives to build needed content:

The most efficient initiatives for building local and easy-to-read content are those that, as part of an educational activity, promote authorship among learners. The program reported bellow is an initiative created to build local content via an extensive partnership.

The *Rede Le*, or Network Read is a project that currently benefits 18 centers for literacy and digital inclusion in the state of Minas Gerais. Participating organizations include the Ministry of Communication (GESAC Program), the Federal University of Minas Gerais, several NGOs and the open-source software associations, all of which contribute to the integration of schools in this network. Network Read promotes the collective production of knowledge via internet-facilitated cultural exchange among several communities. In particular, the network aims to create a social space for communication--the goal being to stimulate the development of existing local activities. ICT, therefore, has become a resource for producing cultural goods. Through this network, the telecenters are transformed into radio and TV production labs. They also produce CD-ROMs, websites, printed and on-line publications, and books and others, exploring content related to local sustainability, education, cultural patrimony, design, graphic arts, hardware maintenance and the creation of open source software. "TV Read" affords internet users access to videos produced in the program, while "Radio Read" is a platform for collective audio production, so each center can create its own radio program. Network Read users can also access online courses for publishing internet content (HTML, CSS, MySQL, PHP and Wiki).

Source: http://www.ufmg.br/rede.le/

The Digital Cooperation network, promoted by Fundacao Pensamento Digital, uses virtual environments to stimulate the creation and sharing of content among participating organizations. There are more than 200 NGOs from two states (RS and SP) that, after joining the network, send their telecenter operators for professional development geared towards content creation among telecenter users. There are pedagogical material and tutorials available on Pensamento Digital's webstie: www.pensamentodigital.org.br .

4.2.3.6 Services and information available in local languages

Describe the availability of services and contents relevant to human development that are available in **local languages** in this type of venue? (i.e., info on health, education, government services, etc)

If appropriate, indicate any specifics that apply to Digital ICT services alone.

Most telecenters offer the following services:
- guidance for internet use and creating e-mail accoutns
- guidance for using e-government services
- IT courses
- After school activities

Some telecenters are also used by NGO staff to compliment adult education and Portuguese courses. There is a large quantity of local content written in Brazilian Portuguese available on all kind of websites (government, academic research, NGOs, wikis and commercial websites). For example, there are 420,281 articles written in Portuguese on Wikipedia alone. Telecenters also offer users access to various portals available in internet. Working in telecenters with teachers to enhance use of the Teachers' Portal (www.portaldoprofessor.mec.gov.br), created by the Ministry of Education, is an opportunity to promote teacher and educator development.

4.2.3.7 Types of uses

What do people USE the venues for (most frequent kinds of information and services people seek in them, activities they carry out in them)?

(ii) If appropriate, indicate any specifics that apply to Digital ICT services alone.

Refer to section 3.4 Charts: Information Needs and complement here as needed.

According with interviews conducted with 13 telecenter operators from all 5 Brazilian regions, 40.9% of users seek out telecenters for education, and 32.7% do so for entertainment.

Perception of information people

Category	Value
Education	40,9
Health	1,3
Agriculture	0,5
Government services	5,4
Entertainment	32,7
News	6,2
Personal	10,0
Others	3,1
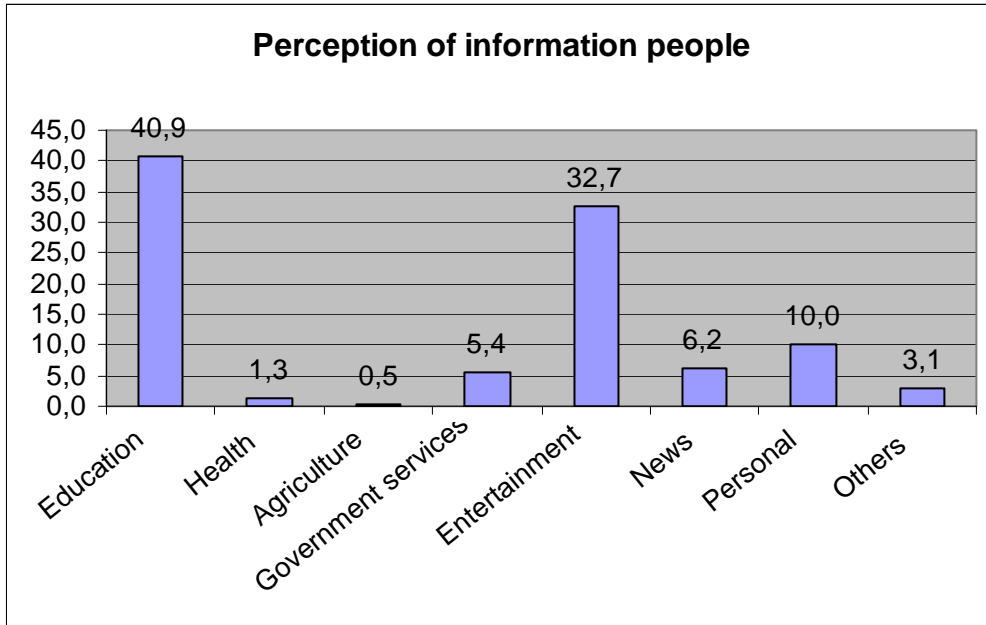
Once at the telecenters users often browse the internet (29.6%) and write e-mails with (22.7%)

Perception of ICT activities users

Category	Value
E-mail	22,7
Chat	11,2
Web browsing	29,6
Blogs & social netw...	16,2
Commerce & business	4,2
Phone or webcam.	1,9
Games	14,2
Others	0,0
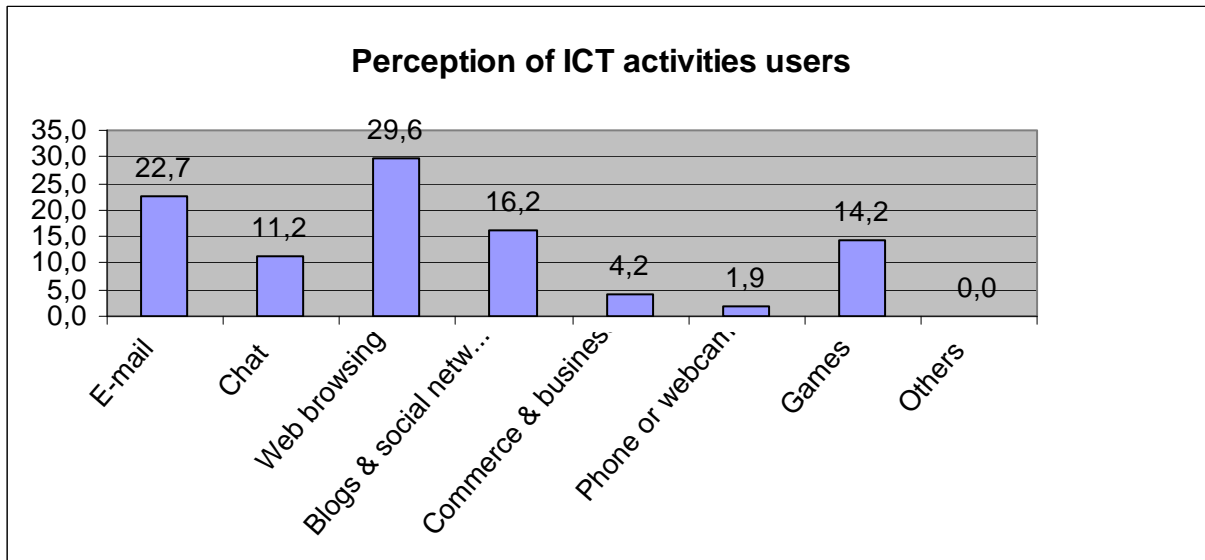
4.2.3.8 Number, type, and frequency of users

Refer to section 3.4 Charts: Information Needs. Complement here as needed.

44% of telecenter users visit the center frequently, and 32.7% do so daily.

How often do you visit this location?
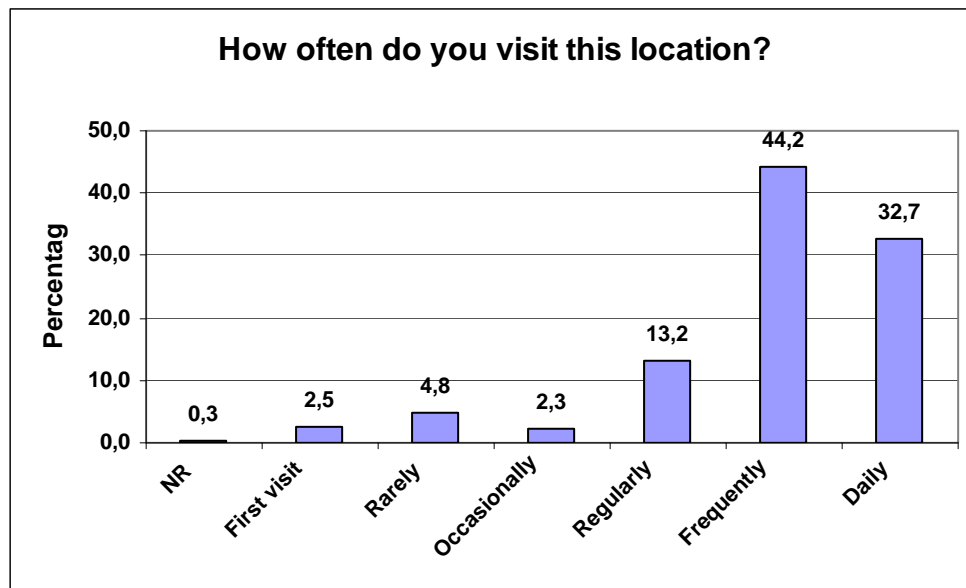
When asked about the type of information users seek, 42.7% responded "entertainment" and 18.2% stated "personal use"

4.2.3.9 Users capacity to use information and services offered

What is the overall capacity of the users to take advantage of public access to information and communication resources, differentiating by applicable Equity of Service variables (Form 1c)?

(i)   If appropriate, indicate any specifics that apply to Digital ICT services alone.

The struggle to develop human capacity in Brazil is deeply engrained in the challenges facing the education system. While 93 % of school-age children are now attending school. the quality of public basic education remains a serious problem. According to UNESCO, Brazil's education is inefficient, particularly in the public school network. As a result, many Brazilians are literate but not functionally literate—that is, they do not comprehend enough about what they read to take advantage of information available to them.

For example, the results from Brazilian participation in PISA, the OECD Program for International Student Assessment (www.pisa.oecd.org) were disheartening. Among 40 participating countries in 2003, Brazil ranked 37th in reading and 40th in mathematics. The National Assessment of Basic Education shows that students are not developing necessary skills in reading, writing and mathematics.

The national Functional Literacy Index also provided sobering results. Among the population of 15 to 64 year olds in 2007, 7% are illiterate, 25% are barely literate, 40% are basically literate, and 28% fully literate.

This context brings both challenges and opportunities for ICT use in Brazil. For the 72% of citizens who are not fully literate, extracting information from currently available content presents a challenge. But online access, in whatever form, also increases the presence of written language one's life; reading and writing skills typically improve as a result. Also, ICT allows for multimedia-based information transmission, which facilitates access for non- or semi-literate users.

The popularity of social networking via ICT also presents opportunities. Youth, even in underserved

neighborhoods, are often able to easily upload and download music and pictures and create profiles for social websites like Orkut, which can require more complex uses of ICT like HTML scripts. Moreover, some internet-enabled NGOs are using ICT in the social projects that they develop (e.g. sewing and cooking cooperatives, daycare, dance, music, etc.). Finally, educators or instructors are using ICT at telecenters to network with other NGOs, plan their activities and communicate their achievements and challenges.

Serious barriers also exist. Cezar Alvarez, President Lula's adviser for digital inclusion, explained that government evaluations reveal training and payment of operators to be key barriers impeding telecenter expansion. Our research also revealed "lack of training" to be an important theme.

4.2.3.10 Training courses for users

Describe training courses offered to the public at this venue, and if they offer some kind of testing and certification.

Training courses: Telecenters are viewed by many as having two purposes: offering free internet access and giving IT skill-building courses to the local population. Results from our interviews confirm this notion: of 13 visited telecenters, 8 offer courses on ICT basics, and one gives a course on LAN and computer maintenance. Only three centers were not offering courses. Two centers in the center-west did not respond, but these centers already offered guided activities for youth involved in other NGO-affiliated programming.

ICT specific training courses: mostly ICT basic courses

4.2.3.11 Integration into daily routines

How easy is it for users to integrate the information and services offered in this type of venue into their daily lives? (offer concrete solutions to their needs and problems, make it easier to solve them at this venue than in other places)

If appropriate, indicate any specifics that apply to Digital ICT services alone.

     Most users visit telecenters for social networking and entertainment purposes. However, adults also use telecenters to create or update ID documents, apply for jobs, send CVs to organizations, and to check bank accounts and make e-payments, both of which are common and secure in Brazil. People also use telecenters to follow the status of legal process that they might be involved with (e.g. an appeal on a speeding ticket)

 (Source: interviews from the first phase).

The government is promoting several population-specific programs to integrate daily internet access in certain segments of the population. For example, Telecenters for Fishing is a program that aims to create 20 telecenters in fishing communities in the 5 Brazilian regions, with goals to improve artisan fishing skills, create an environment to catalyze social organization of fishermen, improve ICT skills in these communities, facilitate employability, and to qualify youth from fishers community in ICT support.

Source: Biblioteca de Inclusão Digital – IBICT - http://200.198.202.145/seap/telecentro/projeto.pdf

4.2.3.12 Users perceptions about the venue

What is the general perception or opinion of the population about the venue (not necessarily its specific services, but the venue itself: i.e., what do people generally think about libraries? Are they places that are "cool" or "only for elites" etc?), differentiating by applicable Equity of Service variables (Form 1c)? This includes perception by people who do not use the venue…

(i)   If appropriate, indicate any specifics that apply to Digital ICT services alone.

In Brazil, community-based NGOs and religious groups have been passed the task of promoting social development in low income communities. In spite of financial struggles and serious sustainability issues, NGOs elicit strong participation in community activities, and contribute greatly to grassroots efforts to solve social problems. In these venues, cultural activities such as hip-hop recording and dancing are popular, and there are many rich grant proposals made by local organizations seeking to do good.

Telecenters are seen by government and civil society as "cool" social investment. The movement to create telecenters took the direction described above; it has used the existing and growing network of NGOs to bring the underserved population access to ICT. NGOs are even creating telecenters in peripheral Brazilian slums, giving teens, some of which have never visited the city center, access to communication technologies. By connecting teens to a world otherwise unknown to them, telecenters are overcoming traditional social barriers.

On the other hand, many NGOs do not have the resources to keep qualified operators like librarians that could better stimulate, facilitate and guide users in the search for information.
. IT courses are seen as the most important service offered by telecenters. Assistance with updating documents is also perceived to be important. Users usually do not generally ask for help with searching for information, as they do not view telecenter staff as equivalent to librarians. They do, however, often ask telecenter staff to help them with IT issues.

When compared to cybercafés, people see telecenters as places with older computers, slower internet access and limited hours of operation. But telecenters are perceived as safer places and as initiatives with a more worthy, social-educational goal.

When asked about barriers to information access in telecenters, users mentioned hours of operation (24.1%), lack of training (15.9%) and lack of content (14.1%).

Three biggest barriers for users accessing ICT services
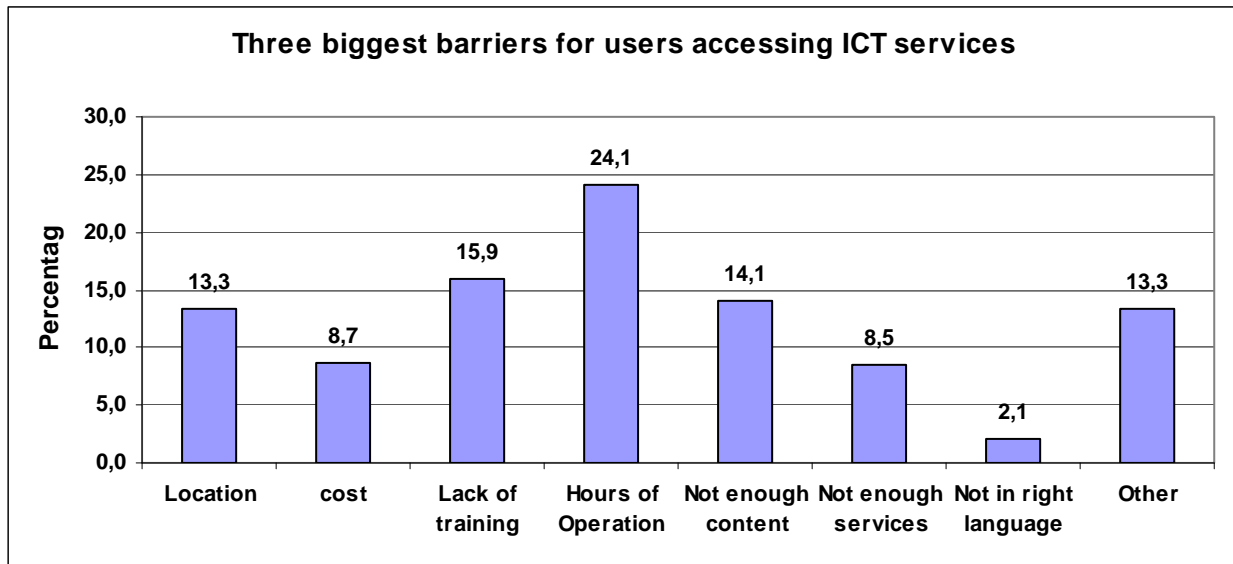
Based on interviews conducted with operators, barriers to information are: hours of operation (22.7%), and lack of training (18.2%).

The biggest barriers for users accessing
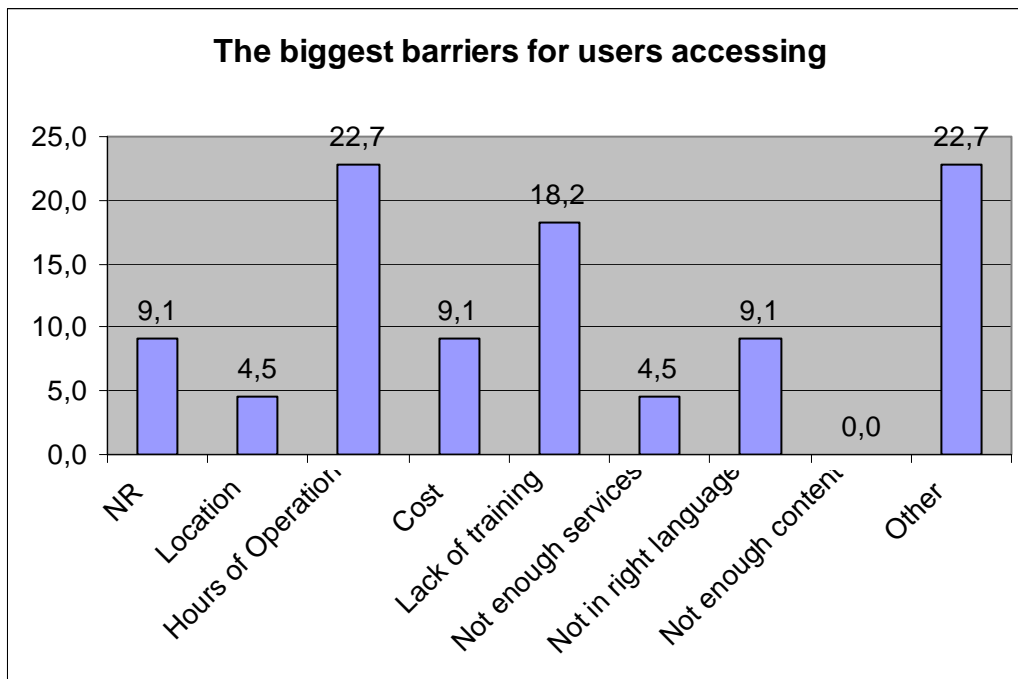
4.2.3.13 Social appropriation of information and generation of new knowledge

What activities, products and services are users undertaking that exhibit new levels of social appropriation of technologies and generation of knowledge? For example, how are users generating and disseminating new knowledge, products and services through their use of this venue? (see category 13 in Real Access Framework for Social Appropriation of Technology).

If appropriate, indicate any specifics that apply to Digital ICT services alone.

Most users first learn to socially appropriate technology when creating their profile on a social networking website or creating webpages (for the local NGO, themselves or a micro business). Interacting with pictures and music, posted or downloaded from internet (many youth have mp3 players) and cellphones (many camera-enabled) are examples of social appropriation of technology. However, in telecenters, there is little evidence of social appropriation of information and the generation of new knowledge.

Network Read introduced in 4.2.3.5, promotes the collective production of knowledge via internet-facilitated cultural exchange among several communities. In particular, the network aims to create a social space for communication--the goal being to stimulate the development of existing local activities. ICT, therefore, has become a resource for producing cultural goods. Through this network, the telecenters are transformed into radio and TV production labs. They also produce CD-ROMs, websites, printed and on-line publications, and books and others, exploring content related to local sustainability, education, cultural patrimony, design, graphic arts, hardware maintenance and the creation of open source software. "TV Read" affords internet users access to videos produced in the program, while "Radio Read" is a platform for collective audio production, so each center can create its own radio program. Network Read users can also access online courses for publishing internet content (HTML, CSS, MySQL, PHP and Wiki).

Source: http://www.ufmg.br/rede.le/

The Digital Cooperation network, promoted by Fundacao Pensamento Digital, uses virtual environments to stimulate the creation and sharing of content among participating organizations. There are more than 200 NGOs form two states (RS and SP) that, after joining the network, send their telecenter operators for professional development geared towards content creation among telecenter users. Pedagogical materials and turorials are available on Pensamento Digital's web site: www.pensamentodigital.org.br

4.2.3.14 Trust, safety, and privacy

What is the general perception or opinion of the population about the safety, security and privacy (TRUST) of the information and services offered in this venue?

Telecenters are seen as safe places because they are located inside community-based organizations or government departments that serve low income populations. Many of these places run daycare and after-school activities and have a strong connection to the local community. As a result, drug dealers, robbers and violent gangs often respect these organizations, as their own children often benefit from their services.

4.2.3.15 Gaps and opportunities in information and services offered

What other information gaps and opportunities exist, which are not being met? (other information/services people need that are not being met there and could be offered, especially through Digital ICT services)

Based on visits, interviews, and surveys, local researchers believe that most users do not understand how effectively integrate ICT into their lives or their work--either because they are not trained to use it, or they cannot imagine the possible benefits. Nor do operators understand the broader potential for technology to empower users to innovate and use technology in creative ways (for general and educational purposes).

Telecenters could be exploited to develop both IT and literacy skills among the underserved population. The development of IT skills (web design, software development) would help employment prospects for underserved youth. Considering the exploding IT job market in Brazil (40,000 job opportunities in 2008), telecenters stand to play an important role in complementing youth education and stimulating teens, perhaps, to go to IT-related

schools and apply for job positions in IT. By offering an additional support network, free courses in the centers might also help improve the 50% dropout rate currently seen in Brazilian technical.

Telecenters also have the potential to improve reading skills among underserved youth and adults in Brazil. If staffed properly, telecenters could attract people for local workshops. For example, telecenter staff could recruit mothers who already send their children to activities hosted by the partner NGO. These activities might feature topics such as family health or cooking, and involve a mixture of skill-building and entertainment, all geared towards increasing interest in ICT.

4.2.4 Enabling environment

2 – 3 Paragraphs:
What is your overall assessment of the ENVIRONMENT ecosystem in this type of venue (local economy, national economy, legal and regulatory framework, political will and public support, regional and international context)?

The political will for creating and supporting in telecenters is stronger than that of the other studied venues. A variety of initiatives to create and support telecenters are being developed by several ministries, municipalities and government corporations (Petrobras, Bank of Brazil). As the economy grows, initiatives to create telecenters are also growing. The private sector has been creating telecenters under their social responsibility umbrella, usually in partnership with community organizations. Some examples include Brasiltelecom, Vivo, Oi, Microsoft, Dell, Vale do Rio Doce (mining), Accenture, and Petroflex (chemistry).

The widespread presence of these initiatives shows that telecenter creation is a trend in Brazilian social programs-- "cool" initiatives to connect underserved communities to the developed society and empower them to learn how to learn, to stimulate entrepreneurship and to better prepare their youth to live in the information age.

Federal initiatives to create telecenters in low income communities exist in several ministries--a fact that has drawn criticism from those advocating a unified policy. But despite some public administration disadvantages associated with decentralization, the plurality of federal telecenter programs has contributed to horizontal--as opposed to vertical--ICT integration into society (as advocated by recognized authors such as Castells).

4.2.4.1 Local and national economy

Describe the local and national economic environment and how it affects public access to information and communication in this type of venue (refer to and complement economic summary in country assessment, section 3.5 Economic, Policy, and Regulatory Environment, calling out what is specific to this venue)

(i)   If appropriate, indicate any specifics that apply to Digital ICT services alone.

In light of the economic growth, the government is receiving more tax income and companies are also increasing profits, both of which make investment in social programs possible. As telecenters are the ICT venue of choice for government and society, the number of programs is increasing. In fact, the federal government is planning to call for proposals, to be completed by community organizations in order to receive computers, internet access and funds to pay operators.

4.2.4.2 Legal and regulatory framework

Describe the legal and regulatory framework and how it affects public access to information and communication in this type of venue (refer to and complement economic summary in country assessment,

section 3.5 Economic, Policy, and Regulatory Environment, calling out what is specific to this venue)

(i)   If appropriate, indicate any specifics that apply to Digital ICT services alone.

The 1995 *Lei Geral de Telecomunicações* (General Legislation on Telecommunications) created a new private model for telecommunication services in Brazil. In marked contrast from the old public model, nowadays there is vibrant competition among private companies to implement telecommunication services in Brazil. Recently, the Braziliangovernment negotiated with operating telecoms to extend broadband to all Brazilian municipalities. While the original focus of this initiative is public schools, once the internet is available throughout municipalities, it will enable and/or facilitate the creation of telecenters as well.

Since most telecenters are located in nonprofit organizations, their hosting organizations respond to the nonprofit legislation and nonprofit environment in Brazil. There are few tax deduction possibilities for private investors compared to the US, but nonprofit status also enables organizations to apply for government funds to implement social programs in partnership with government (national, state and municipal). Since the 1990s, the number and quality of nongovernmental and nonprofit organizations have significantly increased. Nowadays governments implement a great part of their social assistance and informal education policies via partnerships with NGOs.

4.2.4.3 Political will and public support

What is the level of political will and public support for this type of venue? (refer to and complement section 3.5 Economic, Policy, and Regulatory Environment, calling out what is specific to this venue)

(i)   If appropriate, indicate any specifics that apply to Digital ICT services alone.

The political will for creating and supporting in telecenters is stronger than that of the other studied venues. A variety of initiatives to create and support telecenters are being developed by several ministries, municipalities and government corporations (Petrobras, Bank of Brazil). As the economy grows, initiatives to create telecenters are also growing. The private sector has been creating telecenters under their social responsibility umbrella, usually in partnership with community organizations. Some examples include Brasiltelecom, Vivo, Oi, Microsoft, Dell, Vale do Rio Doce (mining), Accenture, and Petroflex (chemistry).

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Federal initiatives to create telecenters in low income communities exist in several ministries--a fact that has drawn criticism from those advocating a unified policy. But despite some public administration disadvantages associated with decentralization, the plurality of federal telecenter programs has contributed to horizontal--as opposed to vertical--ICT integration into society (as advocated by recognized authors such as Pierre Levy and Manuel Castells.

4.2.4.4 Organization and networking

Describe if the facilities in this type of venue organized in any network, association or other collective body? (i.e., national public library system, telecentre franchise or network, etc)?

Most telecenters belong to a network lead by funders or knowledge partners. To create a telecenter, an NGO usually establishes a partnership with donors, funders or other partners, resulting in an interesting network of collaboration. For example, GESAC is a federal government initiative that offers free internet access to NGOs and schools. CDI and Pensamento Digital are examples of NGOs that refurbish computers and donate them to other NGOs to create telecenters, while also offering continuous training and/or professional development for telecenter staff. Some municipalities such as Sao Paulo and Porto Alegre, and state governments like Bahia and

Sao Paulo, have their own telecenter programs. These governments partner with NGOs located in underserved communities, donate computers, supply internet connectivity and pay small wages for local youth that work as instructors or educators inside the telecenters. The federal government has a variety of initiatives that create networks of telecenters following the same framework of partnerships and roles.

The National Observatory of Digital Inclusion describes the 15 federal initiatives to create networks of telecenters. www.inclusaodigital.gov.br

The Digital Inclusion Map lists networks of telecenters created by private corporations (like telecom companies) and networks of telecenters created by states and municipalities. http://inclusao.ibict.br

4.2.4.5 Partnerships

Describe notable public-private partnerships in support of this type of venue.

If appropriate, indicate any specifics that apply to Digital ICT services alone.

Telecenters are created by harnessing a fascinating network of partners, including local governments, NGOs, and the private sectors; most centers are housed and maintained by NGOs, which incubate cultural and social movements, implement public policies, serve low-income communities and aim to democratize access to information and communication technology. Finding ways to pay and train venue operators are the main challenges facing telecenters. The majority of telecenters in Brazil are hosted by a nonprofit and non government organization

To create a telecenter, an NGO usually establish partnership with donors, funders or knowledge partners resulting in interesting networks of collaboration to maintain these centers. For example, GESAC is an initiative from federal government that offers free internet access for NGOs and Schools. CDI and Pensamento Digital are examples of NGOs that refurbish computers, donate to Grassroots organizations to create telecenters, and offer continuous training or professional development for educators from these telecenters. Some municipalities like Sao Paulo and Porto Alegre have their own telecenter programs, in which the municipality partners with NGOs located in underserved communities. The municipality donates computers, supports internet connection and pays small wages to local youth that work as instructors or educators inside the telecenters. Federal government has a variety of initiatives that creates networks of telecenters following the same framework of partnerships and roles.

4.2.5 For publicly funded venues only: Revenue streams

This section is meant specifically for publicly-funded venues (public libraries, national connectivity programs, etc).

4.2.6 Case example for venue 2: Telecenter Program, Porto Alegre

Provide a short descriptions and commentary for each type of venue, offering a realistic sense of what the venue looks and feels like in its day to day operation, the kind of people who visit, and the kind of services they receive. Also, the case example indicates what makes the case unique or what features are commonly shared with other venues. A photo and short quotes will make it even more real.

Insert Case Example and Photo here.

Case Example: Telecenter Program of the Municipality of Porto Alegre

The TPA program – *Telecentros de Porto Alegre* (Porto Alegre Telecenters[6]) coordinates 35 access ICT access points distributed in Porto Alegre. Its first telecenter was inaugurated in 2001 in an impoverished region. Within a few months, the TPA telecenter was receiving an average of 50 local residents per day. By 2004, TPA's registry had accumulated over 10,000 user names. The success of this initiative led to the installation of other access points (there are currently 35), all regulated by TPA. They serve local populations and orient users during the day for free.

Each of the 10 LIXUX computers in the telecenters have internet access, a scanner and a printers. Initially the telecenters were created with refurbished computers, but in 2007, all telecenter computers were replaced with new machines bought by the government of Porto Alegre with funds from Ministry of Science and Technology. Access points are located in community centers or NGOs-- locations that encourage partnerships with and strong ties to local communities. One telecenter is even located on indigenous lands. The infrastructure (room, electricity and furniture) is provided by the community center and security is guaranteed by cages and lock at the doors.

The program's main goals are (1) to attend entire low income communities where the telecenters are installed; (2) to reduce digital exclusion rates in *Porto Alegre*; (3) to spread knowledge and education to communities; (4) to develop human capacity of users in the labor market; and (5) to make access to public services offered on the internet (e-government) available.

The communities benefit from the presence of telecenters and their courses, workshops and assistance with ICT related activities. Users note that TPA has contributed to personal and professional development of communities by ensuring access to technology. TPA addresses an important need by promoting citizenship and supporting personal development in socioeconomically vulnerable communities.

Those who want to use technological services must register, which allows access to virtually unrestricted use of the technology and internet. However, users may only engage in legal activities, and depending on the number of people waiting to use the computers, time limits may be imposed. TPA points are maintained by *Porto Alegre*'s municipal government and local partnering organizations, which the community identifies. The government pays local youth to assist people (trainees), and ensures that the computers are maintained and connected to the internet. Combined, these efforts increase the demand for the telecenter's services and help explain the program's

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[6] The city of *Porto Alegre* is the state capital from RS.

continued success.

The development of trainees is aided by knowledge partnering organization, which advises municipalities on curriculum, methodology and workshop implementation. Recently, the local youth paid as trainees have been given the opportunity to give courses related to the community's interest. A special telecenter was inaugurated to help build youth capacity in this regard.

However, the program is not without its challenges. Low wages for trainees results in a high turnover rate and makes sustainability a struggle. Attending training classes downtown can be difficult for some—especially those coming from faraway, poor neighborhood--considering the transportation costs incurred en route. The municipality struggles to reduce costs and improve the quality of internet access. There is also no database of telecenter users, or any information about usage trends but TPA is planning to implement system to address this need in all telecenters.

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PHOTOS

Photo 1: a telecenter laboratory opened to community.

Photo 2: capacity development offered to the community.

4.3 Venue 3: Cybercafes

4.3.1 Overall venue assessment

Provide a broad picture of the public access information landscape in this venue, informed by the results of this research.

2–3 Paragraphs:
What is your overall assessment of public access information in this type of venue?

Cybercafes are private centers created by small entrepreneurs. They offer users access to the internet and several software programs for unlimited time periods, as users pay (by time) for their use . There are no access restrictions; users have freedom to navigate social networking websites and chat online. Many cybercafes are located in medium and low income communities, and are often not legally registered. Typically, they offer access to newer, high quality computers and are sustainable due to the fees they charge for access to their equipment. Cybercafes are often open day and night, and weekdays and weekends, making them especially available to users. However, in some cases, the cybercafe environment is not ideal for children, as centers might be integrated with restaurants or bars that sell liquor. Cybercafes also do not offer courses, though operators usually offer help, albeit limited, to non experienced users. As a result, the environment is far less tutored than telecenters in community based associations (places that offer daycare, afterschool activities, adult education, etc).

According to a survey on ICT use in Brazil implemented by Brazilian Internet Steering Committee, cybercafes have become the most used places to access the Internet in the country, mainly among the young and the low income individuals .Among all internet users in Brazil, 49% of them access the internet cybercafes, also known as paid access centers. Most cybercafe users belong to underserved communities.

According to the survey implemented for this research, cybercafé users are generally: male (67%) 18 or younger (69%) and visit the center frequently (44%) or daily (30%). 43% seek entertainment and 18 % visit for personal interest. Regarding frequent activities users showed that Orkut (29%, social networking), playing games (21%), e-mailing and chatting (19% each) were all relatively prevalent. When asked about barriers to access, 29% of users mentioned the cost of services (internet access).

4.3.2 Access

2–3 Paragraphs:
What is your overall assessment of ACCESS ecosystem in this type of venue (physical access, appropriate technology, affordability)?

Cybercafes offer on average the best computers and internet quality when compared to other venues of public access to internet in Brazil. They also are open more often and do not restrict content or software . They do charge for services (internet access) but we can infer their fees are affordable, as most cybercafes are located in low income communities and are sustainable.

According to a survey on ICT use in Brazil implemented by Brazilian Internet steering Committee, among all internet users in Brazil, 49% access the internet from a cybercafé or other paid access center.

> The percentage of usage in these centers has risen from 30% in 2006 to 49% in the following year, outnumbering accesses from households which remained stable at 40%. ... The North Region presented the highest increase in the use of this type of places, 22 per cent in relation to

the previous year. From the people who used Internet in the North and Northeast regions in the last year, 68% and 67% respectively accessed the web from LAN houses. This number dropped to 30% in the South region where the average income of the population is higher and where the telephone companies have the highest number of Internet connection points. The survey also shows that the smaller the population's income, the higher the use of LAN houses. From the Internet users earning up to 1 minimum wage, 78% declared to access the web through paid public access centers. This percentage dropped to 67% in the group who earns between 1 and 2 minimum wages; to 55% in the group earning 2 to 3 minimum wages; 42% in the 3 to 5 minimum-wage group; and to only 30% of those who earn more than 5 minimum wages. Moreover, it is important to note that the paid public access centers are used mainly by less educated people: Among elementary school internet users 64% use cybercafés; among high school students 54% use cybercafés; and among college students only 27% access the internet through a cybercafe. This was true for only 27% of the users who had university degrees. These data allow us to conclude that LAN houses, the main means of access to the Internet for classes E, D and C, in respect to access to the Internet, attend to the needs of the economically deprived population. These classes do not benefit from financial incentives as they still cannot afford a computer and the cost of a small period of connection time is low in comparison to the purchase of a computer.

<div align="right">Survey on the use of ICT in Brazil, CGI, 2007</div>

Note: the name "LAN house" is a local term for cybercafes in Brazil.

4.3.2.1 Physical access

Describe how accessible this venue is to various population segments, differentiating by applicable Equity of Service variables (Form 1c), especially the differences between urban and non-urban settings.

If appropriate, indicate any specifics that apply to Digital ICT services alone.

Cybercafes charge for services (internet access) but their fees are affordable, as most cybercafes are located in low income communities and are self-sustaining.

Previous research (CGI 2007) has evaluated where people access computers. This data allows us to examine the percentage of internet users who use cybercafés, stratified by several variables;

- Among all internet users in Brazil 49% of them access the internet in Cybercafes

By Region	Southeast: 45%	Northeast: 67%	South: 30%	North: 68%	Center-west: 51%	
By Gender	Male: 51%	Female: 49%				
By Schooling	Illiterate: 54%	Elementary: 64%	High School: 53%	University: 27%		
By Age:	10-15: 68%	16-24: 59%	25-34: 42%	35-44: 22%	45-59: 20%	60+: 15%

By Income (R$) Monthly	380: 78%	381-760: 67%	761-1140: 55%	1141-1900: 42%	1901-3800: 32%	3801+: 15%
By Social Class	A: 22%	B: 32%	C: 54%	DE: 74%		

Source : Survey on the use of ICT in Brazil, CGI, 2007

4.3.2.2 Appropriate technology and services

Describe how appropriate the technologies, services and information offered in this venue are to the population, differentiating by applicable Equity of Service variables (Form 1c).

If appropriate, indicate any specifics that apply to Digital ICT services alone.

Primary services offered are internet access, entertainment software (games), other software, and printing services. Accordingly, the information offered is all information available on the internet. Although there are no IT courses or concrete social-educational goals in cybercafes, operators do help users with ICT skills, and most users learn from each other.

43% seek entertainment and 18 % visit for personal interest. Regarding frequent activities users showed that Orkut (29%, social networking), playing games (21%), e-mailing and chatting (19%each) were all relatively prevalent. When asked about barriers to access, 29% of users mentioned the cost of services (internet access), 23.4% declared "no barrier" and 15% declared a lack of training.

4.3.2.3 Affordability

Describe how affordable the technologies and services offered in this venue are to the population, differentiating by applicable Equity of Service variables (Form 1c).

If appropriate, indicate any specifics that apply to Digital ICT services alone.

Cybercafes do charge for internet access, but they charge fees affordable for underserved populations. See 4.3.2.1

4.3.2.4 Fees for services

What fees or other requirements exist in order to access and use the information in the venues? (registration, user fees, restrictions to certain populations)

If there are fees: What do these fees buy?

There are fees for all services (computer use), regardless of how they are used :

Indicate amount in local currency   1.00 - 2.50/hour

Equivalent in US Dollars: 0.60 - 1.58 / hour

Date of estimate   July 2008

and local currency name   Real

If appropriate, indicate any specifics that apply to Digital ICT services alone.

Explain any salient differences in the services offered in different regions, sizes or other variables of significance:

NA

4.3.2.5 Geographic distribution

What is the distribution of the venues in terms of their geographic location?

Complement any details not already included in section 2.1: Venue Selection.

There is no available data to describe the number of cybercafes by region. The total number of cybercafes in Brazil is estimated to be 58,000.

4.3.2.5.1   Map

If available, insert a map that displays the geographic distribution of this type of venue in the country (expand to the size you need).

4.3.3   Capacity and relevance

2–3 Paragraphs:
What is your overall assessment of CAPACITY ecosystem in this type of venue (human capacity, locally relevant content, integration into daily routines, socio-cultural factors, trust in technology, social appropriation of technology)?

The following are some overall assessments related to capacity in cybercafés.
- Human capacity: There is no training or formal educational support offered by venues, but cybercafes do offer some informal help for inexperienced users. Most learning occurs individually, or with peers. Entrepreneurs running the centers are typically technologically-savvy.

- Locally relevant content – there is a large amount of content in Brazilian Portuguese on the internet.

- In cybercafes most users visit the center frequently (44%) or daily (30%), mainly for social purposes

(Orkut, 29%; e-mail, 19%; and chatting, 19%). 21% of users pay to play games.

- During the visits, researcher identified some users doing homework or writing papers for college classes.

4.3.3.1 Staff size

How many people work in a typical facility for this type of venue? (full time-equivalent employees or contractors; describe any significant variations, i.e., large, medium and small libraries in the country)

If appropriate, indicate any specifics that apply to Digital ICT services alone.

Around 1 to 3 people work directly in the cybercafe (some centers are affiliated with other commercial business and have more staff not connected to the centers).

4.3.3.2 Staff training

What is the overall capacity of the staff (i.e., librarians, telecentres operators) to help users access and use public access to information and communication services offered in this venue? Differentiate by applicable Equity of Service variables (Form 1c).

(v) If appropriate, indicate any specifics that apply to Digital ICT services alone.

(vi) For Public Libraries, indicate if Library School training is available and/or required for librarians.

According to interviews conducted during this study, most cybercafes operators have completed high school, but researchers identified a large range of educational attainment. While some operators had not completed elementary school, others had finished college.

Frequently users help each other.

4.3.3.3 Services offered

What kind of services does this type of venue offer to the public? (i.e., access to books, magazines; meeting and conference rooms; audio/video programs, computers, Internet, other). Include Digital ICT services if offered.

	Services Offered	Comments
11.	Internet access	
12.	Communication tools	E-mail, Orkut, MSN and other virtual environments
13.	Online government services	All services available on internet. Most often, Detran (State Traffic Department), Federal Tax Department, etc
14.	Printing Services	
15.	Games	

16.	Resumé/CV elaboration	Operators help user construct or update their CV
17.	Convenient Stores	Connected to some venues
18.	Copying	

Explain any salient differences in the services offered in different regions, sizes or other variables of significance:

According to our survey conducted in 16 cybercafes in the 5 Brazilian regions the services offered do not vary by region.

The 2007 CGI Survey on the Use of ICT in Brazil point outs important data about the number of users of cybercafes considering the Brazilian regions:

> Even in the Center-west region, where a lower increase was observed, more than half of the users declared to use LAN houses, Internet cafes, amongst other public centers, to access the web. The North Region presented the highest increase in the use of this type of places, 22 per cent in relation to the previous year. From the people who used Internet in the North and Northeast regions in the last year, 68% and 67% respectively accessed the web from LAN houses. This number dropped to 30% in the South region where the average income of the population is higher and where the telephone companies have the highest number of Internet connection points.
> The survey also shows that the smaller the population's income, the higher the use of LAN houses. From the Internet users earning up to 1 minimum wage, 78% declared to access the web through paid public access centers. This percentage dropped to 67% in the group who earns between 1 and 2 minimum wages; to 55% in the group earning 2 to 3 minimum wages; 42% in the 3 to 5 minimum-wage group; and to only 30% of those who earn more than 5 minimum wages.
>
> Moreover, it is important to note that the paid public access centers are used mainly by less educated people. Among internet users that are students in elementary school 64% access internet in cybercafes; among internet users that are high school students 54% do it through cybercafes and among users attending college or university only 27% access internet through a cybercafe. These data allow us to conclude that LAN houses(cybercafes), the main means of access to the Internet for classes E, D and C, in respect to access to the Internet, attend to the needs of the economically deprived population. These classes do not benefit from financial incentives as they still cannot afford a computer and the cost of a small period of connection time is low in comparison to the purchase of a computer. (Santos 2007)

4.3.3.4 Programs for underserved communities

Describe if this venue has programs specifically intended to reach underserved communities, differentiating by applicable Equity of Service variables (Form 1c).

If appropriate, indicate any specifics that apply to Digital ICT services alone.

Most users belong to underserved communities; services already described.

4.3.3.5 Relevant content

What type of locally relevant content is available? What else is needed? Who is doing it?

If appropriate, indicate any specifics that apply to Digital ICT services alone.

Available Content:

- Software for entertainment and other tasks (word processing, presentations, spreadsheets)

- All content available on the internet

Other Content Needed:

Not identified, but training services are needed

Local Initiatives to build needed content:

More equipment and better infrastructure

Training for users

A library with free access.

Training for operators to help users.

Source: Interviews implemented by researchers, with operators from 16 cybercafe operators in the 5 Brazilian regions.

4.3.3.6 Services and information available in local languages

Describe the availability of services and contents relevant to human development that are available in **local languages** in this type of venue? (i.e., info on health, education, government services, etc)

If appropriate, indicate any specifics that apply to Digital ICT services alone.

All services are in local languages. There is a large amount of content in Brazilian Portuguese available on the internet.

4.3.3.7 Types of uses

What do people USE the venues for (most frequent kinds of information and services people seek in them, activities they carry out in them)?

(iii) If appropriate, indicate any specifics that apply to Digital ICT services alone.

Refer to section 3.4 Charts: Information Needs and complement here as needed.

The use of the social networking website Orkut was the most common use mentioned by users with 28.9%, followed by games (21%), e-mail and chatting (each 19%).

Activities most frequently

Percentag (y-axis: 0,0 to 50,0)

- E-mail: 19,4
- Chat: 19,0
- Web browsing: 9,3
- Blogs & social networking: 28,9
- Commerce & business: 1,6
- Phone or webcam: 0,2
- Games: 21,0
- Other: 0,7
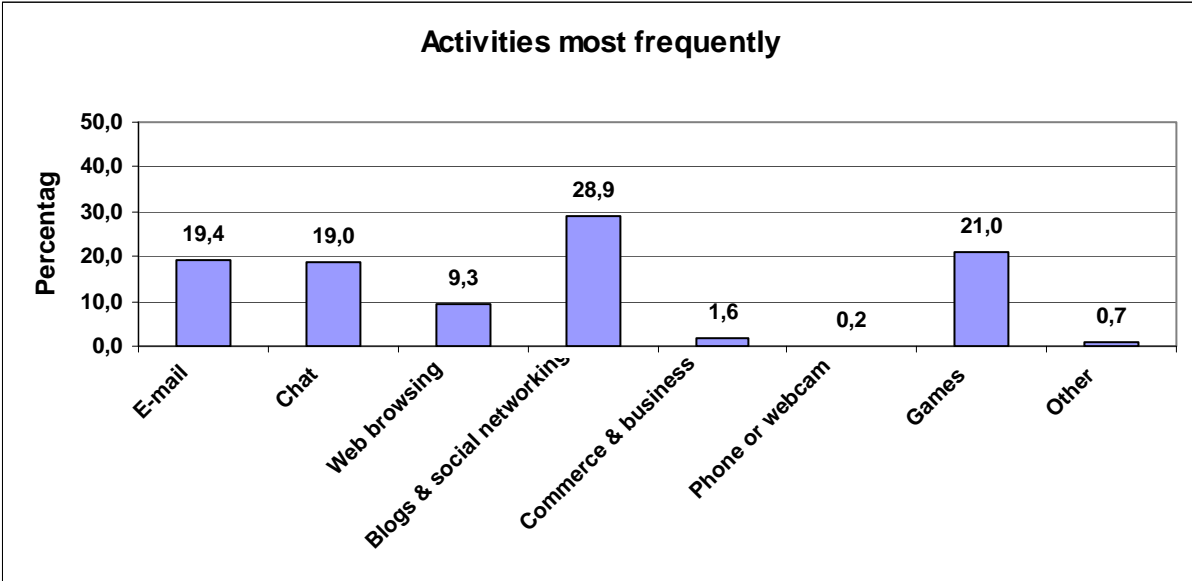
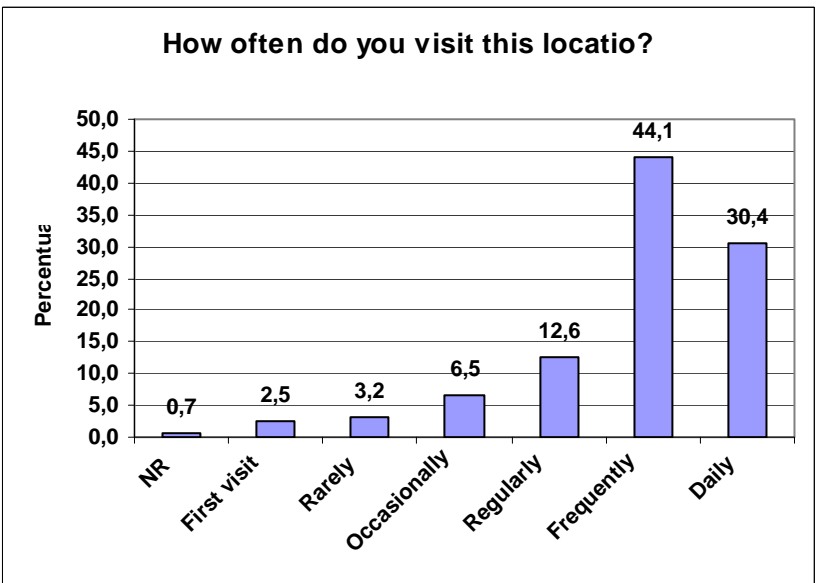### 4.3.3.8 Number, type, and frequency of users

Refer to section 3.4 Charts: Information Needs. Complement here as needed.

In cybercafés, users are most commonly male (67.1%, especially in center-west), between 15 and 18 years old (40.1%), and are frequent visitors (44.1%). Entertainment-related activities (43.7%) predominate, including Orkut (28.9%) .

How often do you visit this locatio?

Percentua (y-axis: 0,0 to 50,0)

- NR: 0,7
- First visit: 2,5
- Rarely: 3,2
- Occasionally: 6,5
- Regularly: 12,6
- Frequently: 44,1
- Daily: 30,4

Regarding the information people seek in cybercafes 43.7% of users seek entertainment, while

18.5% stated "personal use" and 13.9% stated e-mail.

Looking for specific informtion
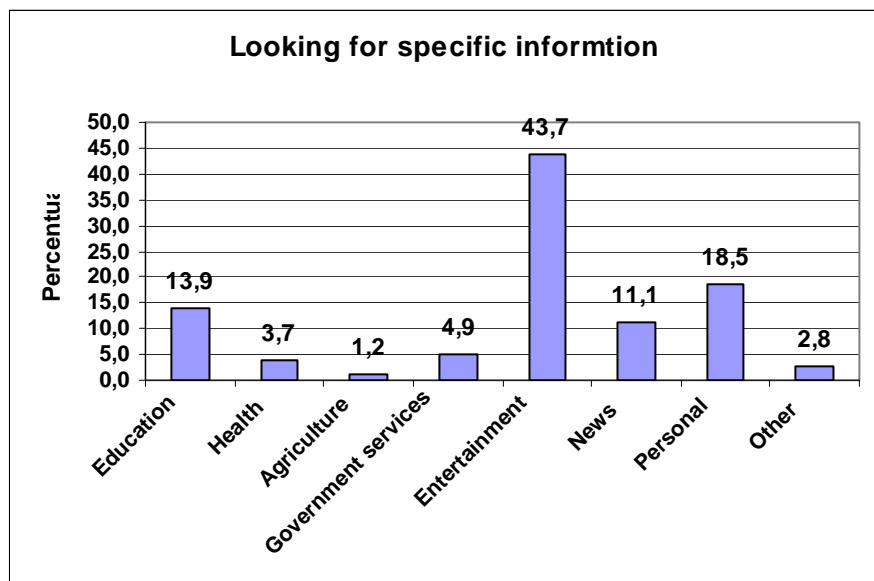
4.3.3.9 Users capacity to use information and services offered

What is the overall capacity of the users to take advantage of public access to information and communication resources, differentiating by applicable Equity of Service variables (Form 1c)?

(i)   If appropriate, indicate any specifics that apply to Digital ICT services alone.

The "Survey on the use of ICT in Brazil", CGI 2007, shows that most cybercafe users belong to low income families and have low levels of schooling (see 4.3.2 Access). According to national and international education indexes lower income populations have lower literacy levels and greater difficulties taking advantage of written information (see 3.2.2 Capacity):

The national Functional Literacy Index also provided sobering results. Among the population of 15 to 64 year olds in 2007, 7% are illiterate, 25% are barely literate, 40% are basically literate, and 28% fully literate.

Considering that there are no courses, workshops or educational, guided activities in cybercafés, researchers conclude that the capacity to take advantage of available information is related to user functional literacy.

4.3.3.10 Training Courses for Users

Describe training courses offered to the public at this venue, and if they offer some kind of testing and certification.

Training courses: Cybercafés do not offer courses; 0

ICT specific training courses: 0

4.3.3.11 Integration into daily routines

How easy is it for users to integrate the information and services offered in this type of venue into their daily lives? (offer concrete solutions to their needs and problems, make it easier to solve them at this venue than in other places)

If appropriate, indicate any specifics that apply to Digital ICT services alone.

Most users visit cybercafes for entertainment and social networking. Surveys conducted with users from 16 cybercafes in the 5 Brazilian regions show that 28.9% of users visit the centers to use blogs and social networking, 21% to play games, 19.4% to use e-mail and 19% to chat. Activities with greater potential for solving user problems were far less common in these venues. Only 9.3% of users browse the web (seek information) and only 1.6% use ICT for commerce and business.

4.3.3.12 Users perceptions about the venue

What is the general perception or opinion of the population about the venue (not necessarily its specific services, but the venue itself: i.e., what do people generally think about libraries? Are they places that are "cool" or "only for elites" etc?), differentiating by applicable Equity of Service variables (Form 1c)? This includes perception by people who do not use the venue.

(i)   If appropriate, indicate any specifics that apply to Digital ICT services alone.

Users believe that cybercafes are clean and well organized centers, with good computers and fast internet access.

Overall, however, Brazilians associate cybercafes with game-playing (hence, LAN houses) and do not see these venues as an environment that promotes educational or social development. There is even, in some states, a law forbidding unaccompanied children under 13 from visiting LAN houses .

According to the National Association of Paid Centers for Digital Inclusion (cybercafes), 90% of cybercafé revenue came from game-playing as late as four years ago. Recently, internet access revenue has increased greatly and now makes up the majority of business for these venues.

4.3.3.13 Social appropriation of information and generation of new knowledge

What activities, products and services are users undertaking that exhibit new levels of social appropriation of technologies and generation of knowledge? For example, how are users generating and disseminating new knowledge, products and services through their use of this venue? (see category 13 in Real Access Framework for Social Appropriation of Technology).

If appropriate, indicate any specifics that apply to Digital ICT services alone.

Most users learn to appropriate ICT by creating their profile on social networking websites or creating webpages for themselves, their social groups, bands or businesses. Interacting with pictures and music (via mp3 players), posted or download from the internet, and cell phones (many camera-enabled) are all examples of social appropriation of the technology.

However, there is little evidence of social appropriation of information and generation of new knowledge in this venue. During surveys conducted with users from 16 cybercafes from the 5 Brazilian regions, only one user, a college student, was working on an academic paper. Several operators responded that users do school activities (homework and research) in their cybercafes.

4.3.3.14 Trust, safety, and privacy

What is the general perception or opinion of the population about the safety, security and privacy (TRUST) of the information and services offered in this venue?

Compared to telecenters, cybercafes are not viewed as safe places. Cybercafes are places for entertainment, meaning that all types of content can be accessed, including violent games. Many cybercafes are located in bars or other stores that sell liquor. As a result, families prefer that their children use a telecenter instead of a cybercafe.   Most cybercafes delete user content every day to ensure their privacy and keep the machines uncluttered.

4.3.3.15 Gaps and opportunities in information and services offered

What other information gaps and opportunities exist, which are not being met? (other information/services people need that are not being met there and could be offered, especially through Digital ICT services)

Based on visits, interviews and surveys, local researchers affirm that most users do not understand how to integrate ICT into their lives or their work, either due to a lack of training or because they cannot imagine the potential benefits of ICT.

Because cybercafes are spread throughout the country in low income neighborhoods, the government could establish partnerships to train and support operators—the goal being to develop activities to stimulate reading and information appropriation in local populations, as well as to explore the broader potential for technology to transform society. In this sense, there is still an opportunity for users to innovate and use technology in creative ways--for general and educational purposes.

Once partnerships between governments and cybercafes are established, cybercafes could offering IT and reading skill development opportunities to users. Activities described in 4.2.3.15 for telecenters can also be implemented in cybercafes. In this scenerio cybercafes could keep their ongoing activities during hours that they receive more users, but use mornings, when few people visit the centers, to implement development activities supported by government. This setup would increase cybercafe sustainability (due to government funds) and would be a cheap and efficient solution for government as well.

Another possibility is to offer educational courses and/or products in cybercafés, also for small fees. The fee would enable the payment and training of qualified educators, and the project would give these centers a new socioeducational purpose. The researchers believe in the potential for increase sustainability in such as scheme, as the courses could attract more young kids supported by their families, as well as adults searching for information or qualification. For paid centers offering this kind of education product, government and other partners could collaborate as they do with telecenters (tax deductions, internet connection, curriculum development, evaluation, etc).

4.3.4 Enabling environment

2–3 Paragraphs:
What is your overall assessment of the ENVIRONMENT ecosystem in this type of venue (local economy, national economy, legal and regulatory framework, political will and public support, regional and international context)?

Cybercafes are an important access point in Brazil. Their driving goals and overall management are vastly different from that of telecenters, which require more complicated collaborations to remain sustainable. Until recently, they were not considered part of the "Digital Inclusion" movement in the country. Assessing their impact is a big challenge, as some centers are not legally registered, but they are present throughout low income areas on account of charging affordable prices to their users.

The fast growth in the number of cybercafes can be explained in part by economic growth and poverty reduction in Brazil. The increased purchasing power of lower classes has allowed for paid access centers to thrive. Other factors include the reduction of computer prices, the rise of the Brazilian Real, and facilitated access to credit, which allows purchases to be divided into small monthly payments. As a result, many entrepreneurs in *favelas* and other poor neighborhoods have bought computers, installed them in a room or garage, connected them to the internet, and launched their own microbusiness. Most of these enterprises are not registered businesses.

Cybercafes have not succeeded in upper class neighborhoods, because most of their target population already has access to the internet at home.

The regulatory framework for cybercafes is not clear. but legislation varies by state. In Rio de Janeiro, youth under 18 cannot go to cybercafes unaccompanied, and in Sao Paulo youth under 18 can use the center unaccompanied only until midnight (afterwards, a responsible adult must be present).These laws apply to LAN houses, but many registered centers have avoided the label and hence, the law. The National Association of Center for Digital Inclusion (aka National Association of Cybercafes) helps centers register officially with the government.

4.3.4.1 Local and national economy

Describe the local and national economic environment and how it affects public access to information and communication in this type of venue (refer to and complement economic summary in country assessment, section 3.5 Economic, Policy, and Regulatory Environment, calling out what is specific to this venue)

(i)   If appropriate, indicate any specifics that apply to Digital ICT services alone.

Cybercafes have not succeeded in high income neighborhoods, but they have done well in medium and low income neighborhoods, where most people do not have computers at home. The CGI Survey on ICT use in Brazil (2006 and 2007) showed that paid centers were responsible by 33% (in 2006) and 49% (in 2007) of the internet access in the country—this despite receiving no assistance from government (funds, policies) or the private sector.

Some of these centers are not properly registered (i.e. informal business that do not pay taxes), which creates challenges for assessing their impact and investing in their promise. Previous research mentioned above, however, shows that these venues is extremely important, due to their growth and sustainability. Importantly, the government is beginning to realize that these market driven centers play a larger role than government sponsored telecenters in promoting ICT access and digital inclusion.

.Paid access centers usually offer newer computers and faster internet access than telecenters, which are often created with refurbished computers. Nonetheless, cybercafes are not seen as ideal educational or social environment. As mentioned above, state legislation even forbids unaccompanied minors from visiting cybercafés.

According to the National Association of Paid Centers for Digital Inclusion (cybercafes), 90% of cybercafé revenue came from game-playing as late as four years ago. Recently, internet access revenue has increased greatly and now makes up the majority of business for these venues.

4.3.4.2 Legal and regulatory framework

Describe the legal and regulatory framework and how it affects public access to information and communication in this type of venue (refer to and complement economic summary in country assessment, section 3.5 Economic, Policy, and Regulatory Environment, calling out what is specific to this venue)

(i)   If appropriate, indicate any specifics that apply to Digital ICT services alone.

The regulatory framework for cybercafes is not clear. but legislation varies by state. In Rio de Janeiro, youth under 18 cannot go to cybercafes unaccompanied, and in Sao Paulo youth under 18 can use the center unaccompanied only until midnight (afterwards, a responsible adult must be present).These laws apply to LAN houses, but many registered centers have avoided the label and hence, the law. The National Association of Center for Digital Inclusion (aka National Association of Cybercafes) helps centers register officially with the government.

4.3.4.3 Political will and public support

What is the level of political will and public support for this type of venue? (refer to and complement section 3.5 Economic, Policy, and Regulatory Environment, calling out what is specific to this venue)

(i)   If appropriate, indicate any specifics that apply to Digital ICT services alone.

Currently, there is no public support for cybercafes. Some experts have suggested partnerships with government to implement development policies in partnership with these centers, but researchers were not able to identify any government plan associated with cybercafes.

Paid access points could be used by government to enhance already existing digital inclusion initiatives and to deliver services to people looking for information. The government currently focus its efforts on creating telecenters, but by partnering with existing cybercafés to develop social educational projects, their efforts would benefit a much larger population.

Even though the government is not planning to work with cybercafes, the success of these venues is forcing policy makers to rethink telecenter sustainability; there is discussion in some circles to charge for services in telecenters also.

4.3.4.4 Organization and networking

Describe if the facilities in this type of venue organized in any network, association or other collective body? (i.e., national public library system, telecentre franchise or network, etc)?

The National Association of Cybercafes (Associaçao Brasileira de Centros de Inclusão Digital, www.abcid.org.br) is an association that informs and guides centers on legal issues, registration, marketing and sustainability.

One of their main goals, according to the ABCID director, is to get centers registered and working legally. The association is also working to fight against the "Lan House" label and inform society that internet service is their main purpose.

4.3.4.5 Partnerships

Describe notable public-private partnerships in support of this type of venue.

If appropriate, indicate any specifics that apply to Digital ICT services alone.

Most cybercafes have not established partnerships.

4.3.5 For publicly funded venues only: Revenue streams

This section is meant specifically for publicly-funded venues (public libraries, national connectivity programs, etc).

Currently there is no funding for cybercafes. Government policies are focused on investing in the telecenter creation and equipping schools with ICT.

## 4.3.6 Case example for venue 3: CYBER CAFE

Provide a short descriptions and commentary for each type of venue, offering a realistic sense of what the venue looks and feels like in its day to day operation, the kind of people who visit, and the kind of services they receive. Also, the case example indicates what makes the case unique or what features are commonly shared with other venues. A photo and short quotes will make it even more real.

Insert Case Example and Photo here.

Cybernet is a legally registered cybercafé located on Praca da Matriz street in Santa Barbara, Bahia. The center is located near both the largest municipal school and the only telecenter in operation and remains full for most of the time. Many of its clients are schoolchildren who use the center for school projects or to play games. The center is primarily staffed by its owner and has 10 computers, plus one for management and a printer.

The center charges R$1.00 per hour. The center also sells snacks and soft drinks. It is open during the day and a night from Monday to Friday.

Cybernet plays an important information access role in the municipality of 19,440, as there are no public libraries in the 326,127 km² area.
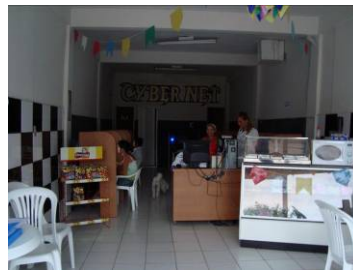
5 Success Factors and Strategic Recommendations

5.1 Summary of Lessons in Country

5.1.1 Information needs

What are the most critical information needs by underserved communities that are currently not being adequately met by public access to information and communication venues?

Initiatives that contribute to the improvement of literacy and a culture of reading are greatly needed. The Brazilian government has not invested in spacious public libraries, like those in developed countries such as the United States. The notion of a library as a "reading sanctuary," common to other countries, does not exist in Brazil. As a result, cultures of reading and searching for written information are present mainly in populations with more schooling.

As mentioned in 3.2.2 Capacity, The struggle to develop human capacity in Brazil is deeply engrained in the challenges facing the education system. While 93 % of school-age children are now attending school, the quality of public basic education remains a serious problem. For example, the results from Brazilian participation in PISA, the OECD Program for International Student Assessment (www.pisa.oecd.org) were disheartening. Among 40 participating countries in 2003, Brazil ranked 37th in reading and 40th in mathematics. The National Assessment of Basic Education shows that students are not developing necessary skills in reading, writing and mathematics. The national Functional Literacy Index also provided sobering results. Among the population of 15 to 64 year olds in 2007, 7% are illiterate, 25% are barely literate, 40% are basically literate, and 28% fully literate

Brazilian researchers identified four main types of information needs in underserved populations. **First, initiatives to improve literacy are needed.** Promoting social and economic development is mostly impeded by the inability of low income populations to take advantage of information, and not so frequently by their access to it. Initiatives that contribute to the improvement of literacy and a culture of reading are greatly needed. **Second, underserved communities need readable summaries of research on inequities and their potential solutions.** Brazilian universities have produced significant research on social development and educational improvement. But results from these studies are usually not accessed by school coordinators, teachers, NGO leaders or policy makers. **Third, better mechanisms must be devised for informing the population about educational opportunities and future job opportunities.** Aside from formal schooling, there are a variety of social and educational programs promoted by governments (federal, state and municipal) and NGOs designed to strengthen

development opportunities in low-income populations. Many of these programs are community based and are free. The key challenge—aside from expanding the scope of these programs—is to inform underserved populations of their existence. **Finally, the government must improve its delivery of health promotion information.** With regard to information delivery, the Brazilian government has made significant strides in the fight against HIV/AIDS and dengue fever, mostly through TV, radio and newspaper campaigns. However, more work is needed to adequately deliver information to the public about chronic diseases and diseases of poverty, such as diarrhea, malnutrition, malaria and tuberculosis.

5.1.2   Where people go

Where do people go for public access to information and communication in the country, especially underserved communities?

Television is the primary source of information for the majority of the Brazilian population, as over 98% of Brazilian households own a TV set (CGI, 2007). As for ICT access, the majority of the underserved population goes to cybercafés--venues that have expanded rapidly during the last three years. Of all Brazilian internet users, 49% accessed the internet primarily from cybercafes in 2007 (versus 30% in 2006 and 19% in 2005).

According to the Survey on ICT in Brazil, conducted by CGI in 2007, The North Region presented the highest increase in the use of cybercafes—a 22% increase over the previous year. Of internet users in the North and Northeast, (the poorest regions) 68% and 67% respectively accessed the web from cybercafés in the last year. In the South region, where the average annual income is higher and internet connection infrastructure is readily available, only 30% of people use cybercafes. The CGI Survey also demonstrated a negative association between income and LAN house use. That is, poorer people were more likely to use cybercafes than their rich counterparts. Among internet users earning less than the minimum wage, 78% declared they access the web through paid public access centers. By contrast, only 30% of those who earned more than five times the minimum wage relied on cybercafés. Moreover, it is important to note that cybercafés are used mainly by less-educated people: 64% of elementary school students, 53% of high school students, and 54% of people with an elementary school education or less had frequented cybercafes in 2007. This was true for only 27% of the users who had university degrees. In sum, these data show that LAN houses serve as important access venues for classes E, D and C—or the economically deprived population. For these users, the cost of connection time is low in comparison to the cost of a computer. (Santos, 2007)

Most telecenter users also belong to underserved communities, but telecenters exist in smaller quantitys (13,351, compared to approximately 58,000 cybercafes). The CGI Survey in 2007 revealed that internet access from free public access centers, such as telecenters and libraries, is still modest, but doubled in the last year, increasing from 3% in 2006 to 6% in 2007.

5.1.3 How access, capacity, and environment affects public access

How do access, capacity and environment affect public access to information and communication venues in the country? (Refer to details under access, capacity and environment in research design document).

Access:

Data reveals a significant advancement in internet access from 2006 to 2007. Researchers have observed marked increases in the number of internet users (35 million to 45 million), computer ownership (24%), broadband connections, as well the use of cybercafés and free-of-charge access centers. In addition, 40% of families earning between three and five times the minimum wage own computers, up from 23% in 2006. While these increases have been observed across all socioeconomic classes, access remains skewed towards the more privileged. For example, 94% of people in Class A have used the internet, while only 17% of Class D and E citizens have gone online.

Accordingly, poorer people rely more heavily on public access (access at cybercafes reached 49% from internet access in the country and free-of-charge facilities has doubled in the past year reaching 6%), while upper class citizens access the internet from home and at work. The government has no policy initiatives designed to equip significant number of libraries with computers or connect them to the internet. There has been some discussion in government circles to increase support in the creation of telecenters, but recent efforts have primarily been focused on promoting ICT access via schools, creating IT Labs. The government also expects to purchase 150,000 educational laptops for children to distribute in 300 schools throughout the country in 2008—the goal being to test the viability of one-to-one computing in Brazilian public schools.

CAPACITY:

The struggle to develop human capacity in Brazil is deeply engrained in the challenges facing the education system. While 93 % of school-age children are now attending school, the quality of public basic education remains a serious problem. According to UNESCO, Brazil's education is inefficient, particularly in the public school network. As a result, many Brazilians are literate but not functionally literate—that is, they do not comprehend enough about what they read to take advantage of information available to them.

For example, the results from Brazilian participation in PISA, the OECD Program for International Student Assessment (www.pisa.oecd.org) were disheartening. Among 40 participating countries in 2003, Brazil ranked 37th in reading and 40th in mathematics. The National Assessment of Basic Education shows that students are not developing necessary skills in reading, writing and mathematics.

The national Functional Literacy Index also provided sobering results. Among the

population of 15 to 64 year olds in 2007, 7% are illiterate, 25% are barely literate, 40% are basically literate, and 28% fully literate.

This context brings both challenges and opportunities for ICT use in Brazil. For the 72% of citizens who are not fully literate, extracting information from currently available content presents a challenge. But online access, in whatever form, also increases the presence of written language one's life; reading and writing skills typically improve as a result. Also, ICT allows for multimedia-based information transmission, which facilitates access for non- or semi-literate users.

The popularity of social networking via ICT also presents opportunities. Youth, even in underserved neighborhoods, are often able to easily upload and download music and pictures and create profiles for social websites like Orkut, which can require more complex uses of ICT like HTML scripts. Moreover, some internet-enabled NGOs are using ICT in the social projects that they develop (e.g. sewing and cooking cooperatives, daycare, dance, music, etc.). Finally, educators or instructors are using ICT at telecenters to network with other NGOs, plan their activities and communicate their achievements and challenges.

Environment

Brazil is the largest national economy in Latin America, the world's tenth largest economy at market exchange rates and the ninth largest in purchasing power parity. Brazil has large and developed agricultural, mining, manufacturing and service sectors. The country has been expanding its presence in international financial and commodities markets, and is regarded as one of four emerging economies, also known as BRIC countries. Brazilian exports are booming, Major export products include aircraft, coffee, automobiles, soybean, iron ore, orange juice, steel, ethanol, textiles, footwear, corned beef and electrical equipment. (CIA Fact Book)

The biggest investment boom in history is underway; in 2007, Brazil launched a four-year plan to spend $300 billion to modernize its road network, power plants and ports. Brazil's booming economy is shifting into overdrive, with biofuels and deep-water oil providing energy independence and enabling the government to generate revenue for irrigating dry areas in the Northeast. Meanwhile, the percentage of poor people is decreasing every year, meaning greater numbers of people can buy computers. Increased purchasing power in resulted in a 23% increase in computers sales and a 211% increase in laptop sales from 2006 to 2007. (ABINE)

The 1995 *Lei Geral de Telecomunicações* (General Legislation on Telecommunications) created a new private model for telecommunication services in Brazil. In marked contrast from the old public model, nowadays there is vibrant competition among private companies to implement telecommunication services in Brazil. This law has also created ANATEL, the National Agency of Communication, to regulate the telecommunication system in the country. The government gives concessions to telecommunication services via a system of public bidding. Currently, three companies share the Brazilian market for broadband; as part of their licensing agreements, they must maintain a policy of corporate social responsibility. Recently, for example, the Brazilian government negotiated with operating telecoms to extend broadband to all Brazilian municipalities, and connect, free of charge, all urban schools by 2025. By the end of 2008, 22,000 schools will receive broadband, while 55,000 schools will be connected by 2010.

   There is also freedom of expression in the country. Based on multilateral, transparent and democratic principles, the coordination and integration of internet service activities in Brazil is controlled by the Brazilian Internet Steering Committee - CGI.br, a multi-stakeholder organization comprised of members

of the government, the business sector, non-profits and the academic community.

Since the 1990s the number and the quality NGOs has significantly increased. The government implements a great part of its social assistance policies and informal education programs through partnerships with NGOs. In this context the national government has chosen to emphasize the creation of telecenters, in partnership with NGOs, as its primary ICT promotion initiatives aimed at underserved communities. NGOs are selected after sending telecenter proposals to benefit their communities with ICT access and services. The political will to create and support telecenters is stronger than that of other venues. A variety of initiatives to create and support telecenters are being developed by several ministries, municipalities and government-owned corporations. However, there is no political will in the federal government to equip libraries with ICT, nor is there an effort to partner with or support cybercafes. Federal initiatives to create telecenters in low income communities exist in several ministries--a fact that has drawn criticism from those advocating a unified policy. But despite some public administration disadvantages associated with decentralization, the plurality of federal telecenter programs has contributed to horizontal--as opposed to vertical--ICT integration into society (as advocated by recognized authors such as Pierre Levy and Manuel Castels).

5.1.4   Role of ICT

What is the role of ICT in public access to information and communication? What untapped opportunities exist?

Compared to traditional library collections, ICT access allows for access to much more content and enables more interaction among users and content authors. The creation of self organized communities in wikis and the popularity of blogging and social networking web sites enable authorship unseen in other realms. Educators and academics view ICT as a precious resource for stimulating authorship, interaction and, as a result, knowledge construction; but less complex processes such as searching for information, selecting, reading and copying also deserves recognition for their ability to develop reading and ICT skills. Considering the educational challenges facing Brazilian society, with its high levels of functional illiteracy and poor results in national and international educational assessments, the use of ICT—however simple--can play an important role in educating citizens. Organizing information, developing presentations, and creating webpages are all useful skills.

The acclaimed psychologist Jean Piaget states that children build their knowledge by interacting with the environment that surrounds them; that is, by understanding the environment as nature, man-made objects, ideas, values, human relations, culture and history. For Piaget, knowledge is the result of the interaction between the learner and the environment, and "knowing" means *organizing, structuring* and *explaining* based on individual experience (CHIAROTTINO, 1988).

We do not need to be cognitive scientists to understand the usefulness of computers and the internet to increase people's interaction with the world; and technology's ability to allow learners to organize, structure and explain their interactive experiences. In this context the possibility to interact with ICT is enormously richer than passively reading printed information. When seeking information through ICT, people can receive, reproduce, change, share, save and process the information alone or in groups of peers or experts. Importantly, ICT allows for interaction with multimedia possibilities, an extremely useful tool to reach the illiterate and barely illiterate population and promote appropriation of information among

youth .

> Juan Carlos Navarro, Chief of Education Unit in Interamerican Development bank concludes:
>
> The changes in the world economy require increasing numbers of workers with higher level skills who must update their knowledge on a regular basis. Methodological knowledge and skills, or "higher order learning," as well as skills such as creativity, communication, and the ability to work in teams, are today more important than the learning of facts and basic data.
> There is increasing hard evidence that the cognitive skills of the labor force considered as a whole, and not only taking into account those with the highest education achievement, impact directly on economic development. A recent study of ten OECD countries shows that cognitive skills in possession of a nation's population–known as "knowledge capital"–are much more powerful predictors of economic development than the average number of years of formal education. According to the study, average skill levels explain over 55 percent of GDP per capita growth between 1960 and 1995, and a 1 percent rise in average literacy leads to a 1.5 percent increase in GDP per capita and a 2.5 percent rise in labor productivity. While much progress has been made recently, the "knowledge capital"–the accumulated knowledge and skills in the population of Latin America and the Caribbean–is inadequate to the world challenge. The region does more poorly than would be expected given its current per capita income and the weaknesses of the region's education and training system continue to constitute an obstacle to economic development.

Therefore, there is an untapped opportunity in using existing public information access venues, equipped with ICT, to stimulate learning and skill development in Brazil's underserved populations. ICT is not the solution to Brazil's "knowledge capital" deficiencies, but it is certainly a tool to transform people's ability to think creatively, communicate effectively, and work interactively.

5.2   Success Factors and Recommendations

5.2.1   Where to invest resources

How could additional resources (money, people, time, knowledge) be best used to strengthen public access to information and communication venues and practices in the country? (i.e., solutions that would make it more accessible, affordable, appropriate?)

Access to ICT is being created and enhanced with public policies, private initiatives and telecom agreements with the government. Sufficient content also exists: E-government services are available and growing, and plenty of content in Brazilian Portuguese is available on the internet. What is lacking is capacity—the capacity to use ICT and to appropriate and interact with information. The problem stems from Brazil's educational system, which continues to do poorly despite offering universal access. But how do we move forward when many parents have lower levels of education than their elementary school children? We must recognize that development of our collective "knowledge capital" cannot be solely confronted by the educational system.

In all researched venues, there are few services—courses, workshops, tutorials, assistance--to address this need, perhaps due to the Brazilian concept of "service," or cultural role attributed to these venues. We observed that people do not necessarily view public access venues as sources for information, but rather as resources for communication. Even libraries are not succeeding in attracting large segments of the population, though no doubt their insufficient budget and local

culture are partly to blame for the nonexistence of services that promote reading.

Computers and the internet are naturally enticing, especially to youth. There is an opportunity to transform this interest into development—increased integration of reading and appropriation of information into people's daily lives. Without this transformation, low educational levels will continue to impede societal progress (Drucker, 2001; Castells 2001; IADB, 2007)

In essence, we must continue to support policies that expand ICT access, but we must also pause to think about how to best help underserved communities use ICT-enabled information. In this context, there is clearly a need to invest in initiatives that effectively attract community members to public access venues and that successfully promote reading among underserved communities. We need to transform venue operators from passive facilitators of ICT access to active agents of change—those who work to promote reading and information appropriation and who understand their community's needs.

Venues themselves also need to be more community oriented by tailoring their activities to local populations. In libraries, this could mean changing the geographical model from one, centrally-located library to many smaller, community-based branches. In developed countries such as the United States, community-based libraries already play important community roles by hosting storytelling, author readings, parenting workshops, and art lessons. In Brazil, this role could be expanded to include ICT-related activities such as collaborative writing workshops, blog and website creation, image editing, and presentation production.

Therefore, it is necessary to fund community-based services in venues and the personnel needed to properly carry them out. Significant financial resources would be required to train and hire qualified staff to host and promote these activities, but if clear goals, and proof of their attainment, are established, sustainability is possible through government, NGO, and private sector funding. Given the reduction in poverty in the country, users could also be charged a small monthly fee for access to such services.

To start, external investment is necessary for the planning and execution of a pilot program that promotes a series of related services, to be implemented in all three studied venues, but with different models for sustainability. Such a project would aim to create innovative services that engaged the population in ICT-enabled information appropriation and contributed to their development as a citizen of an information-driven society. The program's success would rely creation of a new kind of venue operator, or "community librarian." Unlike formally trained librarians, community librarians would likely have similar educational backgrounds as the people they served.

The following steps would be necessary for a successful project:

- Sending a proposal to the government showing interest in developing a pilot program to explore the potential for using public access venues to promote literacy and information use in underserved communities. The program would be based on trained "community librarians," who would promote the usefulness

- of ICT enabled information appropriation through various community-specific activities.
- Soliciting participation from existing centers, including libraries, telecenters, and cybercafes in various regions of the country.
- Acquiring funds for a long-term project to enable adequate evaluation of reading skills and information use.

  Project implementation. Evaluation throughout various stages; comparison to control.

Once government, NGOs, and the general public recognize the value and development potential of these services--and assuming the country continues to grow economically and reduce poverty--the sustainability of these programs could be ensured by either public investment or small user fees, depending on the venue. In this context, Brazil provides an ideal environment for the incubation of such a pilot project, which could be expanded internationally thereafter.

5.2.2 Key success factors

What are the key success factors for public access to information and communication to meet information needs of the population, especially underserved communities, and especially through digital ICT?

Venue creation in location that underserved communities frequent (i.e. not university libraries)

Free or affordable access to information.

Services that promote the use of ICT (courses, workshops and facilitation)

Services that stimulate reading and help people use information to improve their lives

Updated equipment (adequate computers, internet bandwidth)

5.2.3 Role of ICT

How can public access to information and communication venues in the country be strengthened to offer more meaningful and equitable access to information, especially using digital ICT?

Computers and the internet are naturally enticing, especially to youth. There is an opportunity to transform this interest into development—increased integration of reading and appropriation of information into people's daily lives. Without this transformation, low educational levels will continue to impede societal progress (Drucker, 2001; Castells 2001; IADB,2007)

In essence, we must continue to support policies that expand ICT access, but we must also pause to think about how to best help underserved communities use ICT-

enabled information. In this context, there is clearly a need to invest in initiatives that effectively attract community members to public access venues and that successfully promote reading among underserved communities. We need to transform venue operators from passive facilitators of ICT access to active agents of change—those who work to promote reading and information appropriation and who understand their community's needs.

Venues themselves also need to be more community oriented by tailoring their activities to local populations. In libraries, this could mean changing the geographical model from one, centrally-located library to many smaller, community-based branches. In developed countries such as the United States, community-based libraries already play important community roles by hosting storytelling, author readings, parenting workshops, and art lessons. In Brazil, this role could be expanded to include ICT-related activities such as collaborative writing workshops, blog and website creation, image editing, and presentation production.

See 5.2.1 for a more detailed description of how such a transformation might occur.

5.2.4   Top ten recommendations

What are the Top Ten recommendations for public access to information and communication venues in your country? Make sure you include policy recommendations as part of them.

1.   **Define a new, more active role for venue operators;** see 5.2.1 for project proposal

2.   **Create a sequence of module-based ICT courses (i.e. an ICT curriculum) for several age groups, to be offered by cybercafes or telecenters**. Small fees would be charged for such courses. As poverty decreases and interest in education increases, underserved families will be more willing to invest in ICT education for their children, just as middle and upper class families typically invest in English classes for their children. The course's implementation in telecenters could be supported by government through public policies. Cybercafes could offer the courses as a paid service, provided a qualified person was hired to help learners. Offering courses in cybercafes would help free them of the LAN house label and increase sustainability as they attract more young kids supported by their families, as well as adults searching for information or qualification. Government and other partners could collaborate with paid centers as they do with telecenters

3.   **Create more libraries in telecenters, either through NGOs by giving scale to programs such as Arca das Letras (2.1.2)**, or by **creating smaller community public library branches (similar to the neighborhood library system in many cities in the United States)**. By using the Lei da Cultura, investors could benefit from tax-deductions for library creation.

4.   **Use existing resources from programs intended for the creation of telecenters, to create telecenters inside existing public libraries**. A library in the state of Bahia has succeeded in using this approach to acquire computers with

investment of the program Identidade Digital. This program donates computers to create telecenters and covers costs related to internet access and operator salary. Currently, most programs with resources to create telecenters focus mainly in NGOs or grassroots organizations

5. **Pass laws to facilitate and deregulate cybercafe operation.**

6. **Open school computer laboratories to the public during non-school hours**

7. **Stimulate school library use by students and community members; promote reading-related activities for families and community members.**

8. **Promote the use of software in telecenters and cybercafes that is user-centered, interactive, and stretches the mind**. One example of such software is Scratch. **Scratch is a new programming language that makes it easy to create interactive stories, animations, games, music, and art -- and share your creations on the web.** Scratch is designed to help young people (ages 8 and up) develop 21st century learning skills. As they create Scratch projects, young people learn important mathematical and computational ideas, while also gaining a deeper understanding of the process of design. Scratch is available free of charge, in Portuguese. Scratch was developed in 2007 by Mitchel Resnick's team from MIT Media Lab, to be used by youth in community clubs for afterschool activities. Its website hosts a community of users that post projects and interact through comments and forums.

9. **Create rich multimedia content.** While underserved groups do not improve their literacy level, the creation of rich media information to be accessed in telecenters or by cell phones is an opportunity.

10. **Intensify public investment in telecenter creation, with emphasis on adequate operator pay.**

6 Appendices

Please attach on the next pages any other relevant information, resources or materials that can help understand public access information venues in the country.

6.1 List of Countries Included in the Research

Algeria
Argentina
Bangladesh
Brazil
Colombia
Costa Rica
Dominican Republic
Ecuador
Egypt
Georgia
Honduras
Indonesia
Kazakhstan
Kyrgyzstan
Malaysia
Moldova
Mongolia
Namibia
Nepal
Peru
Philippines
South Africa
Sri Lanka
Turkey
Uganda

6.2   Overview of Research Design

The Center for Information & Society (CIS), in partnership with the Information School of the University of Washington, has as part of its core mission the investigation of how inequities in our global society can be reduced through improved access to information and communication technologies (ICT). As part of its research activities, CIS has brought together interdisciplinary teams of researchers to examine the needs, readiness and success factors for public access to information and communication venues through digital ICTs in 24 countries around the world.

Project Goal:

- Understand information needs, and opportunities to strengthen institutions that offer public access to information and communication, especially to underserved communities, and especially through the use of digital ICT: What are the needs, barriers, opportunities and success factors for public access to information and communication to help human development in countries around the world? For the purpose of this study, research is primarily focused on Libraries and Other institutional venues for which access to information has a significant role. This research includes understanding venues where digital ICT is currently offered, *and* also where ICT is not currently offered but there is potential and strong institutional support to include ICT (for example, some public libraries where digital ICT services are currently not offered, but there would be strong interest in offering them).

   Libraries include public libraries and other types of libraries that are open to the public. **Other venues** include national initiatives that offer public access to information, either with ICTs (telecentres, cybercafés and the like) or without ICTs (post offices, community centers and similar) and are of significant importance in local contexts.

Project Purpose:

- Inform policy and funding decisions: Inform funders and government decision makers about future program direction and funding allocations

- Contribute to public knowledge: Disseminate results of in-depth country and comparative analyses, including research design and analytical models

To inform project design, CIS adapted the Real Access framework (Bridges.org), analyzing public access to information and communication through a total of 14 research categories grouped under the dimensions of **Access**, **Capacity & Relevance** and **Enabling Environments**. Adaptation was done in consultation with research partners around the world for the purposes of this study.

The implementation of this project is organized as a two-phase process:

Phase 1:   Nov 07 – Feb 15, 2008

During Phase 1, a **Draft Country Report** will be prepared by local research teams in each country. The Draft Country Report includes a Country Profile, a Country Assessment and an early draft of Lessons & Recommendations.

The *Country Profile* is a collection of 50 general descriptive data points drawn from readily accessible sources; CIS pre-populates the reports for each country, and offers them for validation and comments by local teams. Country Profiles provide primarily statistical data that is intended to offer a quick snapshot of each country, including geography, political environment, demographics, economy, education and ICT infrastructure.

Using a common approach to define research processes, local teams will conduct initial fieldwork to inform a *Country Assessment*. The Country Assessment includes both a scan of information needs, especially for underserved communities; and an assessment of public access to information and

communication venues (with or without digital ICT services) and their environment, resulting in a better understanding of gaps, opportunities, and readiness of public access to information initiatives in each country.

During Phase 1, each country team will also complete an early draft of *Success Factors and Recommendations* focused on strengthening public access to information in the country, and identify potential themes and issues for further study in Phase 2.

Phase 1b: Feb 15-Mar 15, 2008

During this period, CIS will conduct a preliminary comparative analysis based on the Draft Country Reports from all participating countries, and suggest feedback and guidance for Phase 2 of the study. The comparative analysis will look for salient trends, emergent themes, patterns, and threads across regions. During this period, next steps will be determined for in-depth country research for Phase 2.

Phase 2: March 2008 – August 15, 2008

Phase 2 will involve a deeper assessment of public access to information and ICTs across all 24 countries. In particular, CIS is interested in deeper probing of the emerging themes and scenarios identified in Phase 1.   A **Final Country Report** will include high level analysis, success factors and recommendations to strengthen public access to information and ICTs in each country. Final comparative analysis across countries, with analytical models and scenarios, will be completed by CIS after receiving the Final Country Reports.

Findings will be disseminated publically through reports, academic publications, conferences and consortiums. Each country team is expected to produce at least one publishable paper on their research and findings, plus additional papers emerging out of the comparative analysis and global findings. Publications will be part of the public domain, with the CIS web site, partners' sites, and other publication channels to be identified.

6.3   Annotated Country Profile (Form 2)

Attach here an updated copy of the annotated Country Profile (Form 2).File attached –