

Perceptions of Connectedness: Public access computing and social inclusion in Colombia

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Abstract

Of all the benefits public access computers (PAC) offer users, one stands apart: stronger personal connections with friends and family. A closer look at the results of a qualitative study among users of libraries, telecenters, and cybercafés in Colombia, South America, shows that social media and personal relationships can also have an important community and sociopolitical dimension. By fostering a sense of belonging and connectedness to community and to a larger world, PAC usage often leads to feelings of empowerment and development of social capital, two intangible factors that are critical for community development. This study used a mixed-methods approach, combining surveys and interviews in five regions of the country, to uncover the benefits of PAC for underserved communities. Its findings contribute new insight about the impact of information and communication technologies (ICT) on community development and social inclusion.

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1. Introduction

“Wow, the Internet is the best ... it’s a way of not disconnecting from what happens in the virtual world and reality, because these two worlds are complementary.” (cybercafé user, Medellin)

Numerous research and intervention programs have sought ways to help solve development problems such as poverty, illiteracy, disease, unemployment, hunger, corruption and social inequalities through the use of information and communication technologies (ICT) [1-4]. A small proportion of initiatives have explored the potential of ICT to build or strengthen social capital and individual and collective empowerment [for

example, 5, 6, 7]. However, the measurement of the social and economic impact of ICT, especially in public access environments, continues to be problematic. Results to date generally reflect: (i) a bias to action and not a bias to knowledge, (ii) a preference for what is narrowly descriptive and (iii) a field that is not analytical enough. Much research about ICT impact has been anecdotal or case-study driven, measuring activities, processes, outputs and outcomes. Furthermore, there is a strong bias toward positive results, while negative impacts are often underreported.

Public access to computers (PAC) is an important component in ICT programs for development: it is through public access venues such as public libraries, community centers, and Internet cafes or cybercafés that marginalized and underserved sectors of the population have opportunities to learn about and use ICT, especially when they do not own a personal computer or when they do not have Internet access at home, at school, or at work. Libraries, telecenters and cybercafés constitute the PAC ecosystem of a community or a country, in this case, of Colombia.

This paper presents a new way to understand the impact of PAC based on the results of an in-depth study of how people use libraries, telecenters, and cybercafés in Colombia, South America. The study emphasized the users’ experience and their perceptions of how PAC and ICT usage benefited their daily lives. Analysis of quantitative and qualitative data shows that fast, easy access to more and cheaper information, as well as new opportunities to cultivate personal relationships and entertainment, represent the most important benefits people derive from their use of public access venues. Other benefits related to education and learning, and, to a lesser degree, easier transactions and jobs, emerge as very relevant as well.

Personal and social needs such as communicating with friends and family, being in contact with other places and other cultures, or even reaching out to new types of entertainment, represent intangible results for public access ICT programs. But are these results telling anything to researchers, practitioners, and decision-makers about social results or social impacts

of public venue uses of ICT? Why it is so important for users of ICT in public venues to be connected with family and friends and with other people? What do these contacts and connections *mean* for users in their daily life and for their local contexts? Are there any relations between these intangible results and process of strengthening social capital and empowerment?

These are the questions this paper explores, describing and analyzing the public access ecosystem in Colombia. We emphasize the importance of understanding impact from the users' perspective: by listening to their voices, and by eliciting the meanings of their experience using computers and the Internet in public places around the country.

We also identify and seek to understand the *local strategies* users construct while they interact with ICT in public access venues. For this reason we are using and adjusting the perspective of analysis of local strategies developed by Philipsen [8]. His proposal understands local strategies as tactical processes for managing and improving social life that are developed in, and indigenous to, a given locale or community. They involve not only local tactics, enacted and articulated, but also local notions of the problematic and the possible in social life. Local strategies research illuminates the ways in which socio-cultural systems shape pragmatic action in the lives of communities, and in so doing direct attention to some aspects of such systems that are of particular importance. This understanding implies the analysis of local systems of practice, premise and meaning that animate social life in particular contexts [9].

Finally, as a way to get a better understanding of the impacts of ICT, we undertake an exercise comparing these meanings and local strategies with basic criteria produced by projects and practices of empowerment and social capital.

The remainder of the paper presents a review of the literature relevant to ICT's impact, and PAC in particular, and of the environment for PAC in Colombia, followed by a brief discussion of the literature on social capital and empowerment, two key concepts uncovered by this research that represent understudied impacts of PAC. We then describe the methods used in this study, and the key findings. In the end, we present our analysis and conclude with a discussion of future implications of these findings for the field of ICT for development.

2. Context and Literature Review

It is important to understand the political environment in which PAC operates in Colombia. Even though internal armed conflict has marked recent Colombian history, Colombia shows extraordinary

economic stability and steady human-capital growth, which places it among the countries that lead the region's development. Located at South America's northwestern corner, and in a tropical zone that touches the Equator, Colombia's geostrategic location favors commerce and communication. In addition to an incalculable natural diversity, as well as a wide range in climate and ecosystems, Colombia has resources for commercial development due to its proximity to the Panama Canal and to long coastlines bordering the Pacific Ocean on the west, and the Atlantic Ocean through the Caribbean Sea. All of these factors make Colombia the entrance gate to South America, and explain its ports facing the rest of the Americas, Europe, and the Pacific Rim countries.

In spite of important human developments in the last decade, poverty, exclusion, and governability rates are still at dangerous levels (high for the first two and low for the last). These characteristics have been critical to the way people communicate and access information, and they have also affected the way in which Colombians use and acquire ICT.

The progressive nature of government public policy and investment in the communication, education, and cultural realms has favored public access venues in Colombia. Nevertheless, the decisions and commitments of social organizations and the actions taken by communities have been the real development axes of public access venues in the country.

2.1. Public Access Computing

In a recent, extensive review of the literature about the impact of public access to ICT, University of Washington researchers Sey & Fellows [10] concluded that even though ICT are widely acknowledged as important resources for socio-economic advancement in both developed and developing countries, there is limited definitive evidence of downstream impacts of PAC. This is not necessarily because PAC has had no impact, but because it is particularly difficult to identify and measure. These researchers found that while some studies conclude that impacts are high in a variety of areas (e.g., development of ICT skills, job creation, civic engagement), other studies find limited impacts. Their report contributes valuable insight to the ongoing debate about the continued relevance of PAC, particularly in cases that receive public funding. This is partly due to the reality that a significant number of such public access ICT initiatives have fallen out of use.

Additionally, Sey & Fellows recognize that these initiatives are serving social needs more so than the economic or other high priority welfare goals usually associated with PAC projects [10]. A second factor

contributing to the general sense of disillusionment is the difficulty in identifying the precise benefits (particularly at the macro-level) of providing and using public access ICT.

Furthermore, recent studies of free access to computers through public libraries in the US show that in 2008 about 77 million people visited public libraries to get on the Internet; of these, a large proportion are low-income individuals looking for jobs or doing homework at computer centers in the library, or bringing their own laptops and using wireless connections. According to this study, computers in libraries are used primarily for social connections, education, employment, health and wellness, e-government, community engagement, and managing finances [11].

2.2. PAC Ecosystem in Colombia

Three types of venues make up the public access ecosystem in Colombia: **Public libraries** are increasingly offering (or planning to offer) access to computers and the internet. There are 1,563 libraries affiliated with the National Network of Public Libraries¹, and about 16% of them offer PAC, with plans to dramatically extend this to all public libraries by 2015. **Community telecenters** are non-profit centers that offer PAC as part of a development program or other community initiative such as health, agriculture, or education. Today there are 1,062 telecenters operated by non-government organizations and 1,490 operated by government-sponsored programs—primarily the national government's Compartel program—for a total estimate of 2,550 telecenters [12]. **Cybercafés** are for-profit centers that offer PAC as a business, frequently coupled with other services such as food, beverages, photocopies, etc. Our extrapolation of data from official reports suggests there were 14,166 cybercafés in the country at the beginning of 2010².

Based on user surveys from the National Department of Statistics, a recent study found that the **most frequent type of access to the Internet was through public access venues**, especially paid venues (47.2%), followed by access at home (43.8%), at school (26.6%), at work (24.6%), or at someone else's home (16.3%). Free PAC was least used (only 4.1%) [13]. In sum, PAC is a key player in use of computers

and the Internet in Colombia (almost half the Internet use in the country is through PAC venues).

2.3. Empowerment and Social Capital

The notions of empowerment and social capital are critical to better understanding the intangible dimensions of relationships as a perceived benefit of PAC. We therefore briefly review these concepts in the literature, in order to relate them to the findings of this study.

We embrace the concept of empowerment as a process (rather than an event) by which individuals, organizations, and communities gain mastery over their own social and economic conditions, over political processes that affect them, and over their own stories [14]. We also define social capital as the *goodwill* available to individuals or groups, which sources lay in the structure and content of an actor's social relations and its effects flow from the information, influence (power), and solidarity it makes available to the social actors [15].

For Kabeer [16], empowerment also invokes an expansion in people's ability to make strategic life choices in the following dimensions: (1) resources - acquired through social relationships / institutions (social capital) (2) agency - the ability to define goals and act upon them (empowerment), with both positive and negative connotations in relation to power, and (3) achievements - resources and agency constituted together. Achievements range from personal and social to educational. Furthermore, as Campbell & Jovchelovitch [17] pointed out, empowerment directly relates to power, which shapes and constrains the community's sense of social identity and representation. This iterative process of building and rebuilding notions of self-identification leads to the construction and redefinition of identities, mainly related to notions of becoming more autonomous persons, of being better connected with other people and cultures, and of being part of a stronger community of national or international citizenship.

Some scholars [e.g., 18] have argued that social capital is unlike all other forms of capital because it is "located" not in the actors but in their relations with other actors. This makes social capital less tangible than all other forms of capital because it exists in the relationships between people and facilitates activity, just as other forms of capital do. However, this form of capital illustrates how non-tangible/non-monetary forms of capital can still support the exertion of power and influence.

Putnam [19, 20] focuses on features of social organizations such as networks, norms, and trust that facilitate action and cooperation for mutual benefit.

¹<http://www.bibliotecanacional.gov.co/?idcategoria=27552>

²Based on Quarterly report of Ministry of ICT, first quarter of 2010 (<http://www.mintic.gov.co/mincom/faces/index.jsp?id=14580>), which cites number of broadband connections to the Internet for shared access, separate from home and business access, and subtracting the know totals for libraries and telecenters.

Putnam defines social capital as the community cohesion resulting from four features of community: (i) the existence of a dense range of local community organizations and networks; (ii) high levels of civic engagement or participation in these community networks; (iii) a strong and positive local identity and a sense of solidarity and equality with other community members; and (iv) generalized norms of trust and reciprocal help and support between community members, whether or not they are personally known to one another.

However, one of the risks expressed by authors such as Woolcock is that high internal linkages combined with low external linkages can produce a situation where internal solidarity is likely to be detrimental to the actors' integration into the broader whole [21]. Furthermore Adler & Kwon indicate that, depending on the content of its norms and beliefs, a group with strong internal ties but only few external ties may become insular and xenophobic or, alternatively, may use its internal social capital to encourage and help its members reach out to the surrounding world. [15]

As we will see, these dimensions of empowerment and social capital are useful to understand some of the users' perceptions of ways in which using PAC has transformed their lives, especially in bringing about new forms of relations and a sense of belonging to a larger world: what we have called "connectedness."

3. Research Methods

We examined public libraries, telecenters, and cybercafés as the principal points of access to ICT in Colombia. Under telecenters we included both community telecenters (supported by non-governmental organizations) and governmental telecenters (supported by the government's Compartel program among others), as described above. Cybercafés were also included; they are commercial, for-profit businesses that offer access to Internet-connected computers and other related services in towns and cities (including food or beverages; connectivity services like telephone calls, scanning, printing, photocopying, and disc burning; or more diverse services, such as beauty services, exercise equipment, or video games). We included cybercafés in the study in order to have a more holistic picture of the public access computing ecosystem in Colombia.

We used the Access, Capacity & Environment (ACE) framework, developed in the Landscape study mentioned above [22], which helps to establish a comprehensive understanding of public access computing in the country, not just access to computers and the Internet. To better reflect the diversity of the population, we adopted the regional distribution

criteria used in the National Survey of Community Television [23], which divides the country into five regions based on cultural and demographic characteristics. This regional distribution model allowed us to have national coverage and to distribute the aggregate sample proportionally and with statistical relevance in the selected regions, based on the 2005 Census. In each of the five regions we drew the sample from the capital city and a small town in order to reflect the diversity and variety of both urban and non-urban experiences in different cultural settings around the country. Fieldwork was conducted in Colombia during the first half of 2010 by researchers from the University of Washington, *Universidad Icesi*, and *Fundación Colombia Multicolor* with a team of local allies.

Several tools were used in this research:³ a survey to scan users of public access venues, in-depth interviews with experts, semi-structured interviews with users of public access venues, structured interviews with public-access-venue operators,⁴ and focus groups with operators and users in six different localities.

1,182 surveys were applied to ICT public-access venue users nationwide, paying attention to gender-equity criteria, inclusion of different ages, and inclusion of under-represented ethnic groups (indigenous and African-Colombians). Surveys were applied by local volunteers in libraries, telecenters, and cybercafés at different times and on different days. There were ten interviews of experts, which were organized in two groups: six ICT scholars linked to universities, government organizations, and NGOs (most of them lived in big cities: Bogota, Medellin, Cali), and four opinion leaders involved with activities linked to communication and information in a community in each region.

Structured interviews were also conducted with 100 operators: twenty in each region, with a balance between capital cities and municipalities and the three types of public access venues: libraries, telecenters, and cybercafés. Questions around gender equity, different generational representation, and ethnic diversity were a key part of these structured interviews. In the ten personal interviews with operators, questions were asked about approaches, focus, and use of ICT, paying special attention to personal experiences when learning about and using ICT. The operators were also asked about the ability of ICT to be transformative, as

³ Data collection instruments are available at <http://faculty.washington.edu/rgomez/projects/colombia/index.html>

⁴ In this research, "operator" is the person in charge of helping people and providing support to users in public libraries, telecenters, and cybercafés.

well as their motivation for use, or vision of ICT for development.

We held six focus group workshops, one in each region of the country. Approximately twelve community members participated in each workshop, which included users and operators or actors of public-access ICT in the community. Special attention was paid to gender equity, age variation, educational levels, and socio-economic strata, as well as to questions around the inclusion of people with disabilities and from ethnic minorities. The main purpose of these workshops was to facilitate structured conversations that would illuminate the community information and communication requirements and practices, with a particular focus on the role played by ICT public access venues in community development. Another goal was to reveal interactions between different public access venues, mobile telephones, and community radio, as well as local perspectives on their benefits and impacts.

All data was collected in Spanish by native Spanish speakers. Detailed field notes were prepared after each focus group workshop, interviews were transcribed and anonymized, and all data was coded using Atlas TI, a qualitative software analysis package. Data from survey results was entered and analyzed using statistical analysis software as well as Excel. Responses to open-ended questions in the user survey were transcribed and grouped in an iterative process of clustering for emerging themes. Twelve themes were identified, and all responses were then assigned to as many as three non-exclusive themes for further analysis.

4. Findings

Quantitative data collected by the national survey shows people who attend these public access venues are generally men and women between 18 and 35 years of age (77%), and their occupation is mainly student (42%). They frequently go to these venues to use email (42%), browse the web (20%), to use social networks (19%) and to use blogs (14%). Users indicated they mostly look for information related to education (30%), for personal issues (25%), for entertainment (19%), for news (8%) and only a small proportion (6%) to look for jobs.

Public access venues are used primarily to meet personal and social needs such as communicating with friends and family, entertainment, doing homework, and developing computer skills. Education is considered to be a key determinant of public access ICT use, and there are signs that the use of public access venues for computer skills development is linked to users' perception that exposure to computers

and the internet will enhance their current and/or future employability. We found users are inclined towards personal and social uses of public access venues, although economic and political uses also occur.

4.1. Perceived Benefits of PAC

The national survey also included an open-ended question about how use of PAC has changed users' lives. The answers to this question yielded twelve themes, grouped into four broad categories (even though the categories are non-exclusive, we turn them into percentages for the sake of simplicity): more information (42%), relationships (25%), learning (20%), and transactions (10%). All of these can have potential negative consequences as well, which were identified by a small proportion of respondents (3%). Negative consequences are mostly related to increased dependency or addiction, less time available, more superficial interactions or knowledge, more expense (new costs), problems with viruses or hackers, and lack of privacy.

In the **Relationships** category there are three different emerging themes:

- 1) **Friends and Family** (16%): PAC is perceived to enable closer contact and communication with friends and family, and to shorten distances with those who are away. For many respondents this is not limited to maintaining existing friends, but offers opportunities to meet new people and make new friends as well.
- 2) **Connectedness** (5%): PAC gives users a stronger sense of belonging, of being part of a larger world; it offers users better connections and relationship with clients, friends and organizations; new opportunities for advancement, teamwork and collaboration; and an increased sense of ownership of their destiny and their future. There is an important nuance in the way some respondents describe a transformation in the sense of connection and relationship afforded by use of ICT that goes beyond the mere cultivation of friendship: respondents express an added quality of depth and connection, and a stronger sense of belonging to a larger, broader world.
- 3) **Entertainment** (4%): a small proportion of users emphasize how PAC has opened new avenues for entertainment, spending time with friends mostly sharing games and music. The distribution of responses about the perceived benefits of PAC, with the detailed components for the "relationships" category, are summarized in the following figure:

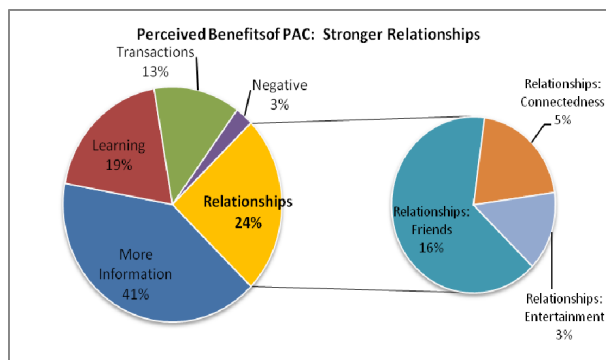


Figure 1: Perceived Benefits of PAC: stronger relationships

Being in contact with family and friends, building new relationships, and connecting with other people, places, and cultures represent the most important benefits that ICT have brought to users in their local contexts. The chance to learn new things, be informed, and open new worlds is another valuable benefit our qualitative research process uncovered. Within the qualitative data interesting relationships between teamwork practices and job creation by using ICT also appeared.

Many respondents talked about the opportunities ICT have offered them to communicate with people who are geographically distant (nationally and internationally). Additionally, they mentioned the opportunities ICT gives them to share daily activities with others, underlining the sense of closeness and immediacy these communications have. About 35% of the responses classified in the group of being in contact with friends and families also mentioned the possibility they have gained of making new contacts and friends through ICT as a way also to know new places, cultures and regions. A few of them mentioned they used ICT to be in touch with people from the same city, town or neighborhood.

The contacts they keep and build with access to ICT imply mixed versions of personal, work, educational, and academic relations. Responses also emphasized the speed and ease with which they are able to connect, and they mention how those relationships have opened new opportunities for learning, informing, and shopping.

When respondents talked about searching for both people and information, their answers have a general tone of success, satisfaction at the achievement of a task, and low levels of frustration. Statements such as “every time I look for something I find it” are very common. Some of them compare this new state of being with their earlier condition of disinformation and isolation. In general they underlined how ICT have changed their lives, making daily life easier, opening alternatives to know (other knowledge, people and

cultures), bringing new entertainment options and introducing them to other tools to create and imagine new possibilities. In the words of one excited respondent, “I can reach the world with the tip of my fingers.”

4.2. Finer Threads in Relationships

Upon further analysis of the responses grouped under “Relationships” and as a result of a more meticulous analysis of the qualitative data we collected, we found five common threads. These threads offer a finer-grained understanding of users’ perceptions of how computers and the Internet have changed their lives:

a) Learning new things through relationships: Respondents pointed out that through ICT they have gained “more exposure to the world,” to go “further in life” with more knowledge to help them move in different social contexts, with increased wellbeing.

“[ICT] have helped me intellectually: I know the governmental plans and health information, and I feel better to engage in a conversation, because I deal with lot of information.”

They also report they have acquired this new knowledge with faster, more current and diverse information. A frequently expressed idea in the users’ testimonies is that many barriers have been broken and there is a vast supply of information to satisfy needs at any moment. In the words of one respondent,

“technology has changed my life because it has changed my vision of life. Before, I thought that I only had to work in the fields since I am from the country. I thought that I only had to harvest potatoes, which was my life; that I was going to die like that. But now I see things in another way.”

b) Relationships with people in other places: This set of answers emphasizes the new possibility “of communicating with the world,” with people from other countries and other places in a more efficient, direct, and fun manner. It also refers to the way in which they have created and strengthened family relationships, and relationships with new and old friends to stay in touch and be connected.

“The world spins around the Internet and now I communicate with people that I haven’t seen in a long time. Now it’s more convenient, you stay up-to-date and you create global networks.”

Above all, what is highlighted is the possibility of “talking” and the sense of nearness and companionship that they build with persons far away, as well as the possibility of mutually sharing their daily life.

c) Awareness of other places and a larger world:

Respondents express that knowledge of computer use and access to the Internet has permitted them to notice that “there are other things in the world”, that these technologies let them know it better, i.e. they open doors to other cultures, other cultural expressions and events which are important and generate changes in their own societies.

“Wow, the Internet is the best ... it’s a way of not disconnecting from what happens in the virtual world and reality, because these two worlds are complementary.”

Furthermore, ICT has allowed them to know about matters which have a global impact (the situation with the environment or arms race), and other topics of personal interest, all with variety and without limit.

d) Speed/ease of relationships:

Interviewees emphasize speed, ease, and availability of information access. *“I don’t understand how people got by before ...”* Respondents appreciate the ability to consume news from all over the world, and the possibility of attending, online, any event. They stress how many barriers have been broken and how the ease to be anywhere in the world in an instant has been opened up to them. Time savings and instantaneous access to information is highly appreciated in the answers. They also mention the importance of having access to vital and urgent information and data without having to rely on other options which they consider to be more complicated such as researching in books. Several of those interviewed expressed the belief that those who do not access Internet are out of place or out of touch since *“everyone communicates through ICT and technologies ...”*

e) Job-related relationships Respondents indicate how ICT represent not only a work tool, but also new opportunities to relate to colleagues and clients, and to do business. They also perceive them as resources to improve their information, knowledge, and performance related to the labor setting. ICT helps them relate to peers and people from their profession, and of course to look for employment.

“Due to work I must interact and communicate via Internet with several employees. They and I send the information that we need through this way. Additionally, I have more contact with clients and I can verify my work constantly.”

The biggest obstacle perceived by local actors for the use of ICT by community organizations is fear of these technologies, and lack of knowledge about them; that is why they see limited possibilities for ICT in local development. According to the respondents, this fear was expressed most strongly in the elderly and

those living in rural areas.

5. Discussion

The information collected allowed us to construct a form of narrative as a result of certain patterns and premises we identified in respondents’ speech and in our experiences in the field. This narrative proposes a sequence that does not necessarily correspond with the practice of any particular individual, but offers a composite of PAC users’ experiences and practices. The individual testimonies, practices, and meanings of people are richer, more diverse, and complex than this narrative. However, for analytical purposes, this method helps us understand important outcomes of accessing and using PAC. We did this exercise to have a better picture about what was going on from the users’ perspective.

These findings highlight users’ perceptions of new possibilities opened through the use of PAC, perceptions which are very positive, almost euphoric about personal and collective transformation. Five characteristics of the narrative we constructed:

- 1) The respondents emphasized how they were able to use ICT in ways that are meaningful to them, generally linked with personal interest, education or job requirements.
- 2) Their access to ICT is considered to offer a fantastic set of tools that have opened windows into larger, faster, and more diverse information and communication methods.
- 3) Compared with the past, these new possibilities have extended and broadened their worlds. They have created opportunities for being connected with new places, cultures, and knowledge. And now they can access multiple simultaneous sources of information and communication in less time and with less effort. Of course the new opportunities opened up also imply risks and losses, but these tend to be fewer and smaller compared with new benefits gained.
- 4) The new access to information and communication opportunities is perceived to be a source of personal growth and success, with different levels of social integration into a larger, more “modern” world. These new benefits make them different kinds of people, different kinds of workers, and different kinds of citizens.
- 5) They express self-identification as individuals with specific new abilities that have allowed them to be more educated (with new knowledge), better informed (from a cultural and news perspective), and technically proficient with previously unknown tools. They also

identify themselves as members of a larger community, as more international citizens.

PAC, Empowerment and Social Capital

As discussed earlier, empowerment is seen as a process (rather than an event) by which individuals, organizations, and communities gain mastery over their own social and economic conditions, over political processes that affect them, and over their own stories [14]. Social capital, on the other hand, is the *goodwill* available to individuals or groups, and it is rooted in the structure and content of peoples' relations; social capital builds on information, influence (power), and solidarity relationships [15].

PAC users experience a strong sense of empowerment through new abilities acquired, new opportunities encountered, and new experiences lived, with a strong sense of the power of transformation those experiences have had for them in both their public and private lives. We found strong evidence that PAC contributes to relationship-building and an increased sense of belonging to local and global communities, in new ways that were not possible or feasible before.

For authors such as Doctor [24] and Chamberlin [25], assertiveness, self-esteem, and access to information are all key elements of empowerment. Data collected show networks have allowed many respondents to know about other information sources, educational programs, or technological tools. Within the networking process they also recognize good opportunities for cooperative activities and teamwork. Some of those possibilities and lessons learned, from Coleman's perspective, could represent "collective goods" because they are not the private property of those who benefit from them but the collective result of social relations.

Social capital is considered to have great effect on social identity and representation, both of which facilitate development. The task of building or enhancing local social capital is regarded as a key dimension of a wide range of development initiatives in disadvantaged settings [17]. In our findings, PAC users consistently express an experience of gaining control in their own lives in the context of interacting with others. This perception can be related to the notions of self-esteem and self-efficacy.

Despite the capabilities and opportunities PAC seem to have offered the participants in our research, it is important to keep in mind that social capital is not just a bottom-up process disconnected from power and authority structures in society. As Adler and Kwon [15] point out, many writers have criticized Putnam and other analysts for an excessively *bottom-up* view

of social capital, instead stressing the *top-down* role of such formal institutions as government structure and legal rules in facilitating or impeding the emergence and maintenance of social capital and trust in civil society.

In regards to empowerment, Zimmerman suggests it can be of different types: intrapersonal, interactional, and behavioral [26]. The empowerment experience of PAC users appears to be more of the intrapersonal and behavioral varieties rather than interactional ones. In other words, it is more related with personal interactions than with organizational and institutional ones. We found very little evidence of processes of empowering communities to participate in the construction/consolidation of larger social arenas and public spheres where representations and resources are disputed. Furthermore, there are few indications of process to exert pressure on established channels of decision making and institutional power to respond to their needs, which are also important elements of (interactional) empowerment [17].

This study offers evidence of how PAC use helps to strengthen individual capabilities that contribute to empowerment, such as self-confidence, self-efficacy, autonomy, and digital literacy. PAC also helps strengthen primary, strong ties between friends, families, and groups who share common interests, as well as weak ties with a broader sector of acquaintances or contacts, near and far. However, we find no evidence of the contribution of ICT to strengthen processes of social, political, or cultural organization. There is little indication of the relations that people build between information resources, communication practices, and other political or cultural dimensions of their social life. In sum, PAC use does not necessarily contribute to other important dimensions that can help turn empowerment into social action: social participation and civic engagement to transform decision-making and existing relations of institutional power.

Nonetheless, we found little evidence to support the claim that PAC helps strengthen civic engagement. The concepts of citizen's participation, empowerment, and social capital have been extremely useful for this analysis. They made us think about **the importance of the contexts and structures** where these perceptions have been produced: the long history of violence and destruction of social fabric, the historical lack of access to technologies and information that prevented connection and interaction with other parts of the country. Those concepts also made us think about **the characteristics of the people** who access ICT through public venues: their levels of income and education, their access to information and cultural goods and services, their social links, the relations they establish

with other people, organizations and networks. These are issues we should keep in mind for further research and analysis.

6. Conclusions

We are still amazed by the positive and enthusiastic perspectives participants expressed towards ICT and its impact on daily life. Their reactions are probably a result of assumptions about ICT that the state and media (as well as social organizations and scholars) have helped to publicize. This “honeymoon” phase has been brought about by feelings of novelty or delight when discovering and using ICT. However, it is also probable that these positive reactions are a result of the historical lack of access to both technologies and information by many regions and social sectors of Colombian society, or an expression of surprise given the historical deficiencies of the state and market in providing basic public services in this Latin American country. This could also be a result of the difficulties many people have experienced accessing free and open sources of information and communication as a product of the established educational system, cultural traditions, and nation-state characteristics.

The findings lead us to conclude that, for the most part, there is little or no connection between the new information and communication capabilities, the opportunities people have gained through PAC, and community development needs. These results could confirm or reinforce the hypothesis (as well as the fears and distrust) of several practitioners and scholars who have pointed out that ICT are mainly contributing to less communication, more isolation and individualism, less public and political engagement, and a process of de-democratization [27].

However, while the introduction of public access to ICT may not have directly contributed to community development, indirect contributions include stronger self-esteem, a sense of belonging, and connectedness with others in a larger world context have emerged. Personal and social needs such as communicating with friends and family, being in contact with other places and other cultures, or even reaching out to new possibilities of entertainment, could represent intangible results of ICT programs. These are intangible outcomes we scholars and practitioners should better understand and analyze.

It is possible that the seeds of much of the ICT-enabled community empowerment and social capital were present and we did not see them in spite of the variety of mechanisms we used to gather our data. It is possible that the use of computers and the Internet for social change is not happening in public spaces, but rather in the private spaces of organizations, schools,

homes, and workplaces. It is possible that the scars of exclusion and violence are deeper, and that the public space created by libraries, telecenters, and cybercafés is still too young to handle certain ways of community development and social wellbeing. It is possible we are missing some important pieces that can provide other evidence to better understand contemporary relations between individual processes and behaviors, and collective and social dynamics.

Contemporary instances of synergy between ICT, social movements, and different ways of development abound. Recent examples include the events in Egypt, Tunis, and other Middle Eastern countries which we witnessed early in 2011; or the 10 million people mobilization against kidnapping in Colombia, promoted by young users of Facebook a couple of years ago, among others. These local strategies represent unexpected uses of technological platforms for social networking which people in local context are using for *collective* and *public* purposes. They are not only trying to build or rebuild external links or primary ties—they are also looking to construct local information bases and interactions for local well-being.

Given the results of our study, it is clear that both the empowerment and social capital theoretical frameworks and their respective debates are fertile fields to think about ICT’s impact and development. It is also clear we now have more questions than answers. It is necessary to compare and contrast the relations between individual uses of ICT and other collective and organizational uses of these technologies (in public and private settings). Additional unanswered questions include:

- What does development mean for people and institutions (State institutions, social movements, business sector, as well as for scholars)?
- What does information mean for people? What do social and family ties mean for them in their particular local and global contexts?
- What do technology, information, and communication mean for public access users, and how does this relate to development, well-being, or empowerment?
- What kind of political participation and power interactions are the relations between ICT and social movements producing? Are there any new political practices emerging? Are they exhibiting flatter relations? Are they enabling new forms of social and political mobilization?

Answering some of these questions could help scholars, practitioners, and decision makers to discover if PAC venues can be something more than providers of, as one respondent put it, *just Facebook and Porn*.

7. References

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