

Contextualized reflections on information and communication technology and on the empowerment of women

ABSTRACT

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This article deals with information and communication technologies (ICTs) and their role in development, and aims to understand how ICTs are used as a means of empowering women. This reflection was corroborated by a literature review that investigates the theme. Empowerment practices were observed in intra-gender relations through the use of ICTs in the transmission of technological skills, social and professional empowerment through training in the use of ICTs in telecenters, NGOs, cooperativism and extension projects, the possibility of reducing poverty through female entrepreneurship on the web and via Facebook and Instagram. As a phenomenon of the digital age, online social networks become important channels of relationships between entrepreneurs, suppliers and consumers. Cyberativism is capable of stimulating discussion about domestic and obstetric violence, incentivizing different sectors of women's health promotion and care, as well as widening women's influence on communication and changing the dynamics of domination in gender relations. Internet has enabled freedom of expression and opinions despite the control of large business groups. Their use can bring indirect benefits for poverty reduction if they are applied to strengthen diversity of social, political and cultural assets and help in the construction of more effective structures and processes that favor the empowerment of women, especially those found in the informal sphere.

KEYWORDS: Information and Communication Technology, empowerment, women.

INTRODUCTION

This paper is based on the premise that Information and Communication Technologies (ICTs) are relevant for development due its transforming and strategic power in society, governments, public policies, social movements, and organizations. In addition, they can democratize information, solve problems that affect humanity, improve the management of organizations and cities, and increase freedom and choice among others (AVGEROU, 2010; DINIZ, POZZEBON, JAYO, 2009; MAYOUX, 2005; KLEINE, 2009; HEEKS; 2010; WALSHAM et al, 2007; CUNHA, 2013, COELHO, 2014).

By a critical bias, Harvey (1992) notes that we are experiencing a moment of transition from Fordism-Keynesianism to a new regime of accumulation, characterized as flexible accumulation:

Flexible accumulation, as I shall tentatively call it, is marked by a direct confrontation with the rigidities of Fordism. It rests on flexibility with respect to labour processes, labour markets, products, and patterns of consumption. It is characterized by the emergence of entirely new sectors of production, new ways of providing financial services, new markets, and, above all, greatly intensified rates of commercial, technological, and organizational innovation (HARVEY, 1990, p. 147).

Flexible accumulation is agile, innovative, virtual, but continues to recombine workforce exploitation strategies by extracting absolute and relative surplus value. It generates a new world economic order, modifies reality, and accelerates the process of urbanization. According to Kuenzer (1988), in the Brazilian case, which is characterized by a heterogeneous productive structure, with a strong emphasis on the informalization of the labor force, the dynamic of the labor market is also affected. Along with this factor, the process of industrialization based on technological innovations dispenses labor and increases poverty.

Prahalad and Hart (2014) argue that a large part of the informal economy is characterized by poverty. Here, access to ICT at the base of the social pyramid makes it possible to lift up billions of people out of poverty, preventing the decay of social conditions, political chaos, terrorism and environmental degradation that will certainly remain if the gap between rich and poor countries continues to widen. On the other hand, the social impacts are limited as the multinationals that sell to this social level are not concerned with prosperity, nor helping to eradicate or at least alleviate poverty.

Duncombe (2009) uses the subsistence framework to analyze its contributions to poverty reduction through microenterprise. By applying this approach, he does not only offer a theory for information-centric understanding, but also allows for a broader and more systematic analysis of poverty. Accordingly, the author considers that mobile phones are increasingly present in the daily lives of the poor, and that they can become potentially useful if they have access, are low cost, provide services and financial transactions, facilitate and include micro payments (m-payments), and provide a platform for electronic money (e-Mobile) (m-banking), and electronic commerce (e-commerce).

Coelho (2014) highlights the contribution of ICTs to development, a topic that has been discussed internationally by several authors and he presents micro-narratives that will be considered in the analysis. Among the several theoretical

approaches in the field of ICT4D, the author highlights the capacity approach, a theoretical construction of Amartya Sen, where the concept of development is defined as the process of expansion of people's real freedoms.

This understanding emphasizes freedom in the personal, social, economic and political sphere. In this perspective, despite the structural inequalities of developing countries, ICTs are a useful means in the empowerment processes, especially for mediating choices.

From this view, we understand empowerment as the basic dimension of development, where the possible alternatives undertaken by an individual or group of individuals in their lives improve their human capacities. Therefore, information becomes a dimension of power and social change, conditioning not only modes of socialization and life, leisure, work, consumption, but also the political and educational system (CASTELLS, 2000).

In this context, despite advances in ICT in the contemporary world, women, especially the poorest, are at a disadvantage in their use and ownership, limiting benefits to their lives (CETIC, 2017). However, through their use, women are provided with means of overcoming economic dependence and gender domination. Diniz (2011) emphasizes how access to banking services are innovative and contribute positively, but he also shows negative signs, such as the indebtedness of the low-income population, the reproduction of social exclusion, and the strengthening of power asymmetries. With this understanding, this article aims to comprehend how ICT-mediated practices promote empowerment of women. In this first item the theme of the article is presented. In the second, a brief theoretical reference on ICTs, empowerment and the matter of women is shown. In section three, the methodology is discussed. In the fourth, the analysis of the results of the research is presented. Lastly, some theoretical and practical conclusions are reached.

THEORETICAL REFERENCES

THE POTENTIAL OF ICTS IN TIMES OF INFORMAL WORK

At this moment of flexible accumulation, the labor market has undergone restructuring due to competition and profit reduction. Bosses took advantage of the weakening of union power and the large amount of surplus labor, made up of the unemployed, to impose precariousness of labor, and flexibility of regimes and contracts. Currently, laws are discussed pressing for flexibilization of labor contracts and social security as one of the alternatives for overcoming the current problem of unemployment, in an analogy to the American model.

This has resulted in impacts for workers in a labor market made up only of a small core with job security, surrounded by circles of those in temporary and underemployment as well as the unemployed. In this context the jobs that arise are not enough to absorb all the surplus labor. There is a process of precariousness, informality, end of employment, and new forms of work such as working at home, virtual work, etc.

According to Harvey (1990), the transformation of the structure of the labor market occurs at the same time of an important shift in the industrial organization

- both caused by the flexibility in hiring and the outsourcing of production, and this opens space for small businesses. This tendency allows older systems of labor to flourish and become necessary for the sustenance of the productive system, such as domestic, artisanal and slave activities, as in the case of Nike and other companies.

From another perspective, Lévy (2000) argues that the discussion on telecommunications also should involve the restricted access to the power of large corporations and the rich. However, in a humanistic perspective, we must appropriate ICTs in a logical way, the author draws attention to the recognition of qualitative changes for social and cultural life resulting from the new communication networks.

In this way, he sees the growth of telecommunications symbolized by the recognition of diversity, acceptance and mutual aid, cooperation, association, and negotiation beyond the point of view of financial interests. Telecommunication is responsible for the interconnected world-wide interaction between people, contractual transactions, transmission of knowledge, exchanges of knowledge, and the peaceful discovery of differences. Herein we can observe libertarian and communitarian dynamics. Despite the economic exploitation of the Internet, it is possible to have free access through universities, public agencies, non-profit-associations, individuals, and various interest groups, among others.

Avegerou (2010) argues that research on the potential of ICTs to aid development is a multidisciplinary field, based on the premise of how they can improve socioeconomic conditions in developing countries (MANN, 2004; WALSHAM et al. 2007). From this theoretical perspective, all want the fulfillment of desirable world orders, such as Sen's capability approach (KLEINE, 2009, MADON, 2004, ZHENG, 2009) or the vision of the United Nations Millennium Goal to eradicate poverty (GILHOOLY, 2005).

In this regard, the analyzes have made use of past or present evaluations of initiatives to advise and facilitate the design and implementation of ICT initiatives and development (HEEKS, 2009). However (KIVUNIKE et al, 2013), the contribution of ICTs assesses social-economic development. This challenge is an even greater concern in poor countries, where empowerment, the use and subsequent impact of ICTs is more dependent on contextual factors.

Avegerou (2010) also supports this study, as he investigates the experiences and consequences of development and use of ICTs for developing countries, rather than the limitations of the technical resources that inhibit it, without neglecting that technological and institutional trends are established elsewhere. Therefore, we recognize and address the distinctions of context.

The context where a new technology artifact and business model first took shape (usually in an advanced economy) may be different from the context where this combined artifact and model are implemented as part of IS innovation practice in a developing country. Moreover, the socio-organizational settings of ICT development and use within sectors, countries, or regions may differ substantially from each other. For example, e-government is practiced differently, and with different results, in countries with different public administration traditions (AVEGEROU, 2010, p. 3).

Its potential is a premise for the research objectives of this article, ranging from the construction of appropriate technological applications through to the dissemination of technologies (KRAEMER et al., 2009), as well as the institutional changes for a community to appropriate the potential of ICTs (MA et al., 2005).

At the same time, ICT4D studies make specific assumptions about how technological innovation takes place in the context of developing countries and about the meaning and nature of the process to which it is intended to contribute. This understanding is related to the mention that the appropriation of ICTs consists of "... a dynamic and social process, not an isolated act of provision of equipment and content (CETIC, 2016, p. 37).

With the increase of unemployment and reduction of formal jobs in times of crisis, new strategies to search for opportunities were necessary in order to generate income. Hence, women become part of the economy due to entrepreneurship (CARVALHO, 2013). According to Carleial and Vale (1997), we observe the expansion of unemployment, reduction of employment in industries, new requirements for qualification of workers, precariousness and flexibilization of working conditions.

ICTS AND THE EMPOWERMENT OF WOMEN: OVERCOMING DOMINATION AND EMANCIPATION

Pozzebon (2015) points out how a new technology (software) has innovated the daily work and life of a group of women in Australia, allowing new social structures to emerge. In spite of the existing gender inequality, they showed themselves as active agents in the management of the family business, they gained self-confidence with the involvement in relationship networks and in the acquisition of technological skills and abilities. Consequently, they not only learned to use them but were also able to modify their use according to their own objectives.

In analyzing microfinance programs and the gender issue in Pakistan, Mayoux (2005) demonstrates how programs have a significant potential to contribute to overcoming inequalities, not only through the provision of financial resources, but also through the capacity of bringing together via organized groups a diversity of innovative, low-cost, high-impact non-financial services that reaches the bottom of the social pyramid. In spite of the existing inequality, they can be overcome through training, courses, and workshops aimed at discussing gender discrimination, poverty among women, class and ethnicity regarding access to microfinance.

Although gender inequality is striking, this situation is modified by the advances of the achievements of the feminist movement and its struggles related to the insertion of women into spaces considered "masculine". These assimilations allow women subjected to exclusion by the male dominant group tools to empower themselves and fight for greater autonomy.

In spite of that, Cortez and Souza (2008) point out that the absence of a structure that offers space for discussions and re-elaborations of their ideas and gender relations weakens the feminist movements. It also allows a reaction of men who, excluded and disinterested in the discussions about empowerment, tend to understand this process as "male disempowerment" or loss of the position of

domination legitimized by patriarchy (LEON, 2001). In these terms, as an example we consider the husband's violent reaction as an attempt of regaining and maintaining control over his wife and thereby resisting the discussion of gender equality (DANTAS-BERGER & GIFFI, 2005).

The access and use of ICTs by women represent a challenge to patriarchal relations, especially in the family environment, since they oppose masculine power and privilege, suggesting changes in the relationships of domination. This change gives women autonomy over their bodies, their sexuality and their right to come and repudiate physical abuse, impunity and unilateral male decisions.

For Comfort (2011), gender inequality is also reflected in the access to cell phones, their possession and use. In an article, he identifies the challenges and benefits arising from its use by rural women in northern Nigeria. The author provides an insight into how the lack of access to ICTs influences communication of women. They are particularly disadvantaged in the digital world because they face obstacles related to gender, infrastructure, costs and geographical location.

Rinauldo (2015) states that Brazil is a country where the proportion of female entrepreneurship is one of the highest in the G-20. Despite this, the number of those who use ICT for the management of their business is restricted, even if the sector advances. The author points to barriers that keep entrepreneurs away from the technology sector. Firstly, he highlights disinformation, because these encourage persistent stereotypes and generate ignorance. Nowadays a variety of tools, applications, websites, software, and courses allows the creation of a website or an application favoring the use of ICTs in business strategy and broadening presence in social networks. Secondly, there is also a cultural and educational barrier. In most families ICTs have in many cases been appropriated by men and young people, reinforcing estrangement in women, and a lack of habit and interaction despite their interest.

In this way, we see that the technology sector also promotes various opportunities and possibilities such as innovative products, the capacity of expanding businesses, a reduction of costs, dynamism, better salaries, flexibility and the possibility of working from home. The factors that explain the growth of women's participation in entrepreneurship are diverse, including the growth of informality, the reduction of wages, the increase of schooling, changes in family structure, reductions in the number of children per family, and a change of values towards their social role. Despite that, the growth in female participation didn't have a reduction of gender inequalities neither in the professional nor in the income sphere (GEM, 2007). In Brazil, entrepreneurship is balanced between men and women, the differences are small concerning the proportion of participation (GEM, 2009).

In fact female presence in informal, family and liberal businesses has increased. In the last three decades, Filion has researched entrepreneurship and observed a progression of women as leaders and highlights some of the more striking features (GEM, 2010). They have a better knowledge of the market; are more stable; are better prepared (they tend to do their homework); progress more slowly, take care of the family; they plan better; when they start their business, a smaller proportion of women compared to men believe they have the requisite competence to succeed; they seem to have a greater integration between their

personal and professional activities; and they believe that they are treated differently by financial institutions because they are women (GEM, 2010).

The data on entrepreneurship show that, over the years, the participation of women in this type of activity has increased gradually. There are an estimated 40 million Brazilians doing this kind of activity. There was an increase in entrepreneurship by opportunity and for the first time the proportion of women entrepreneurs is higher (52.2%), compared to men (47.8%). According to this research, entrepreneurship is considered as a career option for more than 80% of these people (GEM, 2013).

Duncombe (2009) points out that the use of ICT in microenterprises becomes an alternative way out of poverty by increasing incomes for poor families. A case study in Botswana suggests that they can bring indirect benefits for poverty reduction if they are applied to strengthen diversity of social, political, and cultural assets, which help in building more effective structures and processes that favor the poor. The study cited is beneficial to understanding the application of ICT in microenterprise, as shown by an urban and rural population that participates in various activities, with modern communication infrastructure expanding, and a government committed to poverty reduction through the expansion of the business sector and the use of new technologies.

In addition to the struggles of social and political movements, a way to mitigate gender inequality is to stimulate entrepreneurship as a means of reducing poverty and its elaboration should be accompanied by other efficient strategies. With these premises, this article gathered the concepts of development, ICTs, empowerment and women.

RESEARCH METHODOLOGY

In order to achieve the objective of this article, we rely on a review of literature on ICTs and Development (ICT4D) presented in research seminars such as 'Management analysis and information technology', promoted by Fundação Getúlio Vargas in São Paulo. This institution develops research related to management and the impact of the dissemination and use of information systems by organizations, individuals, and society as a whole. The publications researched are indexed in the databases of Google Scholar, Scielo, FGV library, and Portal de Periódicos Capes, from the year 1990 until 2017. The search languages were Portuguese, English, French and Spanish. Key words used were: information technology and communication, empowerment and women. Among the articles available in the databases, after reading and analyzing 60 articles from February to June 2017, we selected a sample of 13 articles that were most closely related to the research topic.

In addition, we sought, as a unit of analysis, to identify the articles with cases of empowering practices mediated by ICTs. We adopted this criterion, because we believe that they bring a broader understanding of lived experiences related to development and facilitating means of empowerment. After this they were read in full and analyzed for their connection to the theme. From the reading we found qualitative studies (case studies, surveys, reports, texts on websites and blogs), project reports and academic articles. Finally, the authors were identified, and the

actions and impacts of ICTs regarding the lives of women were summarized. The results of the analysis are presented and discussed below.

PRESENTATION AND DISCUSSION OF RESULTS

Based on a synthesis on the use of ICTs and the empowerment of women, we present below a compilation of the concepts (table 1). We bring together concepts to demonstrate their diversity. As a result of the research, we present a brief presentation of the concepts of empowerment. The theme has been discussed in the theoretical field since the 1960s/1970s and arose out of social movements for the equality of civil rights. Among the multiplicity of concepts and meanings, the debates vary by analytical dimensions such as psychological, gender, political, economic and social.

Martins (2003)	Empowerment is a neologism. To empower is a verb that connotes action and power. The individual associated with this action becomes an active agent in the processes and ties with other individuals.
Prá (2006)	Strengthening or empowering refers to allowing a person to command his or her own life. In the case of women, empowerment insists on the importance of their power and control over the decisions and problems that determine their lives. The empowerment of women refers to power and relationships within society and intertwines with gender, social class, race, culture and history. Power is identified by the equity and equality of women and men in the access to resources and advantages.
Lisboa (2007)	The concept of empowerment has become central in discourse as a synonym for participation and integration of people. In shared planning, and interactive development where personal skills and knowledge can be recognized.
Freire and Shor (2011)	The authors understand the term as empowerment of a social class: "It indicates a political process of the working classes in the pursuit of their own freedom and domination."
Léon (2001)	Empowerment implies, therefore, the recognition of social restrictions on a group of people and the need to reverse this situation through changes in a broad / public context (insertion in positions of power / decision, non-sexist education and adequate health services) and changes in specific or individual contexts (increased self-esteem and autonomy, reorganization of domestic work, etc.).
Marinho and Gonçalves(2016)	The United Nations has established women's empowerment as one of the millennium goals by 2015. The link between the concept of empowerment and income-generation strategies, derived from this UN and World Bank publications over the last decade, seems to have fomented governmental and non-governmental projects that work in this same axis, seeking the empowerment of women through their inclusion in the productive processes.

Table 1 - Concepts of empowerment

The analysis of the concepts of empowerment shows how they expresses a diversity of concepts and meanings. The concepts (Table 1) give definitions related to the development of the individual, group, community, social class, race or gender. They are associated with processes of citizenship, gender equity in public policy, women's inclusion as protagonists, well-being, autonomy, the struggle for emancipation, political participation, resistance and ideological challenges to forms of domination and machismo, authoritarianism, and patriarchies.

The reflection on the use of ICT and its impacts were made based on a multidimensional narrative, which has, in addition to organizations, gained space in the academic world consolidating a scientific production area in the field of Information Systems (IS). The concern with the democratization of information at its various levels beyond its empowering dimension is a subject of great relevance for its use, impact, context, content and means of dissemination (AVGERROU, CUNHA, POZZEBOM, 2009, DINIZ, POZZEMBOM, 2012).

Kleine (2009), Sen (2000), and Alsop (2005), analyzing the use of ICTs, link choice to the definition of empowerment, and conceptualizes empowerment as improving the ability of individuals or disadvantaged groups to make choices and turn their actions into desired results. Therefore, we think that it is important to enlist experiences of various manifestations of empowerment through the use of ICTs. Not all ICT initiatives are successful, but we sought examples of good practice from the experiences presented in the selected articles.

In order to elaborate Table 2, we took into account the suggestion of Heeks (2008). The author proposes to go beyond the inexhaustible call for professionals and policy makers to incorporate the assessment of their impact as part of a good practice. Firstly, to identify the need to address motivational and structural issues around contextualized groups and check the assessment of the impact of their practices. Secondly, call on policy makers to become more aware of the potential of ICT for development.

Marinho and Gonçalves (2016) emphasize the importance of not only looking at the individual perspective, in the sense of the quest for autonomy independent of social conditions, but to pay attention to the fact that there is only empowerment if there is personal transformation linked to structural changes in the relations of power.

In Table 2, we present some actions that were analyzed in literature. The practices are organized based on authors, groups researched in the study and a presentation of the actions developed. We opted for qualitative and contextualized experiences.

Reference	Researched group	Developed actions
Muñoz-Muñoz et al (2004)	Programa Rur@lia: rural workers in Spain	The aim is to facilitate social empowerment through access and knowledge of new ICTs, digital literacy and specialized vocational training.
Negrão and Viscarra (2007)	Users of a free internet service in Porto Alegre (Brazil)	The action resulted in changes in their consciousness as rights-abiding citizens and thus making them able to react to prejudice and violence, as well as being more politically active.
Hassanim (2008)	Egyptian craftswomen	The author analyzes the potential for Egyptian artisans in using ICT to improve their earnings. While it may be a useful tool for marketing products, it has structural challenges for negotiating through access points as sites for the international market. Although online sales are possible, the use of ICT with the average craftswoman is not feasible in Egypt.
Sousa, Melo (2009)	IT Managers	The study shows how some IT managers express more visible signs of empowerment. Through the motivation and mobilization of their potential to occupy a managerial position, they were more aware and involved in the construction of a social identity for themselves.
Wolf et al (2010)	Seamstress Cooperative	The digital inclusion allowed the required empowerment to obtain greater participation in their work and to increase the cooperative as a whole.
Lopes da Silva (2011)	Craftswomen from Alto do Moura, Brazil	ICTs offer empowerment opportunities by publicizing their products to consumers using social networks like Facebook and Whatsapp. Because of that, they gain wider visibility, attracting and retaining a bigger range of consumers.
Sena, Tesser (2017)	Women worried about medical care during hospitalization for childbirth in maternity wards	The test was used to stimulate discussion about obstetric violence in different sectors of women's health promotion and care, revealing very similar results to the surveys on the quality of childbirth care in Brazil. The results drew the attention of traditional media, by means of articles on radios, magazines and television, sensitized public opinion to attention to the movement for the humanization of childbirth and some academic sectors were already intensely discussing. Obstetric violence action has generated results in the field of laws, public policies and networking.
Rinauldo (2015)	NGO GIT SP	The author seeks to identify and address barriers to women's access to ICTs through information, inspiration and innovation by influencing them in their actions with a YouTube channel featuring videos on innovation, entrepreneurship, and technology aimed at the target audience. These videos show ideas and projects led by women, seeking to help them gain visibility with market players, such as clients, investors, journalists and others. Courses, trainings and meetings are offered with mentors, entrepreneurs and startups creators.

Table 2 – ICTs and empowerment practices for women

Answering to the first question of our research, which enquires about the practices mediated by ICTs that promote empowerment, we can identify organized women participating actively in discussions on websites, blogs, social groups,

institutions, telecenters, NGOs, social movements, cooperatives, and extension projects. The actions have developed positive results for their empowerment, creating movements through the internet, without government or state support, which deal with the social as well as the personal level. This access to information magnifies their power.

With e-commerce entrepreneurship, ICTs offer access to broader markets and greater profit; however, there are gaps in promotion, product design, production and product quality that determine competitiveness and have an impact on sales and marketing.

There are dimensions to be researched such as literacy, language skills, technical knowledge, web knowledge, regulatory and legal aspects of trade and export, product quality, transportation requirements and the availability of e-commerce. Through IT and the Internet, several users that were previous digitally illiterate have increased their education.

Another way to invest in professional and personal growth is the use of the strategic tools in digital social networking. They help micro and small entrepreneurs in generation and management of business, through the use of websites like Facebook as a strategy of digital marketing. That empowers women by lifting previous social and economic barriers, and gives them independence from organizational environments.

As a phenomenon of the digital age, online social networks become important channels between entrepreneurs, suppliers and consumers. They represent an environment conducive to approaching customers and increasing sales for both large companies and small retailers. Thus, communication with different publics according to Porto (2014) is important for the small entrepreneur, since the possibility and direction of communication is one of the most important differentials.

In addition, they can help strengthen the brand, the image and the conquest of more customers, and entrepreneurs have already realized this. However, it is not enough just to be where the customers are. Knowing how to use them properly is a problem for many. They have brought new opportunities for entrepreneurs, especially those who are in the informal sector, however, challenges have also been encountered. They are adapting and learning to figure out the best way to work with them. The lack of professionalism, as well as neglect in the management of the entrepreneurial profile, can affect the perception of value by the client and prejudice the attraction, capture and retention of work.

In terms of impacts, ICTs contribute to the improvement of economic conditions in developing countries. Especially with the work of women, it enables entrepreneurial activities, changes daily life in family relationships, favors proximity to children, and allows the exchange of information between relatives.

The reports show that conditions for women remain precarious in relation to men in the occupation of positions and of income, and the situation at home. Public policies and a more in-depth look at the relevance of artisan cooperatives are needed to make women stronger to face challenges such as poverty (FREIRE et al, 2012).

It's true that female participation in the formal and informal labor market brings financial independence it changes the female social role in the family,

changing the way male power is regarded within the family circle (RODRIGUES and IZQUIERDO, 2014).

When actions are carried out with the community and based on their needs it promotes their advance. The participatory elaboration of community projects strengthens social relations. Telecenters are spaces that facilitate the use and appropriation by offering free infrastructure and professionals, in a more personalized setting. Access to information and the transmission of knowledge are essential to broadening their familiarity with computers and the web, in addition to envisioning new opportunities.

Another aspect observed shows us how domestic violence and femicide directly affect women. So many turn to the Internet and social networks to seek help to get out of the situation. This drives informal communication, and the creation of informal networks of protection. The use favors anonymous denunciation, avoids exposure at the police station, reduces costs and maintains proximity to children. Without public policies for victims of violence in a community, they create solidarity and support with each other using applications.

The posts, the debates and the texts on the websites and blogs are important means of communication and help to identify the violence amongst genders. We observe how they themselves maintain these means without government incentives and how content is kept accessible through colloquial and less academic language, such as in the case of the videos and documentaries.

The results depend on economic conditions, but also on the individual's choice and values. These may include, for example, easier communication, awareness, more income or saving time. According to Kleine (2010), the structural factors are in a complex relationship with the portfolio of resources of the individual, group or community. For example, with the help of social resources (like a neighbor), an individual can have access to the internet which can lead to frequent e-mail contact with a distant family member or friend, thereby increasing communication and potentially expanding social resources. Similarly, a person with greater educational resources (skills and education) and information may find it easier to use existing access facilities to hone their skills and obtain allowances. The interface between the structure of opportunity and the individual agency therefore includes a level of reciprocity.

In forming networks, such as those identified in the articles, they strengthen their social capital. Groups can be defined by kinship, friendship, ethnicity, class, or informal communities and intersubjective ties, and help the dissemination and mediation of solutions for problems in poor communities.

Corroborating that idea, says Coelho (2014), the use of ICTs is marked by a paradox because they are considered by some as transformative inventions and, by others, as an extension of relations of power and domination. Paradoxically, ICTs can contribute to exclusion, maintenance of oppressive relationships and domination or, on the other hand, to leverage their emancipation in their work, income, quality of life, family and social relations, autonomy, access to information, new beliefs and values, formation of networks and connections with other groups, consumption, processes, commercialization, and social causes, among others.

According to Marinho and Gonçalves (2016) in analyzing the unequal distribution of power and control by groups in our society, community empowerment would seek to reorganize this arrangement. It is a process that confronts structures of power present in the micro and macro social sphere, which consequently implies the democratization of power. Resources such as material, financial, natural, geographic, psychological, cultural, social, educational (education and skills), health, and information are valuable as they are agents that give a more holistic and systemic outlook. Therefore, some highlights are of use here:

Material resources: They are essential inputs in the production process such as machinery, hardware and software, and cell phones, tablets, computers, the web, social networks, blogs and websites. They can be means of empowerment.

The contexts of use reveal an advance. However, neither ICTs nor empowerment alone change the relationships of domination and gender. Greater social awareness is imperative for radical change. Women encounter barriers in their empowerment in individualism, informality in work, income and gender inequalities, machismo, diseases, and looking after home and family alongside employment among other factors. There is also a shortage of awareness, participation in power, policies, training, and infrastructure.

Obtaining credit depends on a combination of bank rules and individual guarantees. In general, ICTs improve women entrepreneurs' earnings and become useful tools for the marketing of products. Despite this, there are a number of structural challenges, such as access to the internet, legislation, and access to sites for the international market.

Craftspeople can sell online but often the costs of maintaining websites, blogs and internet access are a problem. Trade and export represent opportunities that artisans are generally neither equipped nor capable of dealing with in a global competitive market. Hence, democratization and access to information is the first step for transforming information into meaningful knowledge. Kleine (2009), Alsop and Heinsohn (2005) list informational assets as a key resource. Heeks (1999) emphasizes that information is placed in the center for the analysis of ICTs and Development, Gigler (2004) adds "informational capital" to the capital portfolio.

Finally, we highlight the benefits that ICTs can bring to the expansion of public space and citizen participation in government:

The key to achieve potential benefits from technologies is often identified with people's ability to have full and meaningful access to them. 'Electronic' democratic practice and the participating in a public electronic space that encompasses governmental systems of service delivery requires citizen's access to this space and their ability to use it. Each citizen should have access to a basic set of computational and telecommunications tools, and know how to use them, providing the opportunities to receive, elaborate and transmit information and to enjoy electronic services (CUNHA and MIRANDA, 2013, p.554).

FINAL CONSIDERATIONS

This article was developed on the basis of scientific articles and reports on the contributions of ICTs as promoters of empowerment of women in developing countries. Concepts of empowerment on the use of ICTs were identified. These concepts serve as a basis for the study of practices such as using websites, blogs, the internet and the search for information on them. From reflection on the theme emerge research opportunities such as the intersubjective relations in the transmission to technological abilities, and the discussion around the telecenters as a means to qualify for use of the ITCs, the feminine presence on the web and its dynamics in gender relations.

Female entrepreneurship has great relevance for society, as it creates formal and informal work, and therefore contributes to economic development. However, a major challenge for women is keeping a balance between work and household chores as they affect one another. As they work to obtain an income to meet personal and family needs, they also to take care of home and children and do unpaid activities. As time is scarce, this creates a permanent tension that affects them. It is a reality that puts them at a disadvantage when compared to males, with effects on gender equality and poverty and, with added stress, can also create tension and conflict at home.

This reflection was corroborated by a literature review that investigates the theme. Empowerment practices were observed in intra-gender relations through the use of ICTs in the transmission of technological skills, social and professional empowerment through training in the use of ICTs in telecenters, NGOs, cooperativism and extension projects, the possibility of reducing poverty through female entrepreneurship on the web and via Facebook, Youtube and Instagram. As a phenomenon of the digital age, online social networks become important channels of relationships between entrepreneurs, suppliers and consumers. Cyberativism is capable of stimulating discussion about domestic and obstetric violence, incentivizing different sectors of women's health promotion and care, as well as widening women's influence on communication and changing the dynamics of domination in gender relations. Internet has enabled freedom of expression and opinions despite the control of large business groups. Their use can bring indirect benefits for poverty reduction if they are applied to strengthen diversity of social, political and cultural assets and help in the construction of more effective structures and processes that favor the empowerment of women, especially those found in the informal sphere.

Reflexões contextualizadas sobre o uso das tecnologias da informação e da comunicação no empoderamento feminino

RESUMO

Este artigo trata das tecnologias da informação e comunicação (TICs) e seu papel no desenvolvimento, e visa entender como as TICs são usadas como meio de empoderamento das mulheres. Essa reflexão foi corroborada por uma revisão de literatura que investiga o tema. Práticas de empoderamento foram observadas nas relações intra-gênero por meio do uso das TICs na transmissão de competências tecnológicas, capacitação social e profissional por meio da capacitação no uso de TICs em telecentros, ONGs, cooperativismo e projetos de extensão, a possibilidade de reduzir a pobreza por meio do empreendedorismo feminino na web e via Facebook e Instagram. Como fenômenos da era digital, as redes sociais online tornam-se importantes canais de relacionamento entre empreendedores, fornecedores e consumidores. O ciberativismo é capaz de estimular a discussão sobre violência doméstica e obstétrica, incentivando diferentes setores de promoção e atenção à saúde das mulheres, bem como ampliando a influência das mulheres na comunicação e mudando a dinâmica de dominação nas relações de gênero. A Internet permitiu a liberdade de expressão e opiniões, apesar do controle de grandes grupos empresariais. Seu uso pode trazer benefícios indiretos para a redução da pobreza se for aplicado para fortalecer a diversidade de bens sociais, políticos e culturais e ajudar na construção de estruturas e processos mais eficazes que favoreçam o empoderamento das mulheres, especialmente aquelas encontradas na esfera informal.

PALAVRAS-CHAVE: Tecnologias da informação e da comunicação. Empoderamento. Mulheres.

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