Information and Communication Technologies for Social Development: a Methodological Proposal

Tecnologías de la información y la comunicación para el desarrollo social: una propuesta metodológica

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ABSTRACT

Most efforts to promote human development through Information and Communication Technologies (ICTs) have focused on increasing infrastructure and digital literacy among vulnerable sectors of the population. This article proposes to expand the scope through a methodology for an organizational level. The objective is to share the theoretical principles, the design and the results of the implementation of a participatory communication methodology for the appropriation of ICTs in organizations with social purposes. The theoretical framework was based on Amartya Sen's human development perspective regarding ICTs for development and social change. The methodology was generated through a collaborative workshop between the academy and organizations dedicated to youth development in different regions of Mexico. The results show that the appropriation of ICTs must transcend its instrumental use and be based on a reflection on its social mission, its context and the needs of the population they serve, to solve their communication problems, but above all to strengthen their capacity to support human and social development.

RESUMEN

La mayoría de los esfuerzos para promover el desarrollo humano a través de las tecnologías de la información y la comunicación (TIC) se han centrado en incrementar la infraestructura y la alfabetización digital entre sectores vulnerables de la población. En este artículo se propone ampliar el alcance mediante una metodología para el nivel organizacional. El objetivo es dar a conocer los principios teóricos, el diseño y los resultados de la implementación de una metodología de comunicación participativa para la apropiación de las TIC en organizaciones con propósitos sociales. El marco teórico se basó en la perspectiva del desarrollo humano de Amartya Sen con respecto a las TIC para el desarrollo y el cambio social. La metodología se generó a través de un taller colaborativo entre la academia y las organizaciones dedicadas al desarrollo de los jóvenes en distintas regiones de México. Los resultados dan a conocer que la apropiación de las TIC debe trascender su uso instrumental al partir de una reflexión sobre su misión social, su contexto y las necesidades de la población que atienden, para resolver sus problemas de comunicación, pero, sobre todo, para fortalecer su capacidad para apoyar el desarrollo humano y social.

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Introduction

Access to and use of information and communication technologies (ICT) has had a sustained increase over the last ten years among world population (International Telecommunications Union, 2018). However, this has not happened in an equitable manner; there still is inequality of digital inclusion with an influence on social inclusion among countries and among different demographic sectors. Much is there to do in the medullary issue of ITC appropriation for social change and development.

Appropriation is distinguished from access, which refers to having the necessary infrastructure to make this service and its use available, that is, employment in different modes or supports. Appropriation is defined as the acquisition of abilities and skills that are necessary for the attainment of specific objectives in accordance with the user. At world summits on the information society the need has been pointed out to advance in the access, use and appropriation of ICT to reach the sustainable development objectives (World Summit on the Information Society, 2018).

The objective of this article is to inform about theoretical principles, design and results for the implementation of a participatory communication methodology for the appropriation of ICT in organizations with social purposes. This approach was the result of identifying that most of the efforts in this field have been centered, individually, in sectors of the population or vulnerable communities, while to a lesser extent, studies and interventions have been done aimed at the organizational level (Padilla & Medina, 2018).

The proposed methodology resulted from the question: How can ICT be incorporated to improve the quality and scope of the job of governmental organizations (GO) and civil society organizations (CSO) engaged in the resolution of problems faced by young people?[1] In this text, a report is given on what was attained in collaboration with GO and CSO, a methodology that would allow a critical review of global trends on the use of ICT, in addition to analyze them in relation with their own problems, resources, practices and feasibility aimed to identify which incorporation modes would be mostly appropriate in each case. In spite that this research was limited to organizations working with young people, a proposal is presented to appropriate ICT which may be applied to any organization for social and human development.[2]

This proposal starts from the argument that GO and CSO are key performers for social and human development, and that ICT have an important role to improve their performance. The United Nations Organization (UNO) highlights the fact that organizations with social purposes are agents for the promotion of the society of knowledge, and when employing ICT in a strategic way they manage to achieve the objectives of the global agenda in terms of improved governance, conflict resolution, attention on poverty, social inclusion, human rights dissemination, environmental preservation, among others.

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ICT allow organizations to have a better access to information, to the administration of and generation of knowledge, in addition, they help to visualize and mobilize support for their cause and, generally, to strengthen their organizational capacity and foster the sustainable employment of these ICT among communities and population sectors they serve (United Nations Organization, 2010).

Finquelievich & Kisilevsky (2005) say that ICT appropriation in organizations ought to transcend the employment thereof aimed to facilitate administrative processes, to disseminate their image, to seek the support of volunteers as well as financing to aspire to a better scope as a catalyzer of social change. The most important contribution of these technologies is to insert work in favor of the resolution of local problems in citizens' global construction processes. In turn, Camacho (2003) identified how ICT have been successfully employed in transformation processes, to generate knowledge, to promote stances and positions for social development. On the other hand, Da Silva (2016) holds that in spite that the use of ICT in organizations is very widespread, they are not being taken advantage of in an optimal and strategic manner.

Organizations with social purposes are the ones making most of the efforts of citizen participation. In the Mexico case, the National Survey on Solidarity and Volunteer Action (ENSAV, by its acronym in Spanish) (Mexican Center for Philanthropy, 2013) reports about 60,000 organizations of the civil society whose job has very important social incidence. Their job implies the participation of 75% of the population in joint or voluntary actions, that are basically located in the triad of school-neighborhood-church. On the other hand, GO represent the extension of governmental programs in community spaces; therefore, attending appropriation problems of ICT at this level enhances their scope in interaction spaces and the proposals in the social environment, as the needs are already placed.

Perspectives on ICT and development

In the field of development ICT, focus is made on two discussions: 1) on the development concept and, 2) around the role and capacity of ICT to promote it. Consequently, the manner in which innovations are proposed and strategies performed to promote appropriation of these technologies, derives from the perspective whereby these two key issues are assumed (Walsham, 2017).

This methodological proposal was based on the concept of development in the communication field for social change and development, that has been sustained from a linear perspective imposed by the development towards a greater inclusion and participation of actors who are the object of said development (Tufte, 2015). In the line

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of ICT for development, the thoughts of Keine (2013) and Walsham (2017) have been assumed, which is included therein based on Amartya Sen (2000).

> Development may be understood, upheld in this book, as an expansion process of actual liberties enjoyed by people. The fact that we focus on human liberties is in contrast with the strictest views of development, as their identification with the growth of the national gross product, with the increase of personal rentals, with industrialization, with technological advances or with social modernization (Sen, 2000, p. 19).

Sen's (2000) definition of development is an alternative to the perspective centered only in economic indicators, because it is understood in terms of recognizing the different types of liberties[3] and, mainly, of the abilities of people to overcome poverty and basic needs. By this, an approach is contributed based on capacities, which consists of valuing opportunities or real possibilities of individuals to achieve the necessary competences to exercise the different liberties that allow them to decide how to lead the life they value.

Dubois and Cortes (2005) agree with Sen (2000) in the sense that it is possible to achieve development by promoting liberty and people's agency. This vision assumes the contribution of ICT which goes beyond that which is merely instrumental, or beyond the support to the economic development of people. In the field of ICT, these authors propose a socio-cultural approach to foster human development.

> The socio-cultural approach contributes a theoretical system to explain the construction process of knowledge, considering that ICT not only are mere technical support but new languages for human understanding, to share experiences and knowledge. In this sense, ICT are cultural tools, new strategic spaces of social mediations that enable social interaction processes and cultural reconstruction (Dubois & Cortes, 2005, p. 29).

In this sense, Dorothea-Kleine (2013) based herself on Sen's (2000) theory with the purpose of incorporating an appropriation model of ICT for human and social development. The model was titled 'choice framework', which enables persons to analyze their abilities or resources to make decisions on how ICT may contribute to their development and achieve the life they want to lead.

Kleine (2013) applied this model to micro-entrepreneurs of a small community down the south of Chile with the purpose of evaluating the results of having incorporated information technologies from the choices made by the same users. In this methodological proposal, the challenge was assumed to employ the model mentioned above to make a choice with regards to the appropriation of ICT in organizations; likewise, the choices were taken into account, although planning and not evaluation was prioritized, which implied reformulation so that this was feasible at an organizational level.

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Walsham (2017) points out that a better potential of studies and interventions of ICT for development may be boosted if focus is made in specific social sectors. For this reason, the proposal was focused on organizations that would support young people, since the social problems raised by late modernity for new generations are active worldwide (Furlong & Carmel, 2006). In the specific case of Mexico, where this study is placed, young people are facing not only a growing scarcity of opportunities, but also find themselves in contexts with major violence and crime (Reguillo, 2012).

Supported by ICT, the purposes of development may be better attained if they are linked to users and work is done in "practice communities", intended to see to the problems in specific population sectors. Academic training may contribute, along with these communities in the collaborative generation of knowledge.

> Those of us who work in the investigation of *ICT4D* have a contribution to make here to explore the role and value of ICT to support this "development". However, we ought not to see us as the "experts" who provide descending solutions to the "beneficiaries", but rather we ought to see each other as co-contributors with the others, as there are people in the world with points of view on the "development" of their specific context (Walsham, 2018, p. 37).

Methodological proposal: Participatory Communication Workshop and ICT

Methodology assumed the epistemology of horizontal methodologies. This perspective considers investigation as the link between theory and practice; it sets out a horizontal illustrative approach for interaction in the public space that recognizes the communication-action basis, which does not separate policy from theory and that traces a research alternative. Nonetheless, it is not placed in activism neither does it divide theory from practice, but it is clearly assumed in the academic field (Corona & Kaltmeier, 2012, pp. 12-13).

This vision derives from the tradition of the Participatory-Action-Research (PAR) (Ander-Egg, 2003; Fals, 1999; Freire, 1970), whose main characteristic is that:

> In the reflection processes, the starting point is knowledge and experiences of social actors, taking their problems, concerns, needs and priorities into consideration. In this way, it is not only intended that the research be performed under the perspective of groups and social actors but also to provide elements that enable them to benefit from the knowledge generated as a resource to advance in the attainment of their objectives (Cortez, 2014, p. 15).

Consequently, it is assumed that transformation and improvement of a social context starts from the diagnosis of practical problems linked to an environment; this

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implies total cooperation of participants to detect needs and it is aimed to amend or improve a process, and to implement actions to attain results. In this case the research-action encouraged participation with a perspective centered on needs, and it was not intended with the purpose of promoting deeper changes that would derive in activism.

Participatory communication, with is origins in PAR, was the basis to design this methodology. It consists of an approximation based on dialogue, enabling to share information, perceptions and opinions among several actors to facilitate empowerment. This communication is strategical for GO and CSO projects, whose purpose is to articulate social process and decision making for social development and change. It includes four stages: diagnosis through participatory communication, strategic design of a participatory communication, implementation of communication activities, and monitoring to assess the impact of the intervention (Tufte & Mefalopulos, 2009).

To design this methodology, a search was made of studies and interventions for ICT appropriations in organizations with social purposes. Studies were identified that approached this problem (Attouni & Mustaffa, 2014; Leonardi, Huysman, & Steinfield, 2013; Nugroho, 2011); the closest background fact was the project of Pimienta & Barnola (2001), who proposed a methodology to foster the incorporation of ICT in social organizations in Latin America. These works are in line with the need to generate methodologies that would guide organizations in appropriating ICT from reflection and discussion among its members, and that are not promoted in a vertical way.

Design and implementation of the Participatory Communication Workshop and ICT in Organizations for the Development of Young People had several stages. In the first stage, work was done to identify the main communication problems, and in the second, on the integration of a communication plan and employment of ICT. The last two stages of the project included implementation and evaluation, which were not done because there were no human resources and time to follow up the appropriation of ICT of the organizations, nor to evaluate the results in the medium and long terms. Notwithstanding, the first two stages were done.

The objective of the workshop was to do a participatory analysis of the context of the organization, its assistance to young people and the manner in which they normally used ICT, to integrate an appropriation proposal. This purpose was achieved by means of analyzing three topics: 1) organization and its context; 2) organization and young people; 3) organization and ICT; these translated into objectives and three-session activities. This division allowed us to review the sense acquired by ICT in a broader context.

It was considered, within the profile, that the participants, preferably, were members of the organization who were better aware of its background, objectives and operation, especially, with regards to their job with young people. In order to foster the participation in the workshop, it was recommended that five to twelve persons

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participated, although in some cases, the maximum number of participants was in excess since organizations requested a larger number of spaces.

A first criterion to choose cases, upon which the methodology would be applied, was that there were contrasts among them. In addition to differences between CSO and GO, it was discussed to select cases from different regional areas in the country so that the diversity in Mexico be incorporated as possible. A second criterion was to integrate consolidated organizations with extensive experience, especially in the case of CSO which tend to be ephemeral. In the third place, their accessibility and willingness ware taken into account to cooperate and include the results of the workshop in their plans. The fourth criterion was organizational feasibility, as organizations have a basic infrastructure and equipment level regarding ICT.

The workshop was implemented six times in CSO and GO in four cities. Aguascalientes (central northern area in the country), Colima (on the west), Saltillo, Coahuila (on the north) and Tuxtla Gutierrez, Chiapas (on the south), from June 2017 to March 2018[4] (Figure 1 and Table 1).

Figure 1. Mexican cities where the workshop was held

The workshop was held in three organizations in Aguascalientes: at Fundacion Mujer Contemporanea, A.C. (a CSO engaged in assisting women who suffer violence, most of them very young), at the Aguascalientes Institute of the Youth (IAJU, by its acronym in Spanish) and at House of Young People (which is part of the System for the Integral Protection of Children and Adolescents (SIPINNA, by its acronym in Spanish)). In the city of Colima, it was held at the Institute for the Development and Alternatives for the Youth (INDAJO, by its acronym in Spanish) (a GO formed by young people who develop several youth programs).

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Table 1. Characteristics of participating organizations

Type of organization	City/State	Organizations	No. of participants
Government Agencies	Aguascalientes, Aguascalientes	Instituto Aguascalentense de la Juventud (IAJU) [Aguascalientes State Institute of the Youth]	15
		Casa del Adolescente (Sistema Integral para la Protección de Niñas, Niños y Adolescentes) [House of the Adolescent (Integral System for the Protection of Children and Adolescents)]	11
	Colima, Colima	Instituto de Desarrollo y Alternativas para Jóvenes (INDAJO) [Institute for the Development and Alternatives for the Youth]	12
Civil Society Organization	Aguascalientes, Aguascalientes	Fundación Mujer Contemporánea, A. C. [Contemporary Woman Foundation, A. C.]	9
	Tuxtla Gutiérrez, Chiapas	Mentes y Manos Chiapanecas, A. C. [Chiapanec Minds and Hands, A. C.]	9
		IKAL IKTAN, A. C.	1
		Colectivo para la atención a la salud integral de la familia, CIFAM, A. C. [Collective for the attention of integral health of the family, CIFAM, A. C.]	1
		Voces Femeninas [Female Voices]	2
		Jóvenes Factores de Cambio [Young People Factors of Change]	2
	Saltillo, Coahuila	Centro de Integración Juvenil, Unidad Saltillo, A. C. [Center for Youth Integration, Saltillo Unit, A. C.]	18
Total	**Four cities in Mexico**	**10 organizations**	**80 participants**

In Saltillo, Coahuila, the workshop was conducted at the Centro de Integracion Juvenil, A.C., Saltillo Unit (which is part of a network of centers located in several cities in the country, engaged in assisting problems related to addictions, and most of the people they treat are young ones). Finally, in the southern area, in Tuxtla Gutierrez, Chiapas, we had the support of the Department of Gender of the Division Community Outreach of the Autonomous University of Chiapas; in this case, although the workshop

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was originally thought for one organization, it was accepted to work with the five organizations that filed a request to participate.

The following sections describe the objectives and the activities of the three sessions of the Participatory Communication Workshop, and ICT in Organizations for the Development of Young People.

Session One. Participatory vision of the organizational context

This session was based on Kleine's (2013) "choice framework", who defines it as an "equity portfolio", a "living and flexible" tool which allowed organizations to visualize its resources or equity to identify its choice capacity. This model is not intended to achieve objectives *a priori* regarding access, use and appropriation of ICT, but that they choose and build in a participatory fashion. In this session, the aspects of the model were identified in reference to context, which was completed in the two subsequent sessions, first off by reviewing the choice possibilities of ICT and then by choosing how they may be incorporated to their work. In addition to Kleine's (2013) model, integrating representation of the context was based on the principles of Hayes & Westrup (2012), who state the need to include the different perspectives of actors who form an organization.

Once the workshop program and confidentiality agreements were presented, the third activity of the first session was to develop a visual representation of the organizational context. In a collaborative manner, on a piece of paper, on the wall, every participant described their context by means of drawings or images from magazines. At the center, they defined their organization, and the outer section was divided into four sections featuring: resources and equity they have, resources and equity they do not have, context supporting or beneficial actors and situations, and context supporting or beneficial actors that imply an obstacle.

The subsequent activity consisted in making a reflection and diagnosis on the characteristics of their program in relation to the development of young people and the desirable profile of the person who works with young people. This was done by means of a checklist designed on the basis of the recommendations of Catalano, Berglund, Ryan, Lonczak & Hawkins (2004) and Huebner, Walker & McFarland (2003). Afterwards, a discussion group was formed (Chavez, 2007) with the purpose that participants shared the perspectives of the organization in respect to the young people and the meaning they give to the chores they do to support their development.

Afterwards, as a sixth activity (Table 2), a presentation and an analysis of the complex situation endured by young people worldwide (Furlong & Carmel, 2006), of the definition of "youth development", of the characteristics prevailing in programs of this

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nature with favorable results (Borden *et al*., 2006; Catalano *et al*., 2004; Christens & Dolan, 2011; Norton & Watt, 2014; Sy, Greaney, Nigg, & Hirose-Wong, 2015; Zeldin, Camino, & Calvert, 2012), as well as the profile of the professional involved in the development of the youth was made (Huebner *et al*., 2003; Krauss *et al*., 2012; Walker, 2011).

This session ended by sharing the opinions of participants on these topics, their similarities and differences in respect to their own work, in addition to the feasibility of having them applied to their context.

Table 2. Session one. Specific objectives and activities

Objectives	Activities
1) Understand the background, context and current situation of the organization with a focus in its financial, social and symbolic capital	• Presentation of the program of the workshop • Confidentiality and ethics agreements and between researchers and participants of the workshop
2) Analyze how the organization understands its role in society according to its nature, its main objectives and the strategies applied to accomplish those objectives according to their capitals	• Visual representation of the organization and its context • Analysis of the features of the program for the development of the youth • Discussion group
3) Identify how the organization defines young people and the work it does for them	• Presentation of the approach (research-intervention) of positive development of the youth
Duration: 5 hours, two sessions of 2:15 hours each, with a 30-minute break	

Session two. Diagnosis on organizational communication

In this space, the workshop analyzed the topic of communication and ICT in the organization. Its specific objective was to make a diagnosis on the communication and the current use of ICT in two areas: a) in their activities as an organization and in their administrative tasks to solve their internal and external needs for communication, as well as in the promotion of their image, in public relations and in the search for financing; b) in youth assistance activities.

This session began with the presentation of studies on the appropriation of ICT in organizations (Leonardi *et al*., 2013) whereby Camacho's (2013) and Finquelievich

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& Kisilevsky's (2005) texts were analyzed, who argue that ICT are employed as communication and organization tools for local development, in addition to their key role for the society to partake in the information society and in successful practices for the attainment of transformation processes. In addition, ICT appropriation cases were presented, specifically for the development of young people (Badillo, 2011; Baelden & Van Audenhove, 2015; Eglinton, Gubrium, & Wexler, 2017; Hanckel, 2016; London, Pastor, Servon, Rosner, & Wallace, 2010; Mareschal, McKee, Jackson, & Hanson, 2007; Mihyo & Ogbu, 2000; Näslund & Gardelli, 2013; Ville, 2016; Yarmuth *et al*., 2012).

The second activity of the session consisted in making a diagnosis of the organizational communication (Table 3). Again, a visual representation was made by using a map with the actors and communication flows, including means of communication and ICT through which they flow. The participants analyzed the main actors of their internal communication and identified the characteristics of communication with the youth they assist, as well as with their external public.

Table 3. Session two. Diagnosis on organizational communication

Objectives	Activities
1) Perform a diagnosis of the communication and the current use of ICT in two fields: a) in activities such as organization and in administrative works to attend its needs of internal and external communication, and b) in the activities of the attention towards the youth.	• Presentation of studies and cases of appropriation of ICT in organizations • Presentation of studies and cases of appropriation of ICT for the promotion of the development of the youth • Creation of a communication map. Identification and prioritization of problems
Duration: 5 hours, two sessions of 2:15 hours each, with a 30-minute break	

The session ended with a discussion on this representation, aimed to identify communication problems of the organization and prioritizing the need to attend to them.

Session three. Communication plan and ICT

The final session included a communication plan and the use of ICT in a participatory, significant and feasible mode for the organization. The performance of the workshop was also evaluated. The activities, first off, consisted of carrying on with the analysis of the communication map made in the previous session. The view of actors, the flows of information and the means employed allowed them to identify their main internal and external communication problems; for example, centralized and public communication

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flows are poorly addressed. Once communication problems have been identified, a discussion was done to find their priorities, both in respect to internal communication and with the work team, the population they assist and other communities.

Based on the foregoing, a feasible communication plan and use of ICT were formed in accordance with their resources. This logic corresponds to Kleine's (2013) "choice framework", given that, once the possibilities of the organization are defined, a participatory mode is chosen on how to optimize the resources of the organization in respect to ICT and others (Table 4).

The session was closed by evaluating the workshop by means of an anonymous written instrument, with close and open elements, and, subsequently, as a group interview.

Table 4. Session three. Making a communication and use of ICT plan

Objectives	Activities
1) Create a participative and significant plan of communication and use of ICT which is viable for the organization 2) Evaluate the performance of the workshop and make recommendations for its improvement	• Discussion of the main communication problems to attend • Choice making about the use of communication and ICT • Integration of a plan of communication and ICT • Evaluation of the workshop
Duration: 5 hours, two sessions of 2:15 hours each, with a 30-minute break	

Analysis of results

Based on the proposed objectives for each of the sessions, four axes are proposed to discuss the results, which are in line with the general purpose of methodology.

a) Context and characteristics of organizations

It was evident that the context and characteristics of each organization outline the perspective young people have about them and how they understand their chore towards them. From this, they were able to identify highly differentiated organizational profiles, some of them range between highly conservative and critical visions towards the youth, permeated by the age condition of most of their members and, at times, by the same nature of the organization, because some of them have even expressed a religious inspiration to do their work; and others which assume a more extensive and structural

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understanding on the problems faced by young people, as well as the recognition of their ability to participate. Some CSO formed by young people have even accounted for a high self-management ability.

In GO, it was identified that in their communication processes and the use of ICT there is an inclination to be in the governmental scenario and support the concerns of the political party their administration is a member of, since, at times, their financing depends on this. However, this was also the issue in some cases of CSO linked to religious, governmental and even military entities.

b) Discussion and sharing the social mission

Undoubtedly, the workshop reconsidered and allowed systematization of ICT appropriation at an organizational level, although this was not the major achievement. Both scholars and the members of the participating organizations agreed that the greater value of the workshop consists of facilitating group reflection and discussion on their role at the complex and diverse problems endured by young people. Within this framework, communication and ICT acquired a clear meaning as key strategies to assume the challenges implied by supporting the youth, a task which they feel overwhelmed by.

Another element which is to be highlighted is visions, sometimes distant, among the members of the same organization. In some cases, disassociation was identified among people who partook as professionals, doing a remunerated and specialized job, as compared to volunteers. This made communication and work strategies difficult, for joint reflection on their identity regarding the organization and objectives was left out at the compelling daily workload. The workshop facilitated a space to discuss how they assume their social mission, it opened the way to share similar goals and, therefore, it was possible to propose a better use and appropriation of information and communication technologies, considering their context, profiles and common objectives.

c) Communication problems

The main communication problems, and therefore on the use of ICT, resulted from not being able to clearly distinguish institutional communication from the communication addressed to the community they serve. On the whole, they intended to serve several communities using the same means or digital support. The organizations already have held training workshops in the modes, supports and applications of ICT; however, they have not had the opportunity of a collaborative space to reflect on their role or to achieve their purposes. That is, the use has been instrumental without questioning their place in the work logic and structure, with limited results regarding a significant appropriation.

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d) ICT appropriation

By means of the workshop, all the organizations achieved greater clarity on the strategic role of ICT for social development, especially addressed to the youth. The ability of organizations to make interesting and feasible proposals took place to the extent of their experience and strength as an organization. It was evident that in the case of organizations with personnel with more education and experience, more stable resources and support by its context and society, the methodological proposal had a greater meaning as they managed to propose relevant communication plans and technological appropriation.

The younger members of the organizations were more proactive in this respect. The critical review of other studies and interventions supplied by people who coordinated the workshop opened an avenue of possibilities. It was clear that the key role of the academy is to perform a search, to synthesize it and to present the previous knowledge in plain language of ICT applied to development. In the case of older members, it was achieved that they better understood the possibilities of ICT beyond their appropriation for entertainment and social ends; to this group, on the whole, the workshop fostered a better willingness towards ICT, although there were less initiatives from their side.

Conclusions

Those elements of the methodological proposal that were considered correct are in this section, as well as their limitations; this derived from the team reflection process. The interest lies in providing information so that, in the event the workshop is repeated, the experience is improved.

Among the virtues, it was confirmed that the methodological proposal is strong threefold:

- The first one was its use to generate knowledge on the role of both types of organizations for social development; both on the problems of young people, nuanced by the cultural context of different country areas and in respect to communication problems and the role of ICT to solve them from the experience of these organizations. Generation of knowledge took place in a cross and collaborative way between the academy and members of the organizations, who found themselves discussing prior knowledge (theory and review of literature) in contrast to experience and practice.

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- The second one was the ability to generate an analysis inside the organization; specifically, to reflect and reach a consensus regarding their role and governance for the development of the youth. The workshop supplied a horizontal discussion space on their organization and internal problems, as well as on the likely ways for solution. By this processes, a greater awareness was attained on the potential of communication and ICT on the society of current knowledge and how this framework of organization ought to be updated. The presentation on good practices of ICT triggered the reflection on appropriation possibilities in accordance with its context; it even fostered creativity and proposal for other solutions.

  Additionally, the participatory nature of the methodology allowed participants to utter and to be heard as a practicing community in each organization. The workshop fostered a valuable space with generous results by the participating members, who said it was an opportunity for joint thinking. The different sessions resulted in different levels of systematic analysis on the context and practice towards the youth, which gained a better momentum in the role of communication and ICT.

- The third way is that adaptability of this workshop to different contexts and organization types was proven. Implementation in all of them showed it had an accessible format and the capacity to create reflection, discussion, analysis and proposals for their specific contexts. This shows that the workshop could be used for other cases.

In line with the above, opportunity niches are evident for the methodological proposal. For example, the time organizations have is usually limited, because of their complex daily activity, work overload, staff shortage, and high load of commitments to be complied with. Therefore, three sessions were scarce to develop the content of the workshop deeply; however, in every case there was an excellent willingness and effort on their side, as well as the interest to be included in activities of a nature other than their chores. Another point in relation to the materials used in the workshop is that their main characteristic is that they ought to be visual and synthetic for the attainment of the dissemination of knowledge on the possibilities supplied by ICT.

At the beginning of this article, it was explained that the methodology only consisted of diagnosis and planning phases on the communication and appropriation of ICT; therefore, there was no accompaniment for the implementation and evaluation thereof. At this, permanent follow-up would be missing of these processes, not only for the appropriation of ICT, but also for reflection on the context where they have meaning as a strategy to achieve the social purposes of each organization; this would be recommended for the public policy regarding ICT appropriation.

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In the case of Mexico, a very significant investment of public resources has been made for the acquisition of ICT; notwithstanding, the effort has been diminished because policies are centered in the instrumental aspect of technology, without considering that it is necessary to use devoted resources and spend time for appropriation processes. Incorporating a reflexive follow-up from the organizations would allow greater clarity on the infrastructure that needs to be upgraded to ensure an efficient public spending and with benefit for users. We believe this will be possible to the extent reflection and evaluation proposals are generated from horizontal and participatory analyses.

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[1] This methodology derived into a more extensive research: "ICT in governmental and civil society organizations for the development of the youth", which included two stages, a quantitative stage which consisted of a survey online ("National Online Survey on Information and Communication Technologies in Governmental and Civil Organizations for the Development of the Youth") (Padilla, Zermeño Flores & Tufte, 2019), and a quantitative stage, which was aimed to work on cases of organizations by means of designing a participatory communication workshop and ICT. The latter is addressed in this text.

[2] For further information on this research refer to the following URL: www.itinerariosparaorganizaciones.com

[3] The fundamental liberties to which Sen (2000) refers are: political liberties, economic services, social opportunities, guaranties of transparency and of protective security.

[4] The initial purpose was to carry out to workshops in each city, two in the north, two in the center and two in the south. However, due to several occurrences, including the 2017 earthquake which adversely affected several cities in the south of Mexico, and the election controversies in the state of Coahuila in the north, two organizers declined from participation, which is why these were applied in the Colima and Aguascalientes cases, where there was accessibility.

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