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THE DIGITAL DIVIDE IN COLOMBIA: THE YANACONA VILLAGE EXPERIENCE

ABSTRACT

In recent years, Colombian government has generated ICT policies focusing on the provision of physical infrastructure for the adoption of digital tools, and the promotion and strengthening the technology industry. However, they have been lagging behind technological adoption processes that include functional territorial approaches. As a consequence, technology is seen as an instrumental good without any economic, social and cultural value. At the same time, the Digital divide is growing in the absence of differential approaches for Indigenous communities.

These communities face different kind of inequalities in access in public goods. Technological adoption in Indigenous communities contributes to a better citizen relationship with government, and to reduce barriers such deficits in road infrastructure, public services, education and health. Some organizations recognize the importance of ICT-based services as a key to achieving sustainable development goals by the deadline of 2030

In this context, a public policy strategy based in indigenous communication contents by Dual Contents is necessary for successful technological adoption processes. Through functional and technological support to autonomous processes, the Dual Contents have the possibility of improve socio-economic and cultural dynamics. Its potential lies in technological appropriation associated with a high degree of exposure and routine use of information systems. These contents have the ability to be flexible to interact complementarily with ancestral institutions and symbols of indigenous peoples. The ancestral institutions are valuable for the dissemination and recovery of traditional indigenous knowledge.

In XXI century Information technologies and communications adoption is configured as one of the main tools for generation and adoption of information. The decisions based on quality information contributes to solve problems such as poverty and inequality, processes can be optimized in different fields of economy, and improve the recognition

and guarantee of different rights. The World Summit on the Information Society advises to governments the importance of integrating more communities to ensure the universality of ICTs. Also suggest training and adapting learning processes to different cultures and languages, as well keep in mind the educational level of people. These processes of adoption should consider specific contexts in each territory and draw attention to specific opportunities for communities that choose to be linked to the information society (UNESCO, 2012).

In recent years, Colombia has had many improvements in information technologies and communications. Since 2010 ICTs connections have grown in 325%, showing a significant improvement in the coverage of infrastructure; there are currently 900 community internet points in municipal centers and about 5,500 community internet centers in rural areas (MINTIC, 2014). The main commitment of the Colombian government in technological adoption has been implementing strategies for generating capacities in digital literacy for vulnerable populations with courses of 30 hours and digital citizen projects seeking to develop office automation and digital skills for educators and public officials around the country.

However, like other national governments in Latin America, Colombia has been ineffective to address these adoption suggestions in their public policies. Most difficult has been those policies related with education, culture, health and citizen services. Other difficulties include the integration of different communities in the information society that poses challenges of territorial access, behavior, and governments and diversity of life forms. These difficulties are particularly complicated in Colombia because there are about 81 ethnic groups and 68 native languages spoken by about 850,000 people, some of them are endangered. As another example is the situation in the south of the country with the Carijona group which currently has only 30 speakers.

In face of these multicultural problems, in 2009 the state takes actions through legal means interventions of the Constitutional Court. As one action, forty safeguard plans were formulated for the development of cross-sectoral programs to include governmental offer with differential approach to different communities[1]. Similarly, in 2010 a law of native languages appeared seeking to ensure the recognition, protection and development of linguistic rights, thought their own traditions (MinCultura 2013). In 2013, another action was led by the Ministry of Information Technologies and Communications (MINTIC). This ministry created a portal called *In my language*, which tried to revitalize seven languages at risk of extinction. Unfortunately, this project lacked a consistent value proposal that would encourage a permanent use by different types of communities. As a consequence of lack of value, this website is idle, without funding, it has not generated new content, and it has had technical problems by not having specialized support of public bodies in the linguistic study. Also this platform has a contradiction; it was handled exclusively in Spanish.

The Digital Divide and One-Dimensional Approach

The Digital Divide is understood as the distance between individuals, families, businesses and geographic areas at different socioeconomic levels, in relation with their opportunities to access to information and communications technology, and the use of Internet for a wide variety of activities, reflected in a number of differences between and within countries

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[1] The Constitutional Court ordered the formulation of safeguard plans because of the high risk that Indigenous populations can have of being culturally or physically exterminated by the internal armed conflict.

(OCDE 2015).This king of gap has sought to reduce inequities in different countries through targeted initiatives to strengthen human capital by creating programs and platforms for digital literacy.

In contrast, some critics claim that digital literacy across platforms is quite limited and makes difficult the adoption of this technological system. This approach has a very low functional design as usually occurs from learning to use the hardware components, the applications and programs, search mechanisms and information available in electronic environments as an end in itself (Ferreira y Dudziak 2006). In Colombia, digital literacy and digital citizenship programs have been usually focused on urban areas, are taught in Spanish and search to provide skills in the use of ICT´s without a clear practical component, for example, much of the ethnics communities can´t access to these programs by territorial, cultural or economic constraints, so they can´t have regular access, or have interaction with their community or other communities. As result, they´re set in a passive player in the information society without the possibility to generate contents by their own.

Differential Approach

According to Donny Meerteens, the differential approach is a method of analysis that takes into account the diversities and inequities in our reality, in order to provide adequate care and protection of the rights (UNHCR, 2002) This approach is based on the basic principles of free exercise of rights, equity and recognition of the differences between population groups. In parallel, the importance of applying the differential approach to communication policy lies in the potential of ICT´s to increase the rate of diffusion of a wide range of technologies, applications, and platforms throughout society and the economy. Dissemination of information can be accelerated including health, education, financial services, electrification and high-yield agriculture. The rapid uptakes of ICT-based services are the key to achieving sustainable development goals by the deadline of 2030 (The Earth Institute 2015)

Nonetheless, the formulation of projects with differential approach is limited by structural constraints such as educational and linguistic imbalances, geographic dispersion, the multiplicity of forms of organization and the budget constraint that involves the articulation of different types of actors and interests. In Colombia there are different types of political representation in Indigenous communities that generally are immersed in making very slow decisions. The geographical complexity of the country makes differing interests of different communities; it makes difficult the articulation of interests for build constant cores for the demands of long term policies.

Similarly, the administrative structures of public entities on which rests the formulation of differential programs still have a poorly bureaucratic technology to face on these challenges. The organizations structures do not conceive specialized units to these issues, and usually the agenda is guided by individuals without sufficient technical preparation to formulate programs consistent with the reality of communities, or worse, is not a priority for many agendas, because ethnic communities have little visibility within accountability exercises.

Now, after having the context of the need to establish different communication policies and to observe differential limiting technological adoption, we will address the case of the Indigenous community Yanacona to deepen the case analysis in Colombia.

In southern Colombia, the Yanaconas lives in the department of Cauca, mainly in the area of the Colombian Massif. According to archaeological evidence is one of the scene of the oldest cultures of Colombia, settled in this territory more than 3000 years ago (Cabildo Mayor Yanacona 2011). Currently they are seeking a political process that involves recovering their identity through cultural, social, economic claim, since much of its customs and its people were exposed to the cultural and physical extinction in the eighteenth and nineteenth centuries. One of the main constraints in this process is set to only 8.6% of the 33,253 people speak their native language, which means that there is a latent risk of cultural extinction (Ministerio de Cultura 2011).

Otherwise, the Yanacona community has a traditional institution called the *Chagra*. The Chagra is a food, agro-based and health system based in the community interaction and relationship with the ecosystem, it relies on symbols and cosmogony for proper articulation of processes and serves as a space for dissemination and cultural preservation.

The Chagra has several phases. First, it start with a cycle of enlistment-based land clearing topsoil, dry land, burn dry biomass, ash generation and ground cooling; is accompanied by rituals to call the spirits of nature (Verschoor y Torres 2016). After the ground is cold they proceed to planting 7 days before the new moon phase (female cycle), there is paid with a mixture of ash and manure, which proceeds to sow different kinds of food, surrounded by plants and brokers medicinal plants that make pest control by odors, physiognomy of the stems and leaves, or by attracting beneficial micro-organisms for the garden. Subsequently, the community makes regular checks and manual eradication of weeds until harvest, this production can be for supply of a family who works or not in the Chagra, or for the community celebration called Mingas for the exchange of experiences, stories and ancestral heritage.

The Caquiona community indicates that the existence of the Chagra is essential to avoid cultural loss or displacements to new territories, for the reason that they believe that the production and life cycle must correspond exclusively to the Yanaconas, this production should not leave the Resguardo[2], and it should be distributed primarily to people who are not able to work (elderly and children), following different families of the territory, and adding different products to establish exchanges with other Chagras. Additionally, anti-inflammatory and antiseptic plants serve as the main input for the prevention and treatment of the most frequent diseases in the community. The Chagres have life cycle of over 10 years, then it turns to perform the enlistment process of the earth.

In this figure the importance of culture in socio-economic relations is emphasized. Children in their early days go with their mothers to harvest in the middle of different kind of crops, where collectively sing songs that claim to life in Chagra and gratitude to the elements. The social interaction of the Chagra is given through the exchange of products of different thermal floors; there food, drink and medicines from warm and low mountain areas are changed with those in the upper area of the massif. Unfortunately, this institution has been gradually replaced by new generations with individual production practices such as planting monocrops, retailing production and other economic activities in different disconnected households. This change in the pattern of production and access to food has

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[2] They are collectively owned territories of Indigenous communities, are inalienable and indefeasible. They governed for handling this and his inner life by an autonomous organization covered by the Indian courts and its own regulatory system.

created dependence on cash income generation for the purchase of agrochemical inputs, purchase of supplies and for payment of logistics for the distribution of crops to nearby cities.

Caquiona and internet community centers

In Caquiona, a small Resguardo Yanacona located in southern Colombia has been characterized by the absence of public goods. As found in an area historically little prioritized by the national government, so the communication of this Resguardo with other communities it has been scarce. The land connection is limited because the roads have not been built in full, telecommunications antennas are scarce and transport systems are not formalized, depending on one bus to enter and leave its territory.

One way to generate connectivity for remote communities of the urban centers in the country was through the internet community centers. These spaces were thought to bring effective access to Internet with the strategy of linking technology infrastructure to places such as schools or other public or community facilities for this administration and care. Despite this, the underutilization of these spaces is one of the most recurring phenomena in ethnic communities, as their communication habits are rooted in basic processes by representation of symbols, sounds and characteristics of their native language words, beyond more than 90% of its inhabitants use the Spanish daily. In Caquiona were supplied by the national government with three of these centers called Vive Digital Kiosks.

This kind of technological breakthrough has been marked by having few context analysis and feasibility, even the various effects they have had in different rural and ethnic populations are unknown. For example, in Nepal the role of women in ICT subjects had adverse outcomes since the technology was an exclusive subject of men, and access was given to their educational level. There cases of resistance to the entry of women to the internet community centers linked to violence issues of different types (Shresta 2007) .This type of dynamics can affect a new form of exclusion beyond the digital divide; this occurred if programs are not constantly monitored. Consequently, the ability to generate value of this infrastructure goes along recommendations in differential public policy, organizations such as the International Institute for Communication and Development urges governments to work with Indigenous organizations to establish structures policy to allow Indigenous peoples culturally learning opportunities through the use of ICT (ICCD 2004)

Dual contents for traditional institutions, Digital Chagra

Given this scenario, an approach is proposed, Dual Contents. This approach sees the possibility of generating communication projects with the Indigenous Resguardos where economic and cultural processes are complemented by creating their own contents, subsequently to take account of traditional scenarios of association and assembly for playback. It is an alternative that emerges through a shared vision of value between communities and government, where populations will design and implement their own content accompanied by government authorities and institutions specialized in linguistic, technological and cultural studies.

Caquiona were evident structural constraints such as low levels of education, pedagogical processes and the lack of own information production for a process of adoption of ICT. A 46% of people in this Resguardo claim to have management skills of ICT, and this percentage 86% claimed to have been trained in school. This means that have not been

contemplated trainings through the framework of technological adoption, but under the concept of computer literacy, which emphasizes basic procedures for using tools, but without a clear functional context. In addition, 80% of these people say they have retaken no training in the last 5 years.

Some critics believe that ICT training that is given to learning a specific technique but unrelated to the development of society in general, implies resistance in ownership; a lack specific plans to adapt educational and governmental institutions for technology. Authors like Somekh and Mavers claim that the school has not been able to adapt to changes in patterns of life as a result of ICT, as is the case with several digitized processes out of school in the world of today (Somekh y Mavers 2003).

Digital Chagra for Yanaconas mean revitalizing the use of this traditional institution and generate technological adoption processes if contents are generated from the Resguardo. Use the ancestral institutions, the symbolism and everyday practices as element of diffusion and recovery of traditional knowledge is a bet that allows spaces of communication for constant use, and generates less resistance in the adoption of technological systems; the incursion of new ways of learning should put on the map. Processes of adoption by self-learning methods have shown great results in countries like India, where educational resources and human capital for education are limited. Several studies have shown that learning in public spaces can be done in a disruptive manner, or through self-instructional methodologies (Sugata, Dangwal y Chatterjee 2005)By his side in Colombia by 2015, almost 42% of Colombians said to have acquired these skills in managing ICT self-taught (DATEXCO 2016).

This type of content has the ability to link different types of communication channels. The articulation of different channels like the cell phone infrastructure and the internet community centers facilitate comprehensive technological processes of adoption and would be less dependent on the operation and maintenance of a single type of communication system. Also, could leverage the strength that Colombia is one of the countries with the highest number of formal Indigenous stations on the continent. Currently in Caquiona there are three community centers Internet, a community radio station, more than 71% of the community has cell phone and 31% listen daily the radio.

The articulation of these types of technology is complementary to the economic processes of aggregation of demand and supply. The briefing to different individuals of guards in the process of Digital Chagra would reduce information asymmetries, processes and generate better coordination and exchange of goods and services. Currently, radio communicators in Caquiona make calls to gather small productions, provide information logistics in transport, health and education; this allows them to reduce transportation costs significantly.

Dual contents for Chagra would focus on an issue of basic training since the creation of contents by chiefs and older men of the Resguardo, those with the most complex ancestral and cultural techniques. These contents would be available in the internet community centers, which also serve to logistics in the production and distribution of labor, supplies, distribution and seed conservation and management of surplus for exchange with other Chagras.

Implementation challenges for Dual Contents

It should be recognized that the implementation of a differential communication strategy is not an easy task. According to the National Indigenous Organization of Colombia, the country has 102 Indigenous communities, 18 are at risk of extinction (ACNUR 2016). In addition, geographical, economic and political of each of these communities features are completely different. For example, the Yanacona community is characterized by having a transition to a traditional farming community, other people have settled in the outskirts of urban centers, others in scattered rural areas and some have declared in voluntary isolation.

Also, the formulation and implementation of dual contents, involves a challenge to the traditional structures of government. Determine which traditional institution will be accompanied by an ICT component involves a system of governance within Indigenous communities to ensure effective implementation of the processes of social adoption. For Yanacona community, its system of government is part of one of the 5 regional Indigenous organizations in the country called Colombia Regional Indigenous Council (CRIC). These organizations provide guidelines in different areas of cultural resistance and have defined the political and social roles within the structure of decision-making, so any decision must take into account authorities of other communities and regions. Even so, these structures are also an organizational opportunity to adoption, as there are specialized divisions on the issue of own communication; in these divisions are given ongoing training on communication and ways of preserving traditional knowledge.

The development of technology plans for Indigenous populations should be made in concert. An improper use of these technologies can be detrimental to traditional knowledge of communities due to the permanent exhibition of exogenous contents that have the potential to accelerate the incorporation of new social practices. Thus, it is true that closing the digital divide plays a transversal role in economic development and inclusion of a nation; this can lead to unexpected consequences if there is no support and constant improvement by the government. Communities must take an active role in generating own data within the information society and monitoring of the processes of adoption.

Organizations has highlighted the importance of exchanges knowledge systems as potential sustainable development. The IPBES has included Indigenous frameworks for ecosystem services and land management for adaptation and climate change mitigation. Dual contents betting on information transfer for traditional systems of food production and land use, is configured as an opportunity to avoid recurring displacement of these communities to other geographic areas. Also to recover traditional Indigenous medicine to reduce public health risks. For Indigenous communicators and local authorities is an opportunity to make visible the processes of social and political resistance in their communities.

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