ICT AND DEMOCRATIZATION OF EDUCATION IN RURAL CONTEXTS

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Abstract

This paper presents an analysis of the relationship between information and communications technology (ICT) and democratization of education in rural contexts. This text is part of the research “Technology policies as a strategy for the inclusion and development of communities in the rural area of Usme in Bogotá”, which analyzes the impact of technologies’ public policies on the development of communities located in rural areas of Bogotá (Colombia). The methodological approach involved the documentary review of the texts of public policy: on the one hand, those that promote the development of the rural sector and, on the other, the national technology policies. This approach shows that growing technological infrastructure and democratizing education are strategies to achieve development in the educational context of rural peripheral areas to Bogotá. Then it's a priority for the objectives of the national policy, which affirms, from a deterministic perspective, that the inclusion of ICT in the education sector leads to the improvement of processes and the reduction of gaps between social groups.

Keywords: Technology policies, rural development, democratizing education, ICT.

1 INTRODUCTION

This paper makes reference to a research named “Technology policies as a strategy for the inclusion and development of communities in the rural area of Usme in Bogotá”, whose objective is the analysis of the relationship between ICT public policies and the development of rural communities in Colombia. The aim of a first stage was to describe the logic of the massification of Information and Communication Technologies, ICT, in peripheral areas, related to the economic and social development. The starting point of the analysis is the technological policies in Colombia, which affirm that there is a direct variation between ICT infrastructure expansion and development. The above is based on the ICT deterministic view, by which ICT is read as a determining factor in the fulfillment of Economic and Political objectives, aligned to the discourse that aims to reduce the digital divide.

In the context of Knowledge Society, UNESCO [1] affirmed that information is an essential factor for development. From this perspective, ICT constitutes the infrastructure that allows the traffic of the information, therefore, the material base of the new informational society. CEPAL has affirmed that the ICT represents an important possibility for the development goals in Latin America, since they facilitate the access to the knowledge and to the relevant factors for the new economy and the productive activities of the global society. In the context of the increasing importance of the ICT in the multiple dimensions of practical life, the Government exert a control on the technologies, with the objective of reproducing its deterministic speech, as well as the informational paradigm, base of the contemporary society, throughout the law.

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In that context, a particular dimension of the relations between ICT and development, has centred on democratization of education, when considering a strategic process for the decrease of the inequality and the enlargement of the social profits to sectors of the population that are excluded or with low access to them. ICT acquires a particular importance in this process, since they suppose a mechanism to articulate technology, education and development like structural factors of society. The ICT make...
possible the democratization of education when expanding the scopes of the educational system to sectors traditionally excluded of its profits, as it is the case of the rural contexts. The democratization of education translates a possibility to distribute the educational resources of a more equitable way [3], at the same time, approach the population to the possibilities of development, provided for informational society.

2 METHODOLOGY

The research is based on qualitative approach, which pretends to describe the relations between ICT and democratization of education; this concept thought as a dimension of the inclusion and development process of rural communities. It has proposed to establish the links between the dimensions of the phenomenon studied and describe the dynamics of its production from the historical perspective in order to raise alarm concerning to this point. In a first phase of the research, it was concentrated on the processes of production of the technologies' public policies and the impacts in the democratization of education. To develop this aim, a documentary review about public policies in Colombia is proposed. First of all, to know any aspect about the rural development and, secondly the bases of the ICT massification, in which it crosses the subject of the education like analytical category and relevant dimension of the process of democratization of the Colombian society. The documentary review, used as a research method, allows to identify the characters and the genesis of the articulation process between the variables proposed, in this case, ICT and democratization of education in rural contexts of Bogota, Colombia.

3 RESULTS

In the first phase of the research work, an approximation is made to the public policy texts related to the national technological policy. It is tried to show that the technological massification, in educational contexts, equivalent to the expansion of the technological infrastructure in education, points to both objectives: development and democratization. It can be stated, in advance, that the expansion of educational coverage is a central task of public policy in Colombia, which appears aligned with the development objectives that affirm education as a possibility for economic growth and social development.

For several decades, the relevance of education as a determining factor of social mobility has been affirmed: “the role of education in promoting social mobility is among the central issues in contemporary sociological and political debate” [4]. Education is considered the main mechanism for achieving development goals, as stated by UNESCO, “education is central to the realization of the 2030 Agenda for Sustainable Development Goal” [5], becoming a strategy for achieving the objectives proposed by the United Nations, such as the eradication of poverty and the scope of welfare for the world population.

Assuming that education is a mechanism for the scope of development, public policies in Colombia began to take place around the expansion of the scope of the educational system, as well as the policy of expanding the coverage of the Plan Sectorial 2002-2006, called “La Revolución Educativa” (Educational Revolution), proposed as a central objective to expand the coverage of the education system from 82% to 92%, with the increase of available quotas in the school system, that is, from the schooling strategy of sectors of the population that they did not have access, while reiterating that "education is a primordial, strategic, priority, and essential condition for the social and economic development of any human conglomerate" [6].

In the case of the rural sector, the Ministerio de Educación Nacional (Ministry of Education) stated that one of its most important problems was educational coverage: "the problems of the rural sector in Colombia are largely caused by low coverage, lack of quality and relevance of an educational service that does not respond to social needs and that is not an agent of transformation" [7]. In this same document, it was stated:

In the Colombian rural sector, the isolation and use of child labor for the generation of family income, as well as the low level of education of parents, have a negative impact on children's access to school. Attrition and repetition rates are higher in rural areas than in urban areas, as well as the number of children that has never been served by the education sector. [8].

Then, the indexes of coverage of the educational system in the 2000s were comparatively lower in the rural sector than in the urban average, close to 30% for the rural sector compared to 65% for the urban
sector. The efforts of the State, during those years consisted in expanding access to the educational system for groups not served by it. Thus, in the 2006-2010 Development Plan, the expansion of coverage was proposed as a goal in the different educational levels: primary, secondary and university. It is stated in said document:

As a result of public expenditure efforts, in the last 13 years, the average years of education of Colombians older than 15 years increased by 1.5, from 6.4 in 1992 to 7.9 in 2005. However, the years of education reached by the Colombian population is still low. On the other hand, during the 2003-2006 period, slightly more than 1.4 million new places were generated in basic and secondary education, which allowed reaching a gross coverage rate of 91%. The results in urban areas are significantly higher than in rural areas: while in 1992 the urban population achieved an average of 7.4 years of education, in rural areas only 3.8 years were achieved; for 2005 the difference remains, being 8.9 years in the urban area compared to 5 in the rural [9].

With the creation of the Ministerio de Tecnologías de la Información y las Comunicaciones (Ministry of ICT), MinTIC, created in 2009, by virtue of Law 1341, it was possible to establish a regulatory framework for the promotion and massification of ICT and, particularly, the strengthening of the protection of the citizens’ rights. According to this aspect, an embedded speech is helping the idea of the expansion of the technological infrastructure with issues related to development and democratization. The reference to citizens’ rights allows to identify the relation presented within the context that relates technologies and society, evidencing a discourse related to democracy. The Article 2 of Ley de TIC (ICT Law) say:

Research, enhancement, promotion and development of Information and Communication Technologies are a State policy that involves all sectors and levels of public administration and society, to contribute to educational, cultural development, economic, social and political and increase productivity, competitiveness, respect for inherent human rights and social inclusion [10].

In this way, the promotion of ICT complies with a series of economic and political objectives and the execution of the policy leads, from the logic of the reduction of the digital divide, to broadening its scope in areas located in urban and rural peripheries. The expansion of technological coverage appears as a central task of public policy, in reference to indicators of technological penetration, this index is measured in relation to variables such as use of a computer or Internet access, in certain time ranges.

The data presented in the Boletín Técnico del Departamento Administrativo Nacional de Estadísticas (Technical Bulletin of the National Administrative Department of Statistics), show that "in the year 2017 for the national total, 44.3% of households owned a desktop, laptop or tablet; 52.1% in the headers and 14.7% in populated centers and dispersed rural "[11], which expresses an inequality in the use of ICT between rural and urban areas. The data constitute a diagnosis for the alignment of public policy in terms of expanding the coverage of ICT, as a strategy to motivate the development of the rural context.

Given the indicators of coverage, particularly in the scenario of democratization of education, the policies designed by the MinTIC focused in the following years on strengthening existing strategies for technological implementation in educational institutions, such as Computadores para Educar (Computer for Schools), and other recent as Vive Digital (Live Digital). Computadores para Educar is defined as "the National Government Program with the greatest social impact that generates equity through Information and Communication Technologies, promoting the quality of education under a sustainable model" [12] and specifically consists of the delivery of computer equipment to educational institutions in the country, mainly in the public sector. Likewise, the program promotes the training of teachers in digital and technological skills. On the other hand, Vive Digital, was in force until 2018, based on the Plan Vive Digital 2014-2018, public policy of MinTic aimed at reducing poverty, generating employment and developing solutions for Colombian problems, through strategic use of technology [13].

Both programs have as main niche of application the education sector, while this is presented as one of the strategic scenarios to mobilize development, hence the affirmation on the educational democratization that represents expanding access to the system through technological use. From the processes of technological implementation, an official discourse is developed that reaffirms the transforming capacities of ICT. The document Evaluación de los Programas del Plan Vive Digital para la Gente Financiados con Recursos del Fondo de Tecnologías de la Información y las Comunicaciones (Evaluation of the Programs of the Live Digital Plan for People Funded with Resources from the Information and Communications Technology Fund) affirms not only the increase of computer equipment in educational institutions as a result of the Computadores para Educar, CPE, but an impact on problems related to education:
The results of this research indicate that the EPC programme is decreasing the dropout rate, increases the scores of standardized tests and increases the likelihood of entering higher education. So, a student who has been exposed to EPC achieves a decrease in the likely to drop out of 5.2 percentage points in the second year and 4.5 percentage points per third year. The program achieves increases in the “SABER 11” of 4.6% of a standard deviation to the fourth year of, and 14.6% of a standard deviation if the headquarters has 8 years of profit. Finally, it is found that the program increases the probability of entering education by 2.6 percentage points if the student graduated from a high school with two years of profit. [14].

The official discourse of MinTic argues that the implementation of computer technologies and teacher training programs, directed from public policy in ICT in Colombia, generate benefits in the education system, not only in terms of access, but in educational quality, which results in the democratization of education, therefore, in the access to the benefits of the educational system by citizens. From this logic it is possible to affirm that the increase of the access to computer equipment in the educational centers of the rural sector, as shown in Chart Number 1, translates into democratization of the education of their populations, therefore, it makes possible the Extending the enjoyment of benefits derived from the system.

![Chart Number 1. Access to computer equipment in educational centers. Source: Departamento Nacional de Planeación, 2018.](image)

Within the framework of the Política Pública para la Transformación Digital de las Localidades del Distrito Capital (Public Policy for the Digital Transformation of the Localities of the Capital District), the need to strengthen the connectivity of the rural border has been highlighted, that is, the peripheral sector of the city of Bogotá that includes rural sectors of towns such as Usme, Ciudad Bolívar and San Cristobal. Given the rural nature that represents problems for the implementation of fixed infrastructures -based on wiring-, it is suggested to opt for mobile solutions that allow to reduce the marked digital gap of the rural sector, likewise, it is recommended to expand the capacity of the wifi network in schools and community centers and increase the provision of computer equipment [15]. It is evident in the various mentioned frameworks a recurrence to aspects related to the democratization of rural educational contexts, based on ICT implementation strategies, suggesting benefits in terms of exercise of citizenship and access to rights, as results of such proposals.

This relationship implies a deterministic perspective on technology, since it assumes as a lifeline the problems presented by Colombian society, among which, the reality of the rural sector is one of the most serious, considering the permanence of poverty rates, inequality and lack of access to social, material and cultural benefits, despite the availability of environmental and agricultural capital, necessary for sustainable development. Some authors suggest that policies to incorporate ICT in education become dominant in their registration to global political logics, based on a primacy of the neoliberal economic sphere:

To respond to poverty and structural social exclusion now exacerbated by these economic policies and to increase productivity, the educational rhetoric of democratization updated in the discourse of access to education. For this purpose, measures are taken to train populations in the skills and technologies rewarded by the labour market of the knowledge economies. Hence, education is conceived as a solution to social exclusion and as a mechanism for social and economic inclusion [16].
In this way, a debate on the real impacts of the implementation of ICT infrastructures in the democratization of education and in the development of the populations of the rural sector, as a particular feature of Colombian society, is open. From the official position, the discussion is closed in the affirmation that the incorporation of technologies necessarily implies an improvement of processes and greater access to benefits such as education, considered as a fundamental right, from the framework of the current dominant discourse. A next stage of the research will address broader reflections on the proposed relationships between ICT and Educational Democratization in Colombia.

4 CONCLUSIONS

This text has presented a first approach to the analysis of the relationship between ICT and Democratization of education in Colombia, from the basis of technologies' public policies, promoted with the creation of the Ministry of ICT, but focused on a deterministic technological perspective which seems to affirm that the simple incorporation of technologies in the different social areas, such as education, necessarily results in the access of the populations to the social benefits, which are the result of the educational process, these are the relevant and quality education, the expansion of access, or, the coverage of the education system and the attention of minority populations from the framework of inclusive education.

It is not evident that the incorporation of ICT in the educational contexts of the rural sector in Colombia, lead to the solution of their current problems, reflected in the recurrence of poverty and inequality, among other phenomena, although it is possible that an appropriate technological policy, can contribute in an important way with those purposes. Meanwhile, we can affirm the presence of a dominant discourse that affirms that education constitutes a fundamental scenario for the mobilization of social and economic development, in such a way that its democratization contributes in the reach of those objectives. It is necessary to investigate, from the approach of the communities and the multiple actors involved in the process, their perceptions about such relationship with the objective of proposing strategies that demonstrate the way in which the democratization of education can benefit from ICTs and, at the same time, point towards development.

REFERENCES


