# Impact of ICT towards the deepening and generation of knowledge by English teachers in 98 elementary public schools Atlantic Department, Colombia.

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**Introduction**

This work aims to promote a better use of ICT among English teachers from public elementary schools in the Caribbean Region of Colombia, for the deepening and creation of knowledge.

The obvious reality in the educational context of the Caribbean Region is the lack of knowledge that elementary school teachers have in terms of the use of technology and its importance to support educational contents. In this situation, we are proposing, as a central objective, the analysis of ICT skills aimed at deepening and generating knowledge in English teachers of public elementary schools in the Caribbean Region.

**Research Questions**

-     What is the profile of English teachers from public elementary schools, in the Caribbean Region of Colombia, in terms of their use of ICT?

- What is the perception that English teachers from public elementary schools in the Caribbean region of Colombia have about the utility and implementation of ICT for the deepening and knowledge generation within the required contents, and in order to develop their pedagogical practices?

- **Problem Statement**

- In the case of ESL teachers, authors like Riascos, Ávila and Quintero (2009) emphasize that these teachers need a set of knowledge, expertise, skills and individual characteristics that allow them to perform actions in a certain context. In other words, they need the appropriate competences to do this educational work with their students. Some of the skills required by these teachers, based on the observations of the authors mentioned above and the Ministry of National Education of Colombia (2008) are: communicative competence, linguistic competence, pragmatic competence and sociolinguistic competence.

- Based on the data obtained by Bastidas and Muñoz (2011), according to the standards set by the Ministry of Education of Colombia (2009), and based on the Common European Framework, 72% out of most teachers involved in education barely reaches the A2 level in English proficiency (The basic level in the English language), even though a B2 level (high superior-intermediate level for an English teacher) is currently demanded.

- **Justification**
- ICT are essential resources in education, however, their implementation in the educational context is a process that involves acceptance, learning and adaptation, as many studies say.
- In the latest report of the "Plan Avanza" (2007) and in the study of Sigalés and others (2008) on the implementation and use of ICT in Spanish schools of Elementary and Secondary Education, some data are presented and give evidence that there is an acceptable level of provision of technology in schools, but "the presence of Internet as a tool for innovation in teaching and learning processes, as well as in the relationships among the school community members is minimal. Teachers prefer to use other resources and other tools to work." (Sigalés and others, 2008, p. 219).

- **Methodology**

- The methodological guide for this project is the project funded by Colciencias under the call 578 with the title: "measuring the impact of efforts to promote ICT in the education sector in the Colombian Caribbean region." Cases Barranquilla and Cartagena, Universidad del Norte, Technological University of Bolivar and Colombia Digital Corporation.
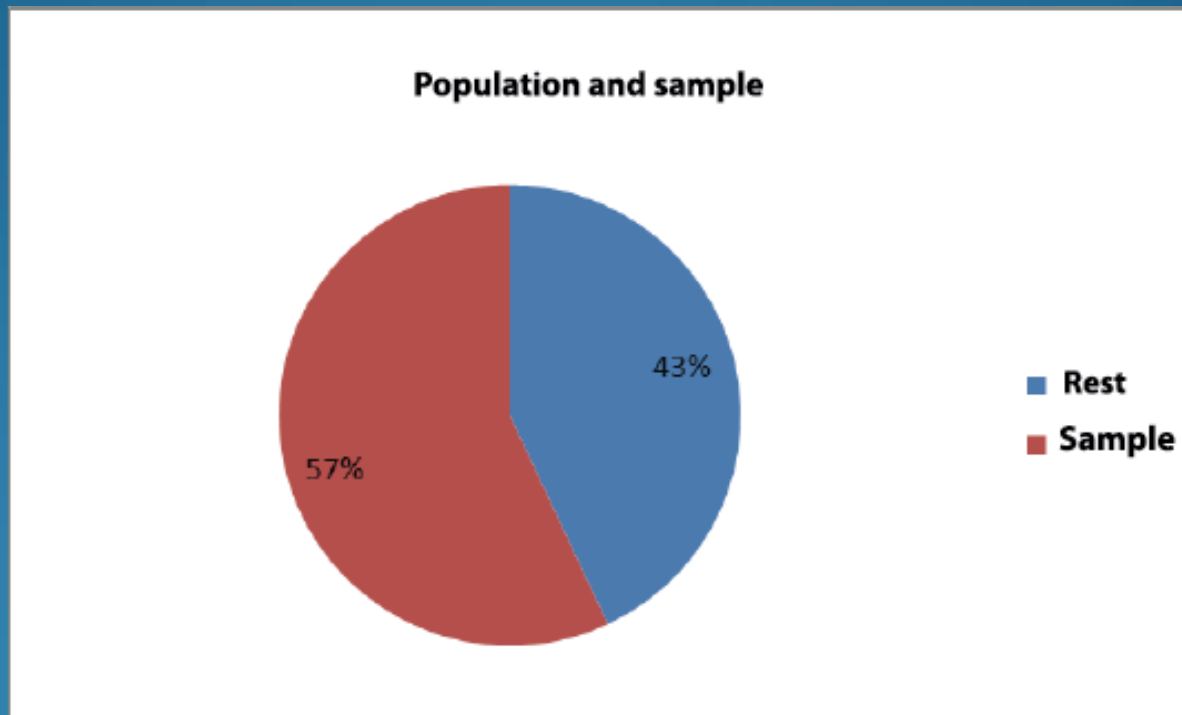
- Type of Research.

- The project is framed within the empirical-positivist paradigm and is also descriptive. It not only seeks to establish the traits that characterize the perception of teachers on the issue raised here, but also the factors that are affecting them, inside and outside the classroom; besides, looking for the identification of a set of elements that impact on this perception.

- Area of study

- Since there is no reliable data concerning the number of English teachers from public schools in the Department of Atlántico, the study population will build the general data that exists from the Ministry of National Education in 2010, in terms of the public schools registered in the Secretaries of Education in the Department of Atlántico, Barranquilla, Soledad and Malambo, which means 313 schools that meet these characteristics. These establishments provided education services for 430.849 students.

- Study Population and Sample.

- In the process of gathering the information, we took the data from the project on which this thesis is based, starting with a sample of **98 schools out of 172 public schools**, considering the cluster sample design, stratified in three stages (Secretary, Zone and Central Office) with proportional allocation applied at the beginning. The selection of these institutions, while maintaining the sample design initially taken, resulted in finding English teachers to fill out the survey since they were already in the school and voluntarily accepted to do it, during the fieldwork. Although the overall sample considered for the general collection of data from the project funded by Colciencias, and which is the base for this thesis, had a confidence level of 95% (confidence level = 0.5) and a margin of error (e) of ± 5%; the subsample that was considered in our case had a confidence level of 92% and a margin of error (e) of ±% 8; which, while not optimal, is in the sampling margin tolerated and widely accepted in social sciences.

- We collected data on the municipalities of the Department of Atlántico, which has a population of 243 bilingual teachers spread among the public schools of each municipality. The instruments used for the quantitative method were printed surveys and at the end we used the SPSS statistical software for data mining.
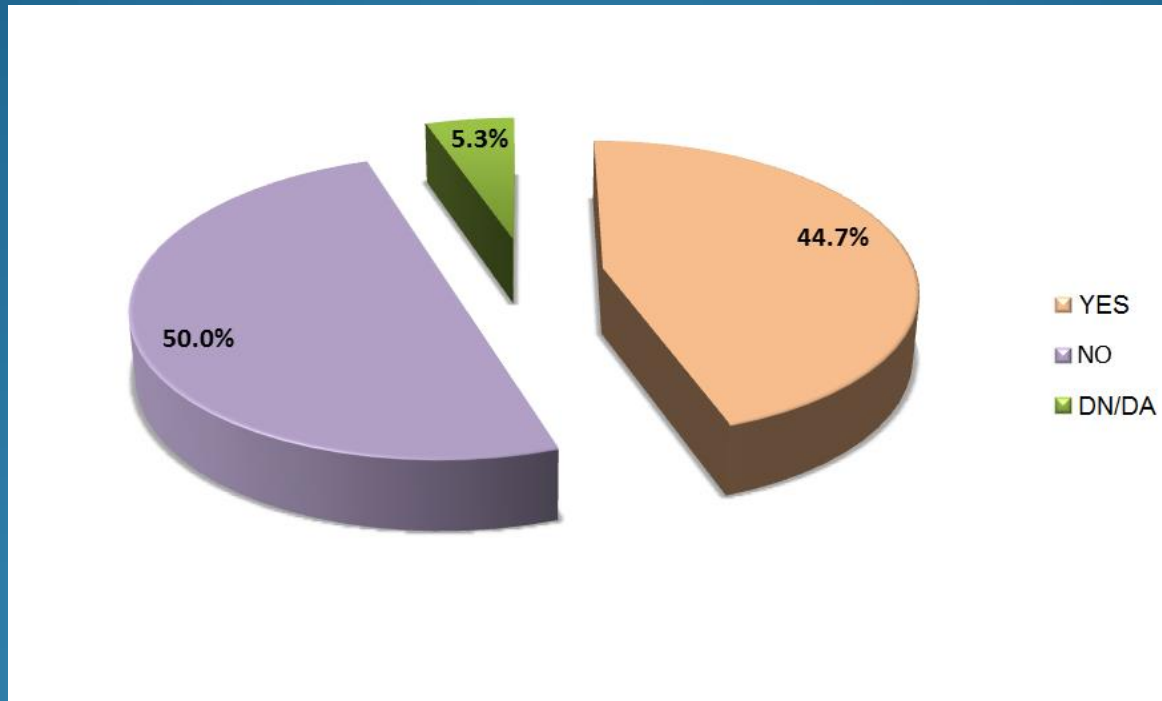
# Figure 1. Population Research



5.5 Applied research techniques

- **Analysis of Results**

- Identify the profile of English teachers from public elementary schools in the Caribbean Region of Colombia in terms of their use of ICT.

•**Graphic 1. Profile of elementary English teachers in terms of their use of ICT**.



• Source: prepared by the author.

- The 44.7% out of all the teachers surveyed has never attended an ICT training course during the last year; 50% has actually attended a course, and 5.3% does not know about it.

- Out of the teachers that have attended a training course on ICT use during the last years, 30.6% has attended short term training courses and/or programs (of one semester or less); 28.1% has attended seminars and conferences; and 13.2% has obtained some Graduate degree (Specialization, Master, or PhD.).

# Graphic 2. Training courses followed by the teachers
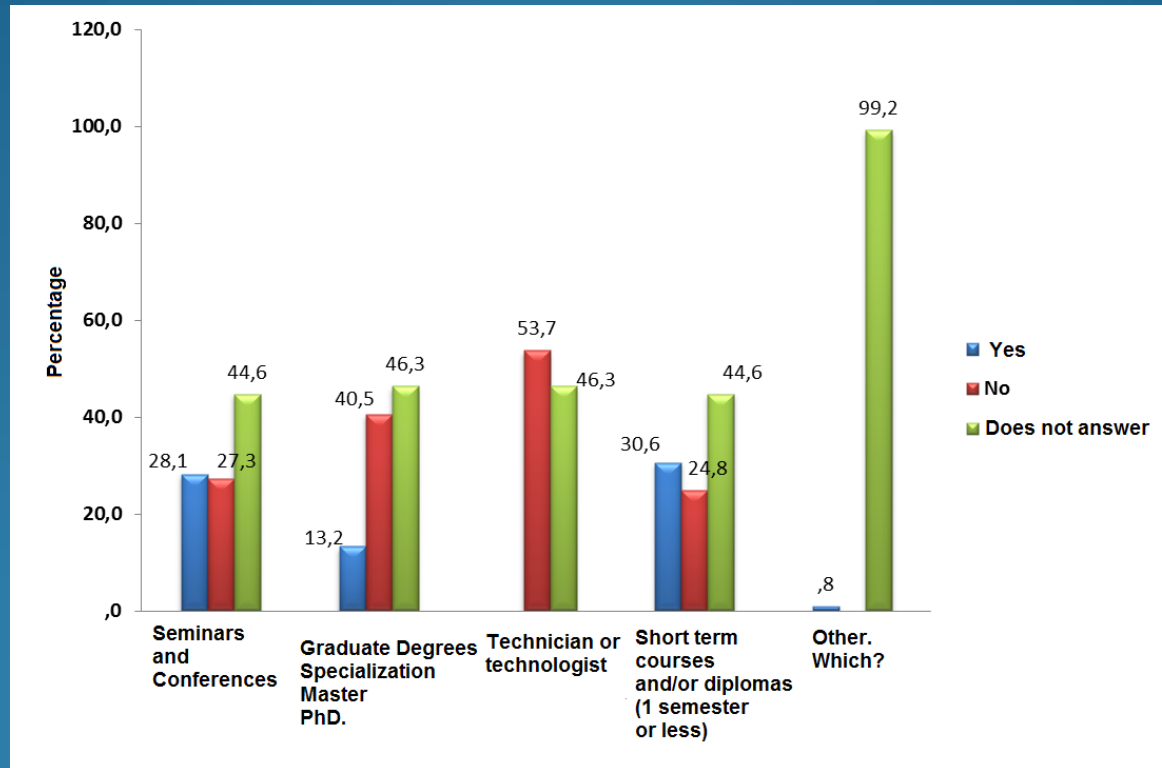


Source: Prepared by the author

- Identify the perception that English teachers from public elementary schools in the Caribbean region of Colombia have about the utility and implementation of ICT for the deepening and generation of knowledge:
- Find and select information using different ICT tools and sources such as search engines, virtual libraries, repositories, etc., with a 61.78%.
- Communicate with others using ICT such as via email, chat forums, text messages, etc., with a 60.9%.
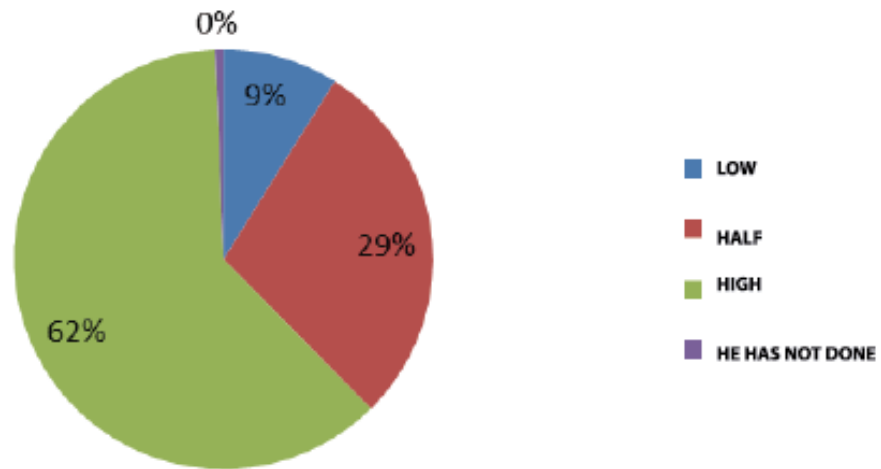
Figure 5. Communication with others using ICT
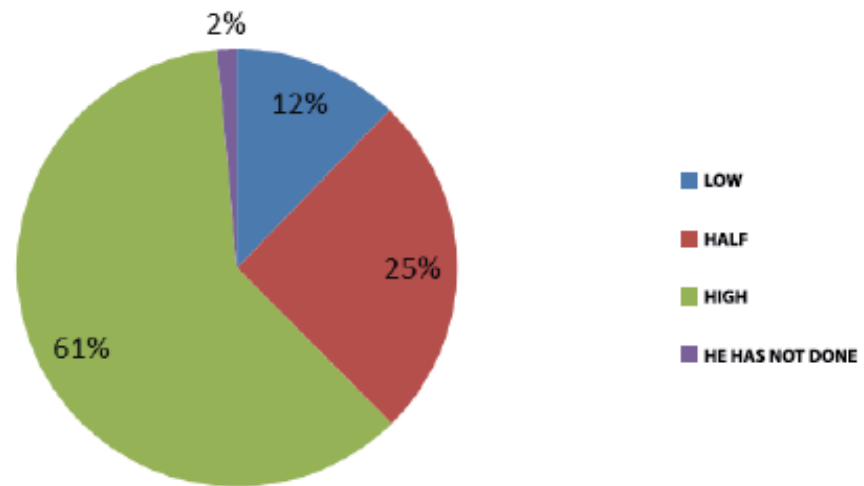
Source: Prepared by the author.

- In the evaluation of teachers' performance, professional growth and leadership, we proposed different options so that they can identify which is more adjusted to their profile. The results show that approximately 65.7% inquire and reflect on their use of ICT, considering the learning needs of their students. In the same way, there are options in which the results are higher, as shown in the table below:

- This reveals that the main stage of the teacher to teach educational content, supported by new technologies, they are the computer field, limiting the time and curriculum flexibility.

# 6 .The features that characterize the use of ICT in teaching practices.
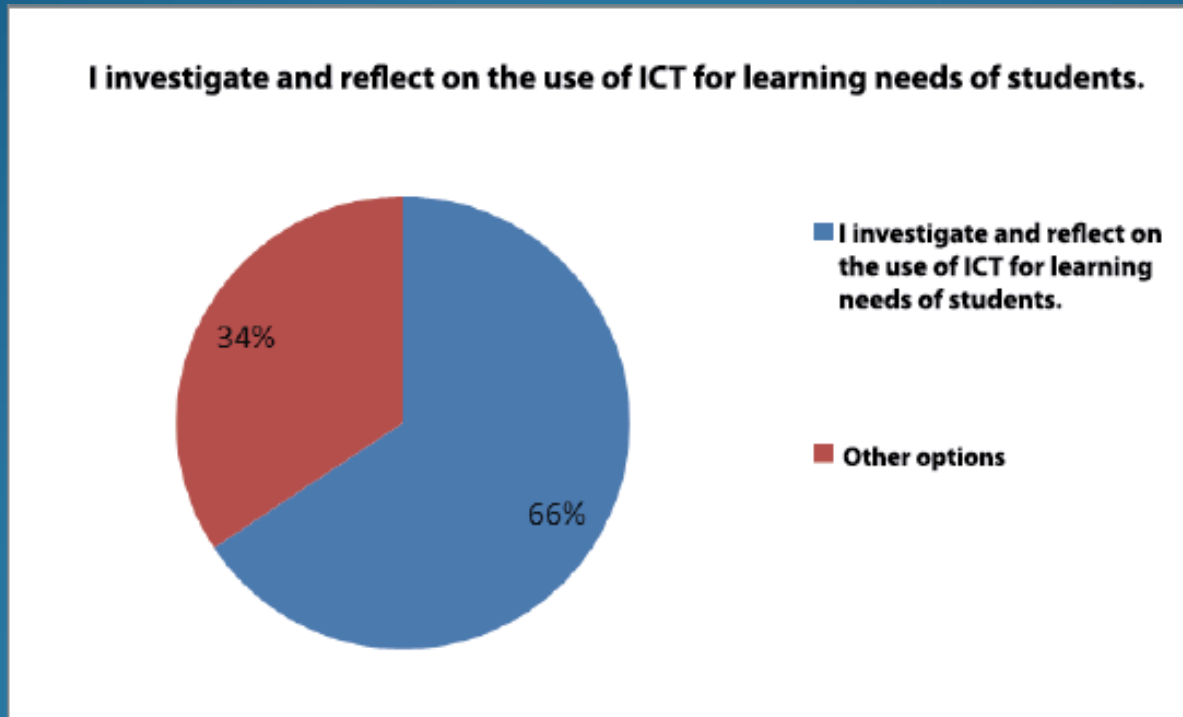


Fuente: Elaboración propia

- **Conclusions**

- Teachers are aware that ICT is key resources within the current educational process and can support teaching and learning of second languages, however, the lack of knowledge about the potential of these tools makes them difficult to teacher's didactic application in the classroom.

- The Fieldwork shows us that the Department of the Atlantic level, teachers are not generating new knowledge, that because they did not participate in the construction of research projects supported by technology. Teachers mostly use ICT tools to search for information for their educational content and not in the sense of strengthening the research process for the development of knowledge projects.

- Of the findings in the investigation, it appears that low levels of professional training for teachers have pedagogical education; responding to reasons of desertion, disinterest and ignorance of pampering, likewise, know ICT public policies to support the use of technology in teaching skills. Also these low levels of preparation, are in conjunction with difficult access that teachers have the application of these postgraduate studies, as standards in examinations regulated by the Ministry of National Education and the requirements of the scholarships offered by the State Colombia, have a very high level of knowledge, ie, that such tests are performed based on international standards, where education levels are higher.

- 'Another unique aspect of the research is how the teachers lack of knowledge about the use of ICT in mobile devices, which, is difficulty working their educational content, on the other hand, some libraries do not have adequate infrastructure so that teachers can search the digital educational content and make appropriate use of technology in relation to the centers of public Internet, they are relatively expensive and are not equipped with the necessary infrastructure for the development of their work, hence, the option of working from home becomes more acceptable, in the sense that teachers adapt their equipment to the needs of information and knowledge, and can work independently from home.

- **References**

- D Bonilla, C. Rincon, L. Aldana Rodriguez et al (2006) education on the FTA, University of Santo Tomas de Aquino, Accounting, Bogota DC (Pp.8-10)

- J. Bastidas, G. Muñoz, (2011) Foundations for Professional Development of Teachers of English, SabBartolome Educational Institution, Cordoba- Nariño (pp.20-49).

- Llorente, C and Cabero, A (2009). Development of an Instrument on ICT skills in college students. Media literacy and digital cultures. Paper presented at the Euro-Iberoamerican Congress ATEI 2010. Sevilla. University of Seville, Spain.

- Mejia, N and Puche, L (2008) ICT Knowledge Generation: Case Uniguajira. Http://www.virtualeduca.info/ponencias2013/113/GeneracindeConocimientosenTICCasoUNIGUAJIRA.docx recovered.

- Ministry of Education (2005). Colombia bilingual ./^/ board (37). Retrieved from http: //www.mineducacion. gov.co/1621/article-97495.html.\
- Riascos S, C, G Maria Quintero C., et al (2009) ICT in the classroom: perceptions of university professors Faculty of Management Sciences, Universidad del Valle, Cali, Colombia. Magazine Education and Educators. vol. 12 No.3 Chia

- Sigalés, C., Mominó, JM, Meneses, J. and Badia, A. (2008). The integration of the internet in Spanish school education: present situation and future prospects. Barcelona: UOC. Recovered from http://www.fundacion.telefonica.com/debateyconocimiento/publicaciones/informe_escuelas/esp/pdf/informe_escuelas.pdf -

- UNESCO, (2008). ICT competency standards for teachers.