

TECHNOLOGY INFORMATION MANAGEMENT IN PUBLIC SCHOOLS OF PIAUÍ-BRAZIL

Francisco Coelho Mendes¹

E-mail: coelhomendes1970@gmail.com

Magnólia Lima Verde Coelho Mendes²

E-mail: magnolialvcoelho@gmail.com

Tamirez Dornelles Pires Grammatikopoulos³

E-mail: tami_dornelles@hotmail.com

ABSTRACT

This article has the objective to present the general management of the Educational Technology Center of the 8th. Manages Regional Education (CTE-MRE), with head office in Oeiras, Piauí - Brazil, in the period between the years 2011 and 2014. For this, the following specific objectives were developed: Identify research contributions made by institutions higher education (IHE), and the introduction and information management in the Brazilian educational sectors; Characterize how the National Educational Technology Program (ProInfo), based on the applicability of Information and Communication Technologies (ICT) in the public education system of schools and the implementation of Educational Technology Centers (CTE) in Piauí; Identify the perception of public servants of the 8th. MRE Piauí on the insertion of educational technology with the state elementary schools. The methodology used was the qualitative research with a quantitative basis, appropriate to measure the opinions, attitudes and preferences of the participants. Using the data collected through literature review, document consultation and questionnaires, it's noticed that ICT has facilitated the development of processes and activities in public education management.

Keywords: *Information Technology; Public Administration; Manages Regional Education.*

1. INTRODUCTION

Currently the technological development has provided changes and developments in all sectors of society. The information and communication technology market (ICT) is currently disputed by all countries, as the information becomes a precious commodity for the maintenance or improvement of competitiveness standards.

Thus, society requires a new citizen profile, which is able to monitor the evolution of ICT. But for this to happen, we need to develop skills such as participation, cooperation and multi-functionality. Thus, the era of information or knowledge needs a new educational model that implies a revolution in the teaching-learning process.

¹ It's Doctor of Science, Technology and Innovation in Agriculture Federal Rural University of Rio de Janeiro (UFRRJ, 2012). Master in Business Administration (Management and Strategy in Business) from the Federal Rural University of Rio de Janeiro (UFRRJ, 2005). It has expertise in Planning, Implementation and Management EAD Federal Universidad Fluminense (UFF, 2010); specialization in School Supervision, Federal University of Rio de Janeiro (UFRJ, 2000); Degree in Administration from the Federal University of Amazonas (UFAM, 1998). He's currently Associate Professor of UFRRJ; researcher at the Research Group on Management and Development (GPAD) and the Center for Studies of Society, Work and Territory (NESTTE) of UFRRJ, with lines of research: Production, Operations and Logistics, Management, Innovation and Technological Development. Has experience in Teaching Higher Education, Distance Education and Public Administration with an emphasis in Information Systems Management; Organizations, Systems and Methods; Production and Operations Management; Productive Resources Management and Reverse Logistics; and Public Policies for Urban Agriculture.

² It's postgraduate (specialization) in Occupational Health Nursing by Specialization College Success Center (CEPE, 2010). Graduated in Biological Sciences from the State University of Piauí (UESPI, 2009). She served as Licensed Practical Nurse at the Regional Tiberius Nunes Hospital and Municipal Health Department in Floriano (Piauí), from 2005 to 2012. She also served as a teacher of primary school system in the Integrated Service Center in Timon (Maranhão), in period from 2005 to 2012. He is currently a Licensed Practical Nurse at the University Hospital Lauro Wanderley (HULW) of the Federal University of Paraíba (UFPB). She has experience in areas of Basic Education and Nursing, with expertise in emergency rooms, intensive care unit (ICU), quality and personal service.

³ Graduation in Business Administration from the Federal Rural University of Rio de Janeiro (UFRRJ). Professional experience in Administration and Finance area. Develops academic research activities with a focus on Business Administration, acting on the themes of Reverse Logistics and Public Policy and integrates the Research Group on Management and Development (GPAD) of UFRRJ. Have Intermediate English (English Culture) and basic knowledge of French (French Alliance).

So we ask: how the National Educational Technology Program (ProInfo), based on the applicability of Information and Communication Technologies (ICT) and the implementation of Educational Technology Centers (NTE) in public schools of Piauí?

Given the above, we can establish general objective is to provide the management of the Educational Technology Center of the 8th. Manages Regional Education (NTE-GRE), based in Oeiras, Piauí - Brazil, in the period between the years 2011 and 2014. For this, the following specific objectives were developed: Identify research contributions made by institutions higher education (IHE), and the introduction and information management in the Brazilian educational sectors; Characterize how the National Educational Technology Program (ProInfo), based on the applicability of Information and Communication Technologies (ICT) in the public education system of schools and the implementation of Educational Technology Centers (NTE) in Piauí; Identify the perception of public servants of the 8th. GRE Piauí on the insertion of educational technology with the state elementary schools.

As opinion maker and citizens, the school can't remain aloof to these issues. It's necessary a new positioning for the teaching of public institutions meet the expectations of society.

To contribute to the teachers to face one more challenge, there're the Educational Technology Centers (NTE) in state and municipal departments of education, which function to enable teachers to better develop pedagogical practice in the environments of computerized classrooms. NTE to empower the workforce with the new information technologies and telecommunications, need to prepare the individual for a new educational work; need to prepare you for entry into a new culture, based on technology that supports and integrates teaching and learning processes, or resize the role the teacher should play in guiding and training of citizens of the twenty-first century.

This work was structured by a literature on ICT applied to public education and the influence of these experiences in Brazil; and research contributions made by public institutions of higher education for the introduction of ICT in the Brazilian educational sectors. Following, it's the creation of the National Educational Technology Program (ProInfo), were studied for application of Information and Communication Technologies (ICT) in public schools and the implementation of Educational Technology Centers (NTE) in states and municipalities.

2. INFORMATION TECHNOLOGY IN PUBLIC MANAGEMENT

According to Melo and Botelho (2008, p.78), the "perpetuation of public organization on the basis of services rendered", the strategic use of IT and management of IT resources can improve the internal environment of the organization, by increasing the organizational effectiveness, agility processes and improvement of ICT in order to adjust the service of the population and the services provided to citizens.

Given the changes in the current era of knowledge or information, it's possible the revolution "infotecnology" and with it the emergence of ICT, where these make up the globalization process, exerting profound changes in management, both from the public sector as the Private Sector (CASTRO; LEITE; BEMVINDO, 2010).

According to Teixeira Filho (2000, p.38), in most organizations, "the responsibility for Knowledge Management isn't centered on senior management, but spread between the average and sometimes is seen as part of the work of each employee".

As Teixeira Filho (2000, p.76), the strategic management process with the use of ICT should follow a calendar, starting with the "analysis of the internal and external environment of the organization", followed by the determination of organizational guidelines by setting mission and organizational objectives, the "formulation of the organization's strategy, its implementation" and ultimately interact with the previous steps, "strategic control".

2.1. Development of Educational Technology in Brazil

The use of computers in education began in 1924 when Dr. Sidney Pressy created a machine to correct multiple-choice tests. This invention was complemented by BF Skinner in the early 1950s, during which he proposed a machine to teach, using the concept of programmed instruction, which was to divide the material to be taught in small logical segments chain, which received the name of module (CASTRO; LEITE; BEMVINDO, 2010).

According to Valente (1993), printed continuous forms presented facts and concepts of multiple-choice questions that should be answered by the student and corrected by a machine. If the answer was wrong displayed, the machine would provide the correct answer.

The programmed instructions presented by Skinner was widely used during the late 1950s and early 1960s, however, this idea didn't become popular because it's very difficult the production of instructional materials and existing materials don't have any standardized hindering expansion. With the advent of the computer, as Valente (1993), many programmed instruction programs were implemented on the computer, resulting in the assisted instruction computer or CAI (Computer Aided Instruction).

As Castro; Leite; Bemvindo (2010), with the idea to revolutionize education, the US government has made major investments in the production of CAI. However, computers were still too expensive to be purchased by public schools only being restricted to universities. The spread of CAI schools only happened with the arrival of computers, allowing a large production courses and a variety of types of CAI (demonstration program, tutorial, learning assessment, simulation and educational games). As stated Valente (2000, p.3), "teaching by computer allowed the development of other approaches, in which the computer was used as a tool to aid in solving databases and process control in real time."

In Brazil, the introduction of ICT in education occurred in the early 1970s, based on the interest of educators from some universities, such as the Federal University of Rio de Janeiro (UFRJ), Federal University of Rio Grande do Sul (UFRGS) and University of Campinas (Unicamp), motivated by what was already the case in other countries such as United States and France (CASTRO; LEITE; BEMVINDO, 2010).

In US schools, the use of computers was driven by technological development and competition provided by the free market of companies that created software, universities and schools. In France, the introduction of educational computing occurred by a government decision, the first Western country that has been programmed as a nation to face and overcome the challenge of information technology in education (CASTRO; LEITE; BEMVINDO, 2010).

In Brazil, educational computing was the result of discussions and proposals made by the technical community, researchers and also the area of government policies, which consider it necessary involvement of public schools in a move that was already established in developed countries, unlike the United States, which was a direct consequence of the market, and France, where was the product of government decisions (VALENTE, 2000).

With regard to the issue of motivation of political and pedagogical proposals of educational computing in Brazil, from the outset, the policies to be implemented were based on research guided by practical experience using the public school. In France, the implemented policies weren't necessarily grounded in research, but in government decisions. In the United States, although various studies have been made, or these could be adopted by schools. Regarding the role that the computer should play in the educational process, it's noted that, unlike the United States and France, Brazil, the computer should cause paradigm shifts, so, turn a focused education in teaching, in which it emphasizes the transmission of information, an education for the construction of knowledge, the computer becomes a teaching tool (CASTRO; LEITE; BEMVINDO, 2010).

In Brazil, although the introduction of ICT in education has been influenced by events in other countries (France and the United States), it's perceived that the influence exerted by these countries was more to "reduce the negative aspects and emphasize the positive aspects rather than a model for an uncritical reproduction." In Brazil, the success isn't greater for a number of reasons, ranging from lack of equipment in schools and, therefore, the lack of a greater commitment to the introduction, by a process of teacher training which has been characterized as fragile and slow (VALENTE, 2000, p. 17-18).

From 1979 took place on the first actions of the Brazilian government with the goal of connecting education to the computer, at which the Special Secretariat for Information (SEI) chose the education sector, alongside the sectors of agriculture, health and industry, as one of those for which would be provided greater support, aiming to make possible the use of computational resources in their activities (OLIVEIRA, 1997).

It was created in 1983 with the Education Project Computers (EDUCOM), which represents the first official action, concrete, to take computers to Brazilian public schools. As stated Oliveira (1997, p. 34), "this project had as its main objective to stimulate the development of multidisciplinary research focused on the application of information technologies in the teaching-learning process."

In 1986, the Ministry of Education created the Information Technology Advisory Committee on Education (CAIE) with the function of advising the Secretary of Education 1st and 2nd degrees (SEPS). The Committee

would be the forum for discussion and forwarding the National Policy on Information Technology in Education. Even in 1986, designed by CAIE, came the Train Project for the training of teachers and technicians from state and local networks of public education in Brazil to work with educational computing (OLIVEIRA, 1997).

According to Valente (1993), the Project Form aimed to the development of specialized courses in computer science education. The first courses were held in Campinas, conducted by researchers from EDUCOM project. These courses became known as Form I, in 1987, and Form II in 1989.

To Oliveira (1997), a new moment in the actions to take computers to Brazilian public schools gave the establishment of Information Centers on Education (CIED). From these CIED, the use of this educational technology in public is no longer centered in the MEC, starting to count with the participation of state and municipal departments of education. The CIED were deployed in several Brazilian states, where interdisciplinary teams of educators, technicians and specialists worked with computer programs of application of educational computing.

In 1989 was created the National Program of Educational Informatics (PRONINFE), which aimed to train professionals for the use of computer, service to students, teachers and community. But it was only in 1991 that the educational computing has gained ground in the law governing the ICT Policy in Brazil, having been reserved for the MEC responsible for deploying human resources training activities in computer science. As Almeida (2000), in this context arises the National Educational Technology Program (ProInfo), created by Ordinance No. 522, April 9, 1997, the Ministry of Education to promote the pedagogical use of computers in elementary school and middle public. This program is developed by the Department of E-Learning (DEL), the Ministry of Education, through the Department of Technological Infrastructure (DITEC), in partnership with state and local education departments. It works in a decentralized manner, and in each state there's a coordination of ProInfo, whose main duty is to introduce the use of ICT in public schools, and articulate the activities under its jurisdiction, in particular the actions of Educational Technology Centers (CASTRO; LEITE; BEMVINDO, 2010).

In 2007, DEL/MEC under the Education Development Plan (EDP) has prepared the review of ProInfo. In its new version, the program established by Decree No. 6300 of 12 December 2007, shall be entitled National Educational Technology Program (ProInfo) and stands for the integration of three components: i) installation of technological environments in schools; ii) availability of content and educational resources, multimedia and digital (Portal Teacher, TV/DVD School) and iii) continuing education of teachers and other educational agents for the pedagogical use of ICT. In order to expand the possibilities of use of technological resources and the improvement of educational processes the Educational Technology Management (CTE) provides an opportunity, through the Educational Technology Centers (NTE) and in partnership with the SEB / MEC, and other institutions, courses that enable teachers to reflection and skills development in relation to its role in the student's knowledge of the construction process with the use of educational technologies (CASTRO; LEITE; BEMVINDO, 2010).

2.2. Programs of Educational Technology Management (CTE) in Brazil

The CTE selects fellows who will work in PROINFO INTEGRATED and follows the courses in schools and NTE. The CTE does the selection of schools that will receive the connection, but follows the development of activities of the Points of Presence and guides schools to achieve the maintenance services of PBLE and GESAC. In Programs MEDIA IN EDUCATION, TECHNOLOGY EDUCATION STUDENT INTEGRATED CTE and performs the selection of participants and forwards them to the University responsible for the courses. In STUDENT Program INTEGRATED CTE selects tutors and students and forwards them to the partner University for training. In LEARNING TECHNOLOGY CTE Program provides assistance to project participants schools, following the activities and brokering activities with the partner company (SEDUC-PI, 2014).

The PROINFO is run in partnership with the Ministry of Education (MEC), to promote the pedagogical use of information and communication technologies at public basic education through the distribution of equipment, training of managers, teachers and students and also the provision of educational content in multi-platform and interactivity - Teacher Portal, Public Domain Portal, Student Portal, E-PROINFO among others. The INTEGRATED PROINFO: Continuing Training Program for Basic Education teachers consists of three courses: Introduction to Digital Education; Technologies in education: teaching and learning with ICT; and project elaboration. We also have the TV SCHOOL - TV channel via satellite for education. - Schools have the

inserted programming in ProInfo computers and can also access it via the Internet; DVD SCHOOL - program that provides the DVD reproducing apparatus schools and part of the program of School recorded TV channel in digital media; MEDIA IN EDUCATION - distance training program for teachers, modular, dedicated to the pedagogical use of information and communication technologies and major contemporary media (SEDUC-PI, 2014).

TECHNOLOGY IN EDUCATION is a specialization course in partnership with the Department of Basic Education (SEB / MEC) and the Pontifical Catholic University of Rio de Janeiro (PUC-Rio), which aims to enable teachers with the skills to: guide, training, support and assist the pedagogical incorporation of information and communication technologies in the school systems. The PROUCA - One Computer per Student Program - refers to schools equipped with individual equipment for each student and wireless connection for use in education. The PBLE - Broadband Program at School - which provides Internet connection in urban schools. Have GESAC - Electronic Government - Citizen Service - which provides Internet connection in rural schools. The INTEGRATED STUDENT - is a program conducted in partnership with the Federal University of Goiás to create opportunities for public school students and teachers, qualification under the Information and Communication Technologies (SEDUC-PI, 2014).

2.3. Educational Technology Center Management (NTE) of the 8th. Piauí GRE

The NTE is the technological base of ProInfo in the States, which is a decentralized structure to support the computerization process in schools, helping both in the process of development and planning of new technologies as the technical support and training of teachers and administrative staff of schools. To implement these NTE was held a partnership between the Ministry of Education and State Education Departments (SEDUC). Thus, the MEC provides the installation of technological environments and training of teachers who work in NTE and SEDUC are responsible for structuring, maintenance of physical space, equipment and the necessary human resources (CASTRO; LEITE; BEMVINDO, 2010).

The NTE Piauí was born in the interest of the Secretary of Education, in implementing educational computing in public schools because ProInfo aimed the creation of state centers. Thus, the NTE of the 8th emerged. GRE, with a professional staff consists of a coordinator, a secretary and teacher educators who are also computer experts in education and technology in education. The NTE the 8th. GRE came up with the aim of training Oeiras municipality of teachers in information technology in education; promote research and propose initiatives to SEMEC regarding the use of information technology and new technologies in education; prepare materials (texts, handouts and books) for updating and ongoing training of teaching in educational computing; prepare the Distance Education courses (DL) for the training of teachers and other education professionals (SEDUC-PI, 2014).

The NTE the 8th. GRE has developed activities offered changes in the forms of teaching and learning; promotes continuing education of teachers, students and administrative staff through courses, educational workshops and pedagogical support to schools that have Educational Computing Laboratory (LEL), aiming to prepare the administrative staff of public schools to the use of computers in their jobs professionals. The NTE the 8th. GRE offers basic and advanced computer courses, exploring and developing practical activities relating to the acquisition of knowledge required in handling hardware and software used in the management of administrative activities of the department in which the professional works.

3. METHODOLOGY

In this phase of the research presents the methodology used for research aimed at analyzing the general and specific objectives relating to the applicability of ICT in the management of the 8th. GRE based Oeiras Piauí. According to the described by Alves-Mazzoti & Gewandszajder (1998, p. 151), the structuring of research aims to give focus to what you want to achieve as a result of qualitative research exploratory, ie "establish the frontiers of research" .

The methodology adopted for this study was the qualitative research with a quantitative basis (Alves-MAZZOTI & GEWANDSZNAJDER, 1998). Were used for this research bibliographical consultations, desk research and questionnaires (Yin, 2001).

According to Alves-Mazzoti & Gewandszajder (1998), qualitative research with quantitative basis are characteristically multi methodological, that's, use a wide variety of procedures and data collection instruments.

It can be said, however, that the observation (participant or indirect), interviews, questionnaires and document analysis are the most used, although they may be supplemented by other techniques.

The questionnaire was through the distribution of copies by email or printed and delivered personally to public servants (teachers and administrative staff) of 11 state schools located in the municipalities that make up the 8th. GRE in the state of Piauí.

The universe of this research are the GREs, which provide public services in education and are located in Piauí. Our sample consists of eleven (11) public schools, such as in OEIRAS (U. E. ARMANDO BURLAMAQUI; U. E. PROF. BALDUINO BARBOSA DE DEUS – CAIC; U. E. COSTA ALVARENGA; U. E. JOSÉ COELHO REIS; U. E. ROCHA NETO – CEMTI; U. E. ORLANDO CARVALHO; U. E. FARMACÊUTICO JOÃO CARVALHO; U. E. NOGUEIRA TAPETY – CEJA; U. E. PEDRO SÁ – CEMTI); and jurisdictional municipalities: U. E. DR. JOSÉ GUSMÃO (COLONIA/PI); U. E. JOÃO DE SOUSA MOURA (SANTO INÁCIO/PI). The survey questionnaire was answered by civil servants (teachers and technical or administrative assistants) chosen at random, regardless of their knowledge of ICT or ETC.

Data collection took place from March to June 2014. Secondary data were obtained by consulting books, magazines, newspapers, websites and Intranet, internal documents. Have the primary data were collected using a structured questionnaire, which deals with the ICT in order to obtain information of experienced and committed people with the operation of organizational activities. 220 questionnaires were distributed, 20 questionnaires to 11 school units, among the 21 school units of the 8th. GRE Piauí. Of the questionnaires distributed, 164 returned completed questionnaires, according to Chart 1, which corresponds to approximately 75% of the distributed questionnaires.

As proposed by the general methodology of this research, the collected data were described, processed and analyzed. This proposal addresses the planning and organization of research; selection and characterization of processes related to public educational management; analysis of the current situation of ICT and ETC in Brazil; identification of the National Educational Technology Program (ProInfo), based on the applicability of Information and Communication Technologies (ICT) in schools in the public education system and the implementation of Educational Technology Centers (ETC) in Piauí.

As mentioned, the distribution of the sample was random, stratified, considering the proportional distribution according to pre-established parameters. The fact of opting for 11 school units, among the 21 units of the 8th. Piauí GRE is because only these 11 units have grip with educational technology, implemented through some of the ICT programs provided by the MEC.

The study in question is limited to analyze the National Educational Technology Program (ProInfo), based on the applicability of Information and Communication Technologies (ICT) in public elementary schools of Piauí. It merely also through access to information via Internet, Intranet, laws and internal documents that deal with the public educational management. Another limitation was the use of questionnaires to public servants who work at a strategic level functions, tactical and operational within 8th. GRE.

The conceptual research axis does not exhaust the problem of educational governance, since it restricts propose continuous improvement of ICT. This thematic focus, reflecting a limitation of the work touches some conceptual aspects of the management process, such as: organizational culture; paradigm shift; costs associated with the lack of planning and control actions. Finally, the proposal is limited to specific aspects of the 8th. GRE, no technical constraints that may generalize it to other segments of educational technology.

4. RESULTS

At this stage of the research presents the results aimed at describing how the management of the Educational Technology Center of the 8th. Manages Regional Education (ETC -GRE), based in Oeiras, Piauí, in the period between the years 2011 and 2014. The ETC develops actions aimed at improving the process of teaching and learning through the preparation of education professionals for the insertion of technologies in their professional and personal experience.

Table 1 shows the relationship of teachers, servers (technicians and assistants) and students of school units of the 8th. GRE Piauí, composed of 11 municipalities, based in Oeiras - Piauí, and 21 state school units of primary education.

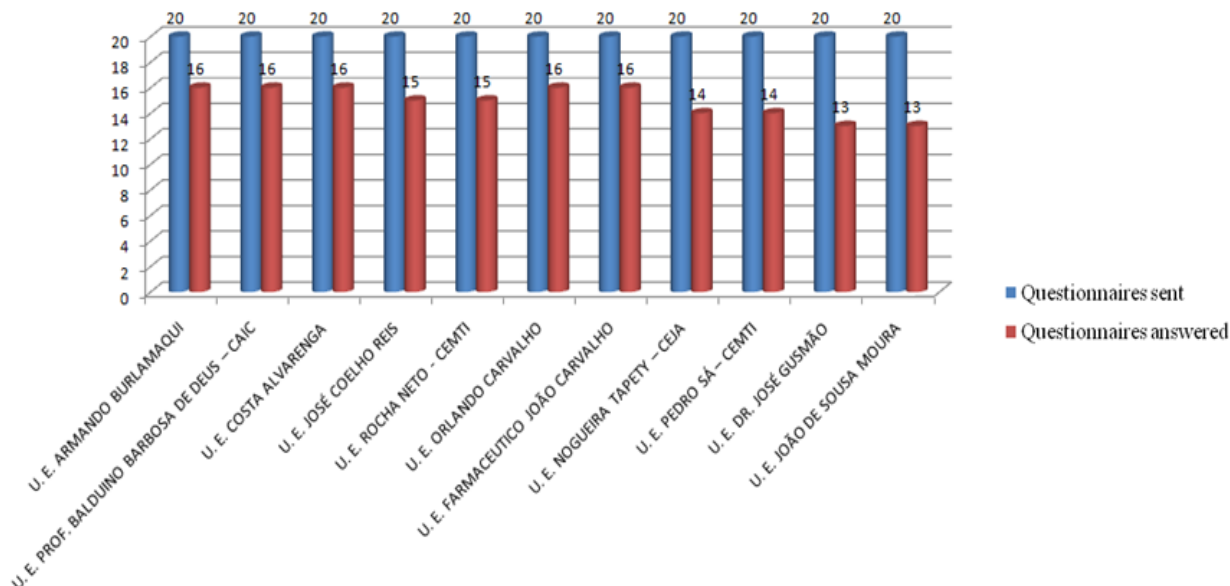
Table 1: Relationship teachers, servers (technicians and assistants) and students of school units of the 8th. Piauí GRE in 2014.

SCHOOL UNITS	NUMBER OF TEACHERS	NUMBER OF STUDENTS	NUMBER OF SERVERS TECHNICAL / AUXILIARY	SCHOOL UNITS
OEIRAS	U. E. ARMANDO BURLAMAQUI	41	352	7
OEIRAS	U. E. PROF. BALDUINO BARBOSA DE DEUS – CAIC	44	352	6
OEIRAS	U. E. COSTA ALVARENGA	47	318	6
OEIRAS	U. E. JOSÉ COELHO REIS	25	170	4
OEIRAS	U. E. ROCHA NETO – CEMTI	19	290	8
OEIRAS	U. E. ORLANDO CARVALHO	40	515	7
OEIRAS	U. E. FARMACEUTICO JOÃO CARVALHO	62	867	10
OEIRAS	U. E. NOGUEIRA TAPETY – CEJA	18	160	4
OEIRAS	U. E. PEDRO SÁ – CEMTI	24	355	9
CAJAZEIRAS	U. E. FRANCIVAL R. DO NASCIMENTO	15	96	7
CAMPINAS	U. E. DR. JOSE DE MOURA FÉ	23	326	8
COLÔNIA DO PIAUÍ	U. E. DR. JOSÉ GUSMÃO	27	307	7
FLORESTA	U. E. WILSON NUNES MARTINS FILHO	9	89	5
ISAIAS COELHO	U. E. DANIEL GOMES	8	90	9
ISAIAS COELHO	U. E. LUIZ UBIRACI DE CARVALHO	25	381	7
SANTA ROSA DO PIAUÍ	U. E. D. EDILBERTO DINKELBORG	26	267	11
SANTO INÁCIO	U. E. JOÃO DE SOUSA MOURA	21	211	12
SANTO INÁCIO	U. E. PEDRO FERREIRA	8	72	4
SÃO JOÃO DA VARJOTA	U. E. SÃO JOÃO BATISTA	22	311	10
SÃO MIGUEL DO FIDALGO	ESCOLA REUNIDA MIGUEL MARINHO	12	85	7
TANQUE	U. E. SÃO SEBASTIÃO	11	142	7
11 MUNICIPALITIES	21 SCHOOL UNITS	527	5756	155

Source: Own made (2014).

220 questionnaires were distributed, 20 questionnaires to 11 school units, among the 21 school units of the 8th. GRE Piauí. Of the questionnaires distributed, 164 returned completed questionnaires, according to Chart 1, which corresponds to approximately 75% of the distributed questionnaires.

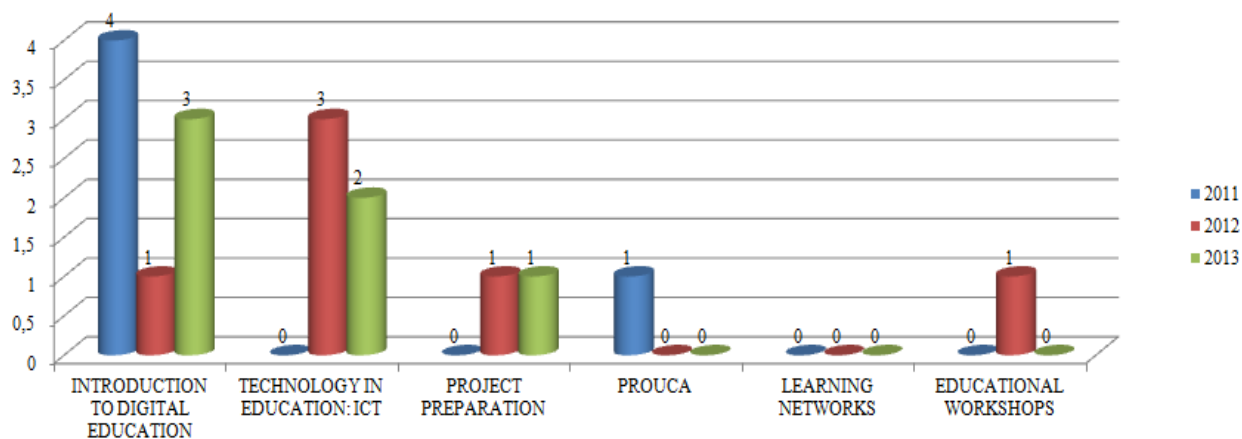
Figure 1: Relationship between questionnaires and completed by members of school units of the 8th. Piauí GRE in 2014.



Source: Own made (2014).

When analyzing Graphic 2, we can see that there was a significant deficiency or inconsistency in the process of implementing programs or projects (activities) developed by NTE-integrated PROINFO the 8th. GRE between the years 2011-2014. This may be a reflection of inadequate public policy incentives for implementation and improvement of ICT processes in educational public management of Piauí.

Graphic 2: programs or projects developed by NTE-integrated PROINFO the 8th. GRE between the years 2011-2014.



Source: Own made (2014).

In examining Table 2, we find that of the 22 classes offered by NTE-PROINFO integrated the 8th. GRE between the years 2011-2014, almost half corresponds to the digital education. It is also noticed that most of the workforce (professionals) who participated in the qualification process is teachers.

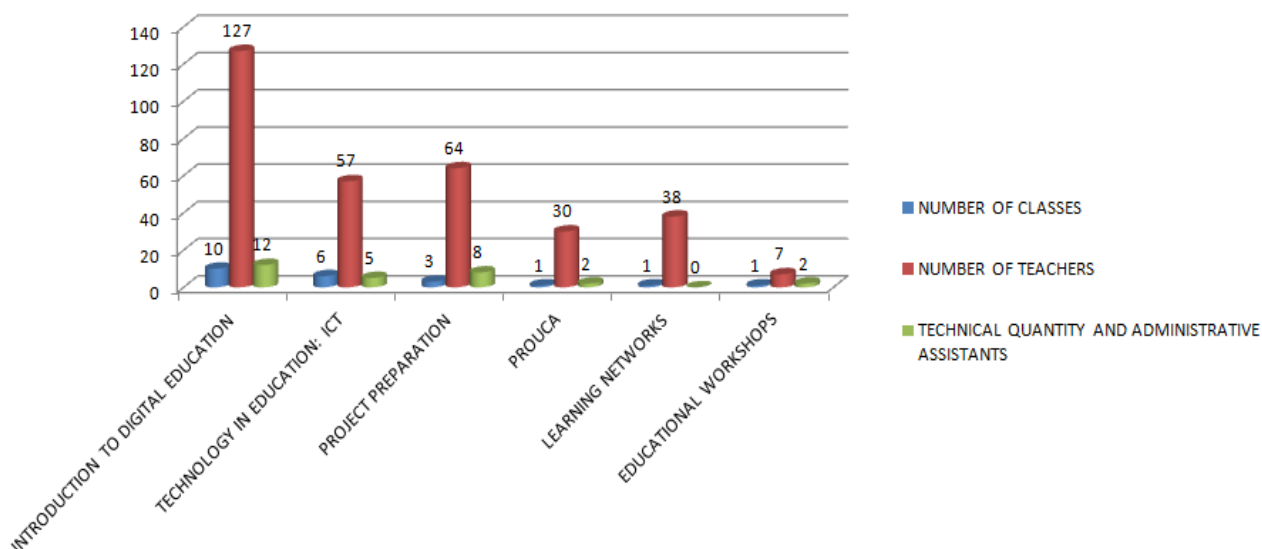
Table 2: ratio of the amount of qualified servers or trained per class by the integrated NTE-PROINFO the 8th. GRE between the years 2011-2014.

ACTIVITIES	NUMBER OF CLASSES	NUMBER OF TEACHERS	TECHNICAL QUANTITY AND ADMINISTRATIVE ASSISTANTS	TOTAL QUALIFIED
INTRODUCTION TO DIGITAL EDUCATION	10	127	12	139
TECNOLOGIES IN EDUCATION: ICT	6	57	5	62
PROJECT PREPARATION	3	64	8	72
PROUCA	1	30	2	32
LEARNING NETWORKS	1	38	0	38
EDUCATIONAL WORKSHOPS	1	7	2	9
SUBTOTAL	22	323	29	352

Source: Own made (2014).

Graphic 3 shows that of the 527 teachers and 155 technical or administrative assistants, the 21 school units of the 8th. GRE Piauí, totaling 682 professionals, only 352 (52%) were qualified professionals, with 323 (61%) and 29 teachers (19%) technical or administrative assistants.

Graphic 3: ratio of the amount of qualified servers or trained per class by the integrated NTE-PROINFO the 8th. GRE between the years 2011-2014.

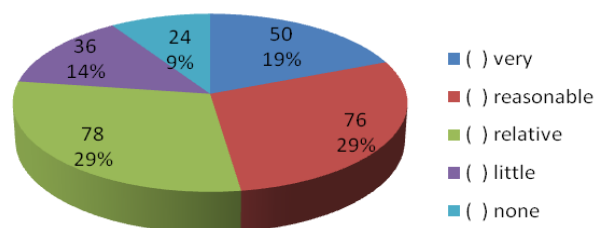


Source: Own made (2014).

We'll look at the perception of public servants of the 8th. GRE Piauí on the insertion of educational technology with the state elementary schools.

By analyzing the following graph answers, one can see that almost a quarter of respondents (23%) consider not know or have little knowledge of the existence of educational technology resources in public administration. This may reflect an inadequate dissemination of ICT policy in education public management of Piauí.

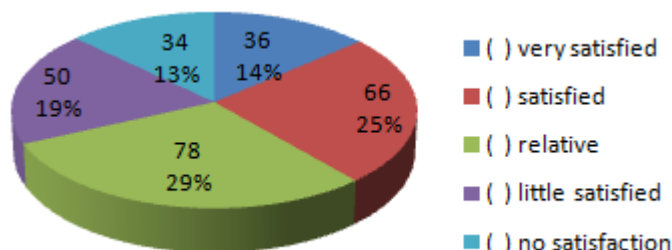
Graphic 4: knowledge of the existence of educational technology resources in public administration.



Source: Own made (2014).

By analyzing the following graph answers, we can see that almost one third of respondents (32%) consider not satisfaction or low satisfaction related to educational technology resources (PROINFO INTEGRATED) in the public schools of the 8th. GRE Piauí. This may reflect an inadequate implementation of ICT policy in education public management of Piauí.

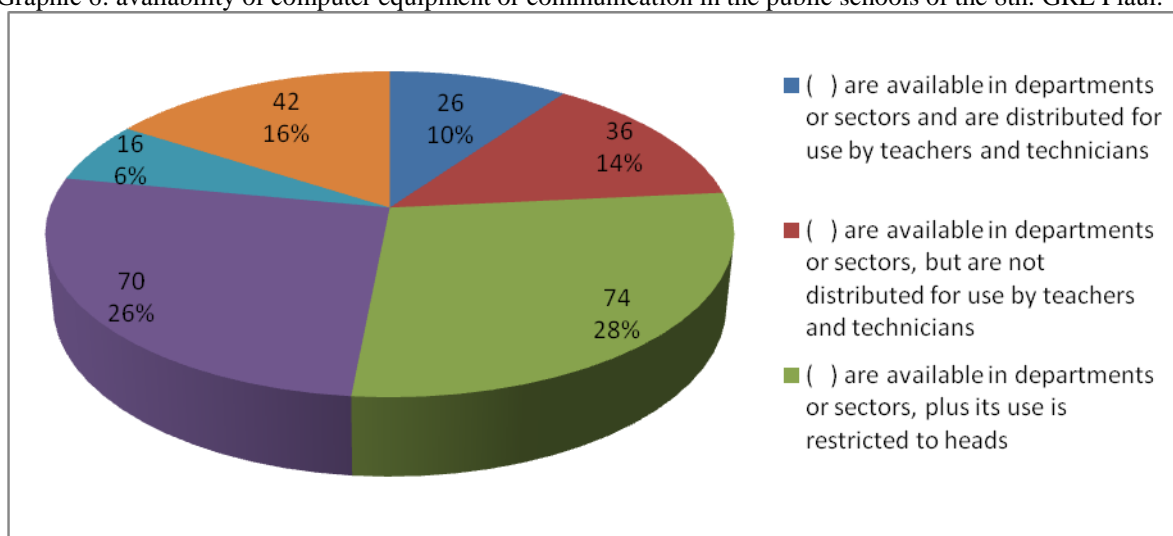
Graphic 5: satisfaction related to educational technology resources (PROINFO INTEGRATED) in the public schools of the 8th. GRE Piauí.



Source: Own made (2014).

By analyzing the following graph answers, one can see that more than half of respondents (54%) consider restricted use to the heads or personal interests availability of computer equipment or communication in the public schools of the 8th. GRE Piauí. This may be a result of poor management of ICT in educational government of Piauí.

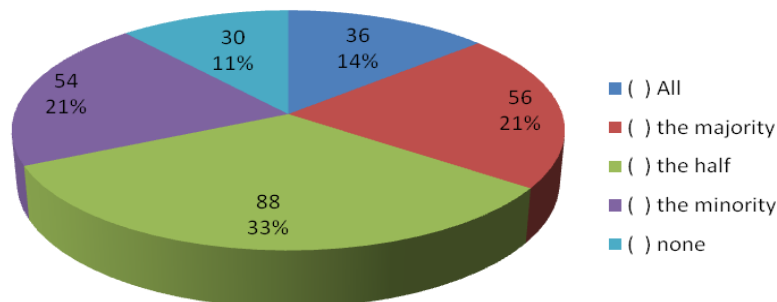
Graphic 6: availability of computer equipment or communication in the public schools of the 8th. GRE Piauí.



Source: Own made (2014).

By analyzing the following graph answers, one can see that almost one third of respondents (32%) believe teachers and technical and administrative staff of the public schools of the 8th. Piauí GRE are not enabled or has little ability to use the information or communications systems and computer equipment. This may reflect an inadequate qualification policy of professional public Piauí education.

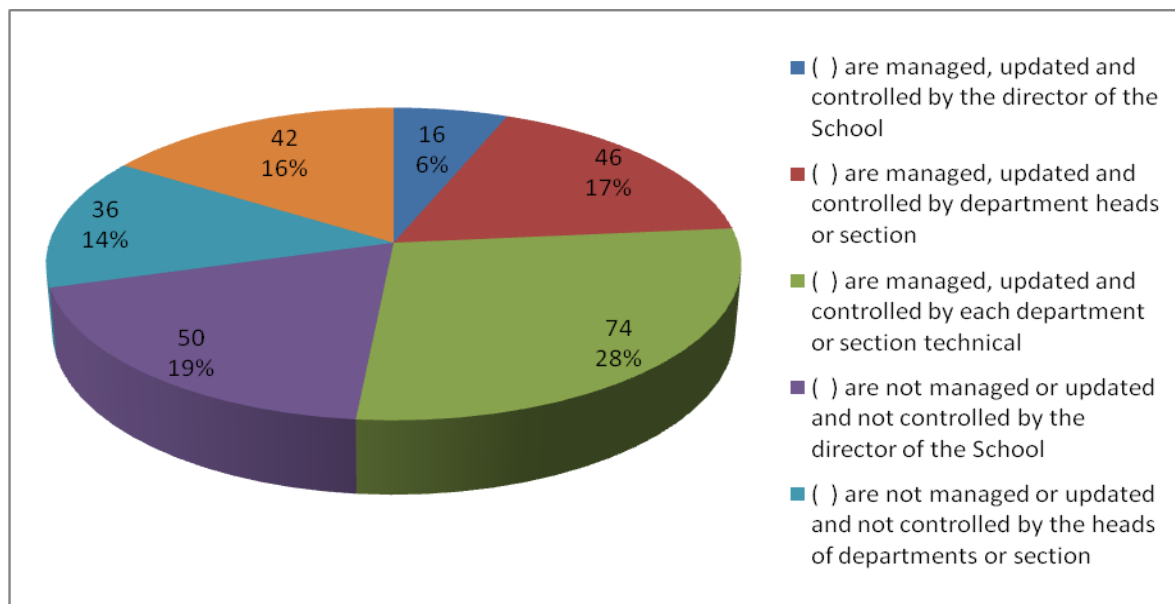
Graphic 7: teachers and technical or administrative assistants able to use the information or communication systems and computer equipment.



Source: Own made (2014).

By analyzing the following graph answers, one can see that almost half of respondents (49%) consider complicates the management of documents served or made available through the information and communication systems of the public schools of the 8th. GRE Piauí. This may reflect an inadequate educational public management policy.

Graphic 8: conveyed document management or made available through the information and communication systems of the public schools of the 8th. GRE Piauí.



Source: Own made (2014).

Considering the results shown in this paper, there has been the need for concrete actions of SEMEC through the NTE, to promote the incorporation of technologies to pedagogical practice of those involved in the educational process of the public school system in the state of Piauí.

5. CONCLUSIONS

The use of ICT is considered a facilitating device for the dissemination and implementation of knowledge, whether in public or private environments. Currently, the educational government can not and should not stop working with technological resources in order to add value to the services provided to the company.

It is observed that from 2011 there was the implementation of the Educational Computing Program in the public schools of the 8th. GRE of Piauí, where it appears a significant number of qualified or trained teachers. This is justified by the SEMEC concentrated effort to insert teachers in state schools, which had received LIE in the

process of inclusion of new technologies in their teaching. This training may be related to factors such as increasing the number of schools served by NTE and mainly to paradigm shifts in the ways of teaching and learning with educational technology in the classroom everyday.

As it turns out, the educational technology needs to be improved as the way to boost the use of ICT by NTE. These NTE need to work with hardware and educational software, which enables the teacher to develop the contents of diverse, enjoyable and effective way.

It is noticed that the digital inclusion of students' work focused on the use of technology in the educational process, state and municipal public schools, was developed by preparing for the exercise of monitoring; and in LIE schools and through continuous training, through thematic workshops that use these resources to exploit the contents worked in class. The continuity of these practices require a consistent and coherent public policy, to promote the incorporation of technologies to pedagogical practice of educational processes of public Piauí teaching.

According to the opinion of the respondents of the questionnaire, it is noticed also that there is an inadequate disclosure policy and implementation of ICT in educational public management of Piauí; and inadequate qualification policy of professional public Piauí education. Therefore, it is recommended that such policies are applied in other GRE Piauí, aiming to improve the management process of educational technologies by the public Piauí teaching.

Thus, it is expected that this study can explain to users, customers (target group) and the other stakeholders such as public services can be improved and maintained; and ensure that the correct application of ICT can provide a public service quality, along the 8th. GRE Piauí, knowing precisely what should be done in pursuit of efficiency, efficacy and effectiveness. This can ensure the education of their development organization with the Brazilian government.

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