TICs in Education

[1]CHANCUSIG-CHISAG JUAN CARLOS, [1]LLANO-CASA ALEX CRHISTIAN,
[2]CASTAÑEDA-CARRANZA JULIO, [2]GÓMEZ-ARCE RICARDO,
[3]GAMBOA-CRUZADO JAVIER

[1]Technical University of Cotopaxi, Latacunga, ECUADOR
[2]National University of Trujillo, PERÚ
[3]National University Mayor San Marcos, PERÚ

Abstract: The illusion that ICTs could be the key to solving a large part of educational problems and to giving a fast momentum to the quality of teaching has been fading in the face of the great pending challenges and the difficulty of modifying the organization of schools and the way teachers teach. However, new reflections, models and initiatives are emerging and give rise to renewed expectations. Actually, the use of ICT in the classroom is the objective of study of this research, it is an important aspect for teaching and learning since it facilitates the students to have a meaningful learning, as long as it is according to an adequate planning for the different areas that will be given, the methodology of study is the field, since the problems of education in educational institutions are evidenced. The results obtained are that the incorporation of ICT in education requires to think previously about the objectives and challenges of education and then determine how and under what conditions the presence of ICT in schools contributes to them. The first and most important thing is to determine the meaning of ICTs in education and which pedagogical model can contribute most directly to improving educational quality and equity. Therefore, we conclude that it is essential to establish the relationship between ICT and the development in students of their ability in order to learn to learn, to search for information selectively, to have a critical position with the information available on the network.

Key Words: Cognitive Abilities, Teaching Sources, Teachers, Students, Technology, New Teaching Methodologies.

1. Introduction

In the present work we try to find all the skills valued through the different items that are part of an ICT to be able to promote in each classroom with the students and so have an education that can be grouped around four general sections with the use and knowledge of the computer and its peripherals, the installation and configuration of programs; the second group of competencies refers to aspects related to the Internet, communication, information, collaboration in third place, we find a group of items that measure competencies related to working with text documents, the processing of information through databases and spreadsheets, the creation and editing of images, sound and multimedia; finally, the fourth group includes a series of items related to the use of the different tools available and includes an invited sample corresponding to third-year students in four of the six specialties of Primary Education, Foreign Languages, Special Education and Music Education.

Education must be adapted to each person who has different abilities, skills and cognitive capacities to learn. ICTs have transformed the parameters for obtaining information by means of communication technologies such as newspapers, radio and television. ICT in education help to resolve the generation gap between students and teachers using resources such as interactive whiteboards, virtual classrooms in real time, discussion rooms, forums, quizzes, schemes, audiovisual resources, digitized bibliography, online collaborative documents, portfolios, didactic games, among others.

Nowadays ICT is a new methodology that teachers can use for the development of teaching and learning of students, leaving behind traditional education, as time goes by,

teachers have to be trained to use ICT in a correct way. To have a better use of ICT in education we must have a planning to avoid improvisation, obtain specific and achievable objectives, so we can have better results

ICT in education allows the creation of comfortable but challenging educational environments, in which the student must assume a greater degree of responsibility, their participation must be active, it encourages interdisciplinary and teamwork, as well as literacy through digital and audiovisual media. To the teacher it helps to have a greater availability of resources and sources for teaching, in addition to giving a greater possibility to cover different teaching styles and innovation in the educational field, leading to a process of professional updating.

[1] The innovation of technology is a strategy that has made it easier for teachers to turn traditional classes into classes where the student feels motivated and can express their ideas without problems, as teachers, we must think about the future of our students and prepare them. In this way, they will be able to respond to all the new requirements and demands of the work environment.

2. General Objective of the Research

To identify how teachers are trained in the management of ICT, the use, innovation and integration of ICT in the teaching-learning process, through surveys conducted for teachers, obtaining new data from research already carried out by other authors.

2.1 Specific Objectives

- To promote and strengthen habits and values of responsibility, tolerance and respect for the adequate use of technological media.

- To reduce the misuse of technological media by creating spaces for participation in the institutions with access to clear and precise information, benefiting teachers and students.

- To analyze the data obtained from the surveys conducted in the child development centers.

2.2 Scientific Content

2.2.1 History of ICT in education

Advances in telecommunications have helped ICT innovation with the creation of new audiovisual and multimedia materials that are increasingly integrated.

> [9] (UNESCO) For UNESCO, the new technology has a very important role, since it can facilitate universal access to education, support a better development of teachers' professional life, improve the quality of teaching and learning in educational institutions, as long as it is used in an appropriate way to achieve successful results.

The industrial society has described and developed a model of education based on labor needs and industry structure, the knowledge society requires new models to adapt training to the needs of society and, thanks to ICTs, presents a different scenario to the way of acting, relating and learning that we knew.

In the 70s, advances in information technology allowed the use of computers in education. In the 80s, a fusion of computing and communications were established, creating the origin of ICTs, which nowadays are an essential part of education

2.2.2 What are ICT in education?

ICT are part of the economic, social and technological changes that are taking place in today's society, and educational institutions cannot remain on the sidelines. They must adapt to the individual characteristics and needs of students, in order to provide greater flexibility in academic trajectories and facilitate the maximum development of their potential.

Significant learning arises when the student, as the constructor of his own knowledge, relates the concepts to be learned and gives them a meaning based on the conceptual structure he already possesses. In other words, he builds new knowledge from the knowledge he has previously acquired. This can be by discovery, especially when we work with ICTs, or

receptive. But they also construct their own knowledge because they want to and are interested in it.

Significant learning is sometimes built by relating new concepts with concepts that he already has, and sometimes by relating new concepts with the experience, he already has. Significant learning occurs when the tasks are congruently related and the subject decides to learn them. Active methodologies constitute an interesting way of presenting knowledge and an answer to the questions of what, how, when and where to teach.

> Society is living a process of accelerated change that is affecting not only the way in which the community has been organized up to now, but also the educational system. In a few years, transformations are taking place that, in the past, required several years, even centuries. A great change that affected the history of humanity was the appearance of literacy, which meant learning to live according to the demands of the literacy process: "learning to read", "reading to learn", "reading to study and research"; consequently, "reading to live" [3]

2.2.3 Particularities of ICT use

At present, many teachers request and want to have computer resources and the Internet for their teaching, in response to the challenges posed by these new information channels. However, the incorporation of ICT in teaching does not only imply the provision of computers and Internet access infrastructures, but its fundamental objective is: to integrate ICT in the teaching-learning processes, in the management of the centers and in the relations of participation of the educational community, in order to improve the quality of teaching.

Teachers have the possibility of generating educational content in line with the interests or particularities of each student, being able to adapt to small groups or even to an individual student. In addition, the teacher has to acquire a new role and new knowledge, from properly knowing the network and its possibilities to how to use it in the classroom and teach their students its benefits and disadvantages.

Teachers state that the use of ICTs has very positive benefits for the school community; their high involvement with ICTs has improved their personal satisfaction, their work performance and their relationship with their students, due to the wide range of possibilities they offer. Adapting to these new technologies is a process that is taking place slowly, but is allowing many teachers to improve the quality of teaching.

> [2] Teacher training is very fundamental for the new generation because as time goes by new things arise and the teacher must know a little of everything on the other hand we must understand that there is only one world, two generations with the purpose of developing a more harmonious and survival world, where technology is an instrument of development and not of destruction, but this can be solved by recognizing that this living space is for the knowledge of the two generations to complement each other.

There are many uses that can be given to ICT in the classroom, for example, teachers have the possibility of creating online content, updated and according to the interests of each moment and each student, being these totally adaptable to each group or each student in particular.

ICTs are helping to improve student interaction with classes, moving from a passive role to a more dynamic, active and responsible position.

But not only is the way in which teaching is delivered changing, but also the procedures and methods for teaching are being modified. New teaching/learning models are being developed, such as the inverted classroom, project-based learning, among others.

It also makes it easier for families to get involved in their children's education, offering the possibility for schools to have more direct contact with them.

2.2.4 Students and ICT

In our society, children assume with total normality the presence of technologies in society. They coexist with them and adopt them without difficulty for their daily use. In this sense, teachers must promote an education in accordance with our era, making new didactic proposals and introducing the necessary tools for this purpose.

Actually, the use of information and communication technologies is an object of concern, discussion and reflection for many authors, both nationally and internationally level. But this concern has not yet been translated into a systematic and organized attempt to carry out relevant activities in favor of an adequate use of technologies.

> [4] Therefore, ICTs are a support tool, and one of the most important challenges for education professionals should undoubtedly focus on the study of the relationship that students establish with ICTs.

It is necessary to know and to understand how they use them, what purpose and how often they do it, as well as the importance they have in their daily lives. It is also interesting to know how these technologies mediate their interpersonal relationships with fathers, mothers, teachers, etc.

Within the social context, students maintain a close relationship with information and communication technologies because they have become a powerful tool that provides them with information, communication and enhances the development of skills and new forms of knowledge construction.

ICTs such as computers, the Internet and cell phones have brought about accelerated and innovative changes in our society, mainly because they are interactive. People, through their use, can interact with other people or media while offering us possibilities that were previously unknown.

[5] The purpose of using these technologies in the classroom is not to transmit specific information, but to teach lifelong learning. Educational centers have to prepare their students not only to access information, but also to know how to "create" knowledge based on this information. They must know how to select, evaluate, criticize, discard and make appropriate use of the information to which they have access from their schools.

ICT can be analyzed and classified into different types. From our perspective, we consider three essential types of uses:

- ➢ Recreation and Leisure.
- ➢ Communication and Information.
- ➢ Educational

2.2.5 Characteristics of ICT in education

- ➢ Allow to reduce costs
- ➢ Reduced time
- ➢ Wider expansion in terms of geographic location
- ➢ Variability in virtual educational models
- ➢ Greater access to information.
- ➢ Synchronous and asynchronous learning
- ➢ They are innovative and creative, since they provide access to new forms of communication.
- ➢ They have greater influence and benefit the educational area to a greater extent, as they make it more accessible and dynamic.
- ➢ They are considered topics of public and political discussion, since their use implies a promising future.
- ➢ They are most frequently related to the use of the Internet and information technology.
- ➢ They affect many fields of human sciences such as sociology, organization theory or management.

2.2.6 ICT tools in education

- ➢ **Flexibility:** both the student and the teacher can decide the use of the computer material or electronic device that suits their needs to perform a particular task.

- ➢ **Versatility:** digital tools allow you to perform different tasks or activities in different formats, such as, the production, editing or transformation of a video.
- ➢ **Interactivity**: with the use of digital tools, students can interact and discover a series of contents that facilitate the achievement of tasks.
- ➢ **Connectivity:** students can communicate, share and exchange information through the use of social networks or virtual platforms in which they can contribute and offer their points of view on a specific topic.

    [6] According to María de Rus Guerrero Sánchez the development of the student is very fundamental, and with the help of ICT we can in a more feasible way to teach students, while it helps teachers to work more efficiently when teaching.

2.2.7 What types of ICT exist?

- ➢ **Networks:** landline telephony, broadband, mobile telephony, television networks or home networks are some of the ICT networks.
- ➢ **Terminals:** there are several devices or terminals that are part of ICT. These are the computer, the Internet browser, computer operating systems, cell phones, televisions, portable audio and video players and game consoles.
- ➢ **ICT services:** ICTs offer a variety of services to consumers. The most important are e-mail, information search, online banking, audio and music, television and cinema, e-commerce, e-administration and e-government, e-health, education, video games and mobile services.
    Advantages of ICTs
- ➢ **Motivation.** The student will be more motivated using ICT tools because it allows to learn the subject in a more attractive, enjoyable and fun way, researching in a simple way.

Interest. interest in the subject is something that teachers can find more difficult than usual depending simply on the title of the subject, and through ICT the student's interest increases regardless of the subject.

- ➢ **Interactivity.** students can interact, communicate and exchange experiences with other classmates, from the center or from other educational centers, greatly enriching their learning. Studies reveal that interactivity favors a more dynamic and didactic teaching and learning process. The user's attitude towards interactivity stimulates reflection, the calculation of consequences and produces more cognitive activity.
- ➢ **Cooperation.** Tics make it possible to carry out experiences, work or projects together. it is easier to work together, learn together, and even teach together, if we talk about the role of teachers. we are not only referring to students, teachers can also collaborate with other teachers, use resources that have worked well in certain areas of which the student will be the main beneficiary. This generates greater companionship and collaboration among students. Initiative and creativity. The development of the student's initiative, the development of his or her imagination and learning on his or her own.
- ➢ **Communication.** The relationship between students and teachers is encouraged, far from the traditional education in which the student had a passive role. communication is no longer so formal, so direct, but much more open and naturally very necessary, greater communication between teachers and students (through e-mail, chats, forums) where they can share ideas, solve doubts, etc.
- ➢ **Autonomy.** with the access of ICT's and the help of the internet, the student has an infinite number of channels and a large amount of information. Students

can be more autonomous in searching for this information, although in the beginning they need to learn how to use and select it. this is a very important task and should be taught by the teacher. students learn to make decisions on their own.

- **Continuous intellectual activity**. with the use of ict, the student has to be thinking continuously.
- **Digital and audiovisual literacy**. The process of acquiring the necessary knowledge to know and use ict appropriately is encouraged.

ICTs are used as tools and instruments in the teaching and learning process, both by teachers and students, especially in the search for and presentation of information, but ICTs can contribute something more to the educational system.

One of the groups that will particularly benefit from the application of ICTs in education is that of people with disabilities, because if technological development does not take into account the needs of this sector, new forms of social exclusion may arise.

Blind or visually disabled people obviously have serious problems of accessibility to ICTs. This difficulty is overcome with the so-called "screen readers" that allow interpretation of the screen through a Braille line added to the keyboard and a voice system.

If there is no blindness but visual disability, the solution lies in the size of sources, colors, contrasts, screen resolution, etc.

The case of the deaf is somewhat different, although it could be thought that having visual faculties they should not have problems to read and write correctly, the reality is that many of them present reading and writing problems. The solution in this case is to establish a simple vocabulary and navigation structure. In addition, audio content should be provided with subtitles or textual descriptions.

Moreover, the availability of ICT in schools is a valuable tool and is an essential component to prevent economically disadvantaged groups and minorities from becoming increasingly isolated and excluded from families who have access to ICT at home. Restricted access to new technologies would pose a risk of social exclusion.

[7] The perspective of development with ICTs conceives technology as a means for a more inclusive human and social development and puts it at the center of the transition to the information society.

In conclusion, we can point out that: ICT applied to the teaching-learning process provides an innovative and creative character, since it gives access to new forms of communication; it has a stronger influence and benefits the educational area to a greater extent, since it makes it more dynamic and accessible; it is related to the use of the Internet and computers; it is open to all people (rich, poor, disabled,) and affects various fields of human sciences.

2.2.8 Some of the main functions of ICT in education:

- As a means of expression: for making presentations, drawings, writing, etc.
- As a channel for face-to-face communication. Students can participate more in class. But it is also a virtual communication channel, in the case of messaging, forums, web log, wikis, etc., which facilitates collaborative work, exchanges, tutorials, etc.
- Tool for information processing.
- Open source of information.
- Instrument for administrative or tutorial management, facilitating the work of tutors and school managers.
- Tool for diagnosis, evaluation, rehabilitation...
- Didactic medium: guides learning, informs, trains, motivates.

➢ Generator of new training scenarios where learning environments and opportunities are multiplied.
➢ Playful means for cognitive development.
➢ They are usually motivating, since they use multimedia resources such as videos, images, sound, interactivity... And motivation is one of the driving forces of learning.
➢ They can facilitate the teaching work with more resources for the treatment of diversity and greater facilities for monitoring and evaluation.
➢ They allow the development of new learning activities with high didactic potential.

[8] Distance education is combined with technology itself helping teachers and students to work in a better way, increasing student motivation so that they can conduct research through virtual libraries.

2.2.9 Disadvantages

➢ **They generate greater distractions:** In the world of ICTs you have so much information and alternatives that it is very easy to get distracted, thus increasing the degree of dispersion.
➢ **High levels of addiction**: When we were talking about learning to use ICTs and becoming aware of them, we were referring, among other things, to learning to control the level of addiction they generate, especially in younger profiles.
➢ **Increased waste of time:** Closely related to the first point of attention in this list.
➢ **It generates isolation:** The abusive use of ICTs generates less contact in the physical world between people, which is a handicap for the growth of the person. It also leads to the non-performance of other necessary activities, such as sports, for example.

➢ **Filtering information:** Much of the information you find in digital media is false or incomplete. It is necessary to know how to contrast the content and look for reliable sources of information.
➢ **Cyberbullying or harassment through the networks:** Undoubtedly a very controversial and topical issue and one of the biggest risks posed by ICT. The lack of physical contact with other people causes the loss of assertiveness and can lead to this type of actions. Likewise, the possibility of creating false profiles and hiding one's identity on the networks can lead to risky situations for people on the networks.
➢ **Lack of privacy:** This issue is also closely related to the previous one, we are very exposed due to the amount of personal information we share on the networks, this can lead to become the target of persecution of harassers. Fortunately, more and more work is being done to improve privacy in the tools, but undoubtedly, it is also necessary to raise awareness that it is not necessary, indeed, it can be counterproductive, to share certain types of information through the networks.

3. Methodology

For the following research, the field research methodology was used, which implies a combination of the student observation method, surveys and analysis. Through the pre-professional practices that were carried out in the CDI it was possible to conduct surveys and observation, with this we were able to obtain new data at the same time we proceeded to perform the critical analysis of each question answered by the teachers of the child development center obtaining satisfactory results.

Technique: Survey and observation

Population: 8 teachers

Research results applied by means of surveys to the teachers of the "Ignacio Flores" child development center.
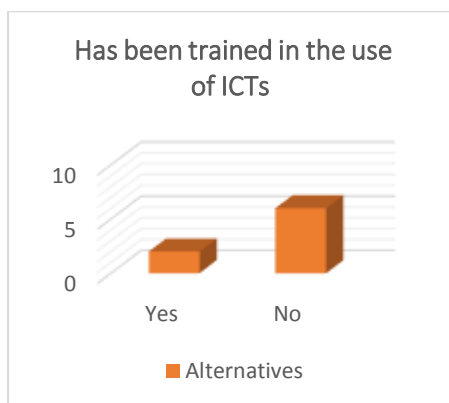
1.- Have you been trained in the use of ICTs to work as a teacher?

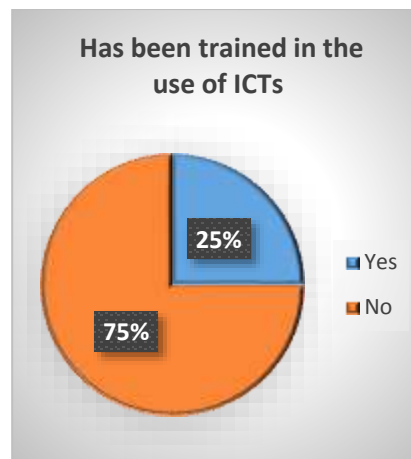**Table N° 1:** Have you been trained in ICT management?

Alternatives	Frecuency	Percentage %
Yes	2	25%
No	6	75%
TOTAL	8	100%

Source: Child Development Center "Ignacio Flores".

Graph N°1: Has been trained in the use of ICTs?

Graph N°2: Has been trained in the use of ICTs?

Source: CDI" Ignacio Flores"

ANALYSIS

According to this question, 75% of the teachers surveyed responded that they have not been trained in the use of ICTs, while 25% responded that they have been trained in the use of ICTs.

INTERPRETATION

The inclusion of ICTs in education is an imminent concern in any institution, since it requires that students be prepared to use technological means during the teaching-learning process.

2. Have you attended workshops to update your knowledge of virtual classroom management?

Table N°2: Knowledge updating workshops

Alternatives	Numbers	Percentage %
Yes	2	25%
No	6	75%
TOTAL	8	100%

Source: Child Development Center "Ignacio Flores".

Graph N°1: Knowledge updating workshops

Graph N°2: Knowledge updating workshops

Fuente: CDI" Ignacio Flores"

ANALYSIS

According to this question, 25% of the teachers surveyed responded that they have attended workshops to update their knowledge and 75% of the teachers surveyed responded that they have not attended workshops to update their knowledge.

INTERPRETATION

The ICT workshops are very important to be able to support the objectives that the teacher has at the moment of teaching the students, a way to improve as teachers is to become aware of our role, in this century to become aware of our being, feeling, thinking and doing.

3. What technological tools do you use in the teaching-learning process?

Table N° 3: What technological tools do you use?

Alternatives	Number	Percentage %
Laptop	1	13%
Cellphone	5	63%
Tablet	0	0%
Television	2	25%
Data projector	0	0%
Smart	0	0%
None	0	0%
TOTAL	8	100%

Source: Child Development Center "Ignacio Flores".

Graph   N°1: What technological tools do you use?
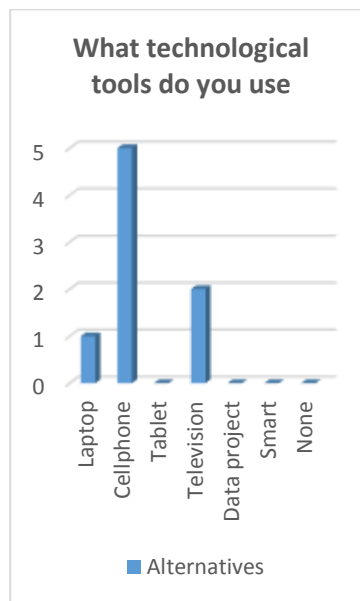
Graph N°2: What technological tools do you use?

What technological tools do you use

- Laptop
- Cellphone
- Tablet
- Television
- Data project
- Smart

0% %
25%
0%
63%
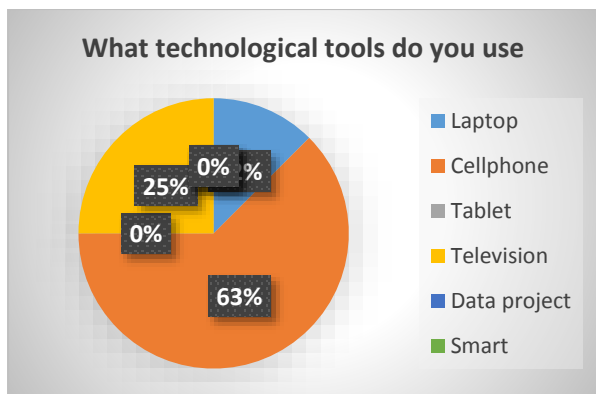
Source: CDI" Ignacio Flores"

ANALYSIS

According to this question 13% of teachers answered that they use laptop as a tool, 63% of teachers use cell phone as a tool, 25% of teachers use TV as a tool while 0% do not use Tablet, Smart, data projector.

INTERPRETATION

The use of technological tools in the classroom allows us to add value to the educational processes, which implies knowing what is being done right and wrong, these tools allow students to have a collaborative and meaningful learning, besides helping us to save time during the teaching-learning process.

4. - Do you know if the Ministry of Education has implemented computers in the educational institution or CDI for the teaching-learning process?

Table N° 4: Has the educational institution or CDI implemented computers?

Implements computers in the educational institution or CDI		
Alternatives	Number	Percentage %
Yes	0	0%
No	8	100%
TOTAL	8	100%

Source: Child Development Center "Ignacio Flores".

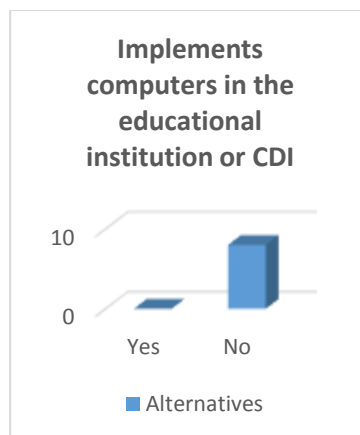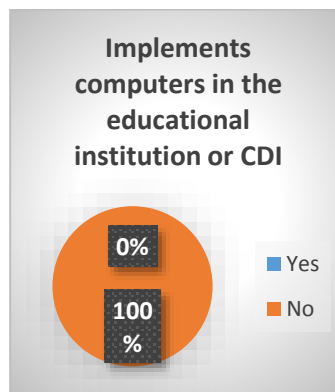**Graph N°1:** Implements computers in the educational institution or CDI

Implements computers in the educational institution or CDI

10

0

Yes   No

- Alternatives

Grafico N°2: Implements computers in the educational institution or CDI

Implements computers in the educational institution or CDI

0%
100%

- Yes
- No

Source: CDI" Ignacio Flores"

ANALYSIS

According to this question, 100% of teachers respond that they do not implement the use of computers in the teaching and learning process.

INTERPRETATION

The implementation of computers in institutions is very important since computer literacy is an essential skill in the modern world, where technological skills are more vital for success in life, children exposed to computers in elementary schools have the opportunity to gain early life skills.
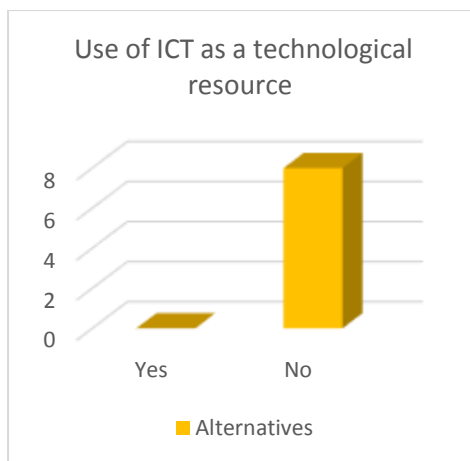
5.- Do you use ICT as a technological resource to teach your students?

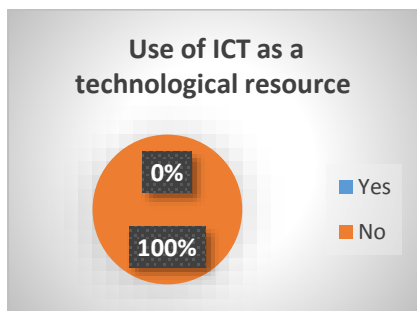**Table No.5:** Use of ICT as a technological resource

Alternatives	Number	Percentage %
Yes	0	0%
No	8	100%
TOTAL	8	100%

Source: Child Development Center "Ignacio Flores".

Graph N°1: Use of ICT as a technological resource

Graph N°2: Use of ICT as a technological resource

Sourcee: CDI" Ignacio Flores"

ANALYSIS

According to this question, 100% of teachers do not use ICT as a technological resource when teaching.

INTERPRETATION

The use of ICTs favors teacher-student interaction, it is of great importance because through the interaction between teacher-student it becomes a virtual and adequate education

allowing students to have flexibility in the access and management of information.

6.- Are you interested in innovating your classes using technological resources?

Table N°6: Innovating your classes using technological resources

Alternatives	Number	Percentage %
Yes	2	25%
No	6	75%
TOTAL	8	100%

Source: Child Development Center "Ignacio Flores".

Grph N°1: Innovating your classes using technological resources
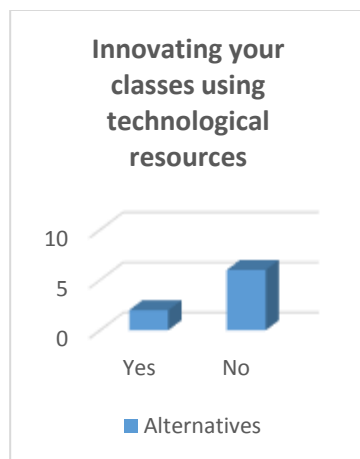
Graph N°2: Innovating your classes using technological resources

Source: CDI" Ignacio Flores"

ANALYSIS AND DISCUSSION

According to this question, 75% of teachers do not use technological resources to innovate their classes and 25% of teachers do use technological resources to innovate their classes.

INTERPRETATION

Using ICT in the classroom implies adapting the educational system to a changing society and to specific needs, teachers must be able to handle ICT in an adequate and pedagogical way and combine traditional methodologies with innovative ways of teaching.

7.- How long have you attended ICT training classes?

Table N° 7: Attended training classes on ICTs

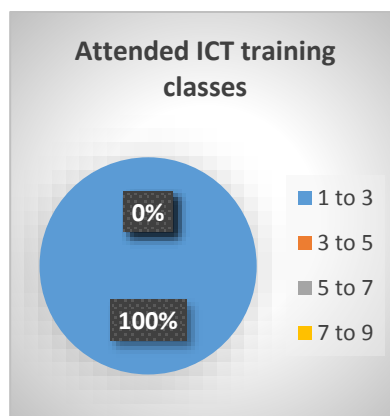| Alternatives	Number	Percentage %
1 to 3	8	100%
3 to 5	0	0%
5 to 7	0	0%
7 to 9	0	0%
TOTAL	8	100%

Elaborated by: Students of the initial education career of the Technical University of Cotopaxi

Source: Child Development Center "Ignacio Flores".

Graph N°1: Attended ICT training classes
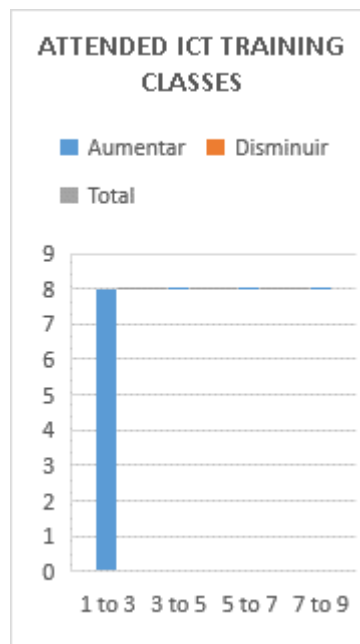
Graph N°2: Attended ICT training classes

Source:: CDI" Ignacio Flores"

ANALYSIS

According to this question, from 1 to 3 years 100% of teachers have attended ICT training classes, while from 3 to 9 years they have not attended.

INTERPRETATION

ICTs are the educational innovation of the moment and allow teachers and students to make decisive changes in their daily work in the classroom and in their teaching and learning process.
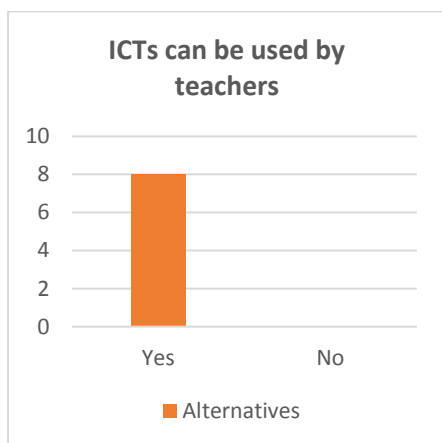
8.- Can ICT be used by teachers in the different areas of study?

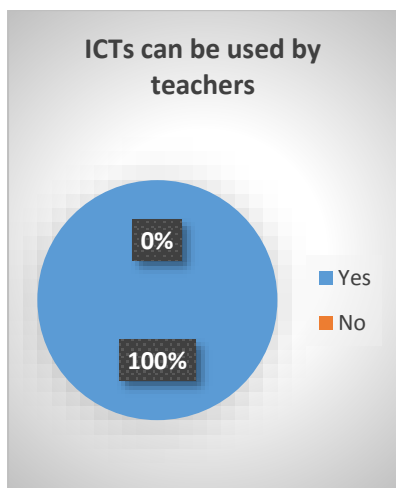**Table N° 8:** ICTs can be used by teachers

Alternatives	Number	Percentage %
Yes	8	100%
No	0	0%
TOTAL	8	100%

Source: Child Development Center "Ignacio Flores".

Graph N°1: ICTs can be used by teachers

Graph N°2: ICTs can be used by teachers

Source: CDI" Ignacio Flores"

ANALYSIS

According to this question, 100% of teachers responded that ICTs can be used by teachers.

INTERPRETATION

The incorporation of ICT in society and especially in the field of education has been acquiring increasing importance and has been evolving over the last few years, so much so that the use of these technologies in the classroom will go from being a possibility to becoming a necessity and a basic work tool for teachers and students.
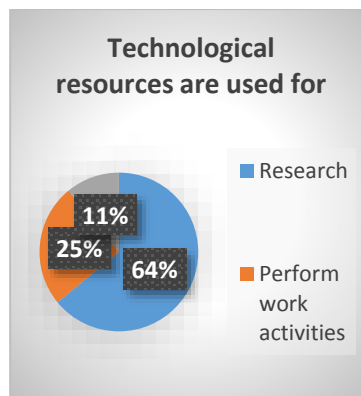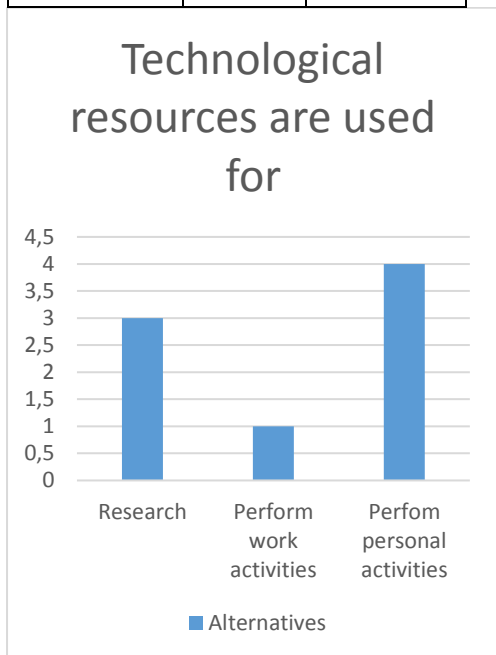
9.- The technological resources are used to:

Table N° 9: Technological resources are used for.

Alternatives	Número	Porcentaje %
Research	3	38%
Perform work activities	1	13%
Perform personal activities	4	50%
TOTAL	8	100%

Source: Child Development Center "Ignacio Flores".

Graph N°1: ICTs can be used by teachers

Source: CDI" Ignacio Flores"

Alternatives	Number	Percentage %
Lack of preparation	1	13%
Lack of time	4	50%
Lack of technology tools in the institution	3	38%
None	0	0%
TOTAL	8	100%

ANALYSIS

According to this question, 50% of teachers use technological resources for personal activities, 38% of teachers use technological resources for research, and 13% use them for work activities.

INTERPRETATION

A technological resource is a means that uses technology to fulfill its purpose. They can be tangible or intangible. Technological resources are used to optimize processes, time, human resources, streamlining work and response times.
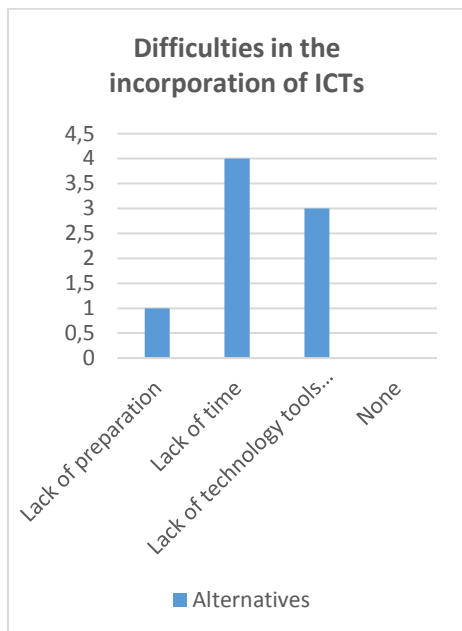
10.- Are the difficulties to incorporate ICT in your work due to?
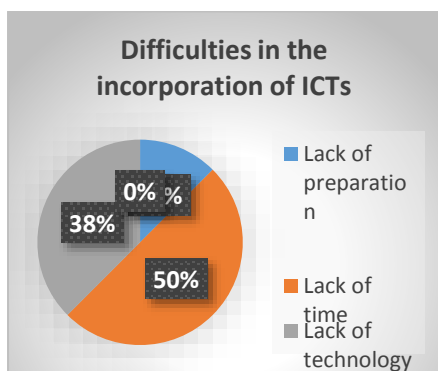
Table N° 10: Difficulties in the incorporation of ICTs

Source: Child Development Center "Ignacio Flores".

Graph N° 1: Difficulties in the incorporation of ICTs

Graph N°2: ICTs can be used by teachers

Graph N°2: Difficulties in the incorporation of ICTs

Source: CDI" Ignacio Flores"

ANALYSIS

According to this question, 50% of teachers have difficulty-incorporating ICT due to lack of time, 38% of teachers have difficulty-incorporating ICT due to lack of tools and 13% have difficulty due to lack of preparation.

INTERPRETATION

The use of ICT is hindered by the low level of preparation of the teacher using new technologies and the available information material, poor planning and lack of space and time hinder the use of these tools.

4. Conclusions

- ➢ As has been seen throughout this article, it is clear that ICTs have had, have had and will continue to have an enormous impact on society and on education.
- ➢ The advantages that ICTs have had in the educational process is that the vast majority of teachers apply ICTs in secondary school, which we want to encourage the proper use of ICTs from primary school.
- ➢ In the child development center "Ignacio Flores" the technological means are not applied correctly in the educational field.

References

[1] Barrio, N. (2018). Las TIC en Educación ¡Innovación metodológica en el aula! inesem digital magazine.

[2] González, M. D. (2017). Teacher Training and Online Education in Nicaragua and the work of the OEI. ibeamericadivulga.

[3] J, G. C. (2014). A historical look at the impact of ICT in the knowledge society in the current national context1.

[4] José A. Ferreyra, A. M. (n.d.). The use of ICT in Special Education: Description of a Computer System for Visually Impaired Children in Preschool. EDUCREA.

[5] Juan Carlos Chancusig Chisag and Javier Arturo Gamboa Cruzado, Results Validation about the Adoption Model of Information and Communication Technologies Applied to the Technical University of Cotopaxi. WSEAS Transactions on Environment and Development, pp.158-171, Volume 16, 2020.

[6] Sanchez, M. d. (2014). Active methodologies and discovery learning. ICT and Education.

[7] Sunkel, G. (2010). "TIC FOR EDUCATION IN LATIN AMERICA". ECLAC, 1.

[8] Torres, A. C. (2017). Distance education as a response to the educational needs of the 21st century. Revista Academica y Virtualidad,10, 26.

[9] UNESCO (n.d.). United Nations Educational, Scientific and Cultural Organization.