

The Application of ICTs as Pedagogical Tools to Improve the Teaching-Learning Process

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Abstract

To analyze the influence of technologies in the teaching-learning process of second-year senior students at Margarita Cortés school in the city of Esmeraldas, a descriptive research was carried out using the methods of deduction and induction. In addition, techniques such as observation and survey were applied to a population of 120 students and 2 teachers in the area. The results revealed that the teachers and students in the English area do not use technological tools or very little to develop topics inside the classroom. Maybe the teacher does not know about the importance and benefits that ICTs can offer to develop a class in a dynamic and interactive way. In fact, "Margarita Cortés" school has few technological tools access in relation to the number of students. Teachers do not share information using technological tools or social networks. This research coincided with a series of investigations related to the application of ICTs in what refers to the modernization and the constant updating of knowledge in the teaching-learning process.

Keywords: ICTS - Methodology - technological tools – pedagogical tools- teaching-learning process.

Resumen

Para analizar la influencia de las tecnologías en el proceso de enseñanza-aprendizaje en estudiantes de segundo año de bachillerato en el colegio Margarita Cortés en la ciudad de Esmeraldas, se realizó una investigación descriptiva utilizando los métodos de deducción e inducción. Además, se aplicaron técnicas como la observación y la encuesta a una población de 120 estudiantes y 2 maestros en el área. Los resultados revelaron que los maestros y estudiantes no usan herramientas tecnológicas o muy poco para desarrollar temas dentro del aula. Tal vez el maestro no sabe sobre la importancia y los beneficios que las TIC pueden ofrecer para desarrollar una clase de una manera dinámica e interactiva. De hecho, la escuela "Margarita Cortés" tiene pocas herramientas tecnológicas de acceso en relación con el número de estudiantes. Los docentes no comparten información utilizando herramientas tecnológicas o redes sociales. Esta investigación coincidió con una serie de investigaciones relacionadas con la aplicación de las TIC en lo que se refiere a la modernización y la actualización constante del conocimiento en el proceso de enseñanza-aprendizaje.

Palabras clave: TICs - metodología - herramientas tecnológicas - herramientas pedagógicas - proceso de enseñanza aprendizaje.

Introduction

Technologies of information and communication (ICTs) are tools that facilitate the daily work efforts and expenditure of time which have become key options to achieve our objectives in our daily routines. In addition, to have a revolutionary impact on the world and how to see it. This phenomenon has changed our way of life with all the advances that occur daily.

The set of teachers that are within schools' lack skills or unaware of the use of ICTs. In fact, teachers use them very little to develop a more dynamic and interactive class. This generation must adapt to positive changes in the use of ICTs and the teachers let their fears and paranoia to technologies that are created to improve and streamline our routine of work. Some of the more relevant problems about the use of ICTs are: Not to have the necessary technological equipment or very little, Not to have internet access and not to use of audiovisual materials including films, posters, slides, projectors, charts, maps, educational television, all of them are basic elements that help with the effective and professional development of teachers.

The non-application of ICTs brings, as a result, the expenditure of time in preparing materials for activities within classes but this time could be better spent on lesson planning. In addition, schools with ICTs resources get better results than those who are not well equipped. There is constantly a better development within the class and student participation. Finally, teachers may notice that the educational achievements of students are due to the good use of ICTs.

The analysis and description of how the use of ICTs can help to improve the English teaching process may help to infer the necessity to apply it, for this reason, the following questions arise to understand in a better way this research: What is the implication of the use of ICTs in the English language teaching–learning process?

What do theories state about the use of ICTs in the English learning-teaching process?

What is the real situation of the use of ITCs in the English language teaching-learning process in the second year of baccalaureate students from “Margarita Cortés” school?

How can the use of ICTs in the “Margarita Cortés” school be improved?

Definition of ICTS

ICTs, according to Gil (2002) are a set of applications, systems, tools, techniques and methodologies associated with the digitization of analog signals, sounds, texts and images, manageable in real-time. ICTs are tools of great utility to access the possibility, handling, processing and dissemination of information in a society that every day is more interconnected, and which requires of its member’s new attitudes and skills with knowledge.

The use of ICTs in the didactic of English

The presence of ICTs in the classrooms has shown an advantage within the teaching-learning process for the transformation of the pedagogical practices of teachers, from the traditional to the illustrative, dynamic and efficient with an expository teaching, ICTs promote learning by reception; with a construction-oriented teaching active and participatory knowledge by the students, ICTs facilitate learning by discovery. In this sense, teachers use the technologies for substantially, to do the same thing they were doing, but faster, more dynamic and in an attractive way.

The fundamental purpose of the pedagogical use of ICT to strengthen teaching strategies is guide and give teachers the chance to improve their practices in the classroom according Trucano (2005) in order to create more dynamic and interactive learning environments to complement the process of teaching and learning of their students, to facilitate teamwork and the cultivation of social attitudes with the learning community. Making the Act of teaching-learning more meaningful by allowing the student to understand that technology is applicable to all areas of knowledge.

Methods to improve the English language teaching-learning process

Methodologies are an essential part of the learning of a second language (in this case English) being how learning is transmitted in the best way by the teacher. Methodologies provide us with structure and organization which intends to teach but are not responsible for learning a language or not because to study certain methodologies we see that each one had a strong influence at different times and had characteristics that made them effective, even some of them are used until today.

As Ericksen (1978) states real learning in class depends on the ability of the teacher to maintain and improve the motivation that brought the students to the beginning of the course. Whatever the level of motivation that students bring, it will be changed, better or worse, by what happens in the classroom it is necessary to vary teaching methods using up-to-date tools and to call the attention of the students. That it is worthwhile going to class, do not worth going to a class in which the teacher is limited to follow to the letter a few notes or text, simply by reading it. It is to avoid boredom or the routine. Each class is a new adventure. We are accustomed to the classes with the traditional method where the student makes it purely a single listener and does not develop their skills which decreases motivation and curiosity.

Currently, within teaching methods arise technologies with specific tools for the development of the skills of each student; the way in which a student learns depends not only on his intelligence or his previous

The Application of ICTs

education, but his preferred learning style where ICTs can offer to develop the fundamental types of learning. According to Sancho (2016) For example:

- Visual: learning better seeing and reading what they're trying to teach
- Touch and psychomotor: learn better by doing
- Auditory: learn better listening
- Videos. -Discussion in class
- Discussion in small groups
- Analysis of cases
- Role-playing
- Simulations

Types of ICTs

Information and communication technologies are composed of various tools and computer systems, they can give us advantages within classroom teaching, as a result of its use improves teaching and learning situations. These tools have been classified by Lim & Tay (2003):

- Informative tools - Internet, Network Virtual Drive, Intranet systems, Homepage
- Resignation devices - CD-ROM
- Constructive tools – MS Word, PowerPoint, FrontPage, Adobe Photoshop, Lego Mind storm
- Communicative tools - e-mail, SMS
- Collaborative tools - discussion boards or forum

Advantages of the use of ICTs

According to Lim and Tay (2003) there are some advantages of the use of ITCs can awake the students' desire to learn such as interest that is defined as a stimulus to draw our attention to a particular thing, person or activity. As well as motivation, which is considered the effort, which helps to achieve goals. Motivation can be intrinsic or extrinsic. There is no doubt that the use of technology makes communication effective and easy between teachers and students. Teachers who use technology have various ICTs to interact, reach and organize his or her routine of work.

Another advantage of using ICTs is the use of cooperative learning where students of mixed levels of ability are arranged into groups to help to other students in an indirect way. Generating a sense of cooperation in the English teaching-learning process. There is no doubt that the principal role of incorporate ICTs inside the classroom is the digital literacy with the incorporation of the new technologies methods which facilitate the work and make it more efficient and effective.

Disadvantages of the use of ICTs

According to Díaz (2014) there are some disadvantages of using ITCs, the first one is the addiction people could present with these technologies, a lot of people begin to depend on technological tools or computers, this means that when they do not have access to technological equipment cannot be able to solve possible problems. Visual fatigue and other physical problems. The use of these tools inside the classroom demands enormous efforts by teachers that need to spend time in front of a computer that affects his /her vision for exposition to screen. Academic staff spends more time in preparation of materials with relation to traditional methods but the benefits to incorporate ICTs are because creating a dynamic and interactive class. Educational resources with short didactic potential Not all the information found on the internet has scientific substantiation and studies, we must be very cautious in selecting information that needs to have important characteristics such as validity and quality for our students.

When the computer software is attacked by a virus runs the risk of the distortion or the loss of total or partial information. It is necessary to have a backup such as an antivirus and clouds on the internet, where people

can store information securely. Finally, there is no doubt about the economic effort new technology requires because it is more expensive than traditional education.

Previous Studies

There are many studies showing the positive impact generated by the application of ICTs in what refers to the modernization and the constant updating of knowledge in the teaching-learning process as Arancibia (2001) stated “the training is continued throughout life” p. 76 who reinforces the theory of Constructivism where societies are focused as the learning and knowledge societies is lifelong based on our experiences so we will review some background about the use and application of ICTs.

According to Daniels in 2002 in his investigation obtain as a result that ICTs have become very short in one of the building blocks of modern society. They are part of the basis of education. The results also revealed that the implementation of the technologies within the schools is changing the plan to follow from a teacher-centered approach that is based on practices around the blackboard and the speech, based on lectures toward a quality education mainly focused on the student.

Yusuf in 2005 applied a research in a school to motivate students and teachers in the classroom, as a result he concluded that the implementation of ICTs within the classroom plays an important role with regard to practice real-life situations through interactive examples where the teacher acts as a guide or facilitator of activities which will help in the future to students, to put in practice the acquired in the classroom during the teaching-learning process.

Reina in 2012 did a research at the Central University of Ecuador in the Faculty of Philosophy in the results revealed that teaching-learning of sciences using ICTs involved scaffold in the educational system to adopt this tools as a complementary part for the development of the different blocks of learning and in the formation of the student, in which the teacher is the main part to this tool of teaching-learning meets function in both academic and social integral training for students.

In conclusion, all studies based on the implementation of the ICT are addressed to the benefit of whom use them, in fact generate us a dynamic interaction between teachers and students, which provides a wide variety of technological tools, starting from the universal access to information around the world to saving teachers time and capture the undivided attention of students, these tools help us to improve significantly with the teaching-learning process

Results of the observation

The observation method was applied to the second year of baccalaureate level, the data was registered and analyzed about the influence that ICTs (information and communication technologies) have on the English area. With the observation sheet, it could notice that teachers and students in the English area do not use technological tools or only use very little to develop the topics. Maybe the teacher does not know about the importance and benefits that ICTs can offer to develop a dynamic and interactive class. In fact, this school as many of the schools in the country has few technological tools access concerning the number of students.

Sometimes teachers used audiovisual materials in the English language teaching-learning process, as a result of this situation the class becomes boring because the teacher only led notes and he read instructions on the books. It was also observed that the methodologies used by the teachers do not catch the attention of students because of the traditional method. Students from senior high levels had a lot of distractions because the teacher did not use interesting topics associated with the students' interest. When the class ended the teacher did not share the e-mail to solve possible doubts. This generates gaps in the English language teaching-learning process.

Results of the survey applied to students

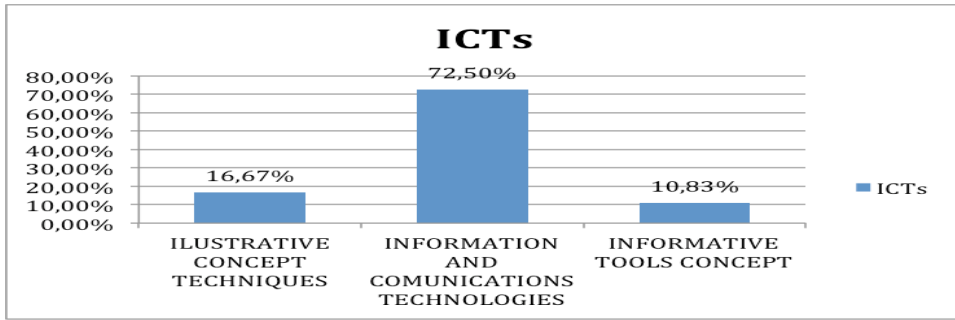


Figure 1: What students know about ICTs

Source: Survey applied to students

This figure illustrates that the major percentage according to 72,50% coincided with students who know about ICTs meaning, also with 16,67% and 10,83% indicates wrong meaning about ICTs as a result of this interpretation of the students, they do not know about ICTs meaning easily.

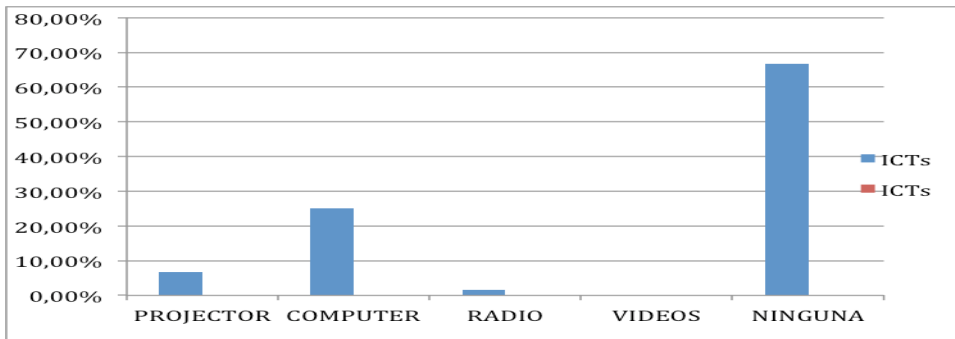


Figure 2: Kind of ITCs used by teachers

Source: Survey applied to students

This figure shows that the kind of ICTs mostly used by the teachers is the computer with 25%, the projector with 6,67%, the radio with 1,67%, videos with 0% but 66,67% of students wrote that do not use any kind of technological tools inside the classroom. We can infer that the teacher does not apply ICTs. The teacher is limited to the presentation of information differently as done by traditional books and videos (known as old resources).

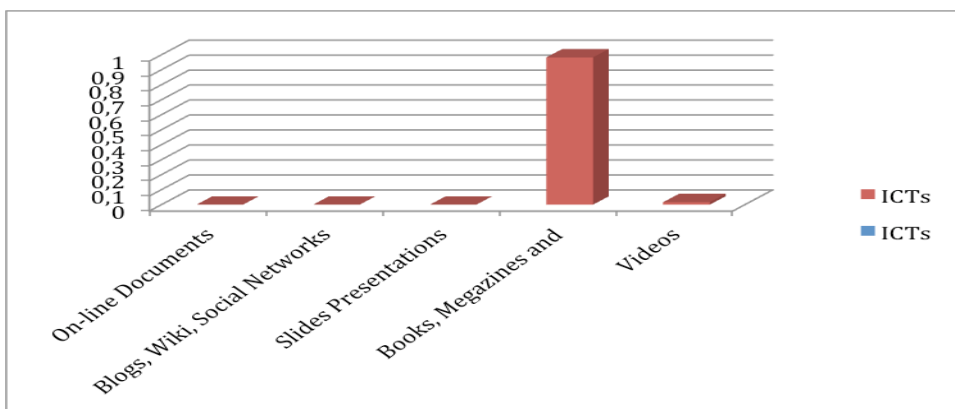


Figure 3: Methods used by teachers

Source: Survey applied to teachers

This figure shows that the resource mostly used by teachers are the books with 98,33%, videos 1,67%, online documents 0%, blogs 0%, slides presentation 0%. This shows a lack of authentic material created by

teachers through slides presentation also there is no interaction among students using online documents, blogs or social networks that create more dynamic activities.

Discussion

The results of this investigation coincided with the ones presented by other researchers who emphasize the benefits of the use of ICT within the classroom as stated by Yusuf (2005) and Daniels (2002) who claim that ICTs motivate, engage and accelerate the learning process. Creating an atmosphere of cooperation, strengthening the theory of Constructivism. That why the purpose of this research if to show that these tools are not being used and encourage teachers and school authorities to implement the use of them in the classrooms.

In the study presented by Reina in 2012 mentions that the use of ICTs become in a scaffold in the educational system, those results completely coincide with the theories that support this research and try to motivate teachers to use ITCs as tools to engage students with the topics.

Conclusions

The staffs of teachers in the English area of “Margarita Cortés” school have little access to ICTs.

The students of the second year of baccalaureate from “Margarita Cortés” school have problems of distractions because of lack of motivation by the teacher.

The teachers use just the book and they do not incorporate technological tools with interesting and actual topics according to their student’s preferences.

References

Arancibia, (2001). An Effective use of ICT for Education and Learning by Drawing on

Worldwide Knowledge, Research, and Experience Department of Education, University of Kashmir,

76. Retrieved from: www.nyu.edu/classes/keefer/waoe/amins.pdf

Daniels J.S. (2002) “Foreword” in Information and Communication Technology in Education – A

Curriculum for Schools and Programme for Teacher Development. Paris: UNESCO. Retrieved from:

<http://www.nyu.edu/classes/keefer/waoe/amins.pdf>

Díaz, D. (2013). TIC en Educación Superior: ventajas y desventajas. Revista Educación y Tecnología. Retrieved from <http://bit.ly/2PWgtDN>

Ericksen, S. C. (1978). The Lecture Memo to the Faculty, no60. Ann Arbor: Center for Research on teaching and learning, University of Michigan.

Gil (2002), ICT Enhancing teaching and learning process Department of Education, University of Kashmir

Retrieved May 2015 from: <http://www.nyu.edu/classes/keefer/waoe/amins.pdf>

Kristianawati (2009) The Importance to teaching English in high school. Retrieved May 2009 from:

<http://writer-hissha.blogspot.com/2013/05/the-importance-of-english-in-elementary.html>

Lim, C.P., & Tay, L.Y. (2003). Information and communication technologies (ICT) in an elementary school:

Engagement in higher order thinking. *Journal of Educational Multimedia and Hypermedia*, 12 (4), 425-451. Retrieved from: http://www.uniassignment.com/essay-samples/education/types-of-ict-tools-education_essay.php

Reina, Tulcanaz (2012). Las TICs en el Proceso de Enseñanza-Aprendizaje de Las Ciencias Naturales en Educación Básica Superior, en el Colegio Nacional Técnico “Dr. José Ricardo Chiriboga Villagómez”, De La Parroquia Manuel Cornejo Astorga, Cantón Mejía, Provincia De Pichincha, En el Año Lectivo 2012 – 2013. Central

University of The Ecuador Faculty Of Philosophy, Letters And Sciences Education. Retrieved from: <http://www.dspace.uce.edu.ec/bitstream/25000/571/1/T-UCE-0010-124.pdf> studies.

Sancho, J. (2016). Técnicas de enseñanza para mejorar la educación usando las TICs.

Universidad del País Vasco. Retrieved from: February <http://educrea.cl/tecnicas-de-ensenanza-para-mejorar-la-motivacion-de-los-estudiantes/>

Trucano, Michael. (2005). ICTs in Education. Washington, DC: *infoDev / World*

Bank. Retrieved February 2016 from: <http://www.infodev.org/articles/teachers-teaching-and-icts>

Yusuf, M.O. (2005). Information and communication education: Analyzing the

Nigerian national policy for information technology. *International Education Journal* Vol. 6 No. 3, 316-321. Retrieved from: <http://www.nyu.edu/classes/keefe/waoe/amins.pdf>

Vygotsky’s philosophy (1967). Constructivism and its criticisms examined Liu &

Matthews, *International Education Journal*, 2005, 6(3), 386-399. Retrieved November, 2011 from:

[https://en.wikipedia.org/wiki/Constructivism_\(philosophy_of_education\)](https://en.wikipedia.org/wiki/Constructivism_(philosophy_of_education))