

The importance of ICT in the dissemination of teaching and learning in students of a semi-collegiate education system

¹Dr. Gilberto Mejía Salazar, ²MTE. Gabriel Zepeda Martinez
^{1,2}Professor at the Autonomous University of Nayarit, Mexico
¹Email: gilberto.mejia@uan.edu.mx, ²gabrielzepeda@uan.edu.mx

Abstract: According to the following research, it is a quantitative type, also, a questionnaire was used to 11 multiple choice questions for the collection of information, applied to 216 random students belonging to the corresponding grades of first, second and third year of a semi-collegiate system. That is why, the main objective is to publicize the importance of Information and Communication Technologies –ICT- in teaching-learning processes in students. Therefore, it was necessary to study the following variable: 1. The age of students using ICT. Source, 2. Gender of students using ICT, 3. Of the services provided by the Internet, which you use frequently? 4. How many email accounts are you currently registered? 5. Do you use devices such as a projector, computers, electronic presentations, spreadsheets, to perform activities in the classroom? 6. Have you sent assignments or any other attached documentation via e-mail? 7. Have you downloaded resources from the internet such as programs, texts, videos, sounds, tutorials, etc.? 8. Do you use communication tools such as chats, forums, instant messaging, etc.? 9. Which of these programs do you constantly use for your academic activities? 10. What do ICT contribute to the training process? 11. Can you indicate how important Information and Communication Technologies -ICT- are for your academic performance? Therefore, the information collected was processed through the SPSS statistical program, so that the results were organized in their respective contingency tables, as well as their graphic reference. Therefore, having an ICT based education improves the teaching-learning of students.

Keywords: Education, ICT, Information society, Students, Teaching-learning.

1. INTRODUCTION:

It should be mentioned that a semi-collegiate course represents an option for workers and those with a certain academic background and who wish to continue their studies in an articulated way with their work activities. In this context, this model proposes educational programs with classroom sessions in a sporadic way and in which a series of tasks are established for the students, which will be reviewed by the tutor or adviser [1]. Of the above, the incorporation of computer and audio-visual media is a great contribution to education, while enriching teaching and learning methods, makes available to teachers and students all kinds of up-to-date knowledge and information, revolutionizes teacher training, facilitates distance education, makes educational management more efficient and makes learning processes more participatory [2].

Therefore, the use of ICT in the classroom has an impact that, according to the teachers, is manifested in opening the possibility for teachers and students to access remote information, images, videos and auditory resources from the classroom. Learning, in the same way, the use of ICT can encourage students to make the least effort. This is because the creativity and the search spirit to develop the student can stay with what the Internet offers, on the other hand, it can also foster dependency [3].

Likewise, the following research was of a quantitative type, a questionnaire was used with 11 multiple-choice questions for the collection of information, applied to 216 random students belonging to the corresponding grades of the first, second and third year of high school. In this way, the main objective is to make known the importance of ICT in teaching-learning processes in students of a semi-collegiate system.

2. LITERATURE REVIEW:

This is how the school, as an educational agent, must use all these ICT to train and prepare students. Thus, when it is time for them to integrate as active members of society, to have sufficient preparation, not only to join it but to be able to modify it in a positive and critical way. Therefore, educational institutions should be open and flexible to the advances that occur in society, to introduce them and adapt them to the needs of the students [4].

In this way, the Internet era demands changes in the world of education, and education professionals have many reasons to take advantage of the new possibilities offered by ICT to promote this change towards a new, more personalized educational paradigm centered on the activity of Students [5]. The three main reasons for using ICT in education are presented below, as shown in Table 1.

Table 1. The three big reasons to use ICT in education.

<p>1. REASON: Digital literacy of students. Everyone must acquire the basic skills in the use of ICT.</p>
<p>2. REASON: Productivity. Take advantage of the advantages they provide in activities such as preparing notes and exercises, find information, communicate -e-mail-, disseminate information -blogs, web-center, and teachers-library management.</p>
<p>3. REASON: Innovate in teaching practices. Take advantage of the new didactic possibilities offered by ICT to make students better learn and reduce school failure.</p>

Source: Own elaboration based on Gómez and Macedo [5].

Thus, the use and appropriation of ICT is a current and important issue when we refer to educational innovation and to the continuous improvement of quality in schools. In this way, the integration and use of ICT is part of a global trend of the knowledge society and the information society, in which schools and all levels of education are somehow involved, some more and others less, before a cultural and social pressure that compels them to participate in it to improve the educative processes of teaching-learning [6].

That is why, in the field of educational activity and in accordance with the problems that present times present, is a pending task for those who are linked to the field of education, also, ICT have become an indispensable tool and every day for the formation of the student and in a central way for those who perform, or will do, in the teaching role [7].

It should be noted that, for its part, the school must consider and support good educational practices and should be characterized by having an efficient policy, organizational and academic and administrative management, to integrate ICT, in addition, little by little provides adequate training of teachers and strengthens reflection on practice [8].

In this context, ICT have the potential to transform the teaching-learning processes in an innovative way to support traditional and non-traditional forms. In several studies, they have been shown to foster a student-centered model, to support collaborative work strategies and to foster the development of research projects, which lead to more reflective, deep and participatory learning; they also raise the level of accessibility which promotes lifelong learning [9].

That is why, ICT are also a resource for information, a powerful resource, valuable for people to communicate through mobile devices, e-mail, discussion forums, chats, among other things. On the other hand, in the educational world we can find many applications of ICT, from the creation of portals or educational websites, the creation of virtual teaching-learning classrooms, videoconferencing, education software and logically the whole set of materials didactic that has a support of disc or educational multimedia that now is distributed through the Internet [10].

In this way, the educational community must work together to promote the proper use of ICT in the formation of the subject, giving interest to interdisciplinary groups for the creation of habits that prioritize the correct functioning of the protocols and technological resources used in training [11].

Information technologies, per experts, constitute a phenomenon of great social importance, are a means to promote education from which the process of reading and writing can be strengthened, since students are today more sensitive to a digital environment, because it enables more interaction with electronic devices, mobile phones, digital television, video games and the habitual use of the Internet [12].

3. METHODOLOGY:

It should be noted that the following research was of a quantitative type, a questionnaire was used to 11 multiple choice questions for the collection of information, applied to 216 random students belonging to the corresponding grades of first, second and third year of high school (Fig. 1).



Figure 1. Students answering the questionnaire. Source: Made by myself.

In this way, the main objective is to make known the importance of ICT in teaching-learning processes in students of a semi-collegiate system. Therefore, it was necessary to study the following variable: 1. The age of students using ICT. Source, 2. Gender of students using ICT, 3. Of the services provided by the Internet, which you use frequently? 4. How many email accounts are you currently registered? 5. Do you use devices such as a projector, computers, electronic presentations, spreadsheets, to perform activities in the classroom? 6. Have you sent assignments or any other attached documentation via e-mail? 7. Have you downloaded resources from the internet such as programs, texts, videos, sounds, tutorials, etc.? 8. Do you use communication tools such as chats, forums, instant messaging, etc.? 9. Which of these programs do you constantly use for your academic activities? 10. What do ICT contribute to the training process? 11. Can you indicate how important Information and Communication Technologies -ICT- are for your academic performance?

In addition, the information collected was processed through the statistical program SPSS version 19. From the above, the results were organized in their respective contingency tables, as well as their graphical reference.

4. DATA ANALYSIS:

4.1. The results obtained from the questionnaire are presented below:

The age of students using ICT. The age groups are distributed as follows, for the first year, the ages of students aged 15 to 25 represent 36.6%, from 26 to 35 years old 5.1%, from 36 to 45 years old 5.1%, from 46 To 50 years and from 51 to 60 years do not present results. For the second year, 15 to 25 years present 16.2%, from 26 to 35 years 4.2%, from 36 to 45 years 1.4%, and for the age groups of 46 to 50 years and 51 to 60 years do not present results, and for the third year, from 15 to 25 years old it presents 17.1%, from 26 to 35 years old 6.5%, 36 to 45 years old 5.6%, 46 to 50 years old 1.9% and from 51 to 60 years old 0.5% (Fig. 2).

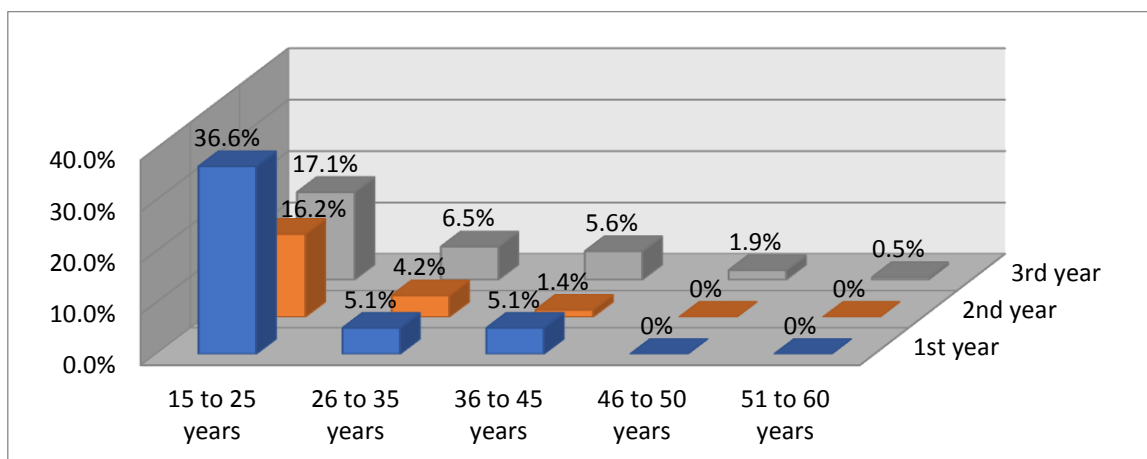


Figure 2. The age of students using ICT. Source: Made by myself.

Gender of students using ICT. The total number of three academic degrees that use this type of tool was 73 men representing 33.8% and 143 women representing 66.2%, of which for the first year presents 15.7% of men and 31% of women, also for the second year was 8.3% men and 13.4% women and for the third year 9.7% men and 21.8% women (Fig. 3).

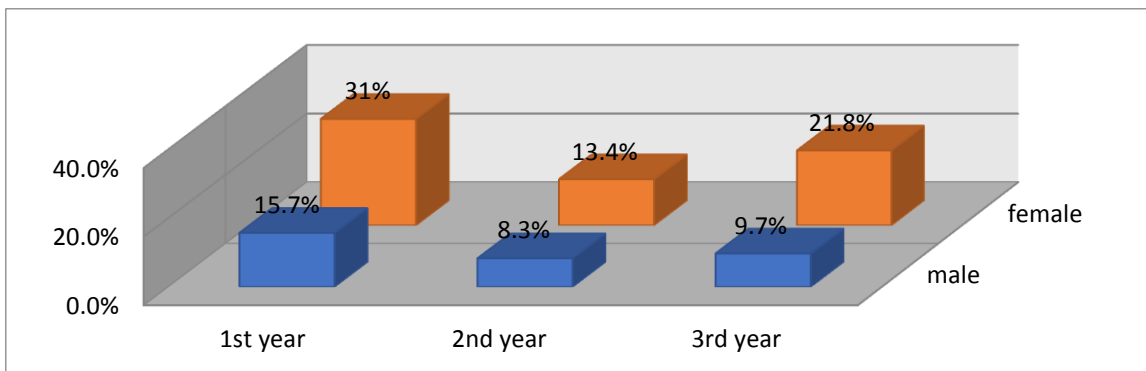


Figure 3. Gender of students using ICT. Source: Made by myself.

What services does the Internet provide, which do you use frequently? Of the services provided by the Internet, 4.6% use e-mail, 19% chats, 19.9% websites and 3.2% downloads. Similarly, for the second year, we have 3.7% use e-mail, 6% chats, 11.6% websites and 0.5% downloads, and the third year presents that 7.9% use e-mail, 13% chats, 10.2% websites and 0.5% downloads (Fig. 4).

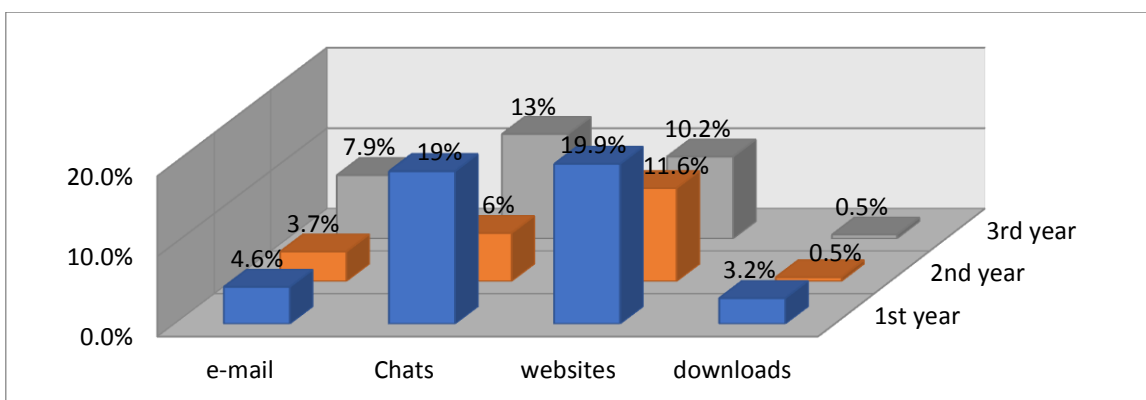


Figure 4. Of the services provided by the Internet, which you use frequently? Source: Made by myself.

How many email accounts are you currently registered? Let's go to how many email accounts you have registered the results are the following, for the first year 26.9% have an account, 10.6% two accounts, 6.5% three accounts or more, 2.8% do not have. For the second year, 9.3% have one account, 8.8% two accounts, 2.8% three accounts or more, 0.9% does not have. Also, for the third year, 20.8% have one account, 7.4% two accounts, 2.8% three accounts or more, and 0.5% does not have (Fig. 5).

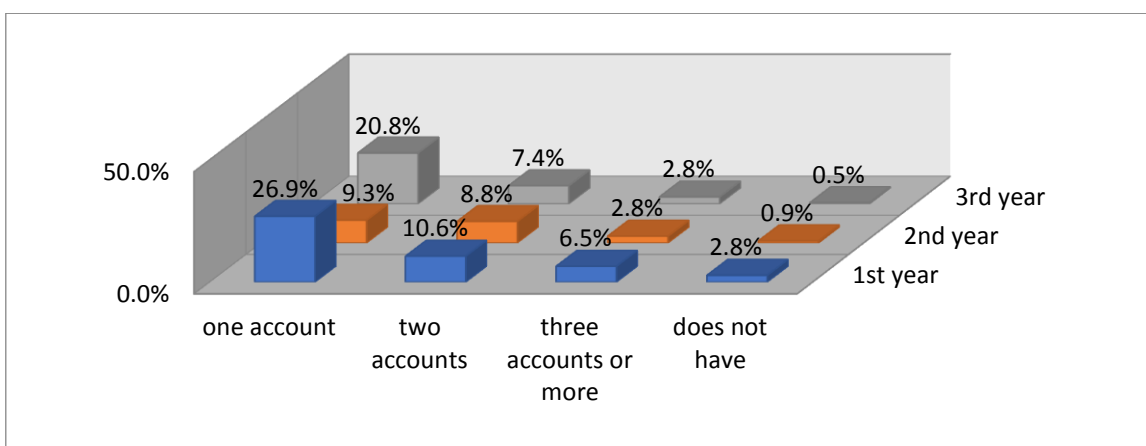


Figure 5. How many email accounts are you currently registered? Source: Made by myself.

Do you use devices such as a projector, computers, electronic presentations, spreadsheets, to perform activities in the classroom? With 9.7% responded that never, 51.9% occasionally, 28.7% constantly, 9.7% very constant. With all the above we have that first year presents that 6% responded that never, 25.9% occasionally, 11.6% constantly, 3.2% very constant. For the second year, 1.9% never, 12% occasionally, 6% constantly, 1.9% very constant. The third year, 1.9% never, 13.9% occasionally, 11.1% constantly, 4.6% very constant (Fig. 6).

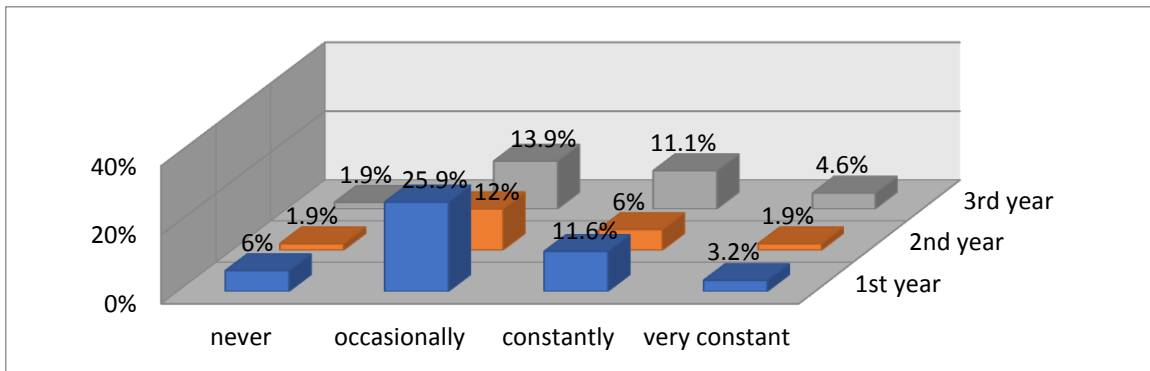


Figure 6. Do you use devices such as a projector, computers, electronic presentations, spreadsheets, to perform activities in the classroom? Source: Made by myself.

Have you sent assignments or any other attached documentation via e-mail? The total result is 2.3% never, 12% occasionally, 22.7% constantly, 6.5% very constant. The results for First year, were 19.4% never, 20.4% occasionally, 6.5% constantly, 0.5% very constant. For the second year, 3.7% never, 13% occasionally, 3.7% constantly, 1.4% very constant. The third year, 2.3% never, 12% occasionally, 12.5% constantly, 4.6% very consistently, it is observed how students occasionally resort to these means to send documentation attached to teachers (Fig. 7).

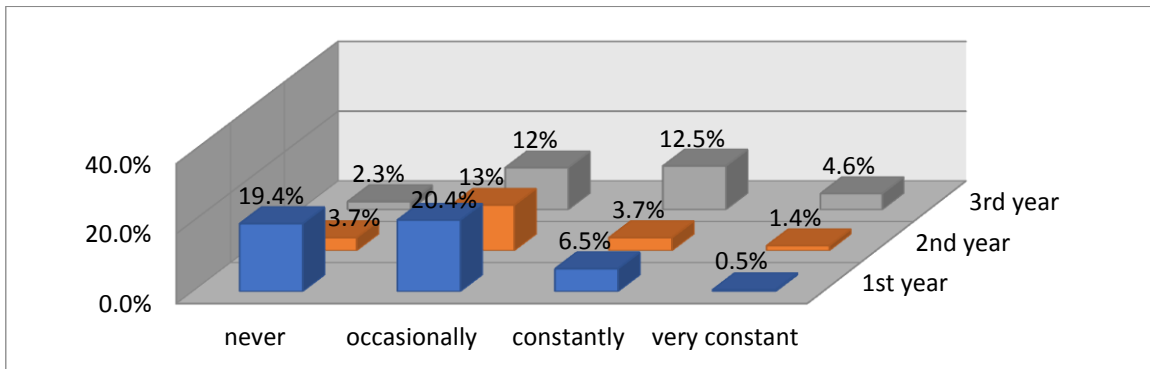


Figure 7. Have you sent assignments or any other attached documentation via e-mail? Source: Made by myself.

Have you downloaded resources from the internet such as programs, texts, videos, sounds, tutorials, etc.? Therefore, we have for the first year the results are as follows, 7.9% never, 18.1% occasionally, 15.3% constantly, 5.6% very constant. Second year, 3.7% never, 9.3% occasionally, 4.2% constantly, 4.6% very constant. The third year, 2.8% never, 11.6% occasionally, 12.5% constantly, and 4.6% very constant (Fig. 8).

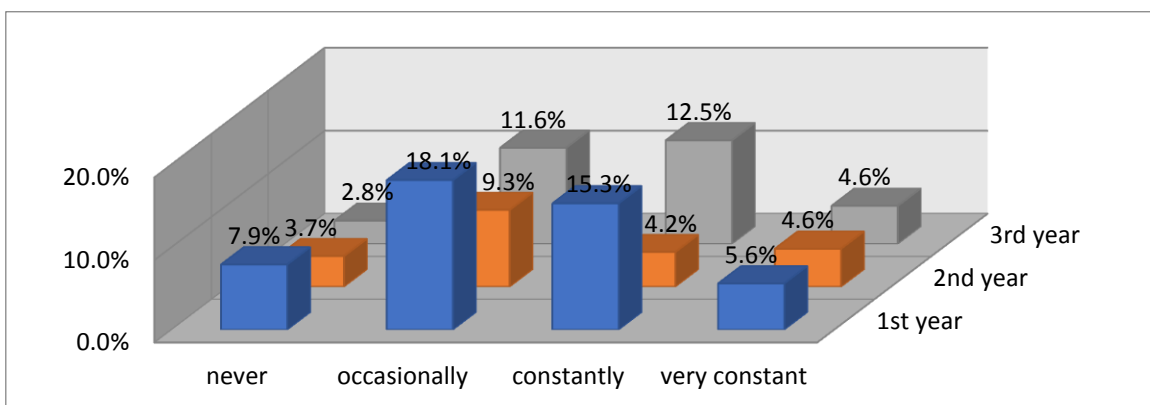


Figure 8. Have you downloaded resources from the internet such as programs, texts, videos, sounds, tutorials, etc.? Source: Made by myself.

Do you use communication tools such as chats, forums, instant messaging, etc.? The results are as follows, the first year I present the following, 5.1% never, 20.8% occasionally, 13% constantly, 7.9% very constant. Second year, 2.3% never, 7.9% occasionally, 6% constantly, 5.6% very constant. Third year, 3.7% never, 12.5% occasionally, 9.7% constantly, 5.6% very constant (Fig. 9).

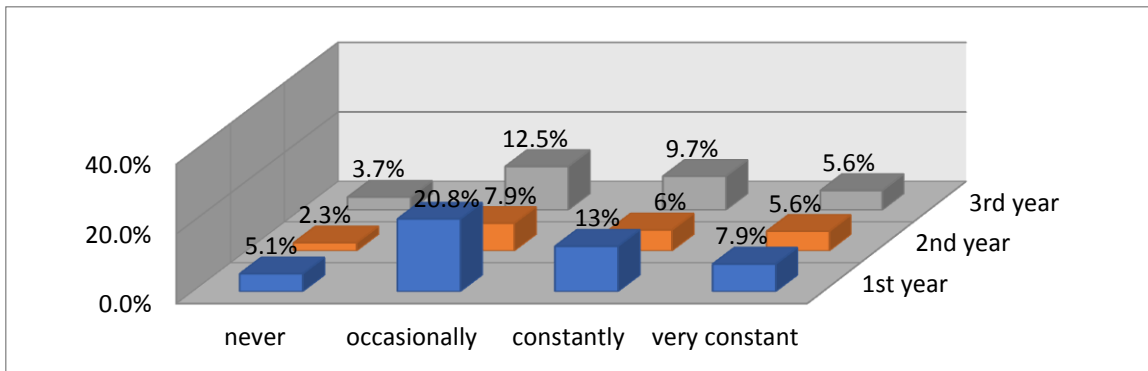


Figure 9. Do you use communication tools such as chats, forums, instant messaging, etc.? Source: Made by myself.

Which of these programs do you constantly use for your academic activities? First year, 22.2%-word processor, 1.4% spreadsheets, 13.9% electronic submissions, 0.5% databases, 8.8% other type. Second year, 8.8%-word processor, 6% spreadsheets, 3.7% electronic submissions, 1.4% databases, 1.9% other type. The third year, 11.6%-word processor, 1.9% spreadsheets, 12% electronic submissions, 2.3% databases, and 3.7% used another type of program (Fig. 10).

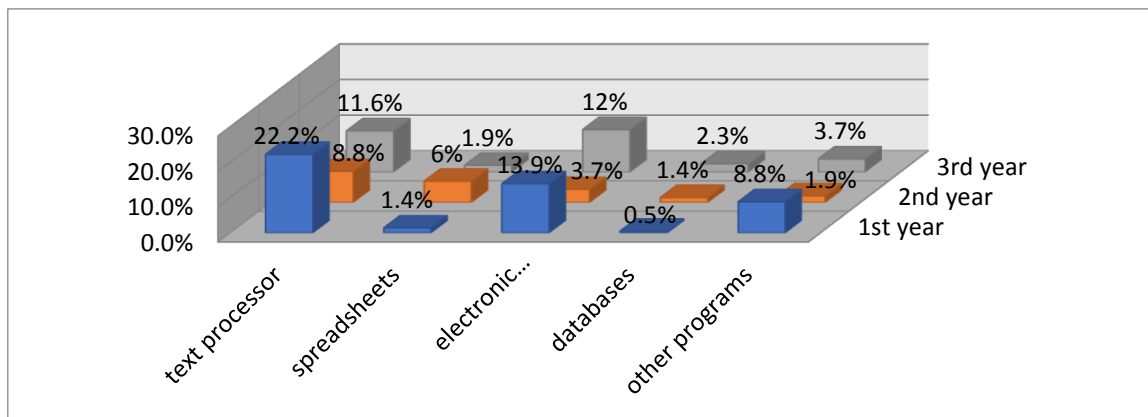


Figure 10. Which of these programs do you constantly use for your academic activities? Source: Made by myself.

What do ICT contribute to the training process? Of the total number of students surveyed, 28.7% provides information, 34.7% knowledge, 26.9% ease learning, 9.7% another type. For the first year, 16.7% provides information, 14.8% knowledge, 10.2% ease learning, 5.1% another type. The second year, 3.7% provides information, 10.6% knowledge, 6% ease learning, 1.4% another type. The third year, 8.3% provides information, 9.3% knowledge, 10.6% ease learning, 3.2% another type of training (Fig. 11).

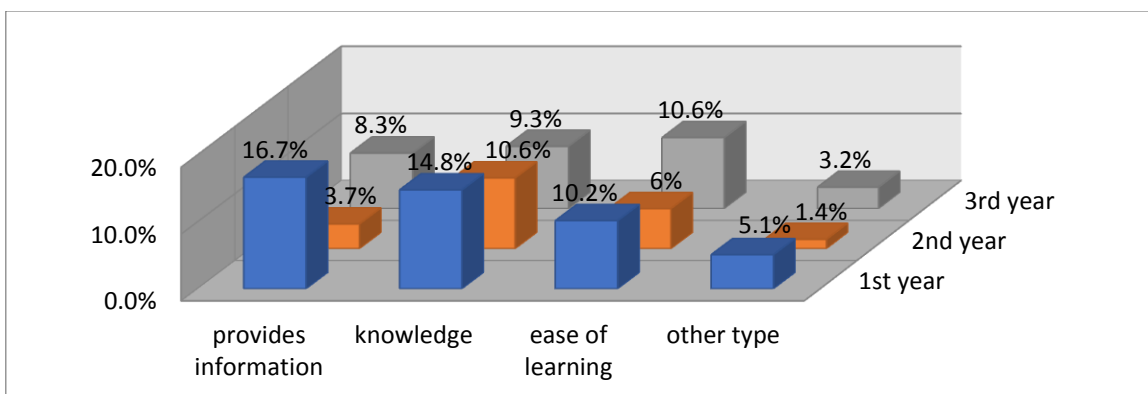


Figure 11. What do ICT contribute to the training process? Source: Made by myself.

Can you indicate how important Information and Communication Technologies -ICT- are for your academic performance? Of the above, for the first year, 3.7% is nothing important, 3.2% less important, 24.1% is important, 15.7% is very important. Second year, 1.4% nothing important, 1.4% less important, 8.8% important, 10.2% very important. Third year, 0.9% nothing important, 0% less important, 17.6% important, and 13% very important (Fig. 12).

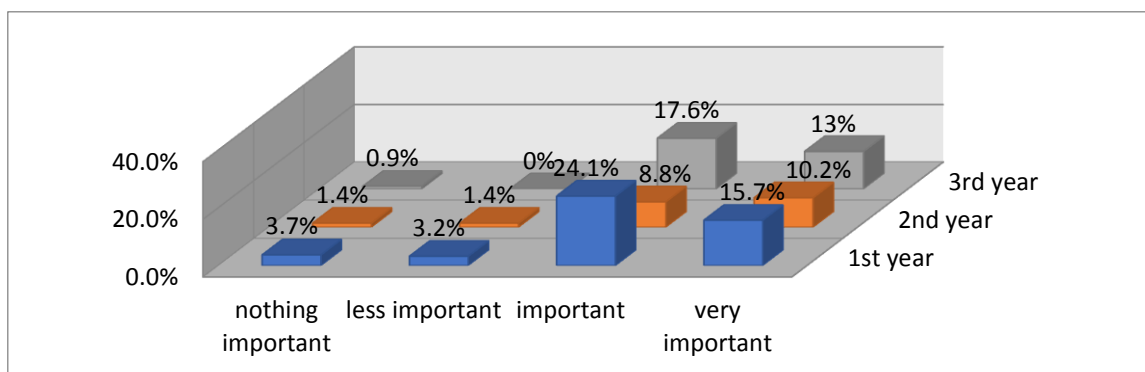


Figure 12. Can you indicate how important Information and Communication Technologies -ICT- are for your academic performance? Source: Made by myself.

5. CONCLUSION:

In conclusion, ICT are tools of support within the contexts of student education. Also, it is understood that these types of technologies are a necessity in everyday life and work, so the importance of these technologies is paramount today since it is necessary to install ICT based learning. Therefore, technology cannot be excluded because it is of immense importance for the human being in general. From the above, most students use programs to perform academic work in different degrees of the institution. Thus, it is specified that these types of resources are very useful for the constant learning of the student granted by the ICT's, which expresses the great interest to use and manage this type of tools within the classroom.

Finally, an education based on ICT improves the results of teaching-learning of students. Likewise, Crespo and Medinaceli [13] affirm that the new curricular design is necessary to adopt modern technologies and develop science and technology in an intercultural framework to integrally train students through community educational practices, articulating knowledge, and ancestral productive practices with knowledge Technologies.

REFERENCES:

- González, M. (2000): Estudios semiescolarizados, una opción práctica. *Gaceta Universitaria*, Recuperado en: <http://www.admision.buap.mx/sites/default/files/SOL%20DE%20PUEBLA%20SEMIESCOLARIZADA%252c%20ABIERTA%20Y%20A%20DISTANCIA%2029-04-16.pdf>. (24/12/2016).
- Rival Oyarzún, H. (2010): Tecnologías de la información y comunicación en el sistema escolar chileno, aproximación a sus logros y proyecciones. *Revista Iberoamericana de Educación*, no. 512/2, 2-11.
- Muñoz Urías, M. (2011): El uso de las TIC's en EMS. Visión de un grupo de profesores-estudiantes. *Revista Mexicana de Bachillerato a Distancia*, número 5, año 3, 84-93.
- Asorey, E. y Gil, J. (2009): El placer de usar las TIC en el aula de infantil. *CEE Participación Educativa*, 12, noviembre, 110-119.
- Gómez Gallardo, L. y Macedo Buleje, J. (2010): Importancia de las TIC en la educación básica regular. *Investigación Educativa*, 14(25), 209-224.
- Zenteno Ancira, A. y Mortera Gutiérrez, F. (2011): Integración y apropiación de las TIC en los profesores y los alumnos de educación media superior. *Apertura*, 3(1). Recuperado en: <http://www.udgvirtual.udg.mx/apertura/index.php/apertura/article/view/193/208> (11/01/2017).
- Loffi de Ranalletti, V. y Collazo, H. (2012): Reflexiones en torno a las TIC en la educación media y la formación de docentes. *Clío & Asociados*, (16), 168-178. En memoria Académica. Recuperado en: http://www.memoria.fahce.unlp.edu.ar/art_revistas/pr.5547/pr.5547.pdf (11/01/2017).
- Ulate, M. (2013): Las TIC en educación primaria y secundaria: un estado del arte. *Día-logos*, 11, 7-27.
- León Martínez, J. y Tapia Rangel, E. (2013): Educación con TIC para la sociedad del conocimiento. *Revista Digital Universitaria*, 14(1), 2-12.
- Bautista Sánchez, M.; Martínez Moreno, A. e Hiracheta Torres, R. (2014): El uso de material didáctico y las tecnologías de información y comunicación (TIC's) para mejorar el alcance académico. *Ciencia y Tecnología*, (14), 183-194.
- Padilla Beltrán, J.; Vega Rojas, P. y Rincón Caballero, D. (2014): Tendencias y dificultades para el uso de las TIC en educación superior. *Entramado*, 10(1), 272-295.
- Hermosa Del vasto, P. (2015): Influencia de las tecnologías de información y comunicación (TIC) en el proceso enseñanza-aprendizaje: una mejora de las competencias digitales. *Revista Científica General José María Córdova*, 13(16), 121-132.
- Crespo C. y Medinaceli Díaz, K. (2013): Políticas en tecnologías de la información y comunicación en el nuevo contexto social y educativo en Bolivia. *OIDLES Observatorio Iberoamericano del Desarrollo Local y la Economía Social*, año 7 núm. 14, junio, 2-26.