Perceptions, Internships, and ICTS in University Students During the COVID-19 Pandemic In 2020

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Abstract:- This article sets out the results of a study aimed at analyzing the perceptions and practices of young university students regarding ICT as a way of accessing their studies during COVID-19 confinement. The methodology used in this work is exploratory, non-experimental, and field. The average age of the studied population is 22 years. Currently, because of coVID-19 confinement conditions, the use of ICTs is no longer an alternative to academic work, it has become the only possibility to continue academic processes so as not to slow the progress of school cycles and student training. University students modified or started new habits to adapt to the virtual modality by 63%; and their perceptions call us to reflect on the need for teachers to be trained and sensitized to the use of ICTs.

Keywords:- Perceptions, Young University Students, ICT.

I. INTRODUCTION

In the last decade much has been discussed about the importance of ICT in education and specifically in higher education (Gallardo, 2018). However, while discussing its importance, covid-19 pandemic confinement had to use this route, ICT, to move forward with educational processes without undermining the quality of these processes. To this end, various platforms have been developed and used that offer, in a friendly way for both teachers and students, a permanent, fluid communication, which considers both synchronous and asynchronous activities.

Today we can see what was already being discussed about the importance of information and communication technologies, ICT (Chari et al, 2008; Luse and Mennecke, 2014) and not only in the educational field, which the introduction of information and communication technologies have provided new avenues for educational processes in addition to resource optimization and diversification of activities. This diversification of activities is not observed unilaterally, but of all the social actors involved in the educational process. This is not a person behind a computer, but streamlined, self-managed processes, using a computer, and even a mobile device.

The leap from the face-to-face to the virtual was not entirely novel for a high proportion of students, or teachers, because we were already advancing on that path. Migration was rapid, but in the last ten years the use of these technologies in education became widespread and for this it began to work in strategic management (Gargallo et al, 2010; Sáez, 2010).

The benefits and fundamental role of ICTs for the economy, society and education in developing countries are now clear, as Grazzi and Vergara (2011) mention, as well as Palvia and partners (2017), ICTs play a constructive role in economic development, GDP growth, skills and skills in jobs, increased productivity and in general an organizational restructuring.

It is good to mention that there has also been discussion about widening inequalities. In the case of Mexico and with DATA from INEGI (2016 and 2019), more than half of households in the country do not have an internet connection. It does not have computers either. In comparison, the use of mobile devices (cellular telephony) is increased to three-quarters of the population. In the current statistics of the same INEGI, in Mexico 70.1% of the population of six years or more is an Internet user and 56.4% of households have an internet connection. Specific to the percentage of college students connecting to the network is 96.4%; while 59.1% of the population with basic education use this network.

The above figures must have been exceeded by the pathways that were eligible to continue educational processes at all levels during the present COVID-19 confinement

starting in March 2020 and continuing so far, March 2021, a year later.

In recent years, much has been discussed and the digital divide continues to be discussed; the term of which is considered ambiguous since on the one hand it has referred to inequality in terms of physical access to diverse computer or technological equipment; on the other hand, it referred to the difficulty of access because of lack of knowledge in its use, or the reluctance to use it by cultural factors (Hargittai, 2002; Van Dijk, 2006 and 2017; Crovi and Lopez, 2011; Tirado-Morueta, 2017).

As elements of interest to the subject, according to Crovi (2008) and Alva de la Selva (2015) the digital divide is associated with the following factors:

- Technological factor: it is related to the provision of infrastructure.
- Economic factor: refers to the availability of resources for access to ICTs.
- Digital skills factors: cognitive abilities individuals must have to integrate into the use of ICT.
- Sociocultural factors: social attitudes towards ICT.
- Political factors: public policies on access to ICT.

The hasty adequacy of teaching activities using 100% ICT has shown that a considerable percentage of teachers and students were not prepared for this reality. This preparation not only refers to the skills, competencies, knowledge poured for the use of ICT, but has emotionally generated resistance to such activities.

This study addressed a review of the perceptions and practices of young university students regarding ICTs as a way of accessing their studies during COVID-19 confinement.

II. METHODS

The methodology used in this work was developed in an exploratory, non-experimental, and field type. The data were obtained through a questionnaire applied to a group of 100 university students of the Faculty of Social Sciences, UNACH in virtual mode. The instrument is a perception questionnaire about factors related to perceptions and practices about COVID-19 and virtual sessions. It was applied by random sampling.

The reliability of the instrument was determined, using Cronbach's Alpha coefficient of internal consistency. This validation process consists of the foundation of the reliability of the questionnaire and the structural validity procedures of the reagents in relation to their classification area. The coefficient can take values of 0 and 1, normally considering coefficients greater than 0.7 to be the most reliable (Nunnally, 1967). In this study, after pilot validation, 0.68 was obtained; medians were observed, a central trend measure recommended for ordinal scales.

III. DISSCUTION

General data. The average age of the population studied is 22 years, university students at the Autonomous University of Chiapas within the context of the current reality regarding confinement by COVUD-19 pandemic and in a country, Mexico, and state, Chiapas, with serious developmental problems, as well as, specific in awareness of preventive measures to prevent contagions and deaths from this disease. 46% of respondents are men and 56% are women. The bachelor's degree from participating students is Economics, from the morning shift (95%) evening (5%).

Working with ICT. 100% say that the activities of their study center have been moved to virtual mode by preventive measures of COVID-19 contagion. It has computer equipment and its own internet 69%, the remaining percentage does not have it and carries out its activities in a cyber-café (19%), with a relative (6%) and from the mobile phone (6%). The usual rate of work as a university student, increased with the pandemic by COVID-19, is thus perceived by 77% of the students surveyed., specify that they perceive poor organization and increase in number of tasks. The remaining percentage does not perceive its current rhythm altered. School performance, during online dynamics has declined (47%), has remained (42%) and has improved (11%). Specifically, with respect to the variation in school performance, they see no variation in their performance (47%). The remaining percentage considers variation due to problems with the use of technologies (22%), too much task (10%), for personal reasons (7%). About virtual classes, 53% believe that they are managing to carry out some of their subjects well, more than half; less than half (19%), all (24%) none (4%). About the responses of their teachers to doubts, 60% say that only some attend to them; the remaining percentage considers that all their teachers solve their doubts (40%). Studying more for exams has been the element identified as the most difficult of online dynamics (77%); and the remaining percentage considers taking virtual classes to be generally difficult (23%).

Changing habits. Modified or began new study habits from online classes to suit virtual mode (63%) the remaining percentage did not change their habits:
1) If I changed some (23%)
2) If I had to restructure and adapt everything (40%).

Examples of habits modified or started when online classes were introduced:
1) I organized between school, home, hobbies, work, to be well at school.
2) I organized myself in terms of my computer equipment, cellular and in general technologies.
3) I learned to be self-taught.

Depending on the way school activities are being developed, what would change:
1) I am extremely comfortable, it would not change anything (45%)

2) Teachers need to respect schedules, given enough time to deliver tasks, and not sanction because sometimes there is no internet or light (32%).
3) It is better to return to face-to-face (10%).

IV. CONCLUSION

Currently, due to coVID-19 confinement conditions, the use of ICTs is no longer an alternative to academic work, it has become the only possibility to continue academic processes so as not to undermine the advancement of school cycles and student training.

Most students have their own computer equipment and internet service (69%), this is important because, while there is talk of a digital divide; it is also true that, in view of the technological advancement of the last decade, university students have these teams that facilitate and promote vocational training.

The usual pace of work for students is perceived to increase, as it was difficult to organize, and the tasks have replaced the dynamics in the classroom. These changes have not had any impact on their school performance (47%); but to some extent the remaining percentage believes that there are problems in the use of ICTs, the high number of tasks, or personal problems that impacted their academic performance.

Undoubtedly, the migration from the face-to-face system to the virtual system abruptly had an impact on both students and teachers; but it is the only option to continue educational processes in the face of confinement measures as part of coVID-19 pandemic management, not only in this country, Mexico, but in the world. This impact is perceived by the difficulty of organization by teachers, as well as the lack of response to the questions that students raise.

It is also reflected as an alarming point that students perceive in the application of exams as the factor of greatest difficulty or challenge for them. In this sense it is worth considering whether teachers are making adequate batteries or electronic examination models that facilitate not only the rescue of understanding of the revised topics, but the proper management of their virtual modality.

The modification of habits by students is clear, they established mechanisms to adapt to the new mode of attention of their university studies. It is important to note that they perceive difficulty on the part of their teachers in the organization of online work; as well as the lack of flexibility and tolerance in terms of exercise delivery times, with no respect for the problems that several students (31%) present for access to ICTs. Faced with this virtual work dynamics, students are shown at ease and only a small percentage (10%) prefers to return to face-to-face mode.

In the educational field, training actions are required for both students and teachers; it is necessary to recognize and operate the possibilities that technologies offer for learning (Cózar-Gutiérrez et al., 2016); but it is also necessary that both participants of the teaching-learning process have the willingness to adapt to technologies, taking advantage of the advantages that are recognized.

For more than 10 years there has been discussion about the importance of teacher training in ICT management; however, it is still difficult to see clear lines and precise objectives to achieve this (García-Cué et al.,2009; De Moya et al., 2011; Cózar and Roblizo, 2014; Cózar-Gutiérrez et al., 2016). Today, 2021 continuing and having gone through 2020 with the prevailing and irreplaceable use of ICTs, as a means of continuity of educational processes during confinement, it is necessary to motivate teacher training for the use of these tools; but not only in the technological option it represents, but in the ethics and didactics it applies for these cases.

Given the characteristics of educational processes through ICT at the university level and the destabilizing effect produced by technological means, discussions on teaching in these contexts need to consider the emotions, fears, experiences and needs of teachers (Montes y Ochoa, 2006; Padila et al., 2008; Mejia et al; 2018). This reasoning is necessary not only for discussions, but for platform programming, teacher training and student training.

University students modified or started new habits to adapt to the virtual modality by 63%; and their perceptions call us to reflect on the need for teachers to organize, respond to their doubts and analyze the formation of exams in virtual mode. The latter are elements that need to be considered for teacher training.

REFERENCES

[1]. Chari, M. D. R.; Devaraj, S.; David, P. (2008). The impact of information technology investments and diversification strategies on firm *performance*. *Management Science*, v. 54, n. 1, p. 224-234.

[2]. Cózar, R. y Roblizo, M. (2014). La competencia digital en la formación de los futuros maestros. Percepciones de los alumnos de los Grados de Maestro de la Facultad de Educación de Albacete, doi: 10.17398/1695-288X.13.2.119, RELATEC. Revista Latinoamericana de Tecnología Educativa: 13 (2), 119-133

[3]. Cózar-Gutiérrez, Ramón, De Moya-Martínez, María V, Hernández-Bravo, José A, y Hernández-Bravo, Juan R. (2016). Conocimiento y Uso de las Tecnologías de la Información y las Comunicaciones (TIC) según el Estilo de Aprendizaje de los Futuros Maestros. *Formación universitaria*, 9(6), 105-118. https://dx.doi.org/10.4067/S0718-50062016000600010

[4]. Crovi, D. (2008). Dimensión social del acceso, uso y apropiación de las TIC. Contratexto, 16, 65-79.

[5]. Crovi, D. y López, R. (2011). Tejiendo voces: jóvenes universitarios opinan sobre la apropiación de internet en la vida académica. Revista mexicana de ciencias políticas y sociales, 56 (212), 69-80.

[6]. De Moya, M.B., Hernández, J.R., Hernández, J.A. y Cózar, R. (2011). Análisis de los estilos de aprendizaje y las TIC en la formación personal del alumnado

universitario a través del cuestionario REATIC, RIE. Revista de Investigación Educativa: 29 (1), 137-156

[7]. García-Cué, J. L., Santizo, J. A. y Jiménez, M. (2004). Identificación de la tecnología computacional de profesores de postgrado de acuerdo a sus estilos de aprendizaje, Actas I Congreso de Estilos de Aprendizaje, Anaya, Madrid.

[8]. Gargallo, A.; Esteban, L.; Marzo, M. (2010). Are new technologies influencing the academic results achieved by students? An exploratory study. *Turkish Online Journal of Distance Education-TOJDE*, v. 11, n. 3, 2010.

[9]. Gargallo, A. F. (2018). La integración de las TIC en los procesos educativos y organizativos. Educar em Revista, Curitiba, Brasil, v. 34, n. 69, p. 325-339, maio/jun.

[10]. Grazzi, M. y Vergara, S. (2011). Determinants of ICT access. In: ICT in Latin America: microdata analysis. Santiago: ECLAC, 11-40.

[11]. Hargittai, E. (2002). Second-level digital divide: differences in people's online skills. First Monday, 7 (4), 1-19.

[12]. INEGI (2016). Aumentan uso de internet, teléfonos inteligentes y Tv digital: encuesta nacional sobre disponibilidad y uso De tecnologías de la información en los hogares. https://www.inegi.org.mx/contenidos/saladeprensa/aproposito/2020/eap_internet20.pdf

[13]. INEGI (2019). Encuesta Nacional sobre Disponibilidad de Tecnologías de Información en los hogares. https://www.inegi.org.mx/programas/dutih/2019/

[14]. Luse, A.; Mennecke, B. (2014). IT can matter: co-evolution fostering IT competitive advantage. *Management Research Review*, v. 37, n. 6, p. 574-588.

[15]. Mejia, J.A., Villarreal M.C.P., Villamizar, N.C.F., Silva G.C.A., Suárez S.D.A. (2018). Estudio de los factores de resistencia al cambio y actitud hacia el uso educativo de las TIC por parte del personal docente. Boletin Virutal REDIPE 17(2):

[16]. Montes G. J. A. y Ochoa, S. (2006). Apropiación de las tecnologías de la información y comunicación en cursos universitarios. Acta colombiana de psicología (2), 87-100.

[17]. Nunnally, J.C. y Bernstein, I.H. (1967). *Psychometric theory*. Vol. 226, 3a Ed., McGraw-Hill.

[18]. Padila Beltrán, J. E., Paez Florez, C. M. y Montoya Zapata, R. D. (2008). Creencias de los docentes acerca del uso de las tecnologías de la información y comunicación. Educación y desarrollo social (2), 45-57.

[19]. Palvia, P., Baqir, N. and Nemati, H. (2017). ICT for socio-economic development: A citizens' perspective. *Information & Management*, 55 (2), 160-176. Recuperado de doi.org/10.1016/j.im.2017.05.003

[20]. Sáez López, J. M. (2010). Utilización de las TIC en el proceso de enseñanza aprendizaje, valorando la incidencia real de las tecnologías en la práctica docente. *Docencia e Investigación: Revista de la Escuela Universitaria de Magisterio de Toledo*, v. 20, n.10 versión digital, p. 183-204.

[21]. Tirado-Morueta, R., Mendoza-Zambrano, D. M., Aguaded-Gómez, J. I. and Marín-Gutiérrez, I. (2017). Empirical study of a sequence of access to Internet use in Ecuador. *Telematics and Informatics*, 34 (4), 171-183. Recuperado de doi.org/10.1016/j.tele.2016.12.012.

[22]. UNESCO (2020). ¿Qué ayuda pueden proporcionar las tecnologías inteligentes durante la pandemia? Consultado en: https://es.unesco.org/news/que-ayuda-pueden-proporcionar-tecnologias-inteligentes-durante-pandemia

[23]. Van Dijk, J. (2006). Digital divide research, achievements and shortcomings. *Poetics*, 34 (4-5), 221-235. Recuperado de doi.org/10.1016/j.poetic.2006.05.004.

[24]. Van Dijk, J. A. (2017). Digital Divide: Impact of Access. *The International Encyclopedia of Media Effects*, 1-11. Recuperado de doi:10.1002/9781118783764.wbieme0043