

# Teaching Digital Skills: Study at Middle and Higher Level in Chiapas, Mexico

Flor Ivett Reyes Guillén  
Facultad de Ciencias Sociales  
Universidad Autónoma de Chiapas  
San Cristóbal de Las Casas, Chiapas, Mexico

Orlando Uriel Bravo Argüello  
Facultad de Derecho  
Universidad Autónoma de Chiapas  
San Cristóbal de Las Casas, Chiapas, Mexico

Socorro Fonseca Córdoba  
Facultad de Ciencias Sociales  
Universidad Autónoma de Chiapas  
San Cristóbal de Las Casas, Chiapas, Mexico

**Abstract:-** This article shows the results of an investigation carried out in Chiapas, Mexico, a state with high marginalization and with a population living in poverty and extreme poverty. The context is necessary given that the main objective was to know the digital competences of teachers at the upper secondary and higher levels. It was at the beginning of this century (XXI) when a new line of work emerged in the training field, aimed at incorporating ICTs in educational systems through even new curricular designs. Teachers were expected to be prepared, but two decades later there is a reality where the basic level of knowledge about ICT management is insufficient.

**Keywords:-** Digital Skills, Education, High School, And University Professor.

## I. INTRODUCTION

The COVID-19 pandemic has meant that since 2020 the world has been digitized with unprecedented speed. In the world of education, a digitization of processes had been taking place with some resistance from the teaching community at the different educational levels.

Given the confinement mechanisms in various countries, it has left the virtual modality as the only way not to interrupt academic activities. This, however, has caused teachers at all levels and especially at the upper secondary and higher levels, who worked in face-to-face modality, to have many difficulties when abruptly switching to a relatively new modality for them, accentuating the concern of authorities and teachers themselves about their digital skills.

At the end of the 20th century and the beginning of this 21st century, before the COVID-19 pandemic began, there was still discussion about ways to introduce the world to the use of technologies that would make us produce more quickly and reduce the times and including costs (Blanco, 2020; Álvarez and Harris, 2020). The contagion prevention measures used by most countries, healthy distance, and social confinement, have been factors that led to the dominance of technologies to continue human activities from home.

Without a doubt, in a short time there will be studies that will consider, at a global and regional level, the reduced costs of working from home and the social benefits for it.

In this need to change behaviors, habits, we bring to the present the theory of reflection, which expresses that the learning activity pursues information capacity and the generation of knowledge that allows forming habits (Israel, 2004). The formation of habits is an element that is pursued as a preventive way and to reduce infections by Latin American governments in the face of the pandemic, which aims to reduce economic costs and increase health care capacity. Even though the populations show a great capacity to understand, judge and transmit information regarding the disease, the action measures of the population are deficient, and this is reflected in their contagion, morbidity, and mortality figures.

Within this reality, the use of technologies for most economic activities and services plays a preponderant role guaranteeing, through the digitalization of work, the protection of human rights by providing public services, education, prevention, and health care. The populations were protected, and the current generation is being educated for a life that demands self-care and the safety of human populations.

The paternalistic factor of governments is a crucial element to understand that, from social cognition, the resolution of any event must be resolved solely by the government, ignoring individual responsibilities (Morales and Prego, 2002); but today, for the humanity of 2020, it is necessary to resolve the situation from each one for all and from all for each one, guaranteeing the involvement of society and government to open new development options.

The forced use of technologies and the digitization of work generates several questions, among them, what are the digital skills that high school and higher-level teachers have in Chiapas?

Based on the above, this document presents the results of a research project on the digital skills of teachers at the upper secondary and higher levels in Chiapas.

## II. METHODS

This study was conducted from Chiapas, Mexico, through an online survey, through Google forms, in Spanish. It remained on the platform until the sample reached a size of  $n = 350$  participants. The questionnaire was structured according to the need to gather information regarding the digital skills that high school and higher-level teachers consider they have. The only selection criterion for the sample was to be a high school and high school teacher in Chiapas.

## III. DISCUSSION

It is interesting to find that the area of specialization with the highest percentage of teachers is social sciences (54%), followed by natural sciences (15%) and mathematics (13%), the remaining percentage (18%) corresponds to various disciplines such as physics, English teaching, physical education, Spanish.

In terms of digital skills, we have:

- Browsing, searching, and filtering information, data, and digital content: Only 10% say they know how to use advanced mechanisms for searching and filtering reliable information. The majority (69%) know how to navigate the Internet and locate information or digital educational resources in different reliable formats; but generally. The rest (21%) know that the internet can be a good source of information, but do not know how to find reliable academic information.
- Evaluation of information, data, and digital content: Evaluates the quality of the educational resources found on the Internet, through clear procedures, 38% of the sample. The rest know that there is a lot of information; but they only perform a basic evaluation of it.
- Storage and retrieval of information, data, and digital content: 54% recognize that they have basic skills for it; but they feel able to organize their resources. On the other hand, 46% acknowledge having skills that allow them to save, label and store in their unit, as well as in the cloud, the information they need for their job performance in teaching.
- Interaction through digital technologies: 65% carry out basic interactions; while 35% have the necessary skills to carry out advanced interactions that even require programming.
- Share information and digital content. Use simple mechanisms for these purposes, such as email, 47%. Uses various social networks and online communities to share information (36%); only 17% have the digital skills that allow them to share information through various digital media and platforms.

In addition to the results displayed in advance, we need to reflect on the current technological development, which represents a complex panorama within the area of education at all levels. It is a challenge for this century, XXI, to reorient

the teaching work since it is not enough to transmit knowledge in traditional chairs, but to educate requires the manifestation of multiple competences, among them the digital ones (Morales, 2013), that although in confinement due to the COVID-19 pandemic accelerated its use, it is also true that it showed us its potential for the world and the framework of this technological reality. But it also made evident the lack of teaching skills for these educational practices using ICT (Sánchez, et al, 2021).

Although the findings in this study show us that there is not total ignorance in the use of technologies, maintaining a basic level of digital skills in high school and higher-level teachers requires attention. This is also undoubtedly a reality that results from the frank resistance to change, a specific change in the inclusion of technologies in the educational environment.

This reality was glimpsed from the first years of the current century, when a new line of work emerged in the training field, oriented to the incorporation of ICT in educational systems through even new curricular designs (Colás and Pons, 2004). Teachers were expected to be prepared, but two decades later there is a reality where the basic level of knowledge about ICT management is insufficient.

## IV. CONCLUSION

The activities today structured and carried out virtually require us not to stop and guarantee permanently active social, economic, educational, and cultural life. In general, around 70% of the teachers who participated in the study have basic digital skills; the remaining 30% consider that they have extensive knowledge in ICT management and allow them to share information through digital media, platforms and even programming of specific tools for their teaching work.

The foregoing reveals that teachers, at the upper secondary and higher levels, need to advance from basic digital skills to the intermediate and advanced levels, since we are currently experiencing a process of technological with greater speed in educational processes. Therefore, higher education teachers require this type of knowledge, skills, and abilities, which can be achieved through continuing education courses.

## REFERENCES

- [1]. Álvarez, Reinaldo Pierre, y Harris, Paul R. (2020). COVID-19 en América Latina: Retos y oportunidades. *Revista chilena de pediatría*, 91(2), 179-182. <https://dx.doi.org/10.32641/rchped.vi91i2.215>
- [2]. Colas, P. y Pons, J. (2004). La formación del profesorado basada en redes de aprendizaje virtual: aplicación de la técnica DAFO. *Teoría de la educación: Educación y Cultura en la Sociedad de la Información*, núm. 5, pp. 207-222.
- [3]. Israel Núñez, P. (2004) "Las necesidades de información y formación: perspectivas socio-psicológica e informacional" *ACIMED* Vol.12, No.5.

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- [4]. Morales López, E. y Prego Vázquez, G. (2002) “Entrevistas electorales en las campañas políticas para la presidencia del gobierno de 1996 y 2000” Editorial Arco/Libros. Chile.
- [5]. Morales Arce, Víctor Gerardo (2013). Desarrollo de competencias digitales docentes en la educación básica. *Apertura*, 5(1),88-97.[fecha de Consulta 25 de Mayo de 2022]. ISSN: 1665-6180. Disponible en: <https://www.redalyc.org/articulo.oa?id=68830443008>
- [6]. Blanco, A. (Ed.). (2009). *Desarrollo y Evaluación de Competencias en Educación Superior*. Editorial: Narcea
- [7]. Sánchez, M., Fabián, L. y Melgoza, D. (2021). Competencias digitales docentes: una experiencia en el nivel universitario. *Hamutay*, 8(1), 59-66. <http://dx.doi.org/10.21503/hamu.v8i1.2236>