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# USE OF TECHNOLOGICAL TOOLS TO CARRY OUT AN EFFECTIVE ASSESSMENT

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**Abstract**: The present investigation was carried out at the Felipe Carrillo Puerto primary school, morning shift, belonging to the municipality of San Pedro Coahuila, Mexico. The objective was to analyze the effectiveness of the evaluation using technological tools applied in the educational environment. It was carried out with the teachers of the aforementioned primary school, it was validated with a virtual instrument, which had 12 items using the Likert scale to identify the tools or applications that each teacher and manager handles in the educational field, said instrument obtained a result of 0.93 coefficient by using Cronbach's Alpha. Where 25% of teachers use virtual learning environments to carry out the evaluation and 75% disagree with their use or do not use them. 87.5% do not use technological tools for the application of exams, while 12.5% apply it periodically. Due to the health restrictions due to the pandemic, there is a need to delve into the use of technologies and the use of their tools in order to establish a school environment appropriate to the needs of educational work. Understanding as technologies all the resources that can be connected through a computer, or digital devices; being effective and versatile tools. These tools have not been exploited to their full potential in current educational institutions, referring to primary school teachers, belonging to the basic education level. Pretending with its use new forms and resources to achieve an effective evaluation in the students.

**Keywords**: Evaluation, Technological tools, Educational, Teachers, Students.

## INTRODUCTION

Derived from the SARS covid-19 pandemic, teaching and work in schools were significantly affected, for which new communication, evaluation and work mechanisms had to be resumed or implemented to carry out the teaching task. This way, it was necessary for each of the teachers to apply new methodologies to obtain the goals that are proposed in the current study programs. If society and culture change due to the presence of ICT, the school cannot distance itself from this reality and must know how to face the challenges and opportunities that these technologies represent.

> Research in Educational Technology has profusely dealt with how to use the innumerable technological tools and applications in the classroom, has originated and tested new methodological models associated with ICT and has pointed out the main implications that the use of these tools and the application of these new methodologies have in the role of teachers. (Arabit Garcia, 2020)

At present, the educational system has not been able to stay on the sidelines with the changes that have arisen in the Digital Age. They were first integrated into society and people's lives and then into educational centers. ICTs are no longer just technological tools in education, but rather become one of the basic skills to be developed in the teaching-learning process.

> (Alcívar Trejo, 2019), argues that this problem forced teachers to enter virtual learning environments where they abounded in educational spaces, hosted on the internet made up of tools that made the task and educational evaluation possible. The presence of technology is an ubiquitous and irreversible phenomenon in the contemporary world, and the school cannot ignore this reality, if it wants to train children and adolescents who are capable of fully integrating into this new society. In short, teaching with virtual environments or, more broadly with technology, is a necessity to promote inclusion in the social, cultural, economic and labor life of the 21st century, in which technology has a fundamental place.

(Salinas, 2014), points out that the use of these technological tools for daily work and effective evaluation does not present modifications, only their application and mastery is advanced, forcing teachers to use them for educational purposes, due to technological advance and globalized environment in which we find ourselves, it was a matter of time for technology to reach the educational system, establishing middle and higher education as a benchmark; taking by surprise the levels that comprise basic education, where in most cases there is no infrastructure, equipment, training and adequate platforms to carry out educational tasks.

These environments were not originally created for educational purposes, but were later adopted in the field of teaching. They are applications of the so-called web 2.0, the current generation of the network that is characterized by the protagonism of users, by allowing them to actively participate in the publication of content, interact and cooperate with each other.

> Born during the first decade of the century, they are part of the so-called "social software", which is focused on promoting communication between users. For this reason, they are very suitable tools for the development of learning processes. (Salinas, 2014)

## MATERIALS AND METHODS

The research carried out was of a quantitative nature, with the aim of finding and analyzing the effectiveness of the evaluation using technological tools applied in the educational environment.

> (Sanchis, 2015), points out that the teaching-learning process as a sequence that, based on the abilities, needs and interests of the students, proposes methodological strategies that are situated in meaningful learning and contributes to the development of the necessary skills to become autonomous citizens / as, reflective, critical and constructive.

Know if the evaluation in distance education is effective and has the requirements to meet the parameters established in the study program, and identify the effectiveness of the technological tools to carry out said educational task, answering the research question: Does the application of technology favor effective evaluation? Advantages and disadvantages. An instrument was made with 12 items referring to educational evaluation, use of tools for the preparation and application of exams, technology as an important resource to improve evaluation, use of platforms for the development of evaluation instruments, new technologies to communicate with students, feasibility of the use of technological tools for an effective evaluation.

> This is how a poorly planned teaching practice, an erroneous view of the student, the lack of professional training, the lack of communication skills, the distant relationships with classmates, the inadequate conceptions about teaching, the absence of coping strategies, the lack of of well-arranged physical environments and the lack of reflective teachers interact as fundamental axes for the consideration of the particularities of the burnt-out subject-teacher. (Munoz, 2012)

The instrument was carried out using the Likert scale, taking totally disagree, disagree, agree and totally agree as a reference.

The figures presented below indicate the statistical validation of the instrument used with teachers to concentrate the information, demonstrate its reliability and correlation greater than 350, taking as reference the analysis using Cronbach's Alpha, showing a result of 0.93 in the participation of teachers.

Table 1, 2 and 3.

## RESULTS AND DISCUSSION

The following graphs show the information obtained from the first instrument and show

| | K= | 6 | | K-1= | 5 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

| Encuestados | Ítems | | | | | | | | | | | | SUMA |
| | I | II | III | IV | V | VI | VII | VIII | IX | X | XI | XII | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E1 | 2 | 3 | 2 | 2 | 1 | 3 | 1 | 3 | 3 | 3 | 2 | 1 | 26 |
| E2 | 2 | 1 | 2 | 2 | 1 | 2 | 1 | 3 | 3 | 1 | 3 | 3 | 24 |
| E3 | 3 | 3 | 2 | 3 | 2 | 3 | 2 | 4 | 4 | 3 | 3 | 4 | 36 |
| E4 | 3 | 3 | 2 | 2 | 2 | 3 | 2 | 2 | 2 | 2 | 4 | 3 | 30 |
| E5 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 24 |
| E6 | 3 | 4 | 2 | 3 | 2 | 3 | 2 | 2 | 3 | 2 | 3 | 3 | 32 |
| E7 | 4 | 4 | 4 | 3 | 3 | 4 | 3 | 3 | 3 | 3 | 4 | 3 | 41 |
| E8 | 2 | 4 | 4 | 4 | 4 | 1 | 1 | 2 | 2 | 1 | 4 | 1 | 30 |
| VAR.P | 0.484 | 1.000 | 0.750 | 0.484 | 0.859 | 0.734 | 0.438 | 0.484 | 0.438 | 0.609 | 0.609 | 1.000 | 30.98 |
| | 6.891 | | | | | | | | | | | | |
| ALFA DE CRONBACH | 0.93 | | | | | | | | | | | | |

Table 1. Cronbach's Alpha

| Correlación | item 1 | item 2 | item 3 | item 4 | item 5 | item 6 | item 7 | item 8 | item 9 | item 10 | item 11 | item 12 | ITEM TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ítem 1 | 1.000 | 0.539 | 0.311 | 0.266 | 0.266 | 0.812 | 0.882 | 0.226 | 0.339 | 0.546 | 0.546 | 0.629 | 0.907 |
| Ítem 2 | 0.539 | 1.000 | 0.577 | 0.718 | 0.674 | 0.292 | 0.378 | -0.180 | 0.000 | 0.320 | 0.480 | -0.125 | 0.696 |
| item 3 | 0.311 | 0.577 | 1.000 | 0.726 | 0.856 | -0.084 | 0.218 | -0.104 | -0.218 | -0.092 | 0.647 | -0.289 | 0.532 |
| item 4 | 0.226 | 0.718 | 0.726 | 1.000 | 0.848 | -0.236 | 0.068 | -0.032 | 0.068 | -0.144 | 0.546 | -0.090 | 0.553 |
| item 5 | 0.266 | 0.674 | 0.856 | 0.848 | 1.000 | -0.256 | 0.255 | -0.315 | -0.357 | -0.194 | 0.669 | -0.202 | 0.500 |
| item 6 | 0.812 | 0.292 | -0.084 | -0.236 | -0.256 | 1.000 | 0.717 | 0.393 | 0.496 | 0.817 | 0.070 | 0.511 | 0.593 |
| item 7 | 0.882 | 0.378 | 0.218 | 0.068 | 0.255 | 0.717 | 1.000 | 0.068 | 0.143 | 0.545 | 0.303 | 0.567 | 0.738 |
| item 8 | 0.226 | -0.18 | -0.104 | -0.032 | -0.315 | 0.393 | 0.068 | 1 | 0.882 | 0.546 | -0.144 | 0.449 | 0.359 |
| item 9 | 0.339 | 0 | -0.218 | 0.068 | -0.357 | 0.4962 | 0.143 | 0.882 | 1 | 0.545 | -0.182 | 0.567 | 0.433 |
| item 10 | 0.546 | 0.320 | -0.092 | -0.144 | -0.194 | 0.8175 | 0.545 | 0.546 | 0.545 | 1 | -0.231 | 0.240 | -0.231 |
| item 11 | 0.546 | 0.480 | 0.6472 | 0.5464 | 0.669 | 0.0701 | 0.303 | -0.144 | -0.182 | -0.231 | 1 | 0.240 | 0.593 |
| item 12 | 0.629 | -0.125 | -0.289 | -0.09 | -0.202 | 0.511 | 0.567 | 0.449 | 0.567 | 0.240 | 0.240 | 1 | 0.483 |
| ITEM TOTAL | 0.907 | 0.696 | 0.532 | 0.553 | 0.500 | 0.632 | 0.738 | 0.359 | 0.433 | 0.536 | 0.593 | 0.483 | |

Table 2. Correlation Coefficient

$$\alpha = \frac{K}{K-1}\left[1 - \frac{\sum S_i^{\,2}}{S_T^{\,2}}\right]$$

Table 3. Cronbach's Alpha Formula

the most relevant data obtained according to said survey.

## Fig. 1

62.5% of those surveyed permanently use technological tools for preparing exams, while 37.5% use them to a lesser extent. Technological development and the arrival of the Internet in the current Knowledge Society, as well as advances in research in Educational Technology, have made available to the educational community a huge variety of new technological resources and teaching strategies that can be used and applied. in the teaching-learning process. (Arabit Garcia, 2020)

## Fig. 2

In the previous graph, 87.5% are inclined to minimally use technological tools for the application of exams, while 12.5% apply it periodically. Joining the network and/or the group is totally voluntary, since this tool is used in a complementary way to the other educational technologies already incorporated by the chair. (Days, 2015)

## Fig. 3

The results obtained in the survey show equal percentages where 50% do not consider technology as an important resource for evaluation and the other 50% agree with its implementation. Virtual training, based on new technologies, makes it possible to favor and promote formative assessment systems, based on self-assessments that allow the student to situate himself at the level of learning achieved and redirect the process towards higher levels of execution. (Hernandez, 2019)

## Fig. 4

The graph shows that 62.5% consider that technological tools facilitate the evaluation task, the remaining percentage 37.5% disagrees with the use of the tools. Regarding the evaluation, not only knowledge but also other skills must be evaluated, what the student knows how to do, this requires

methodological changes and the use of new strategies, self-assessment, co-assessment, learning contract and supported and/or mediated assessment. By the computer. (Olmos, 2008) How to generate strategies and methodologies that have an impact on their appropriation by education actors to favor the processes of teaching and learning. (Sanz & Madoz, 2018)

## Fig. 5

The survey carried out shows that 62.5% do not use digital platforms to prepare evaluation instruments and 37.5% use the platforms to carry them out. This explains the extensive developments that have taken place to present the content and seek its understanding, as is the case with SCORM materials, together with the development of videoconferencing systems to simulate face-to-face classes or the generation of mechanisms to apply knowledge tests in online, as well as technological modules to resolve students' doubts, among other aspects, which shows a tendency to try to simulate traditional face-to-face education. (Tobón, Tobón, & Veytia-Bucheli, 2018) In the first place, students value a teacher who is creative and innovative in a very high percentage, as well as the second characteristics that we have grouped the words, fun, cheerful, happy, motivated and positive, this group of characteristics accumulates more than half of the characteristics that students define as a good teacher. (Carbonero, Reoyo, & Freitas, 2012).

## Fig. 6

37.5% consider the feasibility of using the tools for an effective evaluation to be minimal or null, while 62.5% of those surveyed consider the application viable. Technological resources are important for improving the lives of individuals that facilitate communicative transmission, they are generally used in the educational field by teachers as means to give and obtain fruitful knowledge. (Chavarria,
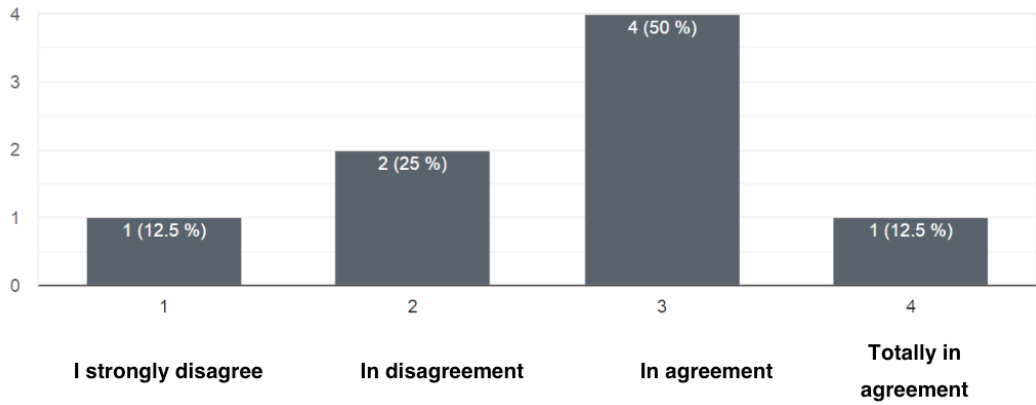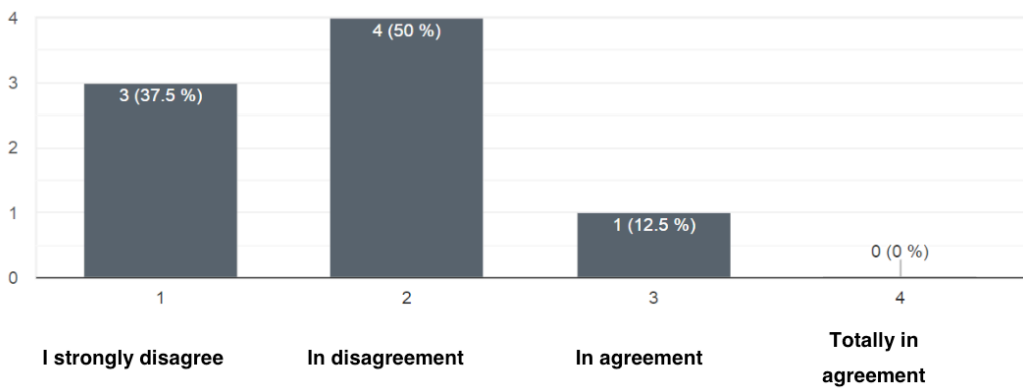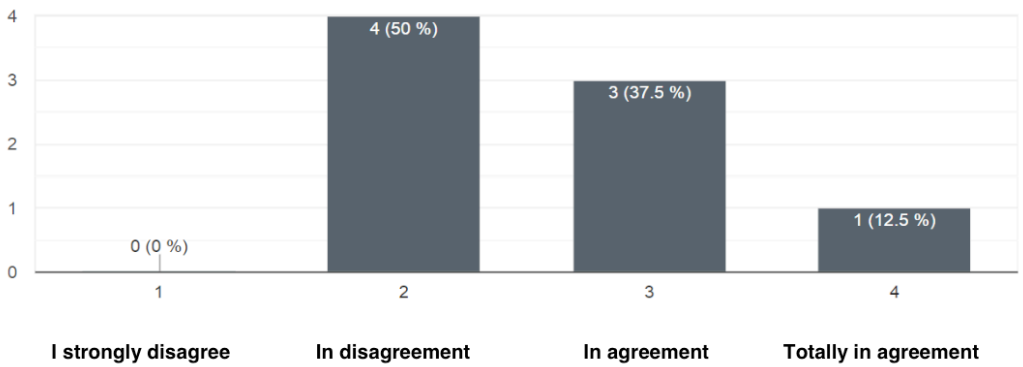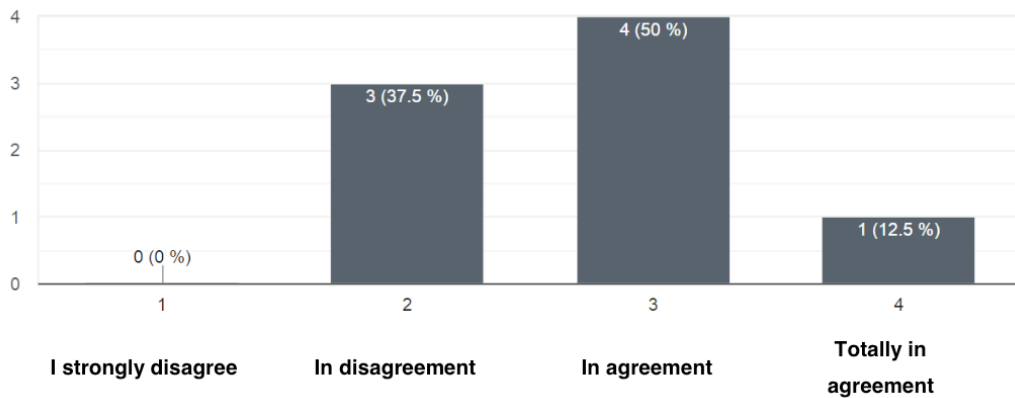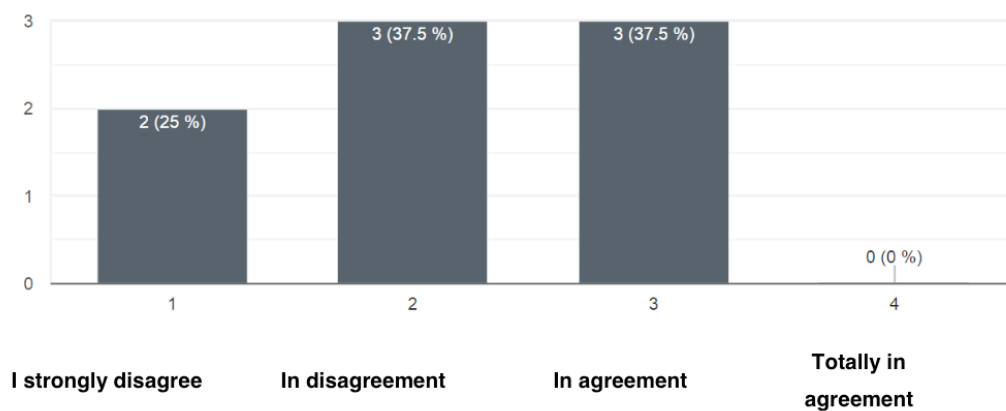
Fig. 1



Fig. 2


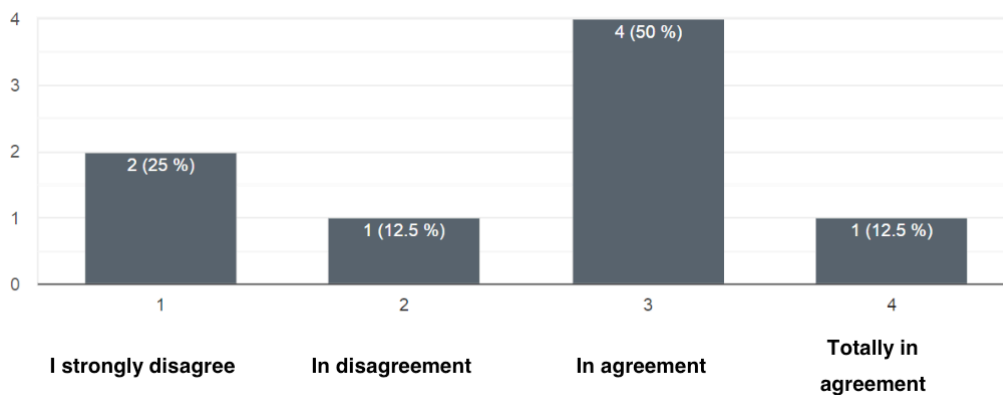
Fig. 3

Fig. 4



Fig. 5



Fig. 6

2015). Therefore, self-efficacy is considered a key element for the effort, persistence and self-determination of teachers, otherwise they could have negative expectations, which can cause failure in the implementation of inclusive educational practices (Murillo Parra, 2020).

## CONCLUSIONS

In short, the teacher must be attentive to make decisions regarding evaluation, activity planning and take stock to identify if the technological tools that are being used are beneficial for teaching and learning.

The study showed that the application of technologies is an obligatory necessity, due to the new scope that being immersed in the technological world represents, the application and use of tools to carry out an effective evaluation are in development but growing by steps. colossal and adapting the new generations to work with the new technologies in a natural way, hoping in the near future that the implementation will not be a problem, if not a real resource that is applied systematically in education, considering the new generations of teachers who have greater skill, technological knowledge and those who already belong to the labor field are trained to jointly carry out the implementation of new teaching-learning methodologies.

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