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## **The Canva platform and meaningful learning in regular basic education**

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**Abstract**--Given the prevailing need to determine which of the educational platforms is best suited to the educational needs of high school students in regular basic education, the present study had the general objective of analyzing the relationship between the use of the Canva platform and learning. significant in regular basic education. It focused on a basic quantitative methodology, non-experimental design and cross-sectional correlational study level. The study population was considered to be 75 high school students from the institution studied , establishing the same number of students as the sample . The techniques and instruments to collect information were the survey and questionnaires on a Likert scale. It was concluded that the use of the Canva platform is located at a high level in interactivity with 66.7%, in virtual resources (88.7%), flexibility (90.7%) and training action 74.7%. In relation to the significant learning of the students, it was at a high level with an average of 63.6% in its different dimensions: motivation, understanding, functionality and active participation. Finally, it was determined that there is a positive mean

relationship (0.446) between the use of the Canva platform and significant learning.

**Keywords**---Educational platforms, pedagogical design, remote teaching.

## **Introduction**

The integration of student ICTs and their curricular procedures, generated positive impacts in various aspects and their use has modified the methodologies and pedagogical strategies traditionally used, these changes have become widespread with the urgent and unforeseen migration to the virtual modality caused by the closure of classrooms, a measure that was taken by many educational institutions as a contingency measure in the face of the Covid-19 pandemic (Failache, Katzkowicz and Machado; 2020).

In science teaching, different investigations have shown that the use of technologies promotes and facilitates learning, only if the continuous improvement of teaching practice is taken into account through pedagogical design, which must be based on the effects of testing the modifications made, that is, their potential depends on the effectiveness of their use, which is why it is a priority to refine and improve virtual resources and environments, these resources are very powerful since they facilitate access and assimilation of information, increase interaction and make abstract models and theories of science visible through images, etc. (Romero and Quesada; 2014).

The Canva platform stands out among the others, for having a striking and easy-to-use interface since it does not require specialized knowledge for its use, which favors the acquisition of skills and abilities through the development of individual or group creativity. It is an interactive tool that allows the introduction of content on various topics, such as the preparation of comics, posts, advertisements, posters, logos, collages, cards, brochures and different infographics that adapt to the creativity and needs of the user (Grossi et al., 2018).

As cited above, the following general research question was raised: What is the connection between the use of Canva and meaningful learning in regular basic education? and the following specific questions: What is the connection between the participation of Canva and meaningful learning in regular basic education? What is the connection between Canva's virtual media and meaningful learning in regular basic education? What is the connection between Canva's permissiveness and meaningful learning in regular basic education? What is the connection between the formative act of Canva and meaningful learning in regular basic education?

The analysis is theoretically justified since the use of the Canva platform to improve meaningful learning is supported through theoretical applications, in addition, due to the novel results obtained on the relationship of these variables, they are a significant theoretical contribution that can be used as theoretical reference through systematization, thus contributing to the state of the art.

Socially it is justified since the results will allow to solve the academic problems of the students, also the information will be offered to the teachers to choose strategies and virtual educational tools according to the promotion of meaningful learning. Finally, the instruments developed in data collection can be modified and used in subsequent studies related to these variables.

The general objective of the analysis is to analyze the connection between the use of the Canva platform and significant learning in regular basic education, and the specific objectives were aimed at establishing the connection between the dimensions of the Canva platform, such as: interactivity, virtual resources, flexibility and training action with meaningful learning. The hypotheses were aimed at confirming the relationship between these variables.

### Theoretical framework

Among the international background on the variables evaluated we have Arcentales, García, Cárdenas and Erazo (2020) who carried out an investigation to analyze the Canva technological platform, in order to establish its impact on the development of learning-teaching, in the area of Language and Literature, where 61 university students from the city of Paute, Ecuador participated. The methodology was mixed, non-experimental, cross-sectional, surveys and interviews with a focus group were used, the results showed that students develop skills through the use of technological tools, however, not all the benefits and benefits are used. that Canva provides, in this way, teachers require frequent training to implement the appropriate strategies and activities that take advantage of all the benefits of the platform.

Muñoz (2019) developed a study to analyze the incidence of ICTs in the meaningful learning of Social Sciences, the study was mixed, exploratory and then descriptive. Likert scale surveys were used to obtain the data, which were applied to parents, students and students of the Educational Unit La Gran Esfera Azul-Ecuador. The author concludes that the little innovative and efficient teaching strategies do not achieve significant learning of the apprentices in the area of social sciences, in addition to this, technological means are not used in the class process, due to the few skills and skills of teachers about ICTs.

Likewise, Ortiz (2018), stated that it is essential to carry out methods in student development within the classroom with the Webquest (WQ), through his research that sought to develop meaningful learning in natural sciences through ICTs in students of the Pablo Correa León Educational Institute - Colombia". The strategies were perfected with the use of ICTs using Webquest, the activities were carried out in a didactic sequence, to promote meaningful learning. It was observed that teachers, through the construction of meaningful and cooperative learning, were able to motivate students, learning from collaboration, sensitivity and responsibility.

Finally, Aveiga (2017) presented the qualitative and descriptive study to study the use of ICT in student development and student instruction at the "Manuel Nieto Cadena" institution in the Esmeraldas canton, using surveys, detecting an insufficient use of ICTs to promote imagination in student development. To

conclude that the application and use of ICTs improves teaching resources and class hours.

Regarding the national background, we have Sánchez (2020), whose purpose of analysis was to establish the level of improvement of imagination through the use of the Canva platform in computer science students of the 1st grade of the IE Simón Bolívar, the approach was qualitative. and an interpretive paradigm, instituting two study units with two students between 14 and 15 years old and two professors in the area of computing. The study concludes that the use of Canva as a means of feedback and learning favors academic performance by improving the level of creativity and innovation and acquiring new skills, likewise, students become the center of learning-teaching development.

The quantitative research of transversal, correlational and non-experimental design carried out by Asencios (2020), had the purpose of establishing the connection between the use of the Canvas platform and the learning by abilities of the university students of the first four cycles of the Technological University of Peru located in Lima. The selected tool was the survey, and the instrument was the questionnaire. The antecedents of Spearman's  $Rho=0.758$  with a degree of significance of 0.000, led to the following conclusion, that there is a high relationship between the study variables.

Campana (2019) carried out a quantitative study at a descriptive - explanatory level with 50 students from 11 to 16 years old and 10 teachers from Integrated IE No. 56108 - Cusco, which sought to determine the influence of the use of ICTs in meaningful learning in the area of social Sciences. The analysis of the data allowed us to conclude that ICTs positively influence the process of intellectual formation, reflected in the significant achievements of the students, in addition, it was observed that the students had a greater motivation in their learning when the teachers used didactic materials through the ICTs compared to those who did it in a traditional way.

Regarding the theoretical bases on the platform Canva, Carranza and Caldera (2018), mention that this emerged with the rise in the use of ICTs, which have modified the ways of accessing information and acquiring knowledge, to a more modern one, being necessary the adaptation of the teachers and students for their proper use in the process of educational resources and information related to their learning (Trejo, 2018).

The Canva platform provides its users with feasible access to personified learning and provides educators with real-time permission for estimation purposes through simple or complicated assessment rubrics (Garcia et al., 2021). as a website, which has a free version, for the formation of figures for design and communication, with online tools for the invention of designs, for recreational or professional use, which can be used by amateur and experienced designers (Stosic, Dermendzhieva and Tomczyk, 2020).

Santos, Batista and Marques (2019) mention that Canva is a flexible instrument with more than 8000 templates that allows you to create designs, incorporating texts, images, among others, its interconnection makes it easy to add menu

components to the structure in process, designs can be created of posters, cards, logos, as well as covers, schedules, programs, publications for employment in social networks , flyers, headers, invitations , calendars, brochures, among others.

Regarding the significant learning variable, it is considered as a human element used to obtain and collect information from a space of understanding ( Vidal, Vialart, Vidal, Alfonso and Zacca, 2019), that is, the student supports the position to group the recent component with its previous cognitive organization, without abandoning the material that dominates the development of learning that is significant in it. It should be emphasized that this point of view benefits the contents of basic sciences as learning material, since according to its peculiarities it is seen as complicated ( Matienzo, 2020).

Peris (2017) refers to meaningful learning as the development that allows processing the competence to review in the way of studying through a development of self-regulation of learning with the application of methods appropriate to different contexts. Likewise, it is determined as a development through which a recent topic is linked in a not unfair and proper way with the cognitive partition that the individual who is learning has (Moreira, 2017).

Around its dimensions, for Ortiz (2020), motivation , psychological significance and logical significance stand out, based on this, teachers design their teaching strategies aimed at associating previous experiences with new concepts, likewise, the learners take the role of providing meaningful learning, through questionnaires about the information previously learned, and the guidance of the students in the formulation and correct solution of the problem (Florez, 2001).

## **Method**

The following study report is of a basic or pure nature, with a quantitative approach, characterized by being a structured study that seeks objectivity, regularity and a causal relationship between the variables, without the influence of the researcher (Hernández and Mendoza, 2018) , in addition, it is correlational level that examines the relationships or associations of the variables or their results (Bernal, 2016), non-experimental design and cross-sectional;

The population consisted of 75 high school students , the sample was census, the study variables are: the Canva platform and significant learning in regular basic education, the technique applied was the survey, the instruments were two Likert-type scale questionnaires , for the Canva platform variable it was made up of 40 items, and 16 items for the significant learning variables , its reliability was established by means of Cronbach's Alpha coefficient ( 0.816 ), and it was validated through the judgment of three experts. After obtaining the data, they were recorded and ordered through a matrix to then proceed with the descriptive and inferential statistical analysis through the Statistical Package for the Social Sciences (SPSS) software in its version 25 , and the contrast of the hypothesis was executed through Spearman 's Rho correlation factor, these results were placed in tables and figures for their respective interpretations.

## Results

### Descriptive results

Figure 1.  
frequency levels use of the Canva platform

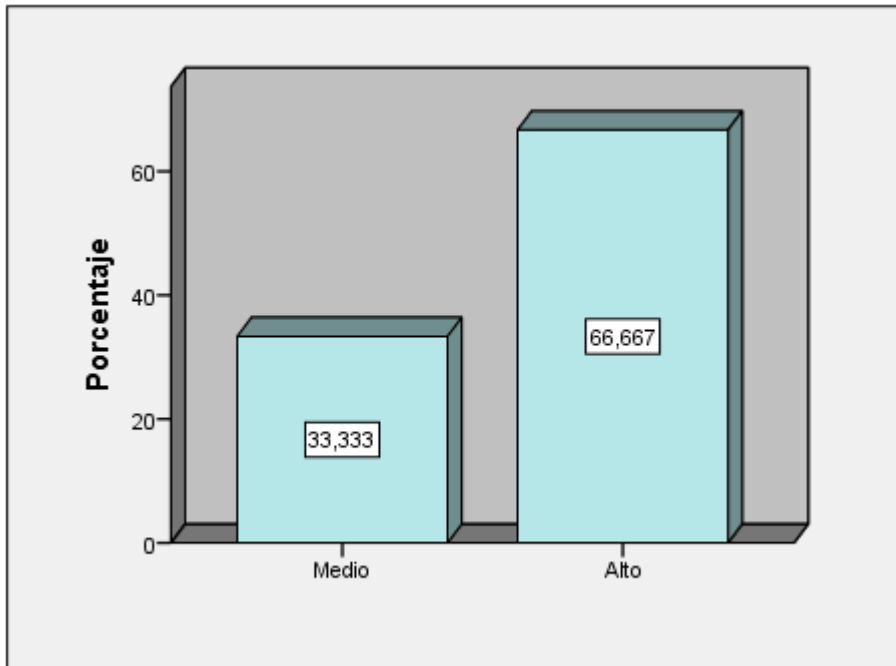


Figure 1 shows the frequency of the employment levels of the Canva platform, determining that 33.33% of the respondents present a medium level and 66.67% a high level.

*Figure 2*  
Frequency of engagement levels on the Canva platform

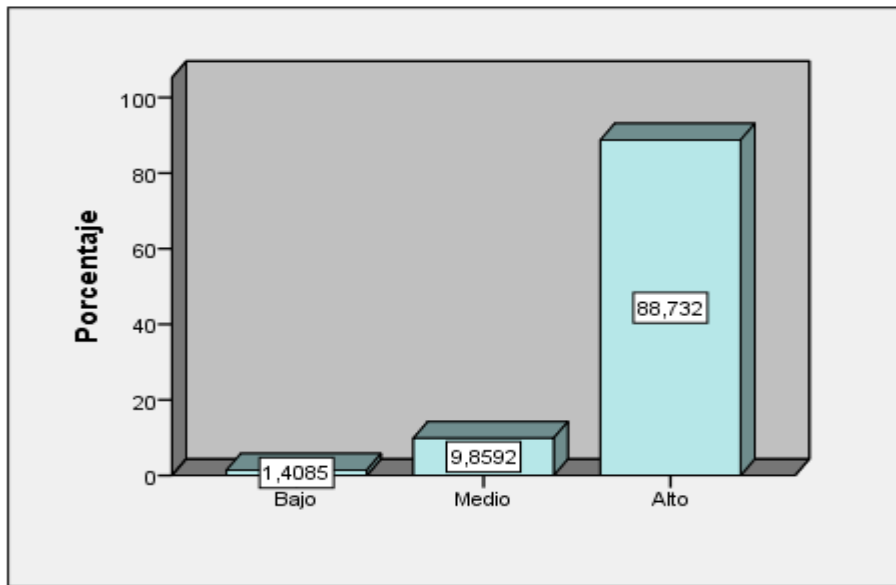


Figure 2 shows the frequency of the participation levels of the Canva platform, determining that 1.4085% of the respondents present a medium level, 9.8592% a medium level and 88.7320% a high level.

*Figure 3*  
Frequency of levels of Canva platform virtual media

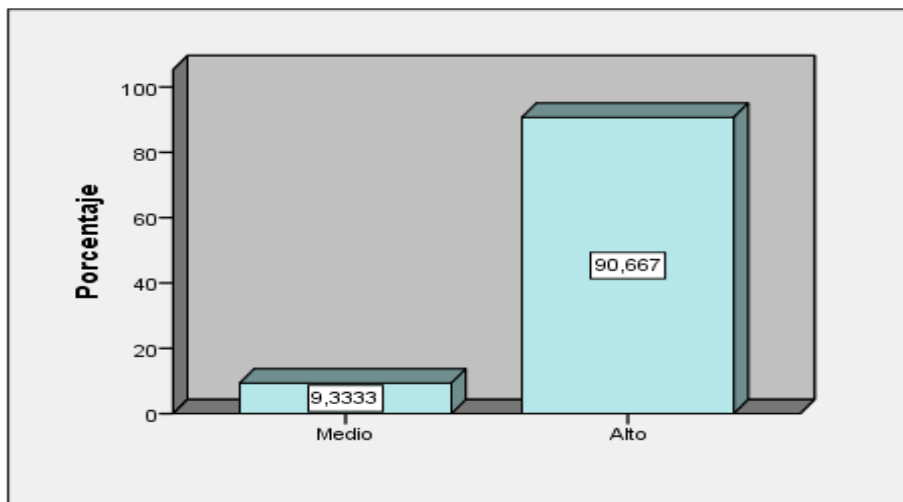


Figure 3 shows the frequency of virtual media levels on the Canva platform determining that 9.3333% of respondents have a medium level and 90.667% a high level.

Figure 4  
Frequency of levels of Canva platform permissiveness

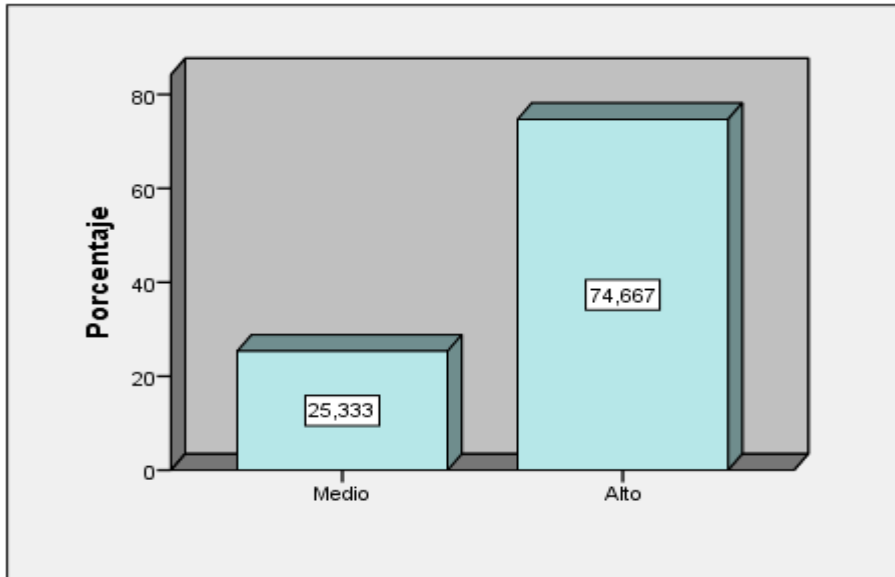


Figure 4 shows the frequency of the permissibility levels of the Canva platform , determining that 25.3330% of the respondents present a medium level and 74.6670% a high level.

Figure 5  
frequency levels Canva platform training event

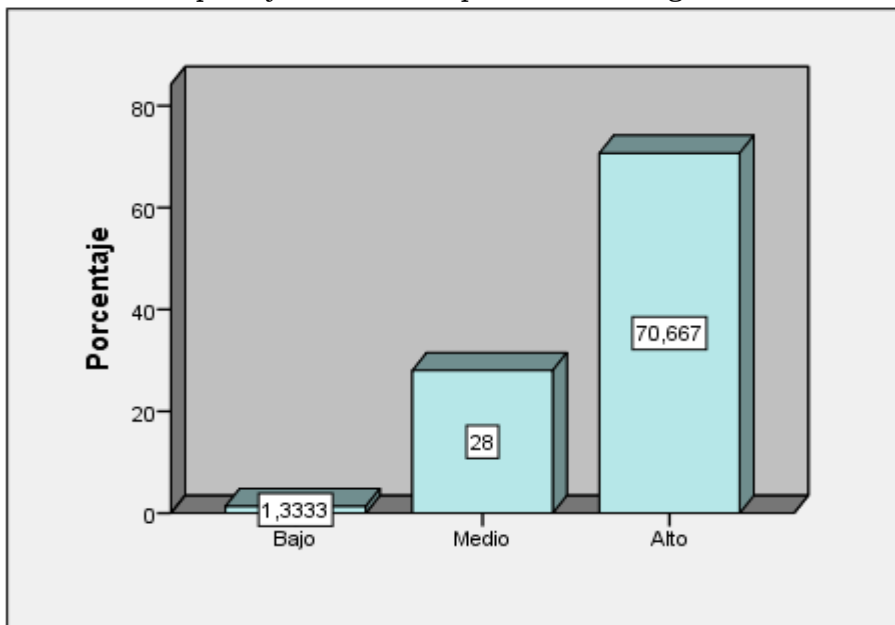


Figure 5 shows the frequency of the levels of training on the Canva platform , determining that 1.3333% of respondents have a low level, 28% a medium level and 70.6670% a high level.

Figure 6  
Frequency levels significant learning

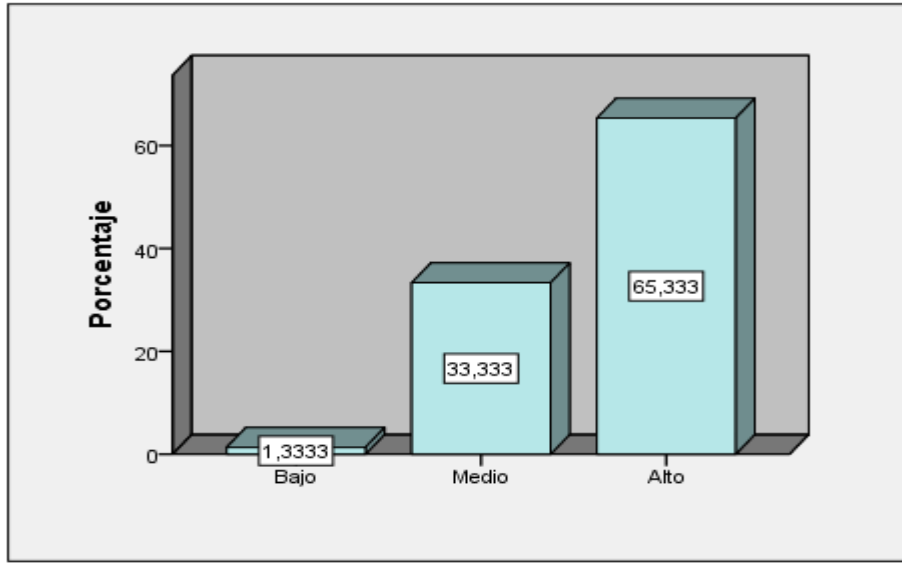


Figure 6 shows the frequency of significant learning levels, determining that 1.3333% of respondents have a low level, 33.3333% a medium level and 65.3330% a high level.

On the quantitative results we have:

Hypothesis testing

General hypothesis

$H_0$  : There is no significant connection between the use of the Canva platform and significant learning in regular basic education.

$H_1$  : There is a significant connection between the use of the Canva platform and significant learning in regular basic education.

Table 1  
*Results of the level of correlation between the use of the Canva platform and significant learning*

		a. significant	Employment
Spearman's rho	a. significant	Coef. correlation 1,000	.446 **
		Next (2-sided) .	,000
		N 75	75
Employment		Coef. correlation .446 **	1,000
		Next (2-sided) ,000	.
		N 75	75

Table 1 shows the Spearman's Rho correlation coefficient = 0.446 and a p-value (0.000) <  $\alpha$ (0.005), so that the null hypothesis is rejected and the alternate hypothesis is accepted, that is, there is a positive connection and significant

between the variables use of the Canva platform and significant learning in regular basic education

Specific hypothesis 1

$H_0$  : There is no significant connection between the participation of the Canva platform and meaningful learning

$H_1$  : There is a significant connection between the participation of the Canva platform and meaningful learning

Table 2  
*Results of the level of correlation between the participation of the Canva platform and meaningful learning*

		a. significant Stake	
Spearman's rho	a. significant	Coef. correlation	1,000 .389 **
		Next (2-sided)	. .001
		N	75 75
Stake		Coef. correlation	.389 ** 1,000
		Next (2-sided)	.001 .
		N	75 75

Table 2 shows the Spearman's Rho correlation coefficient = 0.389 and a p-value (0.001) <  $\alpha$ (0.005), so that the null hypothesis is rejected and the alternate hypothesis is accepted, that is, there is a positive connection and significant between the participation of the Canva platform and meaningful learning.

Specific hypothesis 2

$H_0$  : There is no significant connection between the virtual media of the Canva platform and meaningful learning.

$H_1$  : There is a significant connection between the virtual media of the Canva platform and meaningful learning .

Table 1  
*Results of the level of correlation between the virtual media of the Canva platform and meaningful learning*

		a. significant	virtual media
Spearman's rho	a. significant	Coef. correlation	1,000
		Next (2-sided)	.372 **
		N	.001
	virtual media	Coef. correlation	75
		Next (2-sided)	.372 **
		N	.001
		75	75

Table 3 shows the Spearman's Rho correlation coefficient = 0.372 and a p-value (0.001) <  $\alpha$ (0.005), therefore, the null hypothesis is rejected and the alternate hypothesis is accepted, that is, there is a positive connection and difference between the participation of the Canva platform and meaningful learning.

Specific hypothesis 3

$H_0$  : There is no significant connection between the permissiveness of the Canva platform and meaningful learning.

$H_1$  : There is a significant connection between the permissiveness of the Canva platform and meaningful learning.

Table 4  
*Results of the level of correlation between the permissiveness of the Canva platform and meaningful learning*

		a. significant	Permissiveness
Spearman's rho	a. significant	Coef. correlation	1,000
		Next (2-sided)	.316 **
		N	.003
	Permissiveness	Coef. correlation	75
		Next (2-sided)	.316 **
		N	.003
		75	75

Table 4 shows the Spearman's Rho correlation coefficient = 0.316 and a p-value (0.003) <  $\alpha$ (0.005), so that the null hypothesis is rejected and the alternate hypothesis is accepted, that is, there is a positive connection and significant between the participation of the Canva platform and meaningful learning.

## Specific hypothesis 4

$H_0$  : There is no significant connection between the training act of the Canva platform and meaningful learning.

$H_1$  : There is a significant connection between the formative act of the Canva platform and significant learning .

Table 5  
*Results of the level of correlation between the training act of the Canva platform and significant learning*

		a. significant	training act
Spearman's rho	Coef. correlation	1,000	.408 **
	a. significant	Next (2-sided)	.001
	N	75	75
	Coef. correlation	.408 **	1,000
	training act	Next (2-sided)	.001
	N	75	75

Table 5 shows a Spearman's Rho = 0.408 and a p-value (0.001) <  $\alpha$ (0.005), so that the alternative hypothesis is accepted, that is, there is a positive and significant connection between the participation of the Canva platform and meaningful learning.

### Discussion

The development of evolution in typical teaching systems and the frequent use of information and communication technologies, as well as the heyday of learning through virtual tools and artifacts that enable student support for typical systems, have made possible the development training of the countries, especially those that have shown great importance to their technological evolution, and the countries that have benefited most from the use of technology, achieving an increase in well-being and fitness (Dávila, 2016).

The educational system, with the introduction of virtual platforms, is in constant transformation, as well as the teaching of social sciences, based on the results obtained and its statistical study (Spearman's Rho = 0.446) it was shown that there is a significant connection and positive between the use of the Canva platform and meaningful learning in regular basic education , this coincides with the research by Sánchez (2020), where he states that the Canva platform is a tool that provides strategies and allows prior knowledge to be systematized, promoting creativity and self-identification, likewise, Asencios (2020) concludes that the use of the Canvas platform has a direct and positive relationship with learning by competencies, highlighting the importance of including virtual platforms in the teacher's experience in order to achieve good results. student learning outcomes.

In relation to the participation of the Canva platform and its relationship with meaningful learning, the results of Spearman's Rho 0.389, showed that there is a significant and positive connection between these variables, likewise, it is significant to highlight that 66.7% of the collaborators of the analysis qualified with a high degree the participation of the Canva platform, in this regard, Arcentales et al. (2020), specified that the didactic means supported by good interactivity influence the process of students' skills by promoting motivation and attention, in this aspect, Canva serves as an instrument that promotes the experience achieved through participation favoring the process of skills in students.

In the same way, the virtual resources of the Canva platform have a positive and significant relationship with meaningful learning (Spearman's Rho 0.372), this is reinforced by the study carried out by Muñoz (2019) where he found that students have learning problems. in social sciences because students do not apply virtual media in their pedagogical practice, limiting learning opportunities in students, in addition, he stressed that regular training is essential to provide all the benefits of virtual platforms and adapt them according to the needs of the students. different educational needs.

Regarding the connection between the permissiveness of the Canva platform and meaningful learning (Spearman's Rho = 0.316), it was determined that it is positive and significant, this is reinforced by the results found by Aveiga (2017), who refers that flexibility of the platforms allow the optimization of time and resources in the development of classes, in addition, students can fulfill the purpose of learning, in favor of the process of their digital capacities to improve learning, within the framework of training requirements from today.

To conclude, the connection between the training act of the Canva platform and meaningful learning was achieved as an effect that there is a positive and significant connection (Spearman's Rho 0.408) between these variables, this coincides with the study by Asencios (2020), who found a statistically positive and significant event (Spearman's Rho= 0.712) between the training act of the Canva platform and learning by skills, highlighting the contribution of virtual tools in the training of students in different areas.

## **Conclusions**

The results of Spearman's Rho = 0.446 and p-value (0.000) <  $\alpha$ (0.005), allow us to conclude that the use of the Canva platform has a direct and significant relationship with significant learning in regular basic education , since the theoretical perspective of this platform immersed in the field of education, offers a diversity of models, principles, concepts, techniques and models designed to understand and efficiently improve education, in order to ensure learning and training of apprentices.

In relation to participation, virtual media, permissiveness and the formative act of the Canva platform and significant learning in regular basic education, it was shown that it has a direct and significant connection according to Spearman's Rho equal to 0.389 , 0.372 , 0.316 and 0.408 individually. The implementation of this platform in the development of curricular content carried out in a progressive

and sequential manner fosters meaningful learning experiences in science, through the creation of innovative environments and practices, the effectiveness of its implementation depends on the training carried out about its use, being an important factor to consider.

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