Trabajo colaborativo y estrategias de aprendizaje en entornos virtuales en jóvenes universitarios

Collaborative work and learning strategies in virtual environments in young University students

Estratégias de trabalho e de aprendizagem colaborativa em ambientes virtuais em Young University

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Resumen

El presente artículo se deriva de un proyecto integral acerca de la creación de espacios virtuales basados en el estudio de la psicología de la educación virtual; en este sentido, se analizó la relación que existe entre el trabajo colaborativo y las estrategias de aprendizaje utilizadas por los jóvenes para su aprovechamiento en entornos virtuales. Se trató de identificar las orientaciones o preferencias para la realización de trabajo colaborativo en la generación del aprendizaje autónomo, así como las estrategias utilizadas en el desempeño de los estudiantes al contacto con los entornos virtuales como herramientas pedagógicas. El enfoque metodológico utilizado fue cuantitativo de tipo *ex post-facto* con un nivel de alcance descriptivo de las unidades de análisis: trabajo colaborativo y estrategias de aprendizaje, tomando como muestra de estudio sujetos del nivel medio superior y superior de entre 15 y 23 años de edad del estado de Sinaloa, México.

Se encontró que los estudiantes de bachillerato a pesar de mostrar más facilidad para la búsqueda de información, carecen de iniciativa para la búsqueda de estrategias autónomas, mostrando dificultad para discriminar y seleccionar la información más adecuada como parte de un proceso de análisis. Por su parte, los jóvenes de nivel superior mostraron disposición para trabajar en equipo y mayor habilidad para la búsqueda de información, sin embargo, se reportaron con dificultades para el manejo de plataformas virtuales debido a que perciben que no hay participación por parte del docente. Ambas poblaciones reconocieron contar con ciertas destrezas para el aprendizaje autónomo y el desempeño del trabajo colaborativo, sin embargo la percepción que manifestaron es que el desarrollo de estas competencias no se ha potenciado lo suficiente. Los resultados obtenidos podrán servir como pauta para futuras investigaciones orientadas a la generación de propuestas formativas en el marco de entornos virtuales.

Palabras clave: Trabajo colaborativo, estrategias de aprendizaje, entornos virtuales, tecnologías de la información y comunicación.

Abstract

This article is derived from a comprehensive project on creating virtual spaces based on the study of the psychology of virtual education; in this sense, discussed the relationship between collaborative work and learning strategies used by young people for use in virtual environments. The aim was to identify the guidelines or preferences for the realization of collaborative work in the generation of autonomous learning, as well as the strategies used in the performance of the students in contact with virtual environments as pedagogical tools. The methodological approach used was quantitative type ex post-facto with a level of descriptive scope of units of analysis: collaborative work and learning strategies, taking as sample of study subjects of level between superior and superior between 15 and 23 years of age of the State of Sinaloa, Mexico.

Key words: Collaborative work, learning strategies, virtual environments, Information and Communication Technology (ICT).

Resumo

Este artigo é derivado de um projeto abrangente sobre a criação de espaços virtuais com base no estudo da psicologia da educação virtual; Neste sentido, a relação entre o trabalho e as estratégias de aprendizagem colaborativa utilizados pelos jovens para a sua utilização em ambientes virtuais analisados. Foi para identificar orientações ou preferências para a realização de trabalho colaborativo na geração de aprendizagem autónoma e as estratégias utilizadas no desempenho dos estudantes em contato com ambientes virtuais como ferramentas de ensino. A abordagem metodológica utilizada foi ex quantitativa post-facto com um nível de alcance descritivo das unidades de análise: estratégias de trabalho e de aprendizagem colaborativa, tomando como amostra do estudo submete a média superior e de nível superior entre 15 e 23 anos velho estado de Sinaloa, no México.

Verificou-se que os estudantes do ensino médio, apesar de mostrar mais facilmente procurar informações, falta de iniciativa para as estratégias de busca autónomas, mostrando dificuldade em discriminar e selecionar a informação mais adequada como parte de um processo de análise. Enquanto isso, o nível superior jovem mostrou disposição para o trabalho em equipe e uma maior capacidade de busca de informações, no entanto, relataram dificuldades em gerir plataformas virtuais, porque eles percebem que não há participação do professor. Ambas as populações reconhecidos ter certas habilidades de aprendizagem independente e desempenho no trabalho colaborativo, no entanto, expressa a percepção é que o desenvolvimento destas habilidades não foi promovido o suficiente. Os resultados obtidos podem servir como um guia para futuras pesquisas destinadas a gerar propostas de formação em ambientes virtuais.

Palavras-chave: trabalho colaborativo, estratégias de aprendizagem, ambientes virtuais, tecnologia da informação e comunicação.

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Introduction

Within the traditionalist approach to education, the teacher as central figure is primarily responsible for student learning, then molded into a closed and linear system is responsible for the selection and design of what is learned, and how we learn. Likewise, the assessment of achievements is based on the products and their quality. With constructivist theory, under an active approach and a social perspective, the young University focuses on the process of construction of knowledge from interaction, not only the student teacher, but the interaction between the members of the group, consolidated groups or communities of learning. In this perspective, there is a real world that we experience but the meaning is imposed in the world for us, therefore, to Gross (2002) refers to teaching as a process that is not focused on the transmission of information to the student, they must focus on developing skills to build and reconstruct knowledge in response to demand for a given context or situation.

This new approach makes that you required a new role for the figure of the teacher as it is on the one hand the central actor and on the other its activities change from directives to be counselors and mediators, whose main function changes from instructor to promoter of learning environments. In this sense, collaborative work requires that members of the Group share in common tasks and inputs for a purpose. Alcalde (2015) explains it as a process in which each individual learns more of what they learn by itself, fruit of the interaction of the members of the team, and therefore, a job done in a collaborative group, has a most rewarding result which would be the sum of the individual work.

Interaction then involves a series of activities mediating to participants for the achievement of the objective, as contributions not only joined, but from the search for information, is organized, selected, also enters a process of mutual feedback where it is discussed, are negotiated different perceptions in the construction of knowledge. In this way, share the understanding, and understanding is the art which Professor will have to foster the climate of the classroom in and out. Jhonson (1999) speaks of mixed abilities when he explains the function of collaborative work, i.e. it implies both characteristics of personal development as of a social nature, where each subject contributes through dialogue as the main medium, their own capacity of prospecting, same that in the brokerage will be able to be

reconstructed. Roinstein (2006) speaks of a shared vision where each member takes into account what the other understands, in this sense, flexibility and openness are qualities displayed by the exchange and dialogue, since this condition error and conflict ceases to be an obstacle and becomes learning experience in itself.

On the other hand, the characteristics of the globalized world demand a rapid adaptation to the demands in diverse styles and forms of life that lead us to new forms of interaction. Advances in Information Technology and its usefulness in the different areas have produced in the new generations a social culture with very particular patterns of coexistence. Young people take to the educational space this new technological dimension that, if not exploited by teachers, can become a distractor and not a pedagogical use tool.

The technological tools by means of the creation of virtual environments represent a pedagogical strategy that facilitates the interaction, since it promotes the simultaneous and cooperative learning in spite of the limitations of the distance and the permanence, that have become increasingly a barrier that discards Individual ability under specific conditions. It is for this reason that the results of this study generate a reflection of the educational practice in the use of strategies usable in virtual environments, considering that these environments are not created in an automatic and natural way, they must be created as part of the learning environments, And for this it is important to identify the common use of learning strategies and the preferences and styles that the youngster uses for collaborative learning in his approach to virtual environments.

The objective of this study was to identify the characteristics of the learning strategies used by the youngsters of middle and higher level, as well as their approach to collaborative work in virtual environments.

Virtual environments as an alternative to learning

Theories and educational approaches have been transformed according to the development of society and the way in which its productive sphere is setting new parameters, so that the educational goals in terms of training students in their different disciplines have had to To conform parallel to this dizzying change of society to which man owes himself. It requires an individual capable not only of reproducing schemes, but also of developing with skill in

the new models that technology introduces, and of producing from it the innovations that the social problems are demanding. It is important that what is learned serves as a starting point for the analysis of the situations that it faces, and orient its competences to the search for solutions.

From this scenario it is urgent that the educational actors focus on the construction of learning environments that allow them to develop such requirements, in this sense, the technological tools provide the benefit of going according to the rhythm of the development of the globalized world, for What the lag in time ceases to be a latent risk, and on the other hand, provide the organization of digital information within reach and with it the possibility of interaction with the world, eliminating the setbacks that distance contrasts with face-to-face contact; In the field of learning opens the window to a new format in which autonomy and self-direction become the ideal way to manage the cognitive process.

However, this path is not traced from the technology itself, but to be a pedagogical tool, its design must be supported by theories of learning that somehow take up the dimension of the virtual. Breansford et al. (1999) point out among the main aspects to generate these new learning environments, the need to promote changes in educational goals, and to understand that environments should be focused on the learner rather than on the teacher, In the process of acquisition and not in the permanence of knowledge, and in the field of evaluation as the evaluation of mechanisms and feedback, and not in the product, this implies seeing education as a process of training and not information , In the conformation of learning communities based on the mediated socialization of knowledge, instead of linear management centered on the one who knows best. The integration of these new perspectives requires a systematization that takes into account the innovation of digital media, in this way, mediated interaction in the virtual media through the benefits of the technological reaches represents an opportunity. A virtual environment is a learning environment based on digital media where the interaction takes on different nuances, since it can be synchronous or asynchronous, it is an organized whole so that a set of subjects converge in the construction of the knowledge. Bello Díaz (2005) calls virtual environments for learning "classrooms without walls" and affirms that it is a virtual social space, whose best current exponent is the Internet, is not presential, but representational, not proximal, but distal, is not

Synchronous, but multichannel, and is not based on space enclosures with interior, border and exterior, but depends on electronic networks whose nodes of interaction may be scattered by different countries.

Considering learning as a psychological process, the virtual environment has some advantages. Ballenato (2009) emphasizes among them motivation, active and cooperative learning, study self-direction and self-evaluation, since the student establishes his own objectives and plans the activities according to the possibility of his resources.

Method

For the application of the field study was taken as population segments to students of upper and upper intermediate level whose ages oscillate between the 15 and 23 years of age. With a representative sample of 150 subjects of medium economic level with access to Internet connection services, randomly selected from various educational institutions in the urban area of the municipality of Mazatlan, Sinaloa, Mexico.

For data collection, 2 questionnaires were designed from two main units of analysis: collaborative work and learning strategies in virtual environments. This data collection instrument was validated using the Cronbach alpha coefficient. The questionnaires are composed of 27 and 37 items respectively, addressing the main attributes of the variables to be measured.

The methodological approach used was quantitative ex post-facto type (Bizquerra, 2004) with a descriptive scope of the units of analysis: collaborative work and learning strategies. To calculate the sample size, the following equation was used to perform statistical analysis for descriptive studies in which the units of analysis are managed following the quantitative approach:

$$n = \frac{NZ^2S^2}{d^2(N-1) + Z^2S^2}$$

Results

Self-directed learning and collaborative work in virtual environments

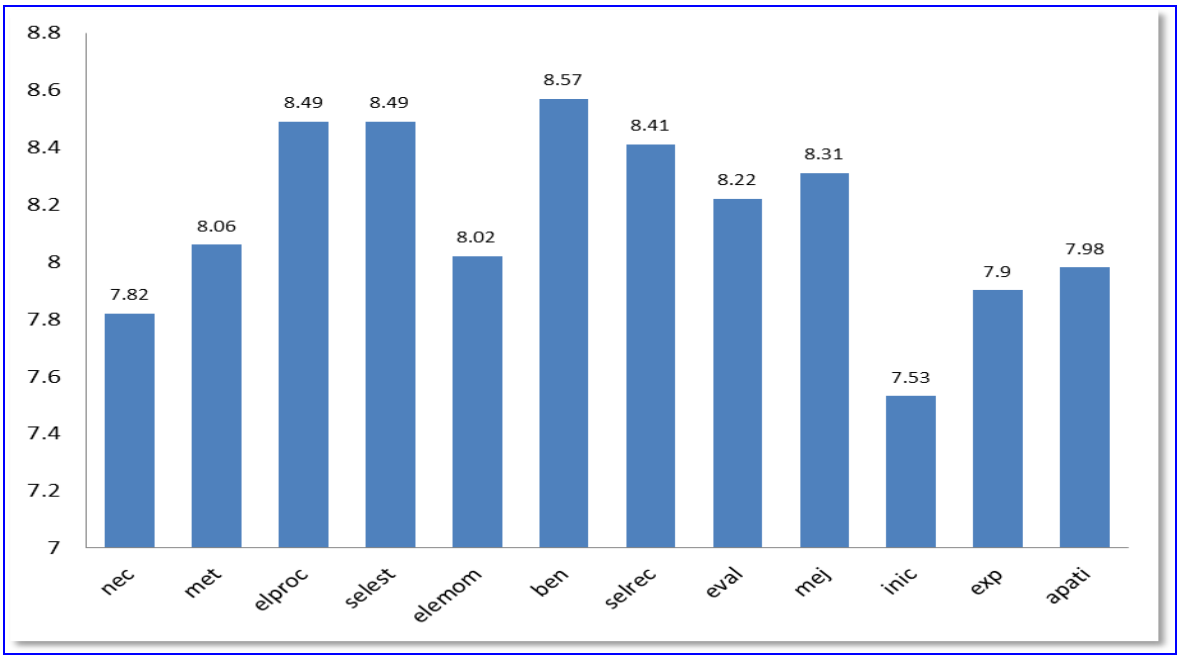
The study presents the grouping of variables that describe the characteristics with which the student develops the competences for self-directed work and collaborative learning, that is, refer to the ability of the upper and upper intermediate students to orient their learning With initiative, identifying their needs, formulating their objectives, identifying their own resources, and their preferences for performance in collaborative work using virtual spaces or environments.

Table 1. Characteristics of self-directed learning in high school adolescents.

VARIABLE	MIN	MAX	X	S	CV	MO
Necesidad de información	1	10	7.82	2.13	0.27	8
Metas al estudiar	0	10	8.06	2.28	0.28	10
Elección de procedimientos	5	10	8.49	1.43	0.17	10
Selección de estrategias	0	10	8.49	0	0	0
Elección de momentos óptimos	1	10	8.02	1.70	0.21	9
Utilidad del aprendizaje	1	10	8.57	1.88	0.22	10
Selección de recursos	2	10	8.41	1.80	0.21	9
Autoevaluación	2	10	8.22	1.79	0.22	9
Mejora del desempeño	0	10	8.31	1.91	0.23	10
Iniciativa	0	10	7.53	2.36	0.31	9
Aprendizaje mediante las TIC	0	10	7.90	2.04	0.26	9
Expectativa	3	10	7.98	1.77	0.22	8
Xx=8.17 Ls= 8.50 Li= 7.84						

Source: Elaboración propia.

Figure 1. Characteristics of self-directed learning in high school students.



Source: Elaboración propia.

In this grouping, from the *Xx*=8.17, The high school students of 15 to 18 years of age show as high value (*X*=8.57) The acceptance of the student to recognize as a great benefit learning, that is, bets on academic life as a means to obtain better living conditions.

It is shown that it has fairly developed skills or competencies to choose the procedures and to select its own strategies and resources, using in a regularly acceptable way the technology to learn by itself without the guidance of a teacher, which means that the acquisition of the characteristics for Autonomous and self-directed learning represent an area of opportunity that can be improved if it is addressed by the education sector.

On the other hand, the student shows very little (*X*=7.53) Interest in taking the initiative to seek information and prepare for a good academic performance, ie, does not feel motivated enough to assume responsibly what is required, which is a weakness to develop the competence of autonomous learning.

In the case of young university students whose ages range from 18 to 23 years of age, they show a greater ability to set goals for what they want to achieve with learning, they declare

with enough skill to choose for themselves the procedures that work best for them by selecting Their own resources. However, very little analyzes the evaluation of their performance, declares in the same direction to resort very little to the use of technologies to carry out their school activities autonomously.

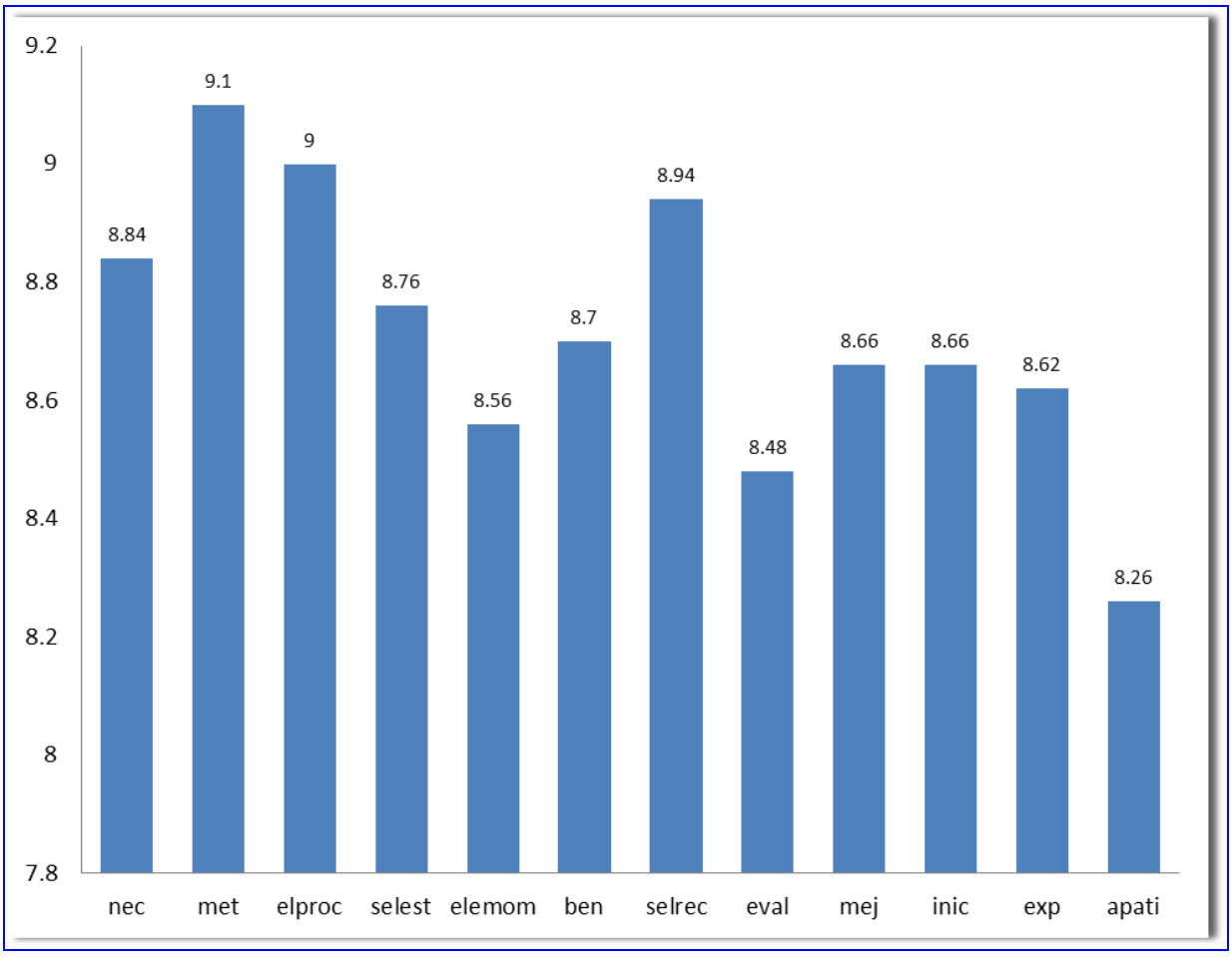
It is inferred from the results that high school adolescents even though they recognize that learning represents the opportunity to make a profit in life, do not feel motivated enough to take the initiative in finding the means and tools that best Which implies that in their learning style they have not developed the competences for autonomous or self-directed learning, so they show some dependence on the teacher's direction to feel confident of achieving academic success.

Table 2. Characteristics of self-directed learning in university students.

VARIABLE	MIN	MAX	X	S	CV	MO
Necesidad de información	0	10	8.84	1.74	0.19	10
Metas al estudiar	2	10	9.1	1.44	0.15	10
Elección de procedimientos	4	10	9	1.45	0.16	10
Selección de estrategias	4	10	8.76	1.45	0.16	10
Elección de momentos óptimos	4	10	8.56	1.34	0.15	10
Utilidad del aprendizaje	3	10	8.7	1.56	0.17	10
Selección de recursos	4	10	8.94	1.28	0.14	10
Autoevaluación	0	10	8.48	1.96	0.23	10
Mejora del desempeño	3	10	8.66	1.37	0.15	10
Iniciativa	5	10	8.66	1.23	0.14	10
Aprendizaje mediante las TIC	0	10	8.62	1.71	0.19	10
Expectativa	0	10	8.26	2.08	0.25	10
Xx=8.71 Ls= 8.93 Li= 8.49						

Source: Elaboración propia.

Figure 2. Characteristics of self-directed learning in university students.



Source: Elaboración propia.

In the case of young university students aged 18 to 23, the results show that they are more clear of their school goals, so they are more self-directed in their learning styles, however they are less inclined to use the technologies for the generation Autonomous learning. In other words, young people at the upper level are clear about what they want to achieve by studying certain subjects, they choose the best way to learn and they know how to select the best resources to achieve a good performance in the task, which indicates that these students have A good level of self-directed learning, however, the variables with low score show that they do not analyze their performance after the work or task is completed, nor do they voluntarily use Information and Communication Technologies (ICT) to learn, Which could hinder self-directed learning since it is important to evaluate the results always to know what

metacognitive strategies to reapply and which not to improve the process of learning itself. According to Monereo (2002), promoting metacognition implies teaching students to know each other better as students, that is, to lead them to identify their difficulties, and to recognize their abilities and preferences, in this sense self-evaluation of performance is of vital importance.

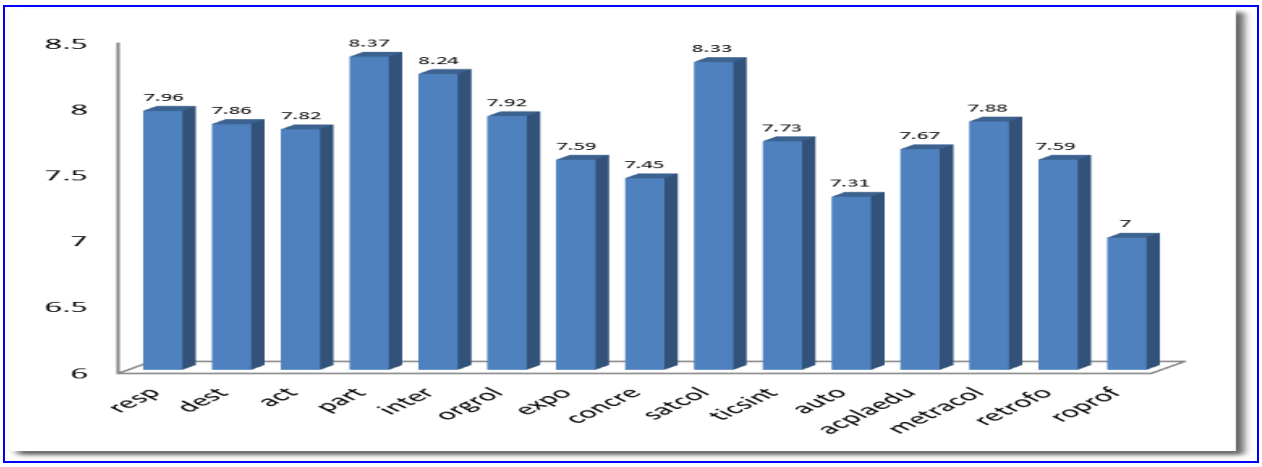
As far as collaborative learning is concerned, since Xx = 7.79, high school students show a willingness to participate in collective work, they declare that they feel very apt to generate a communication environment among their peers in The accomplishment of collective works, that is to say, adolescents of baccalaureate prefer and feel able to perform in equipment of collaborative way.

Table 3. Characteristics of collaborative learning in high school adolescents.

VARIABLE	MIN	MAX	X	S	CV	MO
Responsabilidad	1	10	7.96	1.97	0.25	9
Destreza	0	10	7.86	1.84	0.26	9
Actitud	0	10	7.82	2.36	0.30	9
Participación	2	10	8.37	1.78	0.21	10
Interacción	1	10	8.24	2.15	0.26	9
Organización de roles	0	10	7.92	2.48	0.31	10
Exposición	0	10	7.59	2.49	0.33	8
Concreción	0	10	7.45	2.95	0.40	9
Satisfacción	2	10	8.33	1.83	0.22	10
Uso de tecnologías	0	10	7.73	2.22	0.29	8
Autonomía	0	10	7.31	2.62	0.36	8
Adaptación al uso de plataformas educativas	0	10	7.67	2.42	0.32	10
Medios electrónicos	0	10	7.88	2.59	0.33	10
Retroalimentación en foros	0	10	7.59	2.58	0.34	8
Rol del profesor	0	10	7.0	3.03	0.43	8
Xx=7.79 Ls= 8.16 Li= 7.43						

Source: Elaboración propia.

Figure 3. Characteristics of collaborative learning in high school students.



Source: Elaboración propia.

The high school adolescent is regularly willing to assume and respond with assertiveness among his peers, assumes the technologies as a regularly acceptable tool to learn, shows in an acceptable way his interest to use the virtual platforms as a method of didactic intervention, the adolescent of Baccalaureate regularly uses social networks and emails to share school work, so he accepts that he learns working in a group using ICT. That is, it is inferred that the adolescent accepts to have contact with the technologies and to recognize them as an ideal medium for collaborative learning, showing some disposition, nevertheless it is an area that can be potentialized as part of a school program.

On the other hand, the high school student considers that in collaborative works in virtual spaces (X = 7.31) they can learn little without the intervention of the teacher, so the young person requires the support of the teacher in the conduction of the collaborative activities that Are realized in a virtual way and that very scarcely (X = 7) feels the orientation of the teacher in the virtual works.

In the young university students, the results showed that there are no statistically significant data regarding variables with high values, which implies that they accept in a regular way all the characteristics of the collaborative work, that is, they show disposition and performance if they are told to work.

On the other hand, the variables that were lower compared to the mean of averages were the acceptance of the educational platforms (X = 7.3) and the role of the teacher in the collaborative work (X = 6.58). It is inferred that they show little ability in the use of virtual spaces as a form of collaborative work, since they do not feel the support of the teacher in these means.

From the results we infer that the university students surveyed feel able to generate a communication environment in teamwork, which gives us the idea that, although there is no preference to work in collaborative groups over individual work , Students are acceptably willing to work with others. On the other hand, we can infer that they do not feel secure in collaborative work through educational platforms, since there is no supervision and participation on the part of the teacher.

The results show that the role of the teacher in virtual environments is very important to generate a new culture in learning and promote the balanced pedagogical relationship that allows the generation and confidence in autonomous and collaborative learning.

Silva (2010) points out that for the functioning of the virtual learning space, the important action of the tutor "virtual teacher" is required, who must keep alive the communicative spaces, facilitate access to the contents, encourage dialogue between participants, Share their knowledge and build new knowledge. It is not a question then of waiting for the spontaneous competition of self-conduction to arise in the process of learning in interactivity, it is a question of dynamizing individual potentialities and fostering regulated interaction. It includes among its skills and competencies required to be a companion and facilitator in access and motivation for inclusion in these new spaces. Virtual learning requires a teacher who is previously trained, so that with a pedagogical basis, prioritize the benefits of interaction, facilitate the student's entry into the digital process and their adaptation to the digital strategy to learn and accept the new Normative dynamics.

Learning strategies in virtual environments in young students

The design and implementation of didactic strategies both in face-to-face education and in the creation of virtual environments are fundamental for the achievement of the conditions that allow the activation of the cognitive process, for which reason they must be well supported in a pedagogical approach, Motivation, participation, interest and the conformation of goals and academic intentions makes the difference in the achievement of autonomous and meaningful learning.

Sierra (2011) refers to self-regulation as a competence that includes the individual knowing his own learning process, consciously program his strategies of learning, memory, problem solving and decision making, and expressed as autonomy in learning.

In this grouping of variables, young people are characterized with respect to their ability to manage virtual strategies, thus describing the way young people design their methods to approach the information and the cognitive processing of the same.

From the values of (X = 9.09) for this grouping, it is shown that high school adolescents are able to find information that is very useful to them on the Internet (X = 9.49), they declare that they feel acceptable management in terms of The organization, selection and efficient times in its search of information. However, they show less interest (X = 8.62) because they seek different points of view to confront the information they require, that is, once they locate the information they accept without checking the diversity of opinions of the different authors.

In the case of young university students, this grouping did not show high levels in their responses, they claim to achieve on a regular basis both the approach and the organization, selection and analysis of information, however one of their weaknesses is efficiency in the administration of their Search times because they declare to have little ability (X = 6.96) to quickly find the information.

As for the forms of learning and the approach to knowledge, high school students state that without the presence of the teacher they feel a great need (X = 9.18) to design a strategy, although they feel very skillful (X = 9.10) in planning Of their times. Although they claim to

know how to self-manage on a regular basis in the dynamics of virtual environments, they show very little preference (X = 7.21) for courses with virtual support.

Young university students, for their part, can easily distinguish (X = 8.74) the usefulness and validity of the information obtained, and in a very limited way (X = 6.76), they feel the need for teacher guidance in order to find the information for the task Requested, that is to say, they are more independent in carrying out their activities, however, as the young people of high school show little preference (X = 5.06) for virtual supports as a learning strategy.

In both populations it is recognized the development of some skills and competences for autonomous learning and for the performance of collaborative work in virtual environments; however, it is also shown that these skills have not been sufficiently promoted from the educational field, Characteristics that as the digital natives possess the new generations and therefore the natural approach that the youngest have been making with the technological scope, in the case of the older adolescents in university stage, it is demonstrated the lack of accompaniment of the teacher tutor in the environments Virtual.

Discussion

From the advantages of technological innovations, the opportunity to advance at a better pace and with greater breadth and coverage than traditional teaching is presented, however, this requires a theoretical methodological perspective that allows us to More active and critical vision in the construction of knowledge by the learner. Undoubtedly, the creation of virtual spaces is an attractive strategy to promote in students a series of desirable characteristics in the new profile; Through appropriate strategies to digital environments can stimulate critical thinking as an analysis is presented based on the contrasting information, information that can be learned more efficiently than traditional teaching; It has been proven that the combination of sensitive channels through the use of graphics, animations, sounds, among others, encourages active understanding more naturally.

On the other hand, better conditions are offered for cooperative learning, since the fact of staying together is not the indispensable requirement, but the ability of interaction and cognitive negotiation that permeates in the collaborative work and this is feasible in the design of strategies Digital, without considering the physical permanence extending even to

larger populations or groups forming learning communities, in general terms the computer is no longer seen as a linear and personal instrument to be seen as a tool that expands the potentialities in interaction, where the most important Is the cognitive activity that the learning subject can perform. For Rotstein (2006) collaboration as a pedagogical modality, participation and exchanges in both physical and virtual classrooms occurs through peers. The discussion and the dialogue are constituted in learning scenarios and not only in devices for the appropriation of knowledge, because for the interaction with others to make advances for learning requires the joint understanding of what is addressed, this implies a shared vision .

According to Martínez (2008) all collaborative work is a group work, but not all group work is a collaborative work. The collaborative work is the conformation of a group of subjects with similar knowledge in the subject, where a leader does not appear as in a normal group work, on the contrary, leadership is shared by all the members of this "community" as well The responsibility of the work and / or the learning. It develops among the members of this team, the concept of being mutually responsible for the learning of each other.

It is through exploration and free inquiry that the student develops autonomous learning, plans and controls from their own possibilities and resources.

However, it is imperative that in order for the objectives to be achieved in their intentionality, conditions that in some way allow the installation of a more open culture about learning. One of the main conditions and challenges is to make available to the young people the tools they could hardly access, infrastructure and services, but even more of the human capital enabled to take on a new role as facilitator.

As the data obtained in this study demonstrate, one of the weaknesses in the design and creation of collaborative environments as part of strategies in virtual spaces is the lack of relevant guidance by the teacher, who also faces the challenge of breaking With cultural barriers.

Cabello and Renzo (2013) demonstrate in their study that more than half of the teaching population knows how to use, uses and also has a computer in the home, is a typical feature

especially in the group of teachers of older age and older, and That young teachers usually do not have a computer and are also considered effective and competent users to operate it.

The representations that teachers have about their link to technology vary by age, but this occurs in a context in which knowing and using the Personal Computer (PC) is synonymous with knowing and using the processor. texts. Most of the teachers have been trained to perform their practice in classroom schemes, however, even training in the new innovative approaches does not include all the factors that enable the design of virtual strategies that allow the teacher to change roles, In these conditions the accompaniment as virtual tutor becomes a complicated barrier to break.

Isianny (2011) comments in his work regarding the shortage of teaching enabled in the intervention in virtual environments, worldwide, only a third of teachers who dictate virtual classes have been trained to teach by Internet.

This is one of the main reasons why virtual environments do not achieve sufficient motivation in the student because without a teacher convinced and enabled, the student does not find that point from where to strengthen to continue in exploration and controversy Learns in the information society. Segura and Gallardo (2013) attributed to a lack of knowledge or poor technological skills, both on the part of students and teachers as the main cause of rejection of the incorporation of these means.

The risk of confusing the use per se of these technological implements as an innovative and pedagogical action can deceive the objective and educational goal. Salmerón (2010) warns that the intervention of virtual spaces only acquires pedagogical value when we interpret them as mediating artifacts between the teacher and students or between equals, that is, in the interaction mediated for the construction of knowledge from the direct activity Of the subject who learns with the help of the teacher.

For Villarruel (2009), in order to reach the domain of autonomy in learning requires a high degree of self-control and self-regulation, which can only be achieved through strategies that lead the student to develop a critical and creative thinking, where The skills of a reflective person are appreciated, including the identification of educational and educational needs and abilities.

The results show that there is potential in the two populations analyzed to perform in the virtual spaces, however, this study was limited to consider as a study subject only the student population, without taking into account that the phenomenon of study includes the teacher as An important element for its commitment as an educational actor in the consolidation of the necessary conditions for the creation of innovative spaces. Therefore, this study establishes a starting point for new lines of research that include the teacher in the design of strategies that integrate innovative technological tools.

CONCLUSIONS

High school adolescents, while recognizing that learning represents the opportunity to make a living, do not feel motivated enough to take the initiative in finding the means and tools that work best for them, implying that in Their learning style have not developed competencies for autonomous or self-directed learning, so they show some dependence on the teacher's leadership to feel confident of achieving academic success.

The adolescent accepts to have contact with the technologies and to recognize them as suitable means for the collaborative learning, showing some disposition, nevertheless it is an area that can be enhanced as part of a school program.

College students feel apt to create a communication environment in teamwork, which gives us the idea that, although there is no preference to work in collaborative groups over individual work, students are acceptably willing to work with others. On the other hand, we can infer that they do not feel secure in collaborative work through educational platforms, since there is no supervision and participation on the part of the teacher.

The results show that the role of the teacher in virtual environments is very important to generate a new culture in learning and promote the balanced pedagogical relationship that allows the generation and confidence in autonomous and collaborative learning.

High school adolescents are adept at finding information that is very useful to them on the Internet, however, they are less interested in seeking different points of view to confront the information they require, that is, once they locate the information they accept it without contrasting the Diversity of opinions of the different authors so they can not make a process

of analysis. While for young university students one of their weaknesses is the efficiency in the administration of their search times, since they declare to have little ability to quickly find the information.

In both populations it is recognized the development of some skills and competences for autonomous learning and for the performance of collaborative work in virtual environments; however, it is also shown that these skills have not been sufficiently promoted from the educational field, Characteristics that as the digital natives possess the new generations and therefore the natural approach that the youngest have been making with the technological scope, in the case of the older adolescents in university stage, it is demonstrated the lack of accompaniment of the teacher tutor in the environments Virtual.

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