
La efectividad del aprendizaje activo en la práctica docente

The effectiveness of active learning in teaching practice

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Resumen: La presente investigación describe la práctica docente en el aprendizaje activo analizando su contradicción con la educación tradicional. Se muestra la actitud y predisposición del estudiante al trabajar de manera cooperativa y la necesidad de innovación en el aprendizaje del profesorado. La investigación fue de carácter cualitativo-descriptivo, se aplicó como técnica de recolección de datos, la entrevista a profundidad y para la interpretación de la información se utilizó el método etnográfico constatando un proceder activo en el docente y el estudiante en la resolución de problemas planteado, seguridad en las opiniones e incremento en el interés en la clase.

Palabras clave: Aprendizaje activo; Aprendizaje significativo; Estrategia de aprendizaje; Práctica docente.

Abstract: This investigation describes the teaching practice in active learning analyzing its contradiction with traditional education. The attitude and disposition of the student when working cooperatively and the need for innovation on teachers education knowledge are shown. The research was of a qualitative-descriptive nature, data collection was applied as a technique, in depth the interview and for explanation of the information the ethnographic method was used, verifying an active procedure on educator and learner in solving problems posed, security on opinions and increasing the class interest.

Keywords: Active learning; Meaningful learning; Learning strategy, Teaching practice.

Introduction

The fundamental idea of this research work is to verify through descriptive analysis the effectiveness of the application of learning strategies based on the active method, considering the importance of significant learning that improves teaching practice, reduces the archaic culture of teaching dependent exclusively on the teacher and rather focuses on innovative student learning.

The issue lies in traditional education which, having as a postulate the memorist-repetitive practice, undermines reasoning and contributes to the student remaining in a passive state.

This had its consequences, as Bayona (2003) states: "Learning was, in practice, synonymous

with repetition. Added to this was the fact that there was an evident resignation on the part of the student environment, because the students had participated little or not at all in their educational process" (p.238). Taking into account this proposition, it is evident that the traditional system excludes the active participation of the student.

Active learning tends to become meaningful learning as long as it starts from a previous experience of the student and has been of interest to him, as Ponce (2004) states: "Meaningful learning requires the student to carry out various activities to establish relationships between what is new and what he already knows, that is, to nuance, reformulate, differentiate, discover, order, classify, prioritize, relate, integrate, solve problems, understand a text, etc.". (p. 22).

The previous knowledge of the student and that it is valid to transform the environment, must originate from a Deweyan learning experience, which not only serves to change the abstract knowledge of the student but the concrete reality, as indicated by Carreras (2016): "That is, it is not true that the experience is a subjective matter that affects only the individual, his knowledge, his beliefs and his behavior, but these elements interact with the environment and, therefore, modify it, (...)" (p. 74). The experience arises from the degree of interaction of man with his environment and consequently from the transformation of the environment. It follows that all reality is changeable and cannot be subordinated to immutable ideas or eternal experiences.

With this in mind, this research allows us to clarify the role of teachers by posing the following question: What is the role of teachers in the construction of knowledge? The teacher does not know everything, in traditional education the teacher was wrongly characterized, but it must be admitted that he or she is a key element in generating the learning experience and his or her function is active within the educational process, as Ponce (2004) points out:

The constructivist theories of learning have pointed out the need to conceive of the student as an active being in the construction of knowledge, but they also rethink the role of the teacher as an active agent in the processes of construction of the teaching content of his or her students, as well as in the design, operation and evaluation of the resources, strategies or activities that contribute to their development. (p. 23)

For the materialization of this research, interviews to teachers and students, application of active learning workshops and the bibliographic review of theoretical postulates based on the active method have been arranged.

Both the teacher and the student are strategic agents for the creation of learning experiences and the purpose of this research is to effectively contribute to the didactic-pedagogical clarification that forges the path of active learning techniques that contribute to the improvement of teaching practice.

Development

For operational reasons, it has been necessary to separate the data collection into two parts, according to the units of analysis; teachers and students, and thus arrive at the determination of thoughts and attitudes.

As for the teachers' unit of analysis, chain or snowball sampling was applied to effectively identify the individuals who provided information according to their experiences, which led to other sources that provided timely data to this inquiry (Ku Moo, 2017).

The interview technique was used for data collection, according to authors Colin, Galindo and Saucedo (2012): "The interview is one of the most efficient and active transversal methods for obtaining information and knowledge from the consultant. It allows the development of empathy to facilitate communication; its mastery is relevant to different areas and related professional fields". (p. 21).

A bank of 15 open-ended questions was applied to teachers and neuro-psychologists, and to carry out the interview it was necessary for the interviewer to be actively involved in the teaching practice and with his or her experience and qualities; it allowed him or her to understand the thoughts, feelings, impulses, and reflective modes of action of the interviewee, taking into account his or her own experiences, overcoming the main concepts such as empathy and intuition. (Colin, et al., 2012).

According to the interview applied to teachers, the passive role of the student does not exist, the brain is never in a passive state, it is always in action, what happens is that the student uses his neural energy to connect with memories of personal experiences that do not

contribute to the learning objective. As the class progresses, the student's isolation may become more frequent, due to the demotivation caused by teachers who simply turn the class into a monologue that limits the student's participation.

The student's motivation is important for an active participation in the learning process. According to research, the teacher's stimulation is not the same as the student's, there are significant differences and influencing factors such as age; a younger student assigns different values to a phenomenon observed by a higher-aged teacher. The degree of concentration to analyze and be motivated by an event probably depends on the subject matter and interests of the learner, and on the modalities of learning styles or representation systems, whether visual, auditory or kinesthetic.

In order to identify the different representations in the students it is necessary to observe. The visual stores information quickly and finds any order, shows their emotions in the face. The auditory stores information in blocks and sequentially moves its lips when reading and is easily distracted while the kinesthetic likes to touch everything, expresses its emotions with movements. In short, it is necessary to observe and record their expressions in order to assume a teaching position and make decisions when planning and executing instructional strategies. (Castro and Guzmán de Castro, 2005, p.90)

According to the results of the data collection, there is a linguistic terminology associated with the sense organs or representational systems, that is to say that by assigning a single type of message, but elaborated for all the representational systems, a student improves his attention, for example, a student with greater visual sensitivity captures better the transmission of knowledge through that learning experience, in the same way as one with greater auditory or kinaesthetic sensitivity. In any case, it is concluded that it is possible to create a set of communicative data capable of reaching, at the same time, all the representational systems and that it depends on the classroom environment created by the teacher. In short, it is not a question of creating a communicative system for each learning style, but rather to use a single message that presents all the characteristics that learning demands based on the styles that interest the students.

As for the teacher's learning: Why in many cases there is unconcern for learning, sometimes the teacher is not aware of his degree of ignorance, as this phenomenon inhibits his

cognitive capacity to learn, this is called unconscious ignorance. There is a latent factor of unconscious incompetence incited by episodes of egomaniacal psychological disorders that block the new knowledge in teachers. According to Veintimilla, Fontaines and Tusa (2017), the teacher, believing he knows everything, neglects the possibility of learning new didactic strategies: "He presents himself as knowing an area that he ends up not knowing, because many times he does not practice it and during the sociodiscursive interaction, he dedicates himself to reproduce methodological sequences as uncorrupted truths, (...)" (p.1203).

The teacher, in presenting a methodology as an incorrupt truth, may be hiding his or her own errors. The main functions of researchers are to find flaws and disruptions, and then to discover a theory that has been subjected to as much testing as possible. According to Popper (2001):

Mistakes can be hidden from the knowledge of even our best proven theories; thus, the specific task of the scientist is to search for such errors. (p. 4)

The author advocates a new range of professional ethics that are intrinsically related to values such as tolerance and academic honesty. (Popper, 2001).

To distinguish the traits and characteristics of each group of students, the ethnographic method was used, so it was necessary to apply participant observation in the workshops held during the school day.

Intentional or judgmental sampling was used to select the student population, that is, the sample depended on the researcher's choice because he or she was knowledgeable about the contextual and experimental problems of the group being addressed (Ku Moo, 2017).

The group interview was used in the first and second year of high school at the "Dra. Matilde Hidalgo de Procel" secondary school in the city of Machala, El Oro province. The first group consisted of 18 students; 13 men and 5 women with an age range of 14 to 18 years. The second group was made up of 10 students; 5 men and 5 women with an age range of 15 to 18 years.

The oral and open-ended interview was based on 12 questions. Before answering each question, students were asked to meditate on their answers as sincerely as possible and to use enough time for each intervention, which were recorded on audio for later analysis.

The findings show uncertainty in the transmission of knowledge in the students, which manifest that the blackboard is not a sufficient resource for the transmission of knowledge, since there are students who learn differently and it is not possible to continue using the same resource for all, it is necessary to consider the individualities.

Does the subject taught in class serve to solve real life problems? This question is moderately fulfilled, according to the research, there are subjects that are more practical such as Language that serves, for example, to understand a book and strengthen communication. However, there are subjects such as Mathematics that are not very applicable in the daily field, for example, the performance of a Pythagorean exercise.

As for the usefulness of the subject notebook, it is moderately used as a technique to consult some specific data, but they agree that it cannot be the only resource to do so, since it slows down the knowledge due to lack of concreteness in it, there are subjects that extend and deviate from the learning objective. This resource does not encourage cooperative work because it is a source of academic dishonesty, since the vast majority of students incur in plagiarism of information for the presentation of assignments in class.

Learners do not feel confident that they can transfer the knowledge learned in class, that is, there is a lack of confidence in the application of knowledge in other contexts. They perceive that the problem originates in the transmission of that knowledge by the teacher and that in order to correct this issue; the execution of the lesson plan must be based on experimentation, the classes must be experiential so that the student considers the learning to be meaningful.

In most of the intra-classroom activities, the teacher speaks more than the students; their percentage evaluation is 70% and 30% respectively. The students do not remember any didactic technique and neither can they sustain that the teacher gives his classes from a previous knowledge.

According to the data collected, teachers depend on the school text to teach, and increase their focus on fast learners. There is a lack of happiness in the students regarding the study, the teaching-learning model they receive is based on the student's preference, it undermines those who have different learning styles.

The application of active learning activities was developed in the first and second grades of high school with a communicative-linguistic approach where students were the protagonists of the learning experience (Revuelta, Formoso, 2017).

The didactic workshop was applied in the same educational institution specifically to a group of 10 high school students with an age range of 15 to 18 years, were divided into groups: two of three and one of four members, the time for the realization of the activity was based on two hours.

A literary text was provided to each group, then each group designated a person to read the text, based on the reading the rest of the members wrote the word that most caught their attention, then extracted ideas that were significant for them and then wrote phrases of textual understanding. Zepeda, Abascal and López (2016): "(...) the implicit purpose is to get students to move from a passive state to one that is very active in the class and to make them feel that they are not only attending a class, but that they are part of the class" (p. 317). Continuing with the same sequence "Word, Idea, Phrase", each group was asked to answer the questions: What characteristics do they have in common? What can be derived from the text? What conclusions can be reached? And finally, what aspects of the text have been forgotten in the group dialogue? Finally, each student presented their understanding of the topic in a plenary session.

The results of the research show a change of attitude in each of the students. The problems raised have been resolved more quickly; of the 2 hours set aside, they took 50 minutes. There was an increase in the level of in-depth expression of ideas, an increase in the capacity for analysis, an improvement in the distribution of intervention times, an increase in the security of expressing opinions and in the interest of continuing to participate in the class. Strengthening of the trust networks between teacher and student, aptitude to approach and intervene in each work group, increase in the capacity of response, and opportunity for self-evaluation and systematization of teaching practice.

Conclusions

Through the results obtained in this research, it was demonstrated that there are still rooted characteristics of traditional education in the teaching-learning process, such as the monopolization of the class, the repetitive use of didactic materials (blackboard and subject notebook) and the scarce use of didactic strategies according to the learning styles, this has led to the existence of a lack of motivation in the student, who is not the protagonist in the classroom and the teacher does not fulfill his role as a guide.

In this research it has been found that unconscious ignorance not only makes it impossible to recognize one's own mistakes, but also diminishes the capacity to learn new things. By acting without professional ethics, the teacher is not allowing active learning to take place nor is there innovation in teaching practice.

With the application of the workshop technique, a positive change in the students' behavior was observed, and the effectiveness of active and experiential classes was demonstrated. The memories of the experience manifested in the activity is the previous knowledge of the students and is at the same time an important factor for the teacher to start the class from a solid base.

This academic work has shown several aspects that make up the degree of effectiveness of active learning strategies. The role of the teacher serves as a guide in the educational journey. Likewise, through the application of workshops, the possibility of class optimization is corroborated and the qualitative assessment of teachers and students with respect to the teaching-learning process has been identified.

This research leaves the door open to future investigations that demonstrate, through the verification and contrasting of methodologies, the change in the behavior of students and teachers with respect to active learning. On the other hand, it is important to review the relevance of the current national curriculum systems of education in order to find answers to the current problems related to traditional education.

Bibliographic references

Bayona, J.C. (2003). La escuela: dejar pensar antes que enseñar a pensar. *Educación y Educadores*, (6). Recuperado de: <https://www.redalyc.org/pdf/834/83400617.pdf>

- Carreras, C. (2016). *John Dewey: "En el principio fue la experiencia" Utopía y Praxis Latinoamericana*. Recuperado de: <https://www.redalyc.org/articulo.oa?id=27946220007>
- Castro, S. y Guzmán de Castro, B. (2005), Los estilos de aprendizaje en la enseñanza y el aprendizaje: Una propuesta para su implementación. *Revista de Investigación* (58). Recuperado de: <https://www.redalyc.org/pdf/3761/376140372005.pdf>
- Colín M., Galindo H., y Saucedo C. (2012). *Introducción a la entrevista psicológica*. México: Trillas, 151p. Recuperado de: http://www.biblioteca.cij.gob.mx/Archivos/Materiales_de_consulta/Drogas_de_Abuso/Articulos/LIBROIntroduccionaLaEntrevistaPsicologica.pdf
- Ku Moo, L. (2017). *Poblaciones y Muestras*. Universidad Autónoma del estado de México. México. Recuperado de: http://ri.uaemex.mx/bitstream/handle/20.500.11799/70065/secme-15332_1.pdf?sequence=1&isAllowed=y
- Ponce, V. (2004), El aprendizaje significativo en la investigación educativa en Jalisco, *Revista Electrónica Sinéctica*, (24). Recuperado de: <https://www.redalyc.org/pdf/998/99815918004.pdf>
- Popper, K. (2001) El Conocimiento de la ignorancia. *Polis Revista de la Universidad Bolivariana*, vol. 1. Recuperado de: <https://www.redalyc.org/articulo.oa?id=30501124>
- Revuelta, S. y Formoso, V. (2017) *Situación de Aprendizaje, Descubriendo a Mondrian*, pp. 9.
- Veintimilla, G.; Fontaines-Ruiz, T. y Tusa Jumbo, F. (2017). Ignorancia inconsciente en las representaciones de la investigación. *Complutense de Educación*, 24 (1), 35-38.
- Zepeda, S. Abascal, R. y López, E. (2016), Integración de Gamificación y Aprendizaje Activo en el Aula, *Ra Ximhai*, Vol.12, (6), Universidad Autónoma Indígena de México. pp. 315-325.