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Motivational Strategies in the Teaching Process

Dilka Leyva-Rodríguez [a], Thalia Fuentes-Leyva [b], Rachel Naranjo-Vázquez [c], Carlos Antonio Bueno-Castro [d], Britany Mirella Palma-Alcivar [e]

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Corresponding Author [a]

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Abstract

It could be said that metacognition is a topic that has much to contribute to the learning processes at different ages of students, there are motivational strategies that affect the development of learning in children and adolescents, is an investigation that can be developed and contribute to different elements depending on the conditions in which the entities studied are shown, the objective of the work is to be able to analyze metacognition and motivational strategies that allow personal development in children, adolescents and different levels of teaching, the bibliographic search was used to know how metacognition behaves at different ages and behaviour of students, in addition to the inductive-deductive and historical method where it is valued how it has evolved as new tools and strategies are found in its evolutionary process. It was obtained as a result that metacognition and motivational strategies can be used in teaching-learning processes at different levels and in many cases even in companies that use them to meet their plans and objectives.

Contents

[a] Universidad de Oriente, Santiago de Cuba, Cuba
[b] Universidad Técnica de Manabí, Portoviejo, Ecuador
[c] Facultad 2, de Medicina Santiago de Cuba, Cuba
[d] Facultad 2, de Medicina Santiago de Cuba, Cuba
[e] Universidad de Guayaquil, Guayaquil, Ecuador

1 Introduction

The teaching-learning process needs tools that help the teacher create an adequate environment that allows the student to develop their cognitive abilities, much has been written about it, but it is a theory that can be used at different levels of education; in addition to being able to be applied in any context. Motivational strategies can be used by teachers to build people's capacity, but the human being in the process of development where needs tools that motivate him to understand the environment including all the phenomena that occur around him as well as how to learn to regulate his thought (Casey et al., 2018; Barch et al., 2018).

When children begin their growth stage, they begin a learning process, some developed research has studied the possibility that there are differences between planning skills and metacognitive skills (Iguarán et al., 2016), fundamentally they value that must have control by observing the behaviour of students; but it is appreciated that when there is a positive interaction in the student's school environment, learning is developed efficiently. There are functions of the theory of mind that are born in the human being and others that are developed, in such a way that when a person develops metacognition, they can understand their mind and that of others, when it happens that metacognition is not developed pathologies such as autism may appear; but these problems can be solved through different techniques, such as the theory of mind (Menendez, 2020), according to this author this theory refers to the ability of children to represent and understand the mental states of others, such as goals, emotions and beliefs.

Virtual tools have been evolving in such a way that there are already tools that teachers can apply to metacognition processes, these help improve quality models in education, constituting a challenge for teachers, as it is necessary to clarify metacognitive practice and incorporate its execution in the class (Jaramillo & Simbaña, 2014). A lot of work has been done on this topic at different levels of education, researchers studied how motivation towards student learning is related to their metacognitive skills and cognitive performance (Nieto, 2021), and they concluded that there is still no solid model between motivation and cognition, so work must continue these teaching processes and models.

2 Materials and Methods

A bibliographic review methodology was used to find out how metacognition behaves in the different teaching processes and the management of motivational strategies using the information management of scientific topics (Gómez, 2014), these authors propose to carry out a search that allows the identification of the documents referring to the research topic. The historical method was also used to know the advances in the process of metacognition and the inductive-deductive method to arrive at a result of the assessments made.

3 Results and Discussions

Learning, memory, language, thought, and metacognition is elements that intervene in the process of evolution of the human species, from birth to the last moments of life, it goes through a dynamic process and dialectic where it evolves in such a way that the phenomena and processes that take place in the environment where social relationships are fundamentally developed are understood (Evans, 2008; Wu et al., 2013). During this research, metacognition will be considered, of which there are different types linked to different cognitive abilities, each of its modalities helps to plan, organize and optimize thought. Figure 1 shows their types of metacognitions (Rodriguez, 2022).

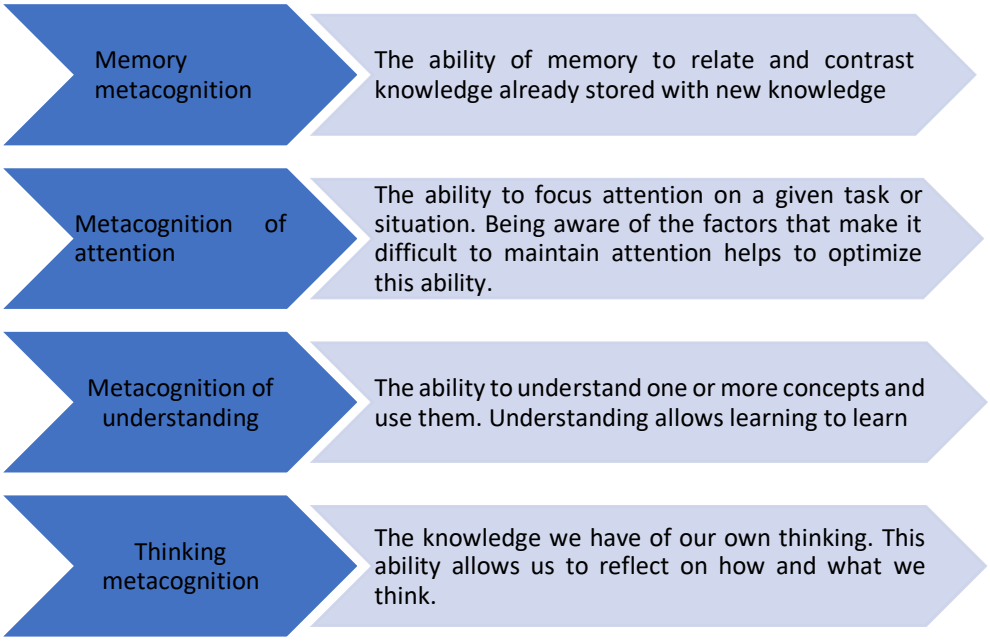

Figure 1. Types of metacognitions
Source: (Rodríguez et al., 2022)

There are different metacognitive strategies, one of them is learning to learn, in this context metacognitive strategies can be developed that help make better decisions in each situation. The psychologist and pedagogue David Paul Ausubel, talk about meaningful learning versus rote learning, he developed the theory on the assimilation of knowledge (Torres, 2016).

Significant learning tries to make the person make sense of the information received, relating concepts and building new information based on what was previously learned; On the other hand, when rote learning is used, the person makes associations and memorizes concepts and facts without the need to understand the information. It is passive learning since new content accumulates in memory without being associated with what is already known (Gazmararian et al., 2003; Malterud, 2001). So this information is more likely to be forgotten.

Metacognition in learning

Metacognition in learning aims for students to develop meaningful learning that takes into account the abilities of each individual to generate cognitive skills. When learning, different strategies are developed that allow learning, for example: we classify information, schemes or associations of knowledge are made to remember them better. Related to this, the ladder of metacognition is the thought-based learning process. Figure 2 shows the four phases of this process (Morales, 2018).

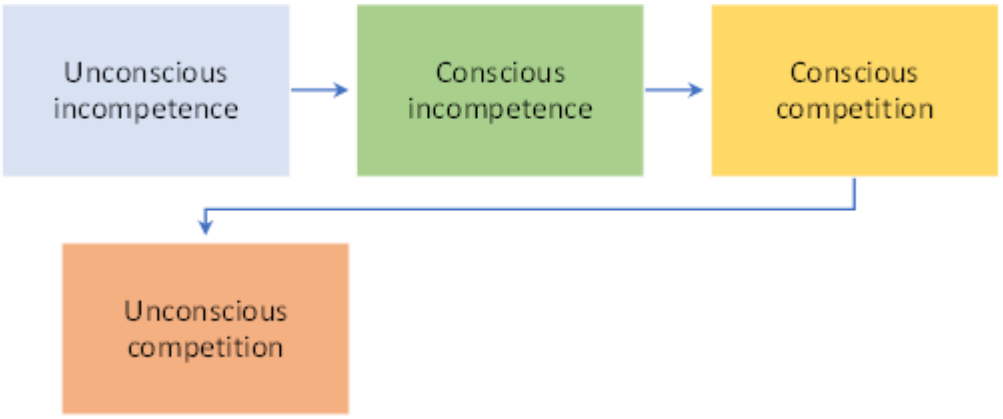

Figure 2. Phases of learning
Source: (Morales, 2018)

These phases of learning help to reveal the logical thinking of the knowledge acquired and can be considered at any stage of the life of the human being, where one must be aware of what has been learned, remember the procedure that leads to learning, value for that what has been learned is useful and can be used at any time when it is necessary or useful; In addition, it can be verified that the individual spends his life learning either consciously or unconsciously.

Metacognitive

strategies These strategies influence how the human being processes information and help regulate learning; however, a strategy is not always good for everyone, that is why it is important to teach students to be aware of their thoughts and be able to plan, control and evaluate learning, these techniques have been used in different teaching systems, in Peru have evaluated it in the academic achievements of an educational institution where they had the result that when students use metacognitive strategies it improves academic results (Escudero & Oseda, 2021).

Some examples of the application of metacognitive strategies can be assessed after performing self-assessment exercises when a specific topic has been studied, carrying out an activity in different ways, this helps to define which strategy is the most appropriate or making conceptual maps to relate different concepts these strategies allow understanding and efficiently develop the acquisition of new knowledge (Seufert, 2003; Pedaste et al., 2015).

Motivational Strategies

Learning requires the student a set of demands, who have a series of resources, in many cases, there are discrepancies between the demands and the resources, which leads the student to experience emotions, positive or negative. So, a group of motivational learning strategies are activated that help you achieve success or are minimally affected by the consequences of failure. This article offers theoretical elements that allow us to assume grounded positions about motivational learning strategies (Taylor et al., 2009; Zepeda et al., 2020). This strategy has been implemented in the context of specific subjects, as it helps students to achieve satisfactory results in academic performance (Quena, 2020), it has also been possible to implement it at different educational levels, for example in Brazil, it was implemented in teachers in training where the desire to learn was fundamentally taken into account (Valenzuela et al., 2018).

There are four pillars of education according to Delors in his report (Delors, 1994), the challenge posed to education is defined, as preparing students for the new times, promoting them learning to know, to do and live with others, and finally, to learn to be. In this way, the importance of training the student towards continuous learning is summarized, with a transformative and creative character, with a clear inclusion in the social group or groups where he interacts.

Today, the need for didactics centred on the learner is recognized, which requires focusing on teaching as a process of learning orientation, where conditions are created so that students not only appropriate knowledge but also develop skills, form values and acquire strategies that allow them to act independently, committed and creative, to solve the problems they will have to face in their personal and professional future. Some authors have worked on didactics from a critical and integrating perspective, where they have had as their objective the study of didactics based on a historical, epistemological, and critical analysis of the theoretical references consulted (Abreu et al., 2018).

Motivational factors play an important role in the initiation, direction, and maintenance of the student's efforts in the self-regulation of their learning processes. For this reason, it is necessary to deploy an educational teaching process that promotes the development of motivational learning strategies to favour the development of an apprentice. In this sense, positive parenting, and self-regulation of learning in adolescents have been investigated, to know the influence of parenthood as a facilitator of autonomy for self-regulated learning (Palacios et al., 2022). In this context, the actions of the family in the teaching process linked to the school are valued as an essential factor to achieve a satisfactory learning process (Suryasa et al., 2022).

Currently, higher education has the social responsibility to train its students taking into account the approaches made by Montes de Oca & Machado (2011), when they refer to the need for didactics centred on the subject who learns, which requires focusing on teaching as a process of learning orientation, where conditions are created so that students not only appropriate knowledge but also develop skills, form values and acquire strategies that allow them to act independently, committed and creative. , to solve the problems they will have to face in their personal and professional future.

Learning strategies

These train the learner in self-regulation processes; It begins when there is a need, a goal to achieve and the ways to achieve it. The planning continues is achieved with the execution and control of the demands of the task and ends with the evaluation or self-assessment, all of which allows the control, selection and execution of methods and techniques for information processing; in addition to planning, evaluating and regulating the cognitive processes that intervene to achieve quality in education; this is done intentionally as a flexible instrument to learn effectively, solve problems and academic demands (Carriazo et al., 2020).

From these theoretical references, it is pointed out that, although they do not coincide in all their aspects, the definitions provided by some authors do agree in the deliberate, intentional, and controlled nature that the student exercises on the integrated sequences of procedures aimed at facilitating and improve their learning, to achieve a certain purpose. To assume a definition of learning strategy, the research developed by Vera et al. (2019), is considered, who showed that the most used strategies are related to metacognitive control and self-regulation that are organized as the set organized, conscious and intentional about what the learner does to effectively achieve the goal set in a given social context, integrating affective-motivational, metacognitive and cognitive support elements.

When reviewing the bibliography in this regard, there are currently dissimilar classifications of learning strategies, in this sense some authors such as (Díaz et al., 1998), pronounced themselves, pointing out that classifications can be found depending on how general or specific they are, the domain of knowledge to which they apply, the type of learning they favour. They can be classified as the macro strategies that are directed to the organization, regulation and affective motivational strategies and the micro strategies that are the repetition and elaboration strategies; but they have different classifications (Mustafa et al., 2020).

Cognitive strategies are aimed at information processing, these allow students to be able to manage their educational process, attend, learn, think, and solve problems, changing old methods and improving their learning process (Klimenko, 2009), metacognitive strategies are also proposed, these guarantee the regulation of the learning process and serve as support for learning constituted by auxiliary procedures, including emotional self-control, time management. Metacognition is a way to learn and form autonomous students (Bustingorry & Jaramillo, 2008). These can be applied to reading in students of different levels of education (Tapia, 2021), these authors obtained in their research the effectiveness in improving the reading comprehension of secondary school students.

Classification of Gargallo and other authors (Gargallo et al., 2020), propose an integrating theoretical model, which is made up of three dimensions related to learning: will, capacity and autonomy, grouped into

two scales: affective, support and control strategies and cognitive strategies directly related to information processing, its classification exposes that it includes the components of academic motivation: value, expectations and affective, to complete its proposal within the affective, support and control.

To achieve a thought that promotes the independent and creative execution of the student; it is necessary to prepare him for it and along that line, the teaching of learning strategies, constitutes a way that creates favourable conditions to achieve the desired purpose, by providing the student with the necessary instruments for his learning, in addition through this process the student takes awareness of how he learns, of the elements that he is using during it, where the way of understanding, analyzing and learning from the means defined by each one stands out.

Every learning task requires the student a series of demands, for which he will have a series of resources. The possible discrepancies between the required demands and the available resources lead to the student experiencing emotions, positive or negative, and concern for their performance before that task, in this way it is observed how emotions triggered by the conditions of the activity, influence the behaviour of the individual, which sets in motion a group of motivational strategies that help him to achieve success in its realization or that are minimally affected by the consequences of failure.

There are 7 motivational strategies according to Mesa (2018), and these can be applied to the learning process and company workers in such a way that good results are achieved in these processes. Motivation in the human being is an internal process determined by biological, cultural, social, learning and cognitive aspects that drive a subject to initiate, develop and/or end a behavior. According to López, it is a variety of physiological factors that initiate, sustain and direct behavior, which is the result of the internal state of an organism that drives it and directs it towards action in a certain direction. Motivation is a process that is closely related to the achievement of objectives aimed at sustaining or improving the life of an individual and that is determined by sociocultural, learning, and cognitive characteristics.

In the academic environment, motivation is a significant variable since any learning model explicitly or implicitly entails a theory of motivation. For learning to occur in the student, there must be motivation, which can be caused by internal or external factors. Motivational strategies directly affect the initiation and maintenance of effort during the learning process, these are a set of processes involved in the activation, direction, and persistence of behavior, they frame procedures used to promote emotionally adaptive states and/or manage those situations that affect personal well-being.

It is considered that the management of motivational learning strategies allows the student to maintain a state conducive to learning, by optimizing concentration, reducing anxiety, directing attention, and organizing activities and study time, in the same way, they can vary depending on both personal and contextual factors allowing strategic learning (Sancho, 2022).

Motivational factors play an important role in the initiation, direction and maintenance of the student's efforts in the self-regulation of their learning processes, academic motivation is given by a reciprocal relationship between motivation, learning and execution, motivation influences learning and execution. There are main components of academic motivation, these create expectations in the student about their abilities where they use it to promote their motivation through activation, defence or management of their self-esteem, making a series of attributions or generating positive expectations or negative among those found, there is also the value component where the learner assigns to the completion of the task and the affect component that has to do with emotions when facing the task.

There are other strategies related to self-esteem and self-concept, praising others that students use to protect their image against poor academic results, highlighting the academic results of their peers, and the strategy of defensive pessimism, in which the student activates negative experiences, which is used to find themselves in the situation of having to increase their level of effort to alleviate the said situation, self-handicapping (getting in the way), where obstacles to success are created to maintain self-worth and self-schemes positive, many of them are investigated in academic performance (Pendones et al., 2022).

There are other strategies such as self-affirmation, which consists of seeking a positive evaluation in a domain that allows you to maintain your positive image and your self-worth; students resort to 6 superficial learning rote techniques, seeking only achievement, with a lack of interest marked by the dedication of time and effort, the cancellation of others, where the student avoids comparison with others about their ability not to be harmed, minimizing the results of their peers, being able to see themselves as competent. Many strategies used by teachers could be mentioned to improve the academic performance of students at different

levels of education and age. Educators can use it to improve the environment, but each educator must know how to use it at the right time and with the subjects in need, therefore it depends on the educator being able to identify them at the moments of the educational process.

4 Conclusion

Motivational strategies can be used in teaching-learning processes at different levels of education to meet their plans and objectives where teachers can use them, and students know that they help improve the levels of knowledge acquired. The strategies studied can be used in different contexts, one of them is the use that companies give to motivational strategies to achieve the goals set, demonstrating that these can be used not only in the educational sector.

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References

Abreu, O., Rhea, S., Rhea, G., & Rosero, M. (2018). Object of Study of Didactics: Historical Epistemological and Critical Analysis of the Concept. *University education, 11*(6). doi:http://dx.doi.org/10.4067/S0718-50062018000600075

Barch, D. M., Albaugh, M. D., Avenevoli, S., Chang, L., Clark, D. B., Glantz, M. D., ... & Sher, K. J. (2018). Demographic, physical and mental health assessments in the adolescent brain and cognitive development study: Rationale and description. *Developmental cognitive neuroscience*, *32*, 55-66. https://doi.org/10.1016/j.dcn.2017.10.010

Bustingorry, S., & Jaramillo, S. (2008). Metacognition: A way to learn to learn. Pedagogical Studies XXXIV(1), 187-197.

Carriazo, C., Pérez, M., & Gaviria, K. (2020). Educational planning as a fundamental tool for quality education. *Utopia and Latin American Praxis, 25*(3), 87-95. doi:https://doi.org/10.5281/zenodo.3907048

Casey, B. J., Cannonier, T., Conley, M. I., Cohen, A. O., Barch, D. M., Heitzeg, M. M., ... & Dale, A. M. (2018). The adolescent brain cognitive development (ABCD) study: imaging acquisition across 21 sites. *Developmental cognitive neuroscience*, *32*, 43-54. https://doi.org/10.1016/j.dcn.2018.03.001

Delors, J. (1994). The four pillars of education", in Education contains a treasure. El Correo de la UNESCO, México.

Díaz, A., Hernández, F., & Gerardo, H. (1998). Teaching strategies for the promotion of learning. Mexico: McGrawHill.

Escudero, A., & Oseda, J. (2021). Influence of metacognitive strategies on academic achievement in the Personal Social area, V cycle, of an Educational Institution of Trujillo, 2020. *Ciencia Latina, 5*(4), 3914.

Evans, C. (2008). The effectiveness of m-learning in the form of podcast revision lectures in higher education. *Computers & education*, *50*(2), 491-498. https://doi.org/10.1016/j.compedu.2007.09.016

Gargallo, B., Pérez, C., Garcia, F., Giménez, JA, & Portillo, N. (2020). The competence of learning to learn at the University: Theoretical proposal. Education XX1, 23(1), 19-44.

Gazmararian, J. A., Williams, M. V., Peel, J., & Baker, D. W. (2003). Health literacy and knowledge of chronic disease. *Patient education and counseling*, *51*(3), 267-275. https://doi.org/10.1016/S0738-3991(02)00239-2

Gómez, E., Fernando, D., Aponte, G., & Betancourt, LA (2014). Methodology for bibliographic review and information management of scientific topics, through its structuring and systematization. *Dyna, 81*(14), p. 158-163.

Iguarán, A., Anaya, M., Paba, CE, & Obispo, K. (2016). Reliability and validity of the Observation Scale for Cognitive and Metacognitive Strategies (OSECM) for the evaluation of metacognition and attention in preschool children. *Psychopeople, 39*(45), 98-109. https://doi.org/10.17081/psico.19.35.1211

Jaramillo, LM, & Simbaña, VP (2014). Metacognition and its application in virtual tools from the teaching practice. *Philosophy of Education Collection*, (16), 299-313.

Klimenko, O. (2009). The teaching of cognitive and metacognitive strategies to support autonomous learning in children with sustained attention deficit. *Virtual Magazine Catholic University of the North*, (27), 1-19.

Malterud, K. (2001). The art and science of clinical knowledge: evidence beyond measures and numbers. *The Lancet*, *358*(9279), 397-400. https://doi.org/10.1016/S0140-6736(01)05548-9

Menendez, M. (2020). Psychology-Online. Retrieved from https://www.psicologia-online.com/que-es-la-teoria-de-la-mente-4157.html

Mesa, J. (2018). https://group-pya.com/. Retrieved from https://grupo-pya.com/7-estrategias-motivacionales-practicar-la-empresa/

Montes de Oca, N., & Machado, E. (2011). Teaching strategies and teaching-learning methods in Higher Education. *Medical Humanities, 11*(3).

Morales, M. (2018). IT & Coaching. Retrieved from https://mariamorales.net/2018/07/11/las-cuatro-etapas-del-aprendizaje/

Mustafa, A. R., Ramadany, S., Sanusi, Y., Made, S., Stang, S., & Syarif, S. (2020). Learning media applications for toddler midwifery care about android-based fine motor development in improving midwifery students skills. *International Journal of Health & Medical Sciences*, *3*(1), 130-135. https://doi.org/10.31295/ijhms.v3n1.290

Nieto, N., Garcia, S., & Angel, PM (2021). Relations of motivation with metacognition and performance in cognitive performance in primary school students. *Annals of Psychology, 37*(1). doi:https://dx.doi.org/10.6018/analesps.37.1.383941

Palacios, MD, Torío, S., & Murga, M. Á. (2022). Positive parenting and learning self-regulation in adolescents. OTHERNESS. *Journal of Education, 17*(2), 291-303. https://doi.org/10.17163/alt.v17n2.2022.09

Pedaste, M., Mäeots, M., Siiman, L. A., De Jong, T., Van Riesen, S. A., Kamp, E. T., ... & Tsourlidaki, E. (2015). Phases of inquiry-based learning: Definitions and the inquiry cycle. *Educational research review*, *14*, 47-61. https://doi.org/10.1016/j.edurev.2015.02.003

Pendones, JA, Flores, Y., Espino, G., & Durán, FA (2022). Self-concept, self-esteem, motivation, and its influence on academic performance. Case: students of the Public Accountant career. RIDE, 12(23).

Quena, R. (2020). motivational strategy to raise academic performance in geography in a high school in Bolivia. *Horizons Journal of Research in Educational Sciences, 4*(16), 415-431.

Rodríguez, D., Fuentes, T., Mero, T., Cárdenas, GM, & Badillo, FR (2022). Metacognition and motivational strategies, self-learning: Dynamics of learning to learn. *International Journal of Health Sciences, 6*(s4), 549–560.

Sancho, J. (2022). Educacreate. Obtained from Teaching techniques to improve student motivation: https://educrea.cl/tecnicas-de-ensenanza-para-mejorar-la-motivacion-de-los-estudiantes/

Seufert, T. (2003). Supporting coherence formation in learning from multiple representations. *Learning and instruction*, *13*(2), 227-237. https://doi.org/10.1016/S0959-4752(02)00022-1

Suryasa, I. W., Rodríguez-Gámez, M., & Koldoris, T. (2022). Post-pandemic health and its sustainability: Educational situation. *International Journal of Health Sciences*, *6*(1), i-v. https://doi.org/10.53730/ijhs.v6n1.5949

Tapia, JR (2021). Metacognitive strategies with reading comprehension in high school students. Conrad, 17(79).

Taylor, I. M., Ntoumanis, N., & Smith, B. (2009). The social context as a determinant of teacher motivational strategies in physical education. *Psychology of sport and exercise*, *10*(2), 235-243. https://doi.org/10.1016/j.psychsport.2008.09.002

Torrres, A. (2016). David Ausubel's Meaningful Learning Theory.

Valenzuela, J., Muñoz, C., & Montoya, A. (2018). Effective motivational strategies in teachers in training. *Education and Research*, 44. https://doi.org/10.1590/S1678-4634201844179652

Vera, A., Poblete, S., & Días, C. (2019). Perception of strategies and learning styles in first year university students. Cuban Journal of Higher Education, 33(1).

Wu, H. K., Lee, S. W. Y., Chang, H. Y., & Liang, J. C. (2013). Current status, opportunities and challenges of augmented reality in education. *Computers & education*, *62*, 41-49. https://doi.org/10.1016/j.compedu.2012.10.024

Zepeda, C. D., Martin, R. S., & Butler, A. C. (2020). Motivational strategies to engage learners in desirable difficulties. *Journal of Applied Research in Memory and Cognition*, *9*(4), 468-474. https://doi.org/10.1016/j.jarmac.2020.08.007

Biography of Authors

Dilka,
Student of the career de Psychology of the Universidad de Oiente, Santiago de Cuba, Cuba
Email: talimar81@gmail.com

Thalia,
Student of the career de Medicine of the Universidad Técnica de Manabí, Portoviejo, Ecuador
Email: tfuentes6243@utm.edu.ec

Rachel,
Student of the Chamber of Medicine, faculty 2 of Medicine de Santiago de Cuba, Cuba
Email: rachelnaranjo89@gmail.com

Carlos,
Student of the career of Medicine, of the Faculty 2 of Medicine de Santiago de Cuba, Cuba
Email carlosanbca@gmail.com

Britany Mirella,
Student of medicina of la Universidad de Guayaquil, Ecuador.