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The Recreational Activities and Their Influence on Learning Mathematics Based Students

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Abstract--*The intention of this article is to provide a global perspective on the use of recreational resources and technological didactics for the teaching of mathematics at the level of higher education, through an analysis of specialized documentation. The benefit of this research work stems from the need to improve the teaching of mathematics by developing the interest of students through a kinesthetic playful approach, incorporating enjoyable, pleasant and didactic activities, helping students discover in an experiential way, new ways of learning and achieving the proposed objectives. The analysis and review of the documentation related to this topic are based on works concerning the incorporation of games for the teaching of mathematics. To obtain the results an instrument was applied where teachers and students intervene, highlighting that the teaching of mathematics for students is boring, tedious, complicated because teachers do not apply active methodologies that allow them to assimilate the contents and can achieve significant learning by improving your academic mathematical performance.*

Keywords--*active methodologies, mathematical performance, playful learning, technological teaching.*

I. INTRODUCTION

Significant learning can be a motivating experience if it is directed in constructive and recreational activities. The implementation of games and activities of this type in teaching processes implies a strategy that allows students to acquire skills in a fun and attractive way for students (Muñiz& Alonso, 2014). Every educational process involves the application of a series of methodologies and activities that help students within the educational processes develop skills widely, which in theory manage to respond to the needs of a demanding society at a professional level, but the educational reality is different, although in the last decade the Ecuadorian educational system has developed new educational policies that are applied through the so-called Ten-Year Plan (Minedu, 2016; Delgado *et al.*, 2019; Macías*et al.*, 2019), which has focused on gradually improving the development of learning skills by educational sub-levels. The educational models that have been applied worldwide have proven not to be as effective except for those applied in Finland and Japan (Ramos, 2015), whose educational standards are extremely high causing expectations at the level of the educational community, of all countries being referents to implement changes in other educational systems.

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In the educational models of both Finland and Japan, several cultural, social paradigms have been changed, in both models, one of the essential elements is the professional preparation of the teacher not only in content but in the formation of values and social responsibility as its functions that society demands. The role of the teacher is leading as much as that of the students, their models are open, there are few standardized tests that are based on education designed in the arts, culture and sports, where inverted, inclusive classes prevail (Duarte, 2003). In this sense, individualized learning is shown, redirected to the interests of children and adolescents, as is the case of Masashi Kishimoto famousmangaka, creator of the popular series narutoeducation products under the Japanese educational model, which are currently a benchmark in relation to the professional quality of students prepared under an open educational model (Morales, 2013; Suryasa*et al.,* 2018; Farfán*et al.,* 2019).

In Finland the educational model has been improving, it involves learning based on the development of projects, which includes digital teaching; In addition to a proposal to promote media literacy in children, a project for the implementation of news channels for children led by children has been launched (Castro & Morales, 2015). To all this, teaching is added through playful games in different learning areas, managing to optimize results in the different subjects or components of a curriculum, in this way it strengthens, the significant learning of students, from the first teaching levels The key to both educational models is the preparation and professionalization of teachers, in addition to the commitment of students, parents and educational authorities that rely on and generate confidence in the teaching work, which stands out in this educational model.

In this context, the policy for the improvement of teaching staff should be emulated from the Finnish model so that classes in different subjects are explained in a fun way (Torres, 2016; Sanchez & Garcia, 2019; Tumbaco*et al.,* 2019), applying dynamic processes with the formula of constantly innovating. The preparation corresponds to making a real change in the paradigm that is being applied at the level of education in Ecuador where you bet on a significant and lasting generational change.The pedagogical utility of games, as a didactic resource, allows a wide variety of options to be built for children to assimilate a certain reality, which helps to understand a process, to master it and to know it especially in subjects such as mathematics. The change that is proposed to be achieved through the use of this resource in Ecuadorian education is to obtain greater interest, at the national level, to be more competitive with the pedagogical models implemented in Latin America.

Among the relevant reasons to consider the use of recreational activities in the teaching process in the classes, it is indicated that the activities become more attractive and at the same time are more easily accepted by the students, in addition to being innovative, a spirit develops competitive, stimulating the development at the social level of the student (Castro & Morales, 2015). The game stimulates significantly at the symbolic and iconic level, at the same time it implies a heuristic methodology that requires an individual and collective effort, since it improves the memory and the level of attention, especially in the classroom or in the subject of mathematics, becoming a motivating resource, aimed at students with learning difficulties and making them more competent in complex research processes.

The school has become the stage where important changes and transformations are developed, raising new features, innovation strategies and collaborative work (Duarte, 2003; Latupeirissa, 2019; Suwija*et al.,* 2019)

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expanding the sense of social responsibility with the community and the environment. For (Posligua&Chenche, 2017), adequately developing a critical, reflexive and logical-mathematical thinking for the higher basic student will achieve a positive and attitudinal change for the acquisition of new knowledge and that this, in turn, generates significant learning. The development of creative thinking in students will give teachers the possibility to improve, train and improve the proper use of strategies that contribute to the progress in the educational process. This project is relevant for parents, educators and people concerned with improving the quality of education, for the reason that the use of strategies contributes to the progress of education and thus to the development of society in any field, as stated (Gomez &Molano, 2015).

A playful activity is always attractive and motivating, attracts the attention of the group of student students towards a sustainable and meaningful learning, considering that during the playful activity the student acquires an awareness and balance between his environment and his body, in addition, the game adequately stimulates the motor coordination, sensory perception, significantly improving their abilities (Morales, 2013; Amen *et al.*, 2019; Estevez *et al.*, 2018). Furthermore, as a cooperative pedagogical and dynamic modality based on the game, it achieves the common objectives, as indicated (Teran, 2009), in turn, strengthens values of fellowship and solidarity. In the case of mathematics, they enter into processes of ambiance, strategic planning, execution and feedback (Castro & Morales, 2015), favoring meaningful learning, when designing participatory learning environments, within a physical environment with a positive psychological impact on everything For the teaching-learning process of a component such as mathematics and, above all, at the level of higher education, where there have been gaps in understanding the process of mathematical logic, which is applied in solving problems of equations, in equations, strengthening among others, this knowledge must be valued in sub-levels of previous schooling, which raises the need to improve the teaching of mathematics through the implementation of environments based on the application of recreational and motivational actions that are collaborative and participatory.

II. MATERIALS AND METHODS

Research is shown from the perspective of the mixed research method (Quantitative/Qualitative). The quantitative methodology allows directing the collection of information in an appropriate and measurable way, while the qualitative techniques for obtaining the information require support from the mathematics, to qualify the results obtained, this technique is used to collect data on behaviors, knowledge, requirements and characteristics of the problem raised, especially with regard to the pedagogical practice. For this work, action research was selected, which offers fundamental tools applied to the population to which the research is directed so that the results are more reliable. The qualitative analysis was applied in the interpretation of the results, directed to the teachers of the area of mathematics and the students of the superior basic section of the Fiscal Education Unit “Uruguay”. The techniques that were applied in the development of the work were: participatory observation, to know the reality of the investigated situation; The interview, in order to collect data and information through the direct and personalized relationship, between the interviewees and the interviewers, a review and analysis of documentary texts related to the problem was made to know points of view and opinions and reinforce the conclusions, as well as material

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photographic and video for a better knowledge of the application of playful games in the teaching of mathematics. For the data collection, triangulation and comparison of relevant sources of information, observations and reports were used, the analysis of the results was obtained through the planned diagnosis, where the data provided by the surveys carried out were evaluated(Farfán*et al.,* 2019; Giler*et al.*, 2019).

III. EDUCATIONAL MODEL

The national educational model is of paramount importance for the development of education in a country and determining it is a necessity. The Ministry of Education of Ecuador (Minedu, 2016), aware of this commitment to Ecuadorian society since 2010, proposed to develop it and reaffirmed its interest in 2012, focusing this mission on the changes of the curriculum that are necessary to achieve the expected objectives (Widana*et al*., 2018). The educational model is the instrument that plays a series of actions and activities that together must be carried out systematically and with quality by the members of the educational communities, such as authorities of the institutions, teachers, students and parents that benefit in the best way to the students, girls, boys and adolescents that are prepared in the educational institutions**.**

The so-called All-Life Plan applied by the Ecuadorian government is a proposal for the emblematic intervention of public policy, with the aim of transforming the structural situations of inequality and poverty in Ecuador and prospering towards a more solidary, fair and equitable society that dignifies to people as subjects of rights throughout their lives(Todaunavida.gob.ec, 2017).For (Alcedo& Chacon, 2011) the educational model has traditionally been conceived as a horizon that guides the work of the teacher collecting different theories and pedagogical practices that have given good results at a certain time and place and they are taken as an example to develop new models, as in the case of Japan, Finland, the United Kingdom and Brussels, which helps guide the process of direction towards the state through the organisms that compose it and wish to implement these educational systems in Ecuador.

In the country in recent decades, some educational models have been put into practice and attempts have been made to improve educational processes, making curricular reforms, teacher updates, curricular improvements, designing modules, redesigning school texts, until now the so-called 10-year plan, which was reformed in 2015 and socialized in 2016 (Minedu, 2016). The change that is needed in education is in pedagogy. You can have the best physical and technological infrastructure, make the biggest investment, but if you do not improve the teaching-learning relationships in the classroom, between teachers and students, everything else is ornamental (Torres, 2016). The area ofmathematics is one of the subjects where a high percentage of apathy, rejection, and lack of interest on the part of students is reported, so it is necessary to improve the way of application of learning processes in this subject, of mathematics since for students it becomes boring, if strategies are not applied where mathematical logic skills are acquired through the application of recreational games (Morales, 2013). It is of interest to consider the needs of the students at national, circuit and zonal level regarding the learning of the subject with teachers specialized in the implementation of improvement projects involving replanning the activities of the classes and the methodology, incorporating playful games and cooperative work considering, the number of students per classroom

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and teacher-student reciprocity with an appropriate psycho-emotional response (Muñiz& Alonso, 2014; Reina, 2019; Suryasa, 2019).

IV. PLAYFUL ACTIVITY AND RECREATIONAL GAMES IN THE SUSTAINABLE LEARNING MATHEMATICS

At the present time, the educational system deprives the need to improve the processes applied in the teaching of mathematics learning especially at the level of the basic yearscorresponding to eighth, ninth and tenth. Basic Education has been influenced, among other aspects, by the application of a constructivist approach being a reference in the Ecuadorian educational

model, as a way of obtaining significant learning in the area of mathematics; however, the results of these processes are increasingly discouraging, students have poor academic performance in this area of learning, no significant and sustainable true learning is acquired that is visible in the higher levels of learning, as well as in the classroom Students demonstrate a great apathy for learning mathematics (Teran, 2009), in relation to these data, Finland became a world leader in education as a result of obtaining the best results for the International Program for the Evaluation of Students (PISA), in the year 2000 (Hernandez, 2015).

At the Latin American level, it is of utmost concern, as stated by (Unesco, 2013), in relation to the learning that students acquire during elementary school and at the secondary level, especially in regard to reading writing and mathematics, in some cases, the difficulties presented are causes of school drop-out and definitive abandonment of studies, it is necessary to develop proposals that allow improving the sustainable learning of mathematics made a proposal for change in traditional and conventional educational systems, in Finland the best scores were obtained, in the three areas that this test evaluates: reading comprehension, mathematics and natural sciences (Torres, 2016),is currently an example for Latin America, becoming exporters of projects and programs aimed at Latin countries including Ecuador, what which is advantageous at a competitive level with other countries in the region.

In relation to educational quality to achieve a better understanding and learning of mathematics, the most important factor must be the preparation and training of teachers, especially in the use of recreational activities in complex and accurate learning processes such as mathematics, especially at the level of the basic superior in this case in Ecuador, unlike educational models such as Japanese or Finnish, you must wait a few years, being necessary to start with the paradigm shift from the classroom and not expect a standardized proposal from a specific government on duty (Quintanilla, 2016).

V. MEANINGFUL LEARNING MATHEMATICS USING GAMES AND PLAYFUL DYNAMICS

Achieving true meaningful learning in the area of mathematics implies a series of changes, which lead to the revision of the national curriculum, the methodologies that are applied in the teaching of the basic conceptualization of mathematics, geometry, statistics and the pedagogical references necessary for what is taught in this field is transformed by developing mathematical logic skills in sustainable and lasting learning for each of the

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later stages and levels of learning, therefore it is up to the teacher to start to make these changes in the teaching of your subject.

To verify the reality of the problem posed in the significant learning of mathematics, the survey was applied to teachers and students of the Fiscal Education Unit "Uruguay", this educational center with 74 years of experience in the Portovejense community is considered an institution

Emblematic by the population of this city, this educational unit was originally founded under the name of Uruguay Technical College, during the government of Doctor José María Velasco Ibarra on June 19, 1945, it has 2200 students distributed at all educational levels, corresponding 12% of the school population of the Portoviejo canton, has 390 students at the level of the upper basic in 4 parallels of eighth, 4 of ninth and 5 of tenth year distributed in classrooms with a capacity of 30 students and 15 teachers who work in the Math area During its 74 years of experience this Educational Unit has trained professionals of significant contribution to the economic and productive development of the province and the country from commercial engineers, auditors, economists, standing out as managers of the most important banks and working in the financial area of entities public and of the most prestigious private companies in Ecuador.

VI. PLANNING OF RECREATIONAL ACTIVITIES

Table 1. Application of teacher's recreational activities

Option	Frequency	Percentage
If applicable	2	13.33
Not	13	86.67
Total	15	100.00

To learn how planning behaves and if the teacher applies recreational activities in their classes, surveys were applied to 15 teachers in the area of mathematics. As can be seen in Table 1, 87% do not carry out activities that help students to motivate themselves in the teaching of mathematics in addition to games to start, evaluate or feedback the teaching-learning process of the subject, which until At the moment it has generated that the class is very monotonous with low academic results despite what the Ministry of Education indicates (Minedu, 2016), in which it is stated that in the development of the classes it promotes the active participation of the students with the implementation of a curriculum raised in 2010 and 2011, updated in 2016 but not yet able to obtain the expected results, the curriculum designed to encourage the development of a thoughtful and critical thinking with an open mind to analyze, interpret and solve difficulties daily life, being necessary for the teacher to prioritize their planning based on the real needs of the students and the twelve In order to improve learning processes to develop true significant changes that are lasting. When the teacher does not apply during his class recreational activities do not improve learning, which makes it difficult to understand the totality of the knowledge that he intends to teach his class.

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The lack of motivation to make learning more dynamic makes it very difficult to prepare the course in the fulfillment of the exercises proposed by teachers at the time of developing their chairs. The recreational activity will be equated with the term ludo that implies a specific, voluntary and involuntary action that causes joy and motivates fun (Castro & Morales, 2015), the different recreational activities are spontaneously present in all areas of our activities Daily allows the assertive incorporation of new knowledge.

VII. PLAYFUL GAMES TO ACQUIRE MEANINGFUL LEARNING

Table 2. Student participation in math class

Option	Frequency	Percentage
Always	52	13.33
Never	260	66.67
Sometimes	78	20.00
Total	390	100.00

The data observed in Table 2, indicate that the students surveyed in 67% do not participate in the math class because Teachers do not use games and play dynamics for the participation in classes of their students, they only use traditional activities such as participation on the board with exercises that are sometimes long and difficult to understand, being necessary to apply new strategies when developing and planning mathematics classes, significantly improving the process of learning mathematics and establishing the use of playful games that positively stimulate skills, their development during daily practice greatly improves student performance, in addition to the educational environment that the teacher provides generating the growth of individual and group competition (Arias*et al.*,2014).

It is necessary to indicate that the level of complexity of mathematics must be overcome through the application of playful games for the acquisition of sustainable and enduring learning so that the student achieves the necessary skills in the understanding of mathematics, especially at the level of The basic superior. When developing recreational activities, it is entertaining and during the development of the interaction in mathematics two components can be considered: one is the entertainment factor and the educational complement, obtaining positive results for the learning of subjects, when playing, the student enters a stage of fun, of learning since it is motivated for the classes managing to acquire significant knowledge (Leones, 2015).

Table 3. How students consider math class

Option	Frequency	Percentage
Bored	317	81.28
Funny	7	1.79
Easy	12	3.08
Hard	54	13.85
Total	390	100.00

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As seen in table 3, 81% of students consider math class boring. In the teaching practice so that a truly sustainable learning is generated and at the same time it is significant to achieve a comprehensive training in mathematics, it is necessary to encourage the student through playful strategies, considering the constant training and the willingness of the teacher to use new ones didactic resources such as playful mathematical games (Pilco, 2013).The teacher applying improvements and new learning techniques in the subject of mathematics helps improve the process of knowledge of the subject according to the students surveyed suggest that the improvement of their learning depends on whether the teacher will apply new techniques in the process where playful games are included in their daily practice in this way they would feel more motivated and the class will be conducted in a more dynamic way and not as technical or structured, which is considered adequate from the point of view of the flexibility presented by the curriculum e It has been applied in Ecuador since a few years ago (Minedu, 2016).

This characteristic that the curriculum has gives you guidelines so that the teacher of mathematics of the upper basic (from eighth to tenth), generates the necessary changes and that he considers pertinent to improve the teaching and when interacting with the group of students, helps during the Evaluation stage, the use of recreational games is a resource that allows the feedback of a certain content that is difficult for students to understand by developing a more dynamic and experiential practice, creating a more motivating environment while improving academic performance in this area of knowledge, especially at the level of the upper basic, avoiding learning problems at the high school level (Gonzalez*et al.*,2014).

VIII. TYPES OF PLAYFUL GAMES THAT IMPROVE THE LEARNING MATHEMATICS

There are different types of playful games that support the process of teaching mathematics, Table 4 shows the types of playful games that teachers in the area of mathematics know by standing out with 47% The mathematical bingo.

Table 4. Types of playful games that mathematics teachers know

Option	Frequency	Percentage
Chess	2	13.33
Tangram	3	20.00
Checkers	3	20.00
Playing cards	0	0.00
Bingo	7	46.67
others	0	0.00
Total	15	100, 00

Chess allows improving motivation, imagination, self-esteem, planning, calculation capacity, forecasting consequences as well as establishing creativity, patience, discipline and the ability to pay attention to the appropriate strategy for the resolution of exercises and arithmetic problems (Villar, 2010).Mathematical bingo is a strategy that helps to obtain the result of an exercise proposed in the class through the use of numbered balls whose value allows

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them to solve a certain problem (Arias*et al.*,2014), allows the understanding of a concept and help others.The tangram is a very versatile tool in the study of mathematics that allows knowing the geometric figures, the sizes of each one, allows to calculate the area and the perimeter of the figures obtained, whether they are straight or irregular polygons during the construction of the tangram. Understanding the concepts of geometry and the use of straight lines, parallelism, perpendicularity and visual ability developed some skill in fine motor and handle definitions of the main geometric figures (Marquez, 2010).

These help in the best way, to explain the exercises to the whole class, to complete a certain theorem, to stop using other materials for the math class using the logic and understanding of mathematical exercises (Espeso, 2016). All mathematical play games have a common characteristic, they are applied to obtain a better result of the understanding of mathematics (Gomez &Molano, 2015), allowing the student to perform a wide variety of mathematical exercises and arithmetic, in the case of bingo, questions are asked through the use of a lottery, each numerical series is related to an exercise or problem established to solve.The path of learning about everything that corresponds to mathematics is a complementary result of the procedure for understanding the contents and the development of mathematical logic for the resolution of exercises or variables such as playing chess or a game of cards. Play with correct probabilities and errors, the student tries to capture what the teacher intends to teach if the teacher applies the various recreational activities, games, dynamics among others, he will be able to obtain better learning results (Villar, 2010).

IX. CONCLUSION

The study made it possible to detect that teachers in the area of mathematics in the Portoviejo canton do not apply in their daily schedules activities and recreational games that allow the knowledge that students possess to be activated in the best way, mathematics classes are considered boring and Tedious not getting the proper attention so that the teacher teaches his chair and can obtain better results within the educational process. The results obtained show that there is a great expectation for learning mathematics because in most cases they consider it a relevant subject for learning, although technological tools are applied to improve their learning, better results are not obtained by As for the student, the development of the procedures is complicated. Math teachers have a wide variety of playful games and mental ability to activate and develop procedural skills. of the results obtained, the teacher's predisposition to improve the acquisition of significant learning that is lasting and sustainable is mentioned. For this reason, it is of utmost importance to connect the activities of the math teacher to the use of playful games to awaken the interest of students during the development of the classes in this way the rate of low academic performance, dropout and loss of interest in the study of mathematics will be significantly reduced, especially at the level of the basic.

REFERENCES

1. Alcedo, Y., &Chacón, C. (2011). The playful approach as a methodological strategy to promote English learning in Primary School children. *TO KNOW. Multidisciplinary Magazine of the Research Council of the Universidad de Oriente , 23* (1), 69-76.

DOI: 10.37200/IJPR/V24I2/PR200371
Received: 17 Dec 2019 | Revised: 03 Jan 2020 | Accepted: 15 Jan 2020

2. Amen, J. S. L., Tuarez, M. E. S., & Pisco, J. M. P. (2019). The presence of anemia of university leveling students from dysfunctional families. *International Journal of Health Sciences*, *3*(1), 9-16. https://doi.org/10.29332/ijhs.v3n1.253
3. Arias, C., Buitrago, M., & Camacho, Y. (2014). Influencia del Juegocomopilar de la educación. RevistaIberoamericana de Psicología: *Ciencia y tecnología*, 121 (4) 39-48.
4. Castro, M., & Morales, M. (2015). Los ambientes de aula que promueven el aprendizaje. *Educare*, 19(1409), 45,49.
5. Delgado, J. L. D., Bone, Y. I. E. B., Lascano, M. A. G. L., &España, S. G. G. E. (2019). Dyslexia as learning problem and its pedagogical intervention. *International Journal of Health Sciences*, *3*(3), 1-7. https://doi.org/10.29332/ijhs.v3n3.333
6. Duarte, D. (2003). Learning environments: a conceptual approach. *Pedagogical studies (Valdivia)* , (29), 97-113.
7. Espeso, P. (2016). Uso de bingo en la enseñanza de matemáticas.
8. Estevez, A. G., Roche, J. R. F., Espinosa, A. H. R., & Rodríguez, D. L. (2018). Social skills training program to prevent alcohol consumption in university students. *International Journal of Health Sciences*, *2*(3), 43-54. https://doi.org/10.29332/ijhs.v2n3.216
9. Farfán, R. F. M., Zambrano, T. Y. M., Sosa, V. M. D., & Zambrano, V. (2019). Design of eco-friendly refrigeration system. *International Journal of Physical Sciences and Engineering*, *3*(2), 1-11. https://doi.org/10.29332/ijpse.v3n2.285
10. Farfán, R. F. M., Zambrano, T. Y. M., Valencia, V. P. Z., & Sosa, V. M. D. (2019). Design and construction of a cold production simulator system: chiller. *International Journal of Physical Sciences and Engineering*, *3*(3), 31-40. https://doi.org/10.29332/ijpse.v3n3.367
11. Giler, R. D. G., Zambrano, T. Y. M., Anzules, F. E. V., & Burgos, V. D. P. Z. (2019). Sensory playful corners on stimulation of children from one to three years. *International Journal of Social Sciences and Humanities*, *3*(2), 217-223. https://doi.org/10.29332/ijssh.v3n2.317
12. Gómez, T., Molano, O., & Rodríguez, S. (2015). The recreational activity as a pedagogical strategy to strengthen the learning of children of the Infant Educational Institution Child Jesus of Prague. *Universidad del Tolima Institute of distance education degree in Ibagué – Tolima Children's Pedagogy* .
13. González Peralta, A. G., Molina Zavaleta, J. G., & Sánchez Aguilar, M. (2014). La matemáticanuncadeja de ser un juego: investigacionessobre los efectos del uso de juegosen la enseñanza de las matemáticas. *Educaciónmatemática*, *26*(3), 109-133.
14. Hernández, JS, Tobón, S., & Vázquez, JM (2015). Study of socioformative leadership through conceptual mapping. *LAUGH Iberoamerican Journal of Educational Evaluation* .
15. Latupeirissa, D. S. (2019). Naturalness of verbs in Kupang Malay language. *Linguistics and Culture Review*, *3*(1), 60-69. https://doi.org/10.37028/lingcure.v3n1.12
16. Leones, MT (2015). Juegoslúdicosen el aprendizajesignificativo. Barcelona, España: Horizonte.
17. Macías, M. E. L., & Martinez, M. E. M. (2019). Problems of learning and intervention. *International Journal of Health Sciences*, *3*(2), 28-37. https://doi.org/10.29332/ijhs.v3n2.328
18. Márquez, GG (2010). *Bad time* . Spanish vintage.
19. Minedu, M. (2016). National Curriculum of Basic Education. *Peru: MINEDU* .
20. Morales, L. (2013). El impulsolúdico: esencia y estructura del juego. Revista de estudiosfilológicos (25), 27.
21. Muñiz-Rodríguez, L., Alonso, P., & Rodríguez-Muñiz, LJ (2014). The use of games as a teaching resource for teaching and learning Mathematics: study of an innovative experience. *Iberoamerican Journal of Mathematics Education* , 19-33.
22. Pilco, N. (2013). Uso de recursosdidácticosen la enseñanza de las matemáticas. Riobamba, Ecuador.
23. Posligua, J., &Chenche, W. (2017). Incidencia de las actividadeslúdicasen el desarrollo del pensamientocreativo. Dominio de las ciencias, 1020-1052.
24. Quintanilla, N. (2016). *Playful strategies aimed at teaching mathematics at the primary education level* (Doctoral dissertation, Master's thesis. Bárbula, Carabobo, Venezuela: Carabobo University.
25. Ramos, J. (2015). Modeloseducativos. Chiapas, México: Unach.
26. Reina, A. L. V. (2019). The brain and learning on initial students. *International Journal of Health Sciences*, *3*(2), 38-43. https://doi.org/10.29332/ijhs.v3n2.329
27. Sanchez, S. M. M., & Garcia, E. K. M. (2019). Human resource development in Faculty of Physical and Chemical Mathematical Sciences. *International Journal of Social Sciences and Humanities*, *3*(1), 1-6. https://doi.org/10.29332/ijssh.v3n1.242

DOI: 10.37200/IJPR/V24I2/PR200371
Received: 17 Dec 2019 | Revised: 03 Jan 2020 | Accepted: 15 Jan 2020

28. Suryasa, I. W., Prayoga, I. G. P. A., &Werdistira, I. W. A. (2018). Attitudes toward the use of internet for students. *International Journal of Physical Sciences and Engineering*, *2*(2), 32-38. https://doi.org/10.29332/ijpse.v2n2.141
29. Suryasa, W. (2019). Historical Religion Dynamics: Phenomenon in Bali Island. *Journal of Advanced Research in Dynamical and Control Systems*, *11*(6), 1679-1685.
30. Suwija, N., Suarta, M., Suparsa, N., Alit Geria, A.A.G., Suryasa, W. (2019). Balinese speech system towards speaker social behavior. *Humanities & Social Sciences Reviews*, *7*(5), 32-40. https://doi.org/10.18510/hssr.2019.754
31. Terán de Serrentino, M., &Pachano Rivera, L. (2009). Cooperative work in the search for meaningful learning in math class of basic education. *Educere* , *13* (44), 159-167.
32. Todaunavida.gob.ec. (2017). www.todaunavida.gob.ec. Recuperado el 25 de diciembre de 2019, de plan-toda-una-vida.
33. Torres, R.M. (2016). Recuperado el 27 de noviembre de 2019, de En el Ecuador El modeloeducativo no ha cambiado.
34. Tumbaco, D. E. S., Albán, W. E. M., Ruperti, M. J. B., & Palacios, D. E. P. (2019). Methodological strategies used in the learning of mathematics in the 8th year of EGB. *International Journal of Social Sciences and Humanities*, *3*(3), 90-98. https://doi.org/10.29332/ijssh.v3n3.362
35. Unesco. (2013). SituaciónEducativa de América Latina y el Caribe: Hacia la educación de calidad para todos al 2015. Santiago, Chile: Ediciones del Imbunche.
36. Villar, R. (2010). Las matemáticas y el ajedrez. La Rioja, España: Uniroja.
37. Widana, I. W., Parwata, I. M. Y., Parmithi, N. N., Jayantika, I. G. A. T., Sukendra, K., &Sumandya, I. W. (2018). Higher order thinking skills assessment towards critical thinking on mathematics lesson. *International Journal of Social Sciences and Humanities*, *2*(1), 24-32. https://doi.org/10.29332/ijssh.v2n1.74

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