

Play environments to enhance reading comprehension in children with school skills disorders

Ambientes lúdicos para potencializar la comprensión lectora en niños con trastornos de habilidades escolares

Ambientes lúdicos para melhorar a compreensão de leitura em crianças com distúrbios de competências escolares

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Abstract: This research aimed to create playful environments as a didactic strategy to improve reading comprehension processes in students with reading disorders in third grade of the IE Marco Fidel Suarez, San Juan de Anganoy. The methodology used will be under the qualitative approach since it allows an approach to the social situation to explore, describe and understand it and from a socio-critical paradigm to transform a reality of low levels of reading comprehension and disinterest in reading, with alternatives to improve this problem through playful environments and using action

research. For this purpose, the reading comprehension processes of the students were diagnosed, a playful environment was designed to favor this process and this strategy and its impact were included to potentiate the reading comprehension processes of the 6 children with school skills disorders in third grade. Likewise, reading comprehension improved notably with the inclusion of playful environments as an alternative didactic strategy where the following levels were addressed: literal, inferential and critical and also favored the social and affective development of the children, since the qualitative assessment was between the upper and high levels, much better if we compare it with the initial test that was in the basic and low levels.

Key words: Playful environments, didactic strategies, reading comprehension and learning.

Resumen: La presente investigación pretendió crear ambientes lúdicos como una estrategia didáctica para mejorar los procesos de comprensión lectora en los estudiantes con trastornos de habilidades escolares de grado tercero de la IE Marco Fidel Suarez sede san Juan de Anganoy. La metodología empleada será bajo el enfoque cualitativo ya que este permite realizar una aproximación a la situación social para explorarla, describirla y comprenderla y desde un paradigma socio crítico transformar una realidad de niveles bajos de comprensión lectora y desinterés por la lectura, con alternativas para mejorar esta problemática a través de los ambientes lúdicos y empleando la investigación acción. Para ello se diagnosticaron los procesos comprensión lectora llevados en los estudiantes, se diseñó un ambiente lúdico dirigido a favorecer este proceso y se incluyó esta estrategia y su impacto para potencializar los procesos de comprensión lectora los 6 niños con trastornos de habilidades escolares de grado tercero. Así mismo se logró que la

comprensión lectora mejore notablemente a partir de la inclusión de los ambientes lúdicos como estrategia didáctica alternativa en donde se abordaron los niveles: literal, inferencial y crítico y además se favoreció el desarrollo social y afectivo de los niños, pues la valoración cualitativa estuvo entre el nivel superior y alto, mucho mejor si lo comparamos con el test inicial que estuvo en los niveles básico y bajo.

Palabras clave: Ambientes lúdicos, las estrategias didácticas, la comprensión

Resumo: Esta investigação teve como objectivo criar ambientes lúdicos como estratégia didáctica para melhorar os processos de compreensão de leitura em alunos com distúrbios de competências escolares na terceira classe do IE Marco Fidel Suarez, San Juan de Anganoy. A metodologia utilizada será sob a abordagem qualitativa, pois permite uma abordagem da situação social para a explorar, descrever e compreender e a partir de um paradigma sócio-crítico para transformar uma realidade de baixos níveis de compreensão de leitura e desinteresse pela leitura, com alternativas para melhorar este problema através de ambientes lúdicos e utilizando a investigação de acção. Para este fim, foram diagnosticados os processos de compreensão de leitura dos alunos, foi concebido um ambiente lúdico para favorecer este processo e esta estratégia e o seu impacto foram incluídos para melhorar os processos de compreensão de leitura das 6 crianças com distúrbios de competências escolares na terceira classe. Do mesmo modo, a compreensão da leitura melhorou notavelmente com a inclusão de ambientes lúdicos como uma estratégia didáctica alternativa onde foram abordados os seguintes níveis: literal, inferencial e crítico, e o desenvolvimento social e afectivo das crianças também foi favorecido, uma vez que a avaliação qualitativa se situava entre

os níveis mais altos e mais altos, muito melhor se a compararmos com o teste inicial que se encontrava nos níveis básico e baixo.

Palavras-chave: Ambientes lúdicos, estratégias didáticas, compreensão, desenvolvimento social e afectivo.

INTRODUCTION

According to Ahmed (2011), reading is a very important and fundamental process within the school environment, which is why it is necessary for teachers to seek ways for their students to generate interest in it on a daily basis. In this sense, it is essential to highlight that each student learns to read in a different way and at different times, making the teacher's job to be active in providing strategies that facilitate this process and lead to its appropriation.

In the IE Marco Fidel Suarez, San Juan de Anganoy, there has been evidence of disinterest in reading and low levels of reading comprehension in the latest tests and daily teacher activities, which reflects that students need to improve this process and playful environments are born as a striking alternative to introduce children to the magical world of reading and its understanding at the levels: literal, inferential and critical, making this a dynamic process in which they can explore their skills while having fun, share and socialize with their peers and teachers.

Thus, the need arises to create playful environments as a didactic strategy to improve reading comprehension processes in students with school skills disorders in third grade of this institution. Initially, the reading comprehension processes were diagnosed in students with reading disorders in third grade of the IE Marco Fidel Suarez, San Juan de Anganoy, Pasto. Then, a ludic environment was designed to favor the reading comprehension process in the literal, inferential and critical levels of the 6 students with

school skills disorders. Subsequently, the materials elaborated for the creation of a ludic environment were applied as a ludic strategy to potentiate the reading comprehension process within the language area.

In this case, qualitative research was used, which as Hernandez, Chacon (2018) says, this allows giving an approach and understanding the phenomena studied, from the perspective of the participants and their relationship with the context. The type of research is action research, which allows according to Vidal and Rivera (2018) to link the study of problems in a given context with social action programs, so that knowledge and social changes are achieved simultaneously; instruments such as observation, field diary, survey and workshops were used, concepts and theories that support this research, which concludes that playful environments do improve the levels of reading comprehension, literal, inferential and critical in students with school skills disorders of this institution.

The results showed an improvement in the levels of inferential, literal and critical reading comprehension, with an initial qualitative assessment in the basic and low levels and after the application of the proposal in the higher and high levels, which demonstrates the relevance of this research and its applications in the educational field, since it allowed the student to have a deeper approach to the text from the strategies and didactic materials that supported each activity within the playful environment, which in turn facilitated and encouraged the student to improve his expression, analyze the text, become interested in reading and improve reading comprehension in the 3 levels already mentioned, generating significant learning that, according to Piaget and Ausubel, breaks the traditional schemes and gives the students the possibility of learning taking into account their previous knowledge, relating it to their realities and interacting with others.

MATERIALS AND METHODS

The purpose of this research is to create playful environments as a didactic strategy to improve the processes of reading comprehension in students with school skills disorders of third grade of the IE Marco Fidel Suarez headquarters San Juan de Anganoy, for this it is relevant to apply a qualitative type of research, which as Moscoso and Diaz (2018) says this allows to give an approach and understand the phenomena studied, from the perspective of the participants and their relationship with the context.

Qualitative research is well suited to this work because as determined by Chamorro (2018), it allows an approach to the social situation to explore, describe and understand it, and according to Sarduy (2007) it is a formative research that has specialized techniques, from a socio-critical paradigm that transforms a reality of low levels of reading comprehension as well as disinterest in reading, providing alternatives to improve this problem through playful environments.

In this study, action research was used, which according to Vidal and Rivera (2018) allows linking the study of problems in a given context with social action programs, so that knowledge and social changes are achieved simultaneously. Likewise according to Sampieri (2018) it focuses on providing information to guide decision-making for projects, processes and structural reforms, therefore, this design allowed to understand the problem of low levels of reading comprehension by students with disorders of school skills of third grade of the IE Marco Fidel Suarez headquarters San Juan de Anganoy and to create strategies from the playful environment to enhance the literal, inferential and critical levels.

The Action Research method was followed according to the model of Tripp, Silva-Calpa et, al (2005), which consists of a cyclical and iterative process, where each cycle is carried out in four phases: planning (diagnosis and planning of the best action practice), action (putting the planned action into practice), observation (monitoring the effects of the action) and evaluation (assessing and reflecting on the results).

The target population of this research is the students of the IE Marco Fidel Suarez, San Juan de Anganoy branch of the city of Pasto, which has 544 elementary and high school students. The unit of analysis chosen for this research are the students with school skills disorders of third grade (6) of the San Juan de Anganoy branch, of which 5 are boys and 1 is a girl whose ages range between 8 and 10 years old. The students participating in the unit of analysis are boys and girls from mostly vulnerable sectors (either because of their economic or social situation) belonging to strata 1 and 2. They are characterized by being curious, participative, spontaneous and with a high sense of belonging to the institution.

Criteria for the selection of the unit of analysis:

- To be part of the third grade community of the IE Marco Fidel Suarez San Juan de Anganoy located in the village of San Juan de Anganoy in the municipality of Pasto-Nariño.
- That they voluntarily accept to take part in the activities programmed within the proposal.
- The commitment, attendance and participation of the students and the teacher in the development of the workshops.

Among the instruments chosen we find participant observation, which as Kawulich, B. (2005) says, allows collecting data on people, processes and cultures, which makes it possible to have a real approach to the working

population, to know it, to make descriptions according to the research, to take evidence and record them for later analysis; since, according to Ferrer, (2018) observation is a fundamental element of any research process.

This data collection instrument according to Sampieri (2018) fulfills four essential purposes:

- a) Explore and discover environments
- b) Understanding processes
- c) Identify social problems
- d) Generate hypotheses for future studies

Through this instrument we sought to obtain information respecting the dynamics of the classroom and the teacher-student relationship and allowing us to make a diagnosis of the space and environment, social dynamics, pedagogy and didactics.

The survey is used as a research procedure that allows obtaining and elaborating data in a fast and efficient way, therefore, surveys with open-ended answers will be applied, designed and intended to know the opinion on certain issues necessary for this work.

According to Obando (1993), the field diary is an instrument for recording information organized with respect to what is to be obtained in each report, which makes it possible to recognize reality based on particular facts or data that are recorded therein, following a research process and that will be subsequently analyzed based on what is observed in the play environments.

The field diary was used in all phases of the research, especially in phases 1, 2 and 3, because it allowed recording notes on what was observed and found throughout the research. According to Cañas (2011) this instrument allows

recording daily experiences as a direct product of the researcher's observations. The annotations must be organized, sequential and coherent with the purpose of the observation and in direct line with the research objectives.

The workshop was used which, as Oliveira (2015) states, is a participatory activity of consultation and elaboration of proposals, directed to a group of people belonging to a certain group, whose particular characteristics position them as key informants, whose knowledge, opinions, experiences and criteria are recognized as of great value for the knowledge and understanding of a social reality.

The questionnaire was also used. This instrument allowed us to know through closed questions, like Saber tests with the statement of a reading, a fragment, images and four answer options of which only one is valid, the students will be able to put into practice their reading comprehension skills, providing us with information about their performance in the literal, inferential and critical levels.

The data collection and its analysis were carried out in parallel and permanently, because in line with what Sampieri (2018) states, this should be cyclical, systematic and should have:

Annotations on the method used, annotations on ideas, concepts, meanings and ideas that emerge, annotations regarding the credibility and verification of the study.

According to Berelson (1952) cited by Abela (2002), content analysis is a research technique that aims to be objective, systematic and quantitative in the study of content, for the analysis of the field diary, photographs and the interview.

Descriptive statistics, according to Ecured (2021) cited by Bustamante (2021), made it possible to describe the results of the questionnaires developed by the students at the beginning (Phase 1) and end (Phase 4) of the application of the strategy. Descriptive statistics allows the treatment of data to organize numerical information and facilitate its interpretation; it implies the abstraction of several properties of the set of observations, through the use of graphical, tabular or numerical methods.

Procedure:

- **Phase 1 (Diagnostic):** Approach to students. Observation of the educational context and application of the initial reading comprehension test to evaluate inferential, literal and critical levels.
- **Phase 2 (planning):** Construction of the ludic environment. Approach to the theoretical foundation of the levels of reading comprehension, selection and identification of problems to strengthen students, incorporation of good teaching strategies of teachers regarding the aforementioned levels of reading comprehension.
- **Phase 3 (Execution):** Implementation of the strategy. Create the playful environment and the application of the workshops.
- **Phase 4 (Evaluation):** Monitoring and evaluation of the strategy. Record in the field diary the development of the strategy with the students, apply the workshops, surveys and questionnaires.

RESULTS

The students of the IE Marco Fidel Suarez, San Juan de Anganoy, showed low levels of reading comprehension in the last tests, which worries the educational actors and there is a need to create a series of strategies that promote an improvement in this important process.

In this sense, an initial test was applied to the selected population in order to know in greater detail the inferential, literal and critical levels of reading comprehension. For this purpose, an individual test was applied, which contained different types of questions: open and ICFES type, supported by images and readings, to be solved by the students in a session that lasted approximately one hour, who showed great interest and willingness to participate.

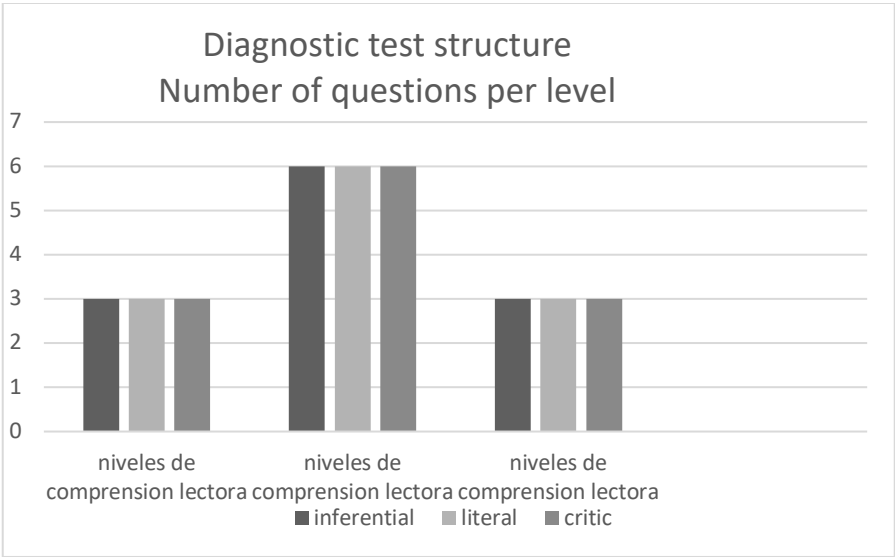
Below is the structure of the test, taking into account the levels of reading comprehension and thinking skills:

Table 1. *Test structure*

No. of questions	Reading comprehension levels	Thinking skills	Reading processes
3	Inferential	Extraction of the message from the text and integration with preview	Semantic, grammatical, lexical and letter identification process
6	Literal		
3	Critic		
		Reading words in sentences and assigning syntactic roles	
		Word recognition and reading	
		Fast and automatic letter recognition	

Source: own elaboration for this research

Figure 1. structure of the test in inferential, literal and critical levels.



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Source: own elaboration for this research

The following results were obtained:

Question number	Reading comprehension level	Total number of students	Qualitative assessment			
			Superior	High	Basic	under
1	Literal	6	3		3	
2	Literal	6	1		4	1
3	Literal	6		2	4	
4	Literal	6		2	3	1
5	Literal	6		2	4	
6	Literal	6			3	3
7	Inferential and critical	6		2	4	

8	Inferential and critical	6	1	5
9	Inferential and critical	6		6

Source: own elaboration for this research

The results of this diagnostic test allowed us to have a previous and real approximation to the problem of low reading comprehension at the literal, inferential and critical levels, and to take from it all the elements that need to be included in this improvement proposal.

The results show that the level that obtained the best results is the literal level, although at a basic level, which shows that it requires the application of strategies to improve this problem. While the inferential and critical levels are at a low level, showing that it is very necessary to plan and execute actions that make possible a positive change in the development of these levels.

This diagnostic test provided valuable information to identify the reading comprehension levels of students with school skills disorders in third grade at IE Marco Fidel Suarez, San Juan de Anganoy, in which according to the results obtained, the annotations made in the field diary and in the observation forms, present low levels and require an alternative orientation to improve. Thus, according to the first specific objective of this work, it was identified that the students' reading comprehension levels presented difficulties that, through this didactic strategy designed and directed to reinforce and improve the inferential, literal and critical levels, it was sought to generate a continuous and significant improvement of reading comprehension.

On the other hand, the application of the 10 workshops within the playful environment allowed the students to interact in a freer and more spontaneous way in the directed activities. The workshops have the following content:

Table 3. *workshop structure*

Workshop number	Number of questions	Number of questions		
		Literal	Inferential	Critic
1: The three little pigs	10	3	3	4
2: Ugly duckling	14	4	5	5
3: El Dorado	18	6	6	6
4: Pinocchio	7	3	2	2
5: Philip's anecdote	14	5	5	4
6: La llorona	14	5	4	5
7: The horse and the donkey	17	6	5	6
8: The flea and the louse	16	4	6	6
9: a tomato fell	20	8	6	6
10: La Maria	8	6	6	6

Source: Prepared by the authors for this research

Being in the playful environment and being able to participate in it, the students were very active, curious and eager to begin the activities, as they were very interested in the materials that accompanied each workshop and that generated that they performed the readings with much more enthusiasm than sitting in the classroom.

At the beginning, some children found it a little difficult to do the oral reading processes, but everything was solved by providing them with an environment of trust and giving them some guidelines to improve this situation. Within the context of the levels of literal, inferential and critical reading comprehension, the children showed improvement in the process as they put into practice the playful activities within the didactic space created for this purpose. As a consequence, the following results were obtained:

After the application of the didactic strategy with activities within the ludic environment, a post-test was carried out in which the students showed evident improvement:

Table 4. *post test results*

Question number	Reading comprehension level	Total number of students	Qualitative assessment			
			Superior	High	Basic	under
1	Literal	6	4	2		
2	Literal	6	5	1		
3	Literal	6	3	3		
4	Literal	6	4	2		
5	Literal	6	4	2		
6	Literal	6	3	3		
7	Inferential and critical	6	5	1		
8	Inferential and critical	6	6			
9	Inferential and critical	6	1	5		

Source: own elaboration for this research

These results show that the reading comprehension process in the literal, inferential and critical levels improved significantly, since the qualitative assessment was between the top and high level, much better if we compare it with the initial test, which shows that it is very appropriate to work reading comprehension processes in playful environments, As Panqueva (1998) says, there has never before been so much playful context for learning in an experiential or exploratory mode, as there is today, when the new generations have changed so much.

The application of the workshops in the playful environments were oriented to strengthen the levels of reading comprehension: inferential, literal and critical, being necessary the creation of striking strategies for the students, which awakened interest in reading, which allowed them to appropriate the reading process, to meet in a different way with it and to discover that it is possible to read and make the comprehension process in different ways than the traditional one, which often only focuses on the literal level.

Within the playful environment, students were able to find various tools to carry out the reading and comprehension processes, since this also allows to generate confidence, security and the development of skills in students, which led to the overcoming of any fear, disinterest or difficulty in the reading comprehension process at any of its three levels and to be able to cope with the constant changes and educational and social challenges.

The workshops applied had integrative and expressive activities, oriented to strengthen the three levels of reading comprehension in a significant way, since according to the results of the initial test, it was necessary to intervene in order to improve the low levels evidenced by the students.

- ***Literal level:*** according to Vega, (2012) at this level, the facts are recognized and remembered as they are shown in the reading. This process includes the recognition of words and their relationship with what they mean, identifying characters, text sequences and remembering important events and details.
- ***Inferential level:*** at this level, previous knowledge is articulated with what is expressed in the text in order to understand it. According to Gutiérrez, Perez (2012) the inferential level allows the reader to complete the information explicitly omitted in the text but necessary to obtain a more elaborated mental representation, in such a way that cognitive processes such as the articulation of knowledge, summarizing relevant

information in an organized way, selecting the type of information being read and elaborating associated ideas that enrich the reading process, predicting endings, deducing the message of the text and proposing or proposing new ideas to articulate them with the existing ones are grouped in this level.

- **Critical level:** at this level, the reader, as Borges (2014) says, thinks about the content of the text and better interprets its reality, thus being able to make judgments according to his perception. For this, the reader must issue his opinion regarding the text, judge what is stated, analyze the actions of the characters or the author's intention and question the message that is implicit in the text in order to issue a value judgment from his point of view.

According to these three levels of reading comprehension, it is necessary to retake Piaget's concepts of learning and Ausubel's concepts of meaningful learning. For Piaget, learning occurs when schemas are modified actively and through processes of interaction of a person with the environment according to his or her stage of growth and development, which for this context, the 6 students with school skills disorders would be in Piaget's developmental stage of concrete operations. In this stage of development that goes from 7 to 12 years of age, people as Triglia (2019) says, are able to use logic to reach conclusions, question themselves and make inferences.

Meaningful learning, which is what is sought within school contexts, according to Ausubel, occurs in each person individually and differently, in which not everything is attributed to memory as something concrete, repetitive and finished, but rather the mind is given the opportunity to think much further, to ground it in its particular reality, to associate it with other contexts and create solutions or provide alternatives for the issues to be

learned. What was propitiated in the playful environment, a space for reading, learning, interaction, socialization and expression.

According to Monrroy (2009), reading comprehension is understood as a process of understanding texts read by a person, allowing reflection, inquiry, analysis, relationship and interpretation of what is read with previous knowledge, therefore it is not a passive process, much less a mechanical one, but rather a very active process where thought processes are organized that include organization and analysis. Hence the disinterest and lack of reading comprehension that occurs in the classroom when this process is carried out, when a text is delivered and some questions are solved literally without giving the student the opportunity to explore the text and provide strategies to make reading more enjoyable and not always given on a dead paper, because it is not the same to read recognizing a language system, than to read understanding and giving meaning to that language system.

Teaching practice should be done by and for students, always thinking about responding to their needs. Thus, pedagogies and strategies should be implemented in the classroom that, as Burgos (2014) says, go hand in hand with the factors that influence the classroom to detect needs, as well as interests and motivate meaningful learning within the school environment.

For many years, the reading process was conceived as something memoristic seen from the literal point of view, but this vision was transformed to see the need and changes in the social context that constantly affect society, making it necessary to pay attention to the inferential and critical points that students must make when faced with a text. This will undoubtedly allow them to critically analyze situations, identify important aspects and relate them to their realities, discover implicit skills, interpret the role of the author and characters of a text and, among many other factors, assume a position, provide a solution and propose other paths different from those exposed in a reading.

In this sense, the playful environments became a very enjoyable way to discover these aspects of the readings through creative strategies and games, which will always be a very important educational resource to favor the teaching-learning processes, since it allows the monotonous to become interesting and generate an atmosphere of confidence and joy for the students when learning.

For Rosales (2007), didactic strategies constitute formidable tools for developing critical and creative thinking, since they allow going beyond what is presented in a reading, discovering other aspects, making inferences, questioning and suggesting other ideas. That is to say, to conceive a reading in a more holistic and internalized way in the three levels of reading comprehension, which is what was achieved with the implementation of this proposal.

As this proposal is within the framework of inclusion research, working with 6 students with learning disabilities. The concept of inclusion began to emerge from the exclusion and educational inequality that for many years has accompanied the educational contexts, historically educational inclusion as a concept and practice in school contexts began in the early 80's in the United States and Europe, as an initiative focused on students with educational needs, However, this conception has been changing over time, being considered as an inclusive education accessible to all people that, as it states, must reach a balance between what should be common for all students and the necessary attention to the diversity of educational needs derived from the uniqueness of each student, without generating inequality or exclusion.

Educational inclusion must therefore be based on the premise that the school must respond in a meaningful way to the learning needs of students, overcoming limitations that may condition the pedagogical practice and that,

on the contrary, it can equitably enhance the development of competencies, skills and talents of all students in the classroom.

In the case of children with school skills disorders, working with playful environments is a very significant tool because it allows them to learn and carry out the process of reading comprehension in the three levels in a dynamic way in which the individual characteristics of the being and its context intervene, highlighting that each person learns differently and at his or her own pace. We cannot compare the capabilities of one person with another because each person is unique in what they do and that is the value of each being and should be highly valued in the classroom to develop skills based on these capabilities and learning styles that as Gardner would say there is no one smarter than another, but everyone learns differently.

For Sans, et. al (2012), disorders of school skills cause children with adequate schooling and normal intelligence to present difficulties because they do not have optimal tools to acquire them, affecting important processes such as reading. In this sense, it is necessary to look for alternatives to reach the students and include them in all school processes, being very appropriate this strategy since being multidisciplinary will generate the development of multiple skills in students and goes hand in hand with the processes of intervention and adaptation of students with this type of diagnosis in the classroom, since it promotes learning, socialization, participation and interaction with each other.

Working on reading comprehension in a playful environment was an enriching experience for both students and teachers, as it allowed them to make deeper approaches to the text to work on and understand it, thus improving this important process inside and outside the school environment, and from the subjective point of view, it allowed confidence, knowledge and

development of more skills in students and the establishment of a more enjoyable bond between teachers, students and classmates.

CONCLUSIONS

Creating didactic strategies to address a problem is very relevant to improve students' academic processes.

In this case, the creation of the playful environment as a didactic strategy, allowed the children of the IE Marco Fidel Suarez, San Juan de Anganoy branch with school skills disorders, to improve the levels of literal, inferential and critical reading comprehension from a basic and basic performance to a high and superior one, thus favoring the reading, teaching-learning processes and test results.

The levels of reading comprehension should be oriented and worked hand in hand so that students are able to identify moments of reading as they occur in it, as well as to give an option and assume a position regarding the text, which allows them to make known their opinion, their forms of expression and human values. The ludic environment as a didactic strategy to favor the reading comprehension process was designed to serve students with learning disorders, however it can be used by any student since it is an inclusive strategy designed by and for the student.

Educational inclusion should be based on the premise that the school must respond in a meaningful way to the learning needs of students, overcoming limitations that may condition the pedagogical practice and that, on the contrary, it should be able to equitably enhance the development of competencies, skills and talents in all students in the classroom by applying the principles of SAD, promoting a flexible curriculum, so that it is open and inclusive from the beginning. In other words, education should be accessible and equal for all, where the teacher starts from the diversity of each student

and uses them to create creative, didactic, motivating and meaningful strategies in the teaching-learning process, such as this proposal.

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