




The development of the lexical-semantic component in escolars with intellectual disability

El desarrollo del componente léxico-semántico en escolares con discapacidad intelectual

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Abstract

The present investigation entitled The development of the lexical-semantic component in schoolchildren with intellectual disabilities, responds to the need to establish the anatomophysiological bases of secondary language delay as part of the criteria and approaches of different authors regarding the development of secondary language delay. specifically, in schoolchildren with a diagnosis of intellectual disability, who have a language age below their mental age where the aspects that most condition their level of language disturbance are difficulties in conceptualization and in the discovery of linguistic structures. With the application of different theoretical and empirical methods, it was possible to verify that the schoolchildren under study present marked difficulties in the development of the lexical-semantic component, characterized by limitations in the use of nouns, adjectives and verbs, which affect the impressive language. and expressive. To respond to these needs, an educational multimedia is proposed, made up of modules, according to different thematic axes, these are made up of educational videos organized in an increasingly difficult way and complemented by pictures, photographs, songs, games and exercises that allow reinforcement and systematization. of the proposed objectives. For what is declared as the general objective: to propose an educational multimedia that contributes to the development of the lexical-semantic component in schoolchildren with secondary language delay associated with an intellectual disability.

Keywords: intellectual disability, lexican, semantic, multimedia system.

Resumen

La presente investigación titulada El desarrollo del componente léxico-semántico en escolares con discapacidad intelectual, responde a la necesidad de fundamentar las bases anatomofisiológicas del retraso secundario del lenguaje como parten de los criterios y enfoques de diferentes autores con respecto al desarrollo del retraso secundario del lenguaje específicamente en escolares con diagnóstico de discapacidad intelectual, que tienen una edad de lenguaje inferior a su edad mental donde los aspectos que más condicionan el nivel de perturbación del lenguaje de estos son las dificultades en la conceptualización y en el descubrimiento de las estructuras lingüísticas. Con la aplicación de diferentes métodos de nivel teórico y empírico, permitió constatar que los escolares objeto de estudio presenta marcadas dificultades en el desarrollo del componente léxico-semántico, caracterizado por limitaciones en el empleo de sustantivos, adjetivos y verbos, que afectan el lenguaje impresivo y expresivo. Para dar respuesta a estas necesidades se propone una multimedia educativa conformada por módulos, según diferentes ejes temáticos, estos se componen de videos didácticos organizados en forma creciente de dificultad y complementados por láminas, fotografías, canciones juegos y ejercicios que permiten el refuerzo y la sistematización de los objetivos propuestos. Por lo que se declara como el objetivo general: proponer una multimedia educativa que contribuya al desarrollo del componente léxico-semántico en escolares con retraso secundario del lenguaje asociado a una discapacidad intelectual.

Palabras clave: discapacidad intelectual, léxico, semántico, sistema multimedia.

INTRODUCTION

Language is a means of communication between people, and this is manifested in children from a very early age; for them, it is a means of knowing what surrounds them, a means of reasoning, of thinking; they have the possibility of knowing the world, not only by their own experience, but it serves as a basis for appropriating the social experience. Hence, it plays a vital role in social life, emerging language as a product of historical development.

Language is a distinctive property of the human being. Thanks to the word, processes such as perception, memory and thought are developed, as well as the complex regulation of actions.

Within the disorders of the communicative language level, language delays are determined as nosological or diagnostic entities. The denomination of language delays has remained the same in the history of its study and treatment, so an analysis in this sense is necessary.

Some authors have established definitions such as López F (1997) states that a child is delayed when, from a quantitative (amount of vocabulary) or qualitative (different areas of language) point of view, he/she is below the average figure for children of his/her age. According to Azcoaga J (2005), it is defined as a delay in the acquisition of the different stages of the chronological development of language, affecting the qualitative and quantitative aspects of its verbal use. They classify them as primary and secondary language delays. Subsequently, Rodríguez and Díaz (2008) state that it is a language disorder that affects the formation and development of its structural components (phonology, semantics, syntax) related to the mechanisms of reception and linguistic programming. According to Fernandez (2012), language delay is considered a secondary disorder when it is characterized by a marked delay in the acquisition of the components and attributes of language in quantity and quality, where the expression and comprehension of language are compromised and that appears as secondary alterations to diagnostic entities of aetiology associated with sensory, motor, cerebral or developmental deficits.

In schoolchildren with secondary language delays associated with intellectual disability, the four components of language are affected: phonetic-phonological, lexical-semantic, morpho-syntactic and pragmatic, which is why addressing comprehensive speech therapy in these cases is a complex process that requires an adequately structured action, whose purpose is to develop the maximum capacity for oral communication.

Referring to the development of language development from the semantic lexical component, the assumptions of international authors such as Ayuso Lanchares (2022), Barros Montenegro (2017), González, Hernández and Sepúlveda (2022) were taken up. Finally, the diploma works of Roque (2018), Gutiérrez (2018) and Labra and Martínez (2022) were considered essential antecedents since they propose a manual for the development of the lexical-semantic component and educational software for the treatment of language delays and general components of the phono audiological intervention in Specific Language Disorder, respectively.

The development of the lexical-semantic component (corresponding to vocabulary, understanding and use of the language (word) depending on its meaning) is of great importance for the evolution of language since vocabulary is not only directed to the understanding and use of new terms but to form a conscious attitude towards the word and enrich its breadth with the inclusion of verbs, adjectives, nouns, among others.

Other nationally prominent authors were Martinez (1999), in his book Oral Language states that language is an experience of psychic development, verbal activity like any other psychic process, is directed by the brain, Figueredo and Lopez (2006) Logopedia I, Cobas (2006), La preparación logopédica del docente, Fernandez (2008) in his book La atención logopédica en la edad infantil, provides essential elements that support the logopedic care offered to schoolchildren, which were obtained from the use of empirical methods. Belkis Hernández Sánchez, in her thesis on Option to the academic degree, proposes a pedagogical alternative to favour pronunciation in children in the sixth year of life (2009-2010), while the author Lic. Migdalis Rodríguez Rojas proposes in her thesis a system of activities to develop pronunciation

in preschool children (2009-2010). However, we can mention that previous research was not named as a lexical-semantic component but with the term pronunciation. Therefore, nowadays, it is used as a component. In addition, there are few references of speech-language specialists who have researched this topic since these researches are from preschool education.

The particularities of communication of people with intellectual disabilities have been addressed by different authors such as González (2022), Fernández and Pons (2013), Díaz (2009-2010) and Figueredo (2020), and many others, who agree with stating that as a consequence of the insufficient development of the psyche of the child with intellectual disability, in this is characterized by the late appearance of all its forms, insufficient appropriation of the semantic aspect of the maternal language, insufficient development of pronunciation and phonemic hearing, limitations in the understanding of other people's language, stereotyped use of grammatical forms and limited spontaneous verbal initiatives, due to little interest in the objects and phenomena around him.

We can say that due to the limited comprehension and marked difficulties in language, people with intellectual disabilities have secondary language delay, which is nothing more than a disorder of the language level of oral communication characterized by a marked delay in the acquisition of the components and attributes of language in quantity and quality, where the expression and comprehension of language are compromised and which appears as secondary alterations to diagnostic entities of aetiology associated with sensory, motor, cerebral or developmental deficits.

The author's experience and his actions in school practice have allowed him to observe that there is a contradiction between the actual and the desired state regarding the development of the lexical-semantic component in schoolchildren with intellectual disabilities. The enriched use of grammatical structures should characterize their oral production; they should use first of all nouns or nouns since these types of words are those that have a meaning of immediate interest; they can use adjectives and verbs in noun or designative function; the active vocabulary is composed of 50% of nouns, 20% of verbs and 40% of adjectives, inflexions and declensions (plurals, gender and verb tense), conjunctions

and prepositions that allow identifying the first logical relationships of language. The sentences they use are up to 12 words. However, there are still insufficient actions foreseen in relation to the development of language, specifically the lexical-semantic component, which manifests itself in insufficiencies in active language, deficient patterns in the articulation of the phonemes of the language, in the not correct expression of words, marked dilation in the appearance of the first words, there is slowness in the linguistic organization at all levels; which is manifested in a poor vocabulary, which includes both passive and active, their language is limited to a set of words or short phrases, sometimes they understand the words, but do not use them in spontaneous language, they also have difficulties in pronouncing and differentiating some sounds of language and agrammatisms.

From all the above and based on previous works and the reviewed theory, the research problem is posed as follows: How can we contribute to the development of the lexical-semantic component in schoolchildren with secondary language delay associated with an intellectual disability?

Therefore, the authors of this research propose a general objective to propose an educational multimedia that contributes to the development of the lexical-semantic component in schoolchildren with secondary language delay associated with an intellectual disability.

METHOD

The present study aims to carry out a quantitative, non-experimental, cross-sectional research, which is research that is carried out without deliberately manipulating variables. That is, these are studies in which we do not intentionally vary the independent variables to see their effect on other variables. In non-experimental research, we observe phenomena as they occur in their natural context in order to analyze them (The Sage Glossary of the Social and Behavioral Sciences, 2009).

The search for articles was carried out in international and national databases and systems, Google Scholar, Erick Database, and the repository of the Marta Abreu de las Villas

University using the following words: language component, lexical-semantic, secondary language delay, schoolchildren, intellectual disability, development of the language, vocabulary and "oral language". As inclusion criteria, articles published between 2015 -2022, which had been conducted on special school student populations, were taken into account.

In terms of publication status, they had to be studies published in indexed journals. Selective reviews, scientific articles, master's theses and doctoral dissertations, and digital books.

The methods used for data analysis were from the theoretical level (analytical-synthetic, inductive-deductive and Theoretical Type modelling) and the empirical level (document analysis, structured observation, a pedagogical test of development and analysis of the product of the activity).

PROCEDURE

The procedures carried out to produce this research report were as follows:

A study of the problematic reality was carried out through the diagnostic evaluations made to the students sampled by the intentional non-probabilistic criterion of causal type of 8 schoolchildren of 3rd B. The intentionality was determined because they are students with secondary language delay and intellectual disability.

Bibliographic information on the antecedents and theories that support the research were reviewed.

The problem, the objectives and the methodology allowed the elaboration of the operationalization of variables. Through these, the indicators that were reflected in the observation sheet and in the test that were applied to the sample were determined.

The didactic model was elaborated and applied to the selected sample with previous consent.

The results and the discussion on the application of the instruments and the model were written up.

RESULTS

Diagnosis, as a scientific, conscious and preventive activity, allows the speech therapist to investigate causal explanations for a given communicative insufficiency, to identify strengths and needs in oral and written communication in order to provide comprehensive speech therapy care to schoolchildren who present regularities in the area of communication with a great ethical sense.

The processing of information through the application of diagnostic instruments from an integral approach to the development of the lexical-semantic component of the third grade of special education will be presented.

Population and sample: To develop this stage of the research of a population composed of students of the first cycle of the Special School "Camilo Cienfuegos" a sample of unintentional probabilistic type was chosen, 8 students of 3rd B, which represents 2.88 % of the population, where the author works as a speech therapist, the sample is made up of 2 female students and 6 male students, ranging in age between 8 and 10 years, who travel together from the preschool grade.

Operationalization of the dependent variable:

Dimension I: Vocabulary development.

Related to the aspects related to the set of words of the language that the child knows or uses spontaneously. It should be applied in a flexible and contextualized manner as a working tool to achieve the necessary transformations.

Dimension II: Grammatical structures.

It is related to the logical order of the words, phrases and clauses of a sentence. The complete grammatical function of the sentence depends on this structure, also called syntactic structure.

Dimension III: Pronunciation.

It is related to the articulation of the sounds of the Spanish language. It is the emission of articulated sounds.

The following table contains the operationalization of the research variable.

Dimensions	Indicators
Vocabulary development	Active vocabulary development
	Passive vocabulary development
Grammatical structures	Correct use of nouns
	Mastering the use of pronouns
	Use of articles
	Use of verbs
	Correct use of adjectives
Pronunciation	Correct articulation of phonemes
	Correct use of breathing during the spoken chain
	Efficient development of phonemic processes

Analysis of the results of the diagnostic instruments applied:

Based on the precision of the problem and the objective outlined, the initial ascertainment phase is carried out, which makes it possible for the researcher to obtain information about the initial conditions of the object of research and data about the current situation of the problem.

For these purposes, the interview (Directive) was conducted with the teachers with the objective of verifying the lexical-semantic component development of the 3rd-grade students. The following results were obtained in the first question aimed at recording the lexical-semantic component, showing that two, representing 66.7%, do not know what the lexical-semantic

component is, and the rest know what the lexical-semantic component is. In the second question aimed at recording Why do your students present poor development of the lexical-semantic component? one asked because of the diagnosis of intellectual disability; for 33.3 %, two teachers representing 66.7 % stated that they do not have fully developed linguistic skills. The subject that their students are most motivated to develop the lexical-semantic component of is the Spanish Language, one for 33.3 % of the world in which we live. 100% of the teachers agree that in all classes, they should work on the development of this language component; 66.7% say that the class should not begin with the development of the component and that this should be done during the development and at the end of the classes.

Table 1

Results of the directive interview with teachers.

Teachers Interviewees	They know the component	%	They do not know the component	%
6	4	33.3	2	66.7

Table 2*Results of the Directive interview with teachers.*

Teachers Interviewees	Diagnosis of DI	%	No language skills	%	They do not use the syntactic structures	%	No interest in improving	%
6	1	33.3	2	66.7	-		-	

Structured observation was applied to classes, with the following results: in five of the classes observed, it could be seen that teachers ensure the starting level by checking the students' knowledge, skills and previous experiences; in four of the classes observed, cooperative work and exchange among students is carried out, encouraging and fostering dialogue among them; the average class uses methods and procedures that promote the development and stimulation of the lexical-semantic component. Likewise, it employs varied teaching means that favour developmental learning in correspondence with the objectives of the grade and the subject, but the selected means are used only to show or illustrate and are not maximized; their possibilities for appropriation are not maximized, above all, the use of new technologies for this purpose is not evident. It is noted that students

need to use grammatical structures more efficiently, being insufficient in the development of these structures in correspondence with their age; to a greater extent, their vocabulary is composed of proper nouns, needing more use of pronouns, verbs, prepositions and sometimes articles. The understanding of the meaning of words is affected, having a poor active and passive vocabulary, limited and reduced in terms of volume and quality; their pronunciation is primarily characterized by omissions, distortions and changes of phonemes, sometimes becoming unintelligible, but only in the minority. By means of the observation, it is appreciated that the students do not efficiently use the exhaled air in the spoken chain, being the fashion the clavicular respiratory type, only 3 students present a thoracic respiratory type, and they use better the air in each inspiration and exhalation.

Table 3*Structured classroom observation.*

Students	Observed aspects								
	1	2	3	4	5	6	7	8	9
1	B	B	R	B	R	R	R	B	B
2	B	B	R	B	R	R	M	B	R
3	B	B	R	B	R	R	R	B	R
4	B	R	R	B	M	M	M	B	R
5	B	B	B	B	M	R	M	B	B
6	B	B	B	B	R	R	B	B	R
7	B	R	B	B	R	R	B	B	R
8	B	R	R	B	M	M	B	B	B

Document analysis was carried out with the objective of confirming the treatment offered to the lexical-semantic component from the classes taught by the teachers and their planning. In addition, other documentation was reviewed, such as the speech therapy and psycho-pedagogical records of the students, as well as RM 200 (Methodological Preparation), RM 238 (School Evaluation) and RM 111 (Characterization), in order to give a scientific basis to the research. When reviewing the speech therapy records, it was found that these are outdated, lacking speech therapy treatments for the correction and compensation of the language disorder, and all the language components are not fully explored for a better understanding of the disorder and enrichment of the subsequent comprehensive speech therapy care strategy.

The Pedagogical Development Test was carried out with the aim of assessing the quality of the

development of the lexical-semantic component, with the following results: the development of the active and passive vocabulary is insufficient in terms of quality and volume, it is difficult for them to understand the meaning of words, they use inadequately the grammatical nexuses in their oral production, characterized by the use of proper nouns and to a lesser extent some adjectives, pronouns and verbs are used inadequately and in many occasions they do not use them, the conjugation of verbs is incorrect, it is difficult for them to structure the sentence orally in a logical way. Alterations are observed in the pronunciation of the sounds of the language, but to a greater extent, /r/, /s/, /t/, /l/, /p/, and /d/. However, they are students who are very quickly motivated, showing great interest in the illustrations and the use of various teaching aids, and they understand the commands given to them.

Table 4
Developmental Pedagogical Test Results

Students	Use of nouns	Use of adjectives	Use of articles	Use of pronouns	Use of verbs
1	R	M	B	R	R
2	B	M	B	M	R
3	B	R	B	R	R
4	R	R	B	R	R
5	R	B	B	R	R
6	B	B	R	M	R
7	B	B	R	R	R
8	B	B	B	R	R

DISCUSSION

As a result of the process, it can be seen that the process has not yet been able to completely solve the deficiencies that exist in the students; the following regularities are determined:

- There are deficiencies in time-space orientation.

- Insufficient development of active and passive vocabulary.

- Poor use of grammatical nexuses in their oral production.

- The quality of vocabulary is limited in terms of volume and quantity.

- Alterations in the pronunciation of the sounds of the language, but to a greater extent, /r/, /s/, /t/, /l/, /p/, and /d/.
- Marked dilation in the appearance of the first words and the later linguistic organization at all levels.
- Breathing difficulties.
- Timeless phonological development, incomplete and with articulatory errors.
- Poor linguistic stimulation from early ages.
- Difficulty recognizing right from left.

Strengths:

- Motivation by brightly colored sheets.
- Peer support.
- Cooperation in the activities.
- Support in retained analyzers.
- They understand simple orders and execute them.
- Imitate onomatopoeic sounds.

By comprehensively assessing the results of the applied diagnosis, it was possible to confirm that the existing difficulties in the development of the lexical-semantic component in schoolchildren with secondary language delay associated with an intellectual disability in the 3rd grade affect the results of the teaching-educational process. Hence, the determination of needs confirms the objectivity and importance of the stated problem, which serves as a basis for the elaboration of the proposed solution.

In spite of these needs, there is a space to enrich the subject, so the authors, due to its pertinence, consider a necessity the development of the lexical-semantic component in schoolchildren with secondary language delay associated with an intellectual disability of the 3rd grade, since it constitutes a need in the Camilo Cienfuegos particular school; considering opportune to design an educational multimedia that allows stimulating the students for this purpose.

CONCLUSIONS

1. The determination of the theoretical-methodological foundations that support the present research is based on the criteria and approaches of different authors regarding the development of the lexical-semantic component, specifically in schoolchildren with a diagnosis of intellectual disability who have a language age lower than their mental age where the aspects that most condition the level of language disturbance of these are the difficulties in conceptualization and the discovery of linguistic structures.
2. The proposed educational multimedia is directed to the development of the lexical-semantic component in schoolchildren with secondary language delay associated with an intellectual disability; it includes activities with a playful, developmental, personalized, collaborative, participative and positive approach, constituting a valuable contribution to the development of language in this type of schoolchildren.
3. After applying the educational multimedia, it was possible to verify a more excellent preparation in the third-grade students, obtaining satisfactory results in the development of the lexical-semantic component where the progress obtained is demonstrated.

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