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## **The actuality and importance of the usefulness of educational software in the correction of language disorders in students with intellectual disabilities**

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**Abstract.** Educational software represents any software product in any format that can be used on any computer and that represents a subject, a theme, a lesson, a course, etc., being an alternative or the only solution to traditional educational methods (blackboard, chalk, etc.). Educational software is a progressive and motivating method that contributes to the efficiency of teaching/learning/evaluation, the modernization of the didactic act, and the accessibility of knowledge. The questionnaire, applied online, highlighted the implementation of the educational software in speech therapy, the advantages, disadvantages, along with the challenges and opportunities of their use. The most used educational software in online speech therapy by the speech therapists who participated in the study is LOGOPEDIX. Another platform used to a significant extent is Tara, Geno-Pro, Timlogo, Voxi Kids, Octoplay, Tarabostes, Pictosonidos. The role and contribution of educational software in the therapy of language disorders, how it influences the results obtained in speech therapy and how it contributes to solving a number of existing cases, was mentioned. Educational software specially created for children with disabilities are important sources in correcting deficiencies. Using IAC can help people with disabilities overcome their disability, become less dependent and enrich their repertoire of skills and abilities. The use of educational software in the correction of language disorders in students with intellectual disabilities is obvious, but the full exploitation depends on the degree to which speech therapists are prepared to integrate them, as well as the available technological resources.

**Keywords.** educational software, speech therapy, speech therapist, therapy for language disorders, people with disabilities, technology resources.



## **Introduction**

Human communication is perhaps the most important way of being to exist. The communication process is of such great importance that it conditions the very development of human society. In the process of communication, individuals approach each other armed with a set of assumptions about how each evolves the other, each adapts to the other, and an adjustment of behavior to the other occurs.

Communication would seem to be confused with language. Things are not like that. Language also has other functions, aesthetics, for example, and communication can also take place outside of language.

The most common form of language manifestation is speech, that is, the verbal realization of the communication process. Man cannot think without using linguistic means, the thinking of the normally developed man is always a verbal thought and the verbal language is always loaded with a mental content.

The child with intellectual disability mainly uses external language. It is known that in these children cognitive and motivational areas are primarily affected, and manual coordination is deficient. They have a low interest in learning, extrinsic motivation is predominant, which will make their school adaptation more difficult. They cannot concentrate for a longer period of time and fail to adapt their volitional capacities to the demands made by the adult.

From a phonetic and phonological point of view, the child with mental disabilities encounters difficulties caused by his inability to observe the exact way of producing the pronunciation, necessary for a correct imitation. Pronunciation defects, speech disorders in general, can go as far as alalia, the most frequent being, however, cases of polymorphic dyslalia. Uncertainty in pronunciation can appear both in the pronunciation of consonant words, diphthongs and triphthongs, as well as in the case of pronouncing sentences and phrases that involve deep thinking and conveying complex information.

The existence of a large number of language disorders and the deficit of thinking give the speech of the child with mental deficiency an almost unintelligible character, its reception being much more difficult, and in terms of expression a simple, uniform verbal behavior.

From a lexical point of view, the vocabulary of the child with disabilities is limited, especially from the point of view of abstract words. There is a big discrepancy between active and passive vocabulary. In spontaneous speech or answers, the words with the widest circulation are updated first. However, if a word is required to be specified and the first or first sounds of that word are indicated, it can be updated.

Words with an abstract character are used incorrectly in a context different from the one in which they were learned. The more the part of speech lacks concrete support, the more sporadic its use. There are thus big differences between the number of words understood and spoken, but also difficulties in organizing and structuring the lexicon. The principles most often used are sequential association, followed by paradigmatic association.

The mentally deficient child often has difficulties in perceiving the structure of a word or a sentence. The analysis and synthesis of words is carried out with difficulty in small schoolchildren. The narrow visual field determines reading, in many mentally deficient people, by letters or syllables. Among the words, the easiest to make, read and even write are bisyllabic words with open syllables (table, house, etc.). These are followed by monosyllabic and then



polysyllabic words. The most difficult ones turn out to be those containing consonant groups or groups of letters (ce, ci, etc.).

In children with mental deficiency, the semiotic function is poorly represented, which affects both the level of language development, the ability to communicate, as well as the efficiency of thinking operations, mnemonic procedures and imaging combinatorics.

To educate these children, teachers must use special methods and techniques to find new, innovative ways to recover deficiencies and form the correct motivational stimuli.

It results from the permanent use of multimedia means and related applications that represent a reality and a necessity in the logo-therapeutic process for students with intellectual disabilities through a theoretical and praxeological approach.

Current guidelines (Burlacu, 2014) [1], (Gherguț, A., 2006) [2], (Gherguț, A.; Frumos, L.; Raus, L., (2016), [3], (Popovici, D. V., (2016), [4] from the field of psychopedagogy recommends the use in school of tools derived from professional software applied on the computer.

On the other hand, the new guidelines in the field of special psychopedagogy (Fogarassy – Neszly, P., (2007) [5], (Gherguț, A., (2016), [6], (Mușu, I. (2000), [ 7], (Pădure, M., (2007), [8], (Popovici, D.V.; Racu, A.; Racu, S.; Danii, A., (2007), [9], (Roșan, A. , (coord.), (2015), [10], (Rotaruțu, Ștefania, (2012), [11], (Tobolcea, I.; Karner-Huțuleac, A., (2010), [12] discuss the functions that the "computer" and its related programs have, namely as a mediator - it supports and motivates the child by adopting learning at his level, a "protein" function (the computer ensures a transcoding of a deficient sensory or motor channel into another well-controlled one), this type of applications is useful whenever working with children who present different types of impairments.

Starting from the excessive concreteness of the thinking of children with intellectual disabilities and the lack of coherence of thinking, it is shown how they more or less severely limit access to information and the ability to retrieve and transmit information. Treating language disorders from their initial phase creates the early prerequisites for removing some of the causes of school failure, namely those of a speech therapy nature. Therapy must be adapted to each child, on a case-by-case basis, at a pace that suits his learning possibilities and the degree of the disorder. Due to the complexity of the problems involved, there is a great variety of methods in the therapy of language disorders. Specifically, the techniques used are based on exercises and include what the child must go through to achieve the proposed objective: obtaining a correct speech.

Any practicing speech therapist recognizes the fact that this technique of sustained repetition of the correct pronunciation of sounds, syllables, words and sentences leads to a decrease in interest and motivation for practice, because it causes a certain monotony, fatigue and regression in correction. Precisely for this reason, a combination of traditional techniques with the new logo-therapeutic computer technology would stimulate the child's motivation for systematic practice and accelerate therapeutic progress. By means of computerized technology, the therapeutic relationship is improved in the sense of eliminating the frustration activated by the monotonous exercises of classical therapy, which indirectly also increases the children's self-esteem.



In order for computer technology to be fully effective, the development of these techniques must be carried out in accordance with the requirements of the users - software created according to the frequency of language problems encountered in children.

Aspiring to and acquiring selected new technologies is just the beginning. For new technologies to fully benefit education, most schools need to broaden their managerial vision—how administrators/managers, teachers, students, and community members work together. Changes are needed at the level of infrastructure, teachers, educational administrators/managers and students.

To live, learn and work successfully in an increasingly complex and information-filled society, students and teachers must use technology effectively. In a healthy educational environment, technology can help students: be able to use a new technology-based learning environment to learn, communicate, collaborate, produce and develop their knowledge.

The use of multimedia in the educational system: - trains multiple senses, supports active learning and increases the value of lessons, adapts to the individual, allows the student to learn at his own pace, connects abstract knowledge with the real world, breaks the barriers between the classroom and real life, allows time migration and space.

Multimedia is used effectively in the following conditions and situations: if visual information is important, when a combination of sound, image, text and/or video, animation is required, if different characteristics of learning situations must be met: different skill levels , number of students in the group, different paces of learning, independent learning, if quality programs are used.

In order to select a multimedia program for educational purposes, it will be ensured that the program used: is appropriate to the educational objectives, its content is appropriate to and focused on the school curriculum, is appropriate to the time restrictions, has desirable characteristics (proper framework for testing ), contain key instructions.

Information and communication technologies allow access to many more resources than the traditional textbook, but more importantly, they allow new types of student activity, much more stimulating and productive. Through the use of ICT, the student has access to new learning environments that incorporate new strategies: student-centered instruction, multisensory stimulation, progress along multiple pathways, collaborative work, information exchange, active learning, exploration, investigation, authentic, real context.

The use of multimedia means and related applications is a reality and a necessity, and the logotherapeutic process so complex in this case becomes the scene of three actors: the speech therapist - the child - the computer, who together try to ensure the success of the therapeutic approach.

Current guidelines in the field of psychopedagogy recommend the use in school of tools derived from professional computer software, such as modern writing and editing tools, which combine text typing and graphics. On the other hand, the new guidelines in the field of special psychopedagogy, question the functions that the "computer" and its related programs have, namely as a mediator - it supports and motivates the child by adopting learning at his level, a "protein" function (the computer provides a transcoding a deficient sensory or motor channel into a well-controlled one, this type of application is useful whenever working with young people with different types of impairments.



Another important component of language is listening. In preschoolers and young schoolchildren with mental deficiency, hearing (listening) also raises some specific problems. For good hearing, it is necessary that the receiver (the child in our case) be prepared to listen. This is difficult to achieve due to the lability of his attention; in general, the child with mental deficiencies does not make an effort to concentrate and when he does, it is mostly done involuntarily and is a consequence of the interest he shows at a given moment. However, regardless of whether it is a voluntary or involuntary attention, it is short-lived and depends, in most cases, on the interest that the listened arouses in the child, on an event, situation that, although familiar, also presents an element of novelty, satisfy an immediate need of the child or the pleasure of playing.

Access technologies provide students with learning difficulties with the necessary support to integrate into mainstream schools and participate in general curriculum classes. They help the student to transfer tasks in classic format to electronic format, allow detailing, organization and editing of writing tasks and, last but not least, motivate students to participate with pleasure in the achievement of speaking, reading and writing tasks.

In order to capitalize on the real potential of each student with special needs, an appropriate assessment and the development of an individualized educational plan is necessary, which includes the use of access technologies and computer-assisted instruction according to the particularities and needs of each student with special needs

Computer-assisted training together with access technologies do not exclude traditional teaching-learning methods, but only complement them so that the entire educational process adapts to the needs of students with special needs.

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