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Teaching Blind and Visually Impaired Using Tactile Materials

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ABSTRACT

This article discusses methods for educating blind and visually impaired children using specialized instructional materials and tailored approaches. This article discusses education of the blind and visually looked with the use of tactile materials. teaching children with identified visual impairments requires attention to the dark scientific and methodological aspects of the life of typhlo-pedagogy, which are focused on providing conditions for the self-realization of the blind in various scopes. The specifics of teaching people with mental disorders the inevitable lack of access to information. Their training requires a special system of measures and specific didactic materials.

When switching to the State Educational Standard of the Republic of Uzbekistan, the state imposes requirements for the content, results and conditions of education for students with disabilities.

In this article, the authors present a unique experience in creating conditions for the education and socialization of blind and visually impaired children based on tactile materials.

A multi-level system of psychological and pedagogical support for students has been created in the educational system. This is a holistic, organized and systematic activity of specialists aimed at creating socio-psychological and pedagogical conditions for children to receive a quality education, maximize self-realization and prepare for successful social adaptation.

Teaching children with profound visual impairments requires increased attention to those scientific and methodological aspects of typhlo-pedagogy that are focused on providing conditions for the self-realization of the blind in various spheres of life. The specificity of teaching people with visual impairments is due to the limited access to information. For their training, a special system of measures and specific didactic materials are needed. Thus, it is quite obvious that it is necessary to search for new approaches to create rational methods for teaching, correcting and rehabilitating visually impaired people.

Teaching English to visually impaired people are an even more difficult task, but knowledge of the language expands the educational opportunities of such people, allowing them to become part of the global educational environment and feel socially adapted in society.

When teaching the language of blind and visually impaired children, it is necessary to take into account the peculiarities of the process of their perception of the surrounding reality. The main channels of perception of such children are: touch, hearing, smell, taste and sense of space (kinesthetics). A child with a complete or partial loss of vision has virtually no opportunity to

receive non-verbal information. However, in such a child, non-visual channels for receiving information are activated and develop, in particular hearing and touch. Thus, we can conclude that blind and visually impaired children receive information converted either into an acoustic signal or into some tactile representation (braille, relief, vibration).

Neurophysiology specialists from the Georgetown University Medical Center, using functional magnetic resonance imaging, proved that blind people use the visual region of the brain just to enhance hearing and touch. According to Professor Joseph Raushker (leader of the research team), in the blind, the visual cortex of the brain is much more excited than in sighted people, in whom signals from the hearing and touch organs almost completely turn off this part of the brain [1, p. 2].

This fact, in addition to scientific interest, explains the incredibly developed sense of touch of the blind. Thus, in the classroom with visually impaired and blind children, tactile books and other tactile aids for blind and visually impaired children are an indispensable assistant to the teacher.

The development of tactile sensations and motor skills is a prerequisite in teaching a blind child. Studies show that the study of tactile drawings contributes to teaching children to read Braille and perceive raised images.

The bright colors and sharp colored outlines encourage the visually impaired child to use the rest of their vision and exercise eye-hand cooperation. And the presence of buttons, laces, zippers in the book helps children develop fine motor skills of their hands [2, p.34].

The main function of such a book is to help a blind or visually impaired child in examining and perceiving the world around him. According to the Doctor of Pedagogical Sciences V.P. Ermakov, the widespread use of graphic and color images in the educational process allows children with visual impairments to join scientific knowledge, expand their artistic and social experience [3, p.442]. Having learned to work with a tactile book, the child will easily switch to the touch of convex drawings, maps and textbooks made in the format of typography [2, p.43].

According to world standards, there are two types of tactile books:

- associative, which are an alternative version of a flat-printed children's book with color images (fairy tales, stories);
- didactic, which should be made by tiflo-specialists. Designed to help in learning, knowledge of the world.

Within the framework of the standard, the main requirements for a tactile book are indicated:

- Safety – avoid sharp, piercing, cutting parts, as well as toxic materials that a child can put in his mouth.
- Durability of the book [3, p.443].

The standard also specifies some guidelines for making tactile books:

- ✓ Not a very large format of the book so that the child can mentally cover the entire page.
- ✓ The book shouldn't be heavy.
- ✓ If possible, the pages should be soft, pleasant to the touch, the corners of the page should be rounded.
- ✓ There should be a small number of items on the page so that the child can concentrate on the main thing without being distracted by minor details.
- ✓ The colors in the image of objects, animals, people must correspond to the real ones.
- ✓ Colors should not be very bright, sharp, cutting eyes.

- ✓ A clear contrast between the background and the subject by touch and color.
- ✓ Images are as close as possible to real objects (recognition of objects).
- ✓ In animals, all four limbs are depicted, preferably both ears, horns, etc., so that the child does not get the wrong idea.
- ✓ Other sense organs are maximally involved, in addition to touch - hearing, smell, etc., i.e., objects that make sounds, smells are used.
- ✓ All kinds of pockets, wallets, pouches are widely used, which can be closed and opened, something can be put in and taken out.
- ✓ Production methods: various applications (fabric, wood, paper, etc.), soft toy, etc.
- ✓ It is better to attach individual objects and characters of the book to the book using laces, Velcro, rivets, etc. etc.
- ✓ If any object or character is repeated on several pages of the book, it is necessary to keep the size of this object so that the child does not confuse it with others.
- ✓ To recognize the top and bottom of the book, a convex braid, lace is sewn at the bottom of each page.
- ✓ Books are accompanied by Braille text, sometimes large print.
- ✓ The text can be placed both on each page, as a basis for illustration, and as a separate book.
- ✓ If the book has a lot of items attached with laces, Velcro, etc., it is better that the book closes (with ties, Velcro, buttons, etc.).
- ✓ On the back of the book is a pocket with the imprint of the publication.

The work of the staff of the State Library was continued by English teachers who, within the framework of the project “Teaching English to blind and visually-impaired students”, developed several experimental tactile didactic manuals in English on the topic “Pets”, "Vegetables", "Fruits" and "Forms, textures, materials". Guidelines for working with them were also developed for these books, an analysis of these recommendations showed that the following general rules can be distinguished when using tactile books in English lessons in a class of blind and visually impaired children [3, p.443]:

- ➢ it is necessary to take into account the age of the child, his ability to "read" tactile aids, as well as the general level of development.
- ➢ the manual can be used first in Uzbek if the student does not have experience in “reading” tactile books. It is necessary to introduce the student to the general concepts of tactile books, to tell how to use them, to “look”, what to look for. When the student knows how to properly arrange the manual, how to "read", you can switch to English.

The method of working with the manual includes two stages: preparatory and the stage of working with the manual. At the first stage, the teacher tells the children what the tactile aid is and how to work with it. Then, depending on the vocabulary being studied, the teacher presents the opportunity for children to work with three-dimensional figures (for example, if the topic is “vegetables”, then work with natural vegetables). When the guys have a concept of volumetric and planar figures, you can proceed to the manual [1, p. 5].

At the end of the work with the manual, you can invite students to make their own page on the topic "Vegetables". It is preferable to perform this exercise in the classroom under the supervision of a teacher, so that the children correctly create a flat recognizable image. Then, when the children's manuals are ready, they can be exchanged, studied, viewed and worked in pairs.

Thus, we can conclude that the tactile book is one of the main didactic materials for teaching blind and visually impaired children. It can be most effectively used in teaching English vocabulary. Distinctive features of the tactile book are accessibility and ease of use (after all, every teacher can make his own tactile book).

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