

INNOVATIVE TECHNOLOGIES IN THE EDUCATION OF GIFTED BLIND CHILDREN

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Annotation: *This article examines the various technologies available for supporting the education and development of gifted blind children. It highlights the importance of tailored technological interventions that cater to the unique strengths and needs of these children. The discussion includes assistive devices, specialized software, and innovative educational tools that facilitate learning, creativity, and social interaction. By exploring these technologies, the article aims to provide educators and caregivers with insights into effective strategies for nurturing the potential of gifted blind children.*

Keywords: *Gifted education, blind children, assistive technology, educational software, inclusive practices, sensory learning, creativity.*

Introduction

The education of gifted blind children presents unique challenges and opportunities. While these children may possess exceptional cognitive abilities, their visual impairment can create barriers to accessing traditional educational resources. However, advancements in technology have opened new avenues for supporting their learning and development. This article explores various technologies designed to enhance the educational experiences of gifted blind children, emphasizing the importance of personalized approaches that align with their individual strengths and interests.

Main Part

In our country, on the basis of the principle "For human dignity", necessary measures have been taken to further improve the system of support for persons with disabilities, in particular, to strengthen the position of blind and visually impaired students in society. . In particular, in scientific research on the development of imagination of students with vision problems, special attention is paid to the effectiveness of the educational process, and the need to develop an improved methodical system is emphasized. In these studies, scientifically based suggestions on the development of the imagination of students with sensory (intuition) and special educational needs, the creation of an improved methodical system based on person-oriented educational technologies, the identification of influencing factors, Priority is given to the development of imagination, communication and self-development skills of students with learning disabilities.

Scientific researches are being carried out in connection with the methodological foundations of the development of the imagination of students with vision problems, the formation and development of technologies for social and personal activity competences, and the systematic organization of the correctional approach. increasing the effectiveness

of the development of students' imagination, as well as improving the didactic provision of organization through corrective works, is gaining importance.

The process of teaching blind students begins by explaining and demonstrating certain material. This material should be organized so that students with visual impairments can perceive it in the best way, while the teacher helps them master this material. Visual aids used for visually impaired students should have increased color saturation - orange, red, green. Display material should be displayed against a contrasting background color and visual material should have a clear shape. It is not recommended to use benefits with a glossy surface. Tables or pictures hung on the classroom wall should be devoid of glass and hung at the eye level of students. Tables or visual aids should not be overloaded with details that make them difficult to review and understand.

The best lighting standard for a classroom with visually impaired students is 700-1000 lux. The light should spread throughout the room, but there should be no bright, blinding glare in the classroom. Proper installation and height-appropriate furniture are of great importance. It is desirable that the board has a green color. It is not recommended to cover the board with white chalk, because the perception of such lines is especially straining for children with astigmatism. When presenting visual educational material from the front, it is better to invite visually impaired students to the blackboard, which ensures a complete and correct perception of the picture. It is recommended to use silhouette drawings that are simple, have minimal details and are therefore well received by low vision.

Perception of the world with the help of a vision analyzer is important for the mental development of the student. The strongest impressions of the surrounding environment are perceived by the eyes. The student gets an idea about the color, shape, size, movement, distance and proximity of objects, and their place in space through the ability to see. A known vision analyzer is a transmitter that delivers the image from the light-receiving part of the eyeball and its auxiliary apparatus to the subcortical centers and then to the cerebral cortex, where the family visual centers are located. Changes in any part of this analyzer will certainly affect the reader's ability to see.

Progressive weakness of vision, blue water, that is, glaucoma, is due to retinal dystrophy around the optic nerve, and can occur at any stage of the pupil's development. Non-observance of hygienic requirements also leads to worsening of eye defects associated with refractive anomalies.

Severe visual impairments cause secondary complications to the pupil's character and psyche. All work with blind students is carried out on the basis of restoring their vision, and it is possible to achieve such certain results. In any case, the student remembers the colors, shapes, etc. to some extent, which makes it easier to form relevant concepts. The later the blindness appeared, the richer the student's ideas about the surrounding environment, and the easier it is to strengthen, improve, and expand them.

Assistive technology plays a crucial role in providing blind children with access to information and educational resources. Key devices include:

- **Screen Readers.** Software applications like JAWS (Job Access With Speech) and NVDA (NonVisual Desktop Access) convert text on a screen into synthesized speech, enabling blind students to access digital content independently.

- **Braille Displays.** These devices translate digital text into Braille, allowing students to read and interact with content tactilely. This is particularly beneficial for gifted students who may prefer or require Braille for complex subjects.

- **Smartphone Applications.** Many apps are designed specifically for blind users, offering functionalities such as OCR (Optical Character Recognition) to read printed text aloud or navigation assistance through GPS technology.

Educational software tailored for blind children can significantly enhance their learning experiences. Some notable examples include:

- **Math and Science Tools.** Programs like Tactile Graphics and MathTalk allow blind students to engage with mathematical concepts through tactile representations and voice recognition.

- **Creative Software.** Applications such as GarageBand enable gifted blind children to explore music composition and sound editing, fostering creativity through auditory means.

- **Interactive Learning Platforms.** Online platforms that incorporate audio descriptions and tactile feedback can provide engaging learning experiences across various subjects, from literature to history.

To effectively integrate technology into the education of gifted blind children, teacher training is essential. Educators must be equipped with the knowledge and skills to utilize assistive technologies effectively. Professional development programs should focus on:

- Understanding the capabilities and limitations of various technologies.
- Developing individualized education plans (IEPs) that incorporate technology.
- Fostering an inclusive classroom environment that values diversity in learning styles.

Conclusion. The integration of technology in the education of gifted blind children offers unprecedented opportunities for enhancing their learning experiences. Assistive devices, specialized software, multi-sensory learning tools, and social interaction technologies can empower these students to reach their full potential. By adopting personalized approaches and ensuring educators are adequately trained in using these technologies, we can create an inclusive educational landscape that nurtures the unique gifts of blind children. Continued research and innovation in this field are essential for developing new strategies that support the diverse needs of gifted learners with visual impairments.

REFERENCES:

1. Resolution of the President of the Republic of Uzbekistan on measures to increase the quality of education in specialized boarding schools for blind and visually impaired children and to further improve their activities, No. PQ-209 dated 18.04.2022
2. The speech of the President of the Republic of Uzbekistan Shavkat Mirziyoyev at the meeting with representatives of creative intellectuals of Uzbekistan on 03.08.2017 www.president.uz
3. Mengnorova S.X. The methodology of developing the creativity of the beginning 1st class teacher with the help of ethnopedagogy. World Bulletin of Social Sciences (WBSS) Available. -ISSN: 2749-361X, 2023-yil. <https://www.scholarexpress.net> Vol. 27, October 2023
4. R.P. Ermakov, G.A. Yakunin, Tiflopedagogiki, Moscow - 2000 g.
5. D. Sulstonova. Tiflopedagogika, the text of lectures T - 2005
6. Djalilov Z. M. "Special psychology Typhlopsychology" Tashkent - 2010