# Features of inclusive education with children with special educational needs in Uzbekistan

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**ABSTRACT**

This article examines accessible educational resources and strategies for creating an inclusive learning environment for visually impaired and blind children in English language classes.

It addresses key considerations for inclusive teaching, proposing a lesson model that integrates audio-lingual and communicative methodologies. The article also provides practical examples of classroom and extracurricular activities utilizing universal access system components and educational applications. These examples aim to support the learning of visually impaired students and serve as a valuable resource for educators seeking to enhance inclusivity in their classrooms.

## INTRODUCTION

**Features of Perception in Blind and Visually Impaired Children**
Visual impairment significantly impacts a child's development of essential learning skills and cognitive functions. Children with low vision often experience fragmented and delayed perception, limited peripheral vision, and reduced observation abilities, hindering their ability to form a complete understanding of the world around them.

While these challenges can complicate educational management and organization, L.S. Vygotsky emphasized that the absence of vision can lead to profound personal and organismic restructuring. The body's compensatory mechanisms allow individuals to redirect their strengths to overcome the deficiency. Blind and visually impaired children often demonstrate superior verbal, mechanical, and logical memory compared to sighted peers. They exhibit heightened attentional activity and develop other senses like touch, smell, and hearing more acutely.

While limitations in mobility and spatial orientation present challenges, blind individuals benefit from strong social connections, enabling them to thrive as valuable members of society. This is facilitated by language, which acts as a bridge between the blind and sighted worlds, allowing for shared experiences and understanding.

Vygotsky highlighted the importance of inclusive education, where visually impaired children interact with sighted peers. This environment fosters communication and mutual understanding, empowering individuals to overcome their visual limitations through verbal exchange. The conflict arising from the interaction between the individual and their environment can stimulate exceptional development, transforming perceived deficiencies into strengths.

Every child faces a sense of insecurity, and overcoming this is crucial for personal growth and societal integration. In inclusive classrooms, teachers play a vital role as guides and mediators, minimizing potential negative outcomes such as antisocial behavior, withdrawal, and low self-esteem.

**Figure-1.** Methodological-strategy-of-English-language-learning-for-VIS-Source-authors
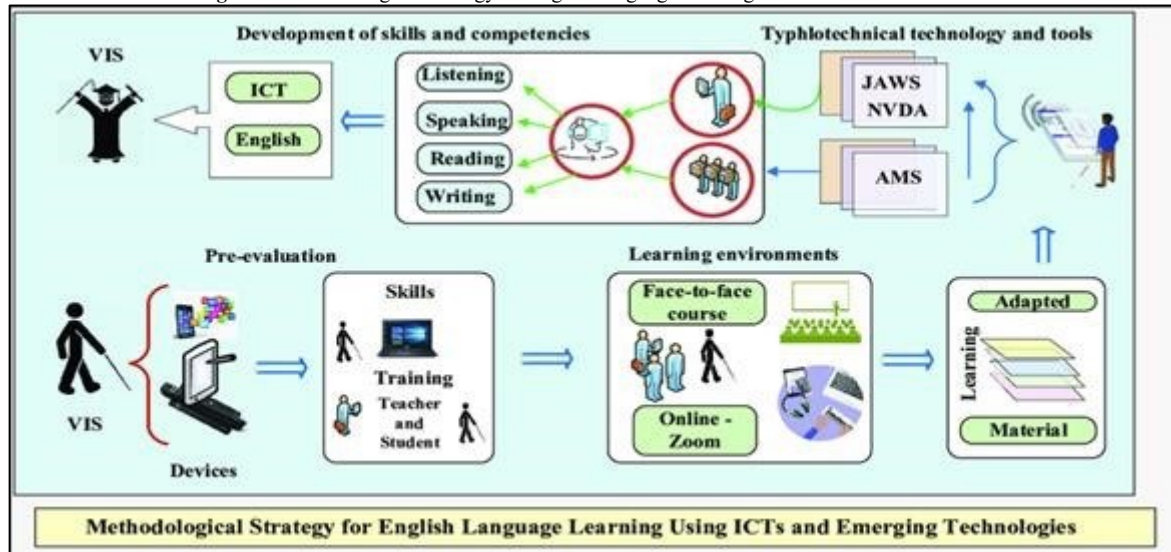
**Figure-2.** The Bralia alphabet

## Material and Method

This text explores the multifaceted nature of blindness and its implications for education. It begins by defining blindness as a functional impairment of vision, acknowledging both external factors like darkness and internal ones such as physiological conditions. The text emphasizes the complexity of visual impairment, encompassing various types and degrees, including color blindness and inattentive blindness.

Highlighting the importance of environmental adaptation to mitigate visual challenges, the text underscores the interplay between individual characteristics and external conditions in enabling integration. It acknowledges the significance of societal support and preparedness in fostering motivation and facilitating daily tasks for individuals with visual impairments.

The text then delves into the cognitive processes involved in object recognition by visually impaired individuals. While they share similarities with sighted individuals in analyzing and synthesizing features, their perception often faces limitations in processing complex details due to reduced visual-spatial synthesis. This can hinder generalization and analytical thinking, crucial for learning.

Furthermore, the text addresses external challenges faced by visually impaired students in educational settings, such as difficulties with multimedia content, formatting requirements, and lack of accessible workstations. It advocates for integrated education, where students with disabilities learn alongside their peers in inclusive classrooms. Acknowledging the need for specialized training and support for all participants in this setting, the text emphasizes the importance of a systemic approach to understanding individual needs and addressing primary, secondary, and tertiary impairments.

Finally, the text stresses the significance of utilizing diverse teaching technologies, such as communicative and research-based approaches, to engage students with visual impairments actively. It champions the compensatory role of speech in knowledge acquisition but cautions against relying solely on verbal methods. Instead, it advocates for a multisensory approach that integrates practical activities to ensure deep understanding and foster independent thinking.

In essence, this text provides a comprehensive overview of blindness as a multifaceted challenge and underscores the need for inclusive educational practices that empower individuals with visual impairments to reach their full potential.Results

The involvement of children with visual impairments in the process of learning English in inclusive classrooms can be facilitated through several methodological recommendations. Additionally, there is a list of relevant Internet resources available for visually impaired children through the use of

screen adjustments such as color settings, magnification, and audio dubbing.

One of the most popular screen reading programs is JAWS (Job Access With Speech), designed for individuals with low vision using personal computers. Moreover, students can utilize pre-installed (free) screen access programs on computers, smartphones, and tablets. For instance, TalkBack is used on the Android platform, while VoiceOver is used on Mac OS and iOS platforms. These programs provide audio feedback for the text displayed on the screen, assisting the child in independently navigating various educational websites.

To ensure that students with visual impairments do not lag behind their classmates in learning, it is recommended to provide them with a range of Internet resources for additional independent practice at home.

Let's consider a standard lesson plan consisting of seven stages as a model:

Beginning (Organizational stage): This stage involves organizational matters, lesson objectives, language warmup activities, and setting the students' focus on learning English. The teacher greets the class and discusses unrelated topics to engage the students.

Revision (Knowledge activation stage): This stage aims to activate and review previously learned vocabulary and reinforce lexical units relevant to the topic being studied.

Successful education implies regular monitoring of the effectiveness of the educational process, including group work, following the case-study principle.

To assess the completion of tasks by a visually impaired child, tests available on special online resources can be used. In such cases, the student would need to report the percentage of successfully completed tasks. Additionally, within the lesson's topic, the teacher can assign a similar task to the whole class, allowing them to observe the progress of the visually impaired student.

Let's continue with the remaining stages of the lesson plan:

Presentation (Introduction of new knowledge): This stage may involve a brief lecture by the teacher, individual work of the students, pair or small group work. The objective is to develop dialogical speech skills, reading skills for comprehension and exploration, and listening skills with information extraction.

Practice (Reinforcement of new knowledge): Students work in pairs or small groups to reinforce vocabulary related to the topic. They can listen to audio materials or engage in discussions based on the texts they have read.

Production (Skill and ability development): Students complete a written task from the textbook, aiming to develop their writing skills related to the topic. The visually impaired student also works independently, writing the text in a Braille notebook. The teacher is recommended to ask the student to read their work aloud for assessment, as it might be challenging for the teacher to perceive Braille script.

Giving homework: Based on the exercises completed in class, students are assigned individual tasks to be done at home.Feedback and evaluation: The teacher summarizes the lesson, assesses the students' work during the class, bids them farewell, and wishes them a good day.

Below are informative educational Internet resources with various content that can be used to increase the interest of each child in the learning process, including children with visual impairments. Each of these websites offers numerous additional materials for independent student work and provides teachers with the means to later assess the comprehension and successful completion of tasks. These materials can be used by the teacher during class (at any of the aforementioned stages) or as homework for further topic exploration.

BBC School Radio: [BBC School Radio, 2017]

This website is useful for both teachers and students. The materials are diverse and well-structured. It offers sections suitable for beginners as well as students with advanced language skills. The audio collections include examples of various natural phenomena, objects and instruments, animal and bird sounds. There are also different stories, traditional musical pieces, and more.

Voice of America: [Learning English, 2017]

he materials on this website are accessible and beneficial for both teachers and students. The video and audio resources are categorized based on language proficiency levels and themes, making it easy to navigate and select content based on the desired topics.

These resources provide engaging audio materials and activities that can enhance the language learning experience for students, including those with visual impairments. Teachers can incorporate these resources at different stages of the lesson plan to reinforce vocabulary, listening skills, and cultural understanding.The resource offers a selection of useful applications for the iOS operating system. With their help, you can develop knowledge and skills in English language proficiency. The website also provides applications that teachers can use to facilitate the work of students with visual impairments. For example, there is an application where you can upload the text of assignments from handouts, eliminating the need for the student to ask classmates to read it.

## DISCUSSION

Additionally, there is an internet resource that offers a collection of grammar and vocabulary tests. In addition to that, the website provides a compilation of videos where students need to listen to words and repeat them after the announcer, thereby practicing the skill of proper pronunciation of English sounds.

Of course, the list of resources provided is not exhaustive. We have selected resources that, in our opinion, best suit the theme of working with blind and visually impaired children in integrated middle school classes. Technologies are evolving, and today more and more websites offer additional settings for the visually impaired. Therefore, teachers can independently update and expand this collection. However, there are some conditions to consider: online resources should contain minimal graphical information such as illustrations, diagrams, and tables since the abundance of images can hinder the student's use of the resource, as current electronic access programs cannot recognize and vocalize images. The online resource should be informative and, if possible, offer tasks aimed at developing all types of speech activities.

Methodological recommendations for teachers to organize lessons for visually impaired students are also provided.

The challenge of working in inclusive classrooms lies in the fact that children with visual impairments may experience difficulties in visual perception, which can slow down their work compared to sighted students. For the most effective work in an inclusive class, solving this problem should be comprehensive. Special methodological materials, interactive lessons, reliance on specific online resources, as well as audio and media materials can assist teachers. To organize an inclusive lesson for a child with visual impairments and their classmates in the most comfortable way, ensuring maximum participation from all students, it is important to create a supportive educational environment and provide each student with the necessary level of independence.

To achieve truly successful results, teachers should focus on creating a comfortable learning environment and provide all students with the necessary degree of autonomy. For this purpose, teachers are recommended to use a set of additional assignments in the form of audio materials and texts based on online resources. Students will need to complete these assignments at home, and then discuss them with their classmates during the lesson within the topic provided by the teacher. By preparing in a calm atmosphere independently, rather than in a stressful situation during the lesson, students will feel more confident, knowing the material. Thus, during the class, the student can engage in similar tasks with other students, participate in pair and group work, and present their findings at the board. Going through the material together with everyone else, a student with visual impairments will feel more confident, which positively affects their comprehension of the material and social integration

within the group. Individual assignments are also suggested to enhance the self-esteem of students with visual impairments.

Before reading a textbook passage during the lesson, it is recommended to initiate a small discussion and ask students to talk about scientists, writers, or musicians they are familiar with. It is advisable to specifically address the student with inclusion and ask them to share the material they have prepared, without emphasizing that preparatory work was done at home. This provides the child with an opportunity to take on a leadership role in facilitating the discussion. Based on their presentation, a dialogue can be organized, and the class can ask questions to the student with inclusion. It's important to note that students with visual impairments may require a bit more time to read the text, as the reading speed in Braille is slower than reading with the eyes. Avoid rushing the student and involve them in the discussion once you realize they have finished reading.

We see an advantage in this method in that the teacher has the ability to track and monitor the level of understanding of the material by each student. It is also necessary to consider options for preparing a separate version of assessment tests for the student with inclusion, printed using the Braille system. Additionally, the text can be uploaded to a special application that the student (if they have a laptop or smartphone) could use during the lesson. This application can read out the pre-loaded text of the tasks, which the student with visual impairments can listen to using headphones.

A number of recommendations for organizing the integrated learning process in inclusive classrooms will be useful for teachers who are encountering the education of such children for the first time. It is important to understand that a child with visual impairments is capable of learning on an equal footing with other classmates, provided they receive the necessary educational support through the organization of an inclusive environment. Online resources can help in organizing such an environment, allowing the student with inclusion to pre-align with the topic, prepare for it, and work in the classroom on equal terms with everyone.

New technologies

In January 2017, a project to develop a tablet computer for blind and visually impaired individuals was announced on the well-known startup forum "TechCrunch" dedicated to technological innovations. The "Blitab" tablet, based on the "Android" platform, is equipped with a special dynamic display where text messages can be displayed in Braille code. This technology allows visually impaired and blind people to read books and texts from the internet. The device also features the "Voice Over" technology with universal accessibility functions, enabling computer control through voice commands. There is also consideration for the possibility of displaying images and maps on the display using Braille code. The tablet is promised to be very affordable and more convenient compared to existing devices such as printers and e-readers (O'Hare, 2023).

## CONCLUSION

Similar technology is being developed by electronic book manufacturers, such as the company "Kindle". Additionally, well-known computer corporations like "Microsoft" and "Apple" have been conducting research in the field of intelligent visual analysis and computer vision for many years and have achieved significant success. All "Apple" computers are equipped with software that supports universal accessibility features for individuals with disabilities. "Microsoft" specialists are working on projects in the field of natural language processing, including speech recognition programs and systems for image analysis and captioning. They are seeking ways to enhance the informativeness of verbal descriptions and developing image processing algorithms that can take into account valuable information and minute visual details, such as facial recognition and emotions. Engineers and scientists are striving to teach computers to see what a person can see in an image and describe it as accurately as possible, using voice messages or text [9]. These innovations and technological breakthroughs will enable blind and visually impaired individuals to have practically unlimited access to information resources and facilitate the process of information exchange. Therefore, it is essential for educators and methodologists to pay special attention to technological advancements in this field and begin preparing for the design and adaptation of new methods and systems for inclusive education.

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