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TEACHING ENGLISH LANGUAGE SKILLS TO VISUALLY IMPAIRED MASTER STUDENTS ONLINE*

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Abstract. Despite the development of assistive technologies, visually impaired students (VIS) continue to face issues when learning English. Most of the research explores the role of technology and materials adaptation in teaching English to VIS; however, there is a lack of research focusing on development of methods and approaches specifically designed for online education of blind students. Our research aims to address this gap by describing the methods, approaches and adaption of materials used to teach online English as a second language to visually

impaired master's students in an inclusive setting at ITMO University. We found strong evidence supporting the effectiveness of collaborative activities in inclusive education and adapted this idea for our online course, in which we successfully addressed several challenges identified in the literature, notably problems with fostering blind students' autonomy. The article provides examples of online collaborative activities, the analysis of the most common VIS mistakes and tips for online teaching VIS vocabulary, grammar and four language skills.

Keywords: visually impaired students, assistive technologies, online education, distant learning, inclusive setting, teaching strategies, ESL (English as a second language), accessibility, collaborative activities, educational materials, teacher training, adaptation of teaching materials, teaching language skills.

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ОНЛАЙН-ОБУЧЕНИЕ АНГЛИЙСКОМУ ЯЗЫКУ НЕЗРЯЧИХ СТУДЕНТОВ МАГИСТРАТУРЫ*

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Аннотация. Несмотря на развитие ассистивных технологий, незрячие студенты продолжают сталкиваться с трудностями при изучении английского языка. Большинство научных работ исследует роль технологий и адаптации материалов в процессе обучения иностранному языку. Однако существует недостаток работ, фокусирующихся на методах и подходах к обучению незрячих студентов онлайн. Цель данной статьи заключается в восполнении этого пробела путем описания подходов, методов и адаптации учебных материалов для осуществления онлайн-обучения английскому языку как иностранному незрячих студентов магистратуры Университета ИТМО, обучающихся в инклюзивной группе. Мы нашли убедительные доказательства эффективности совместного выполнения

заданий зрячими и незрячими студентами в инклюзивном классе и адаптировали эту идею для нашего курса, в котором нам удалось решить ряд проблем, описанных в литературе, в частности, проблему формирования автономии у незрячих студентов. В статье описываются использованные подходы и примеры заданий для организации автономной работы зрячих студентов с незрячими в сессионных залах платформы Zoom. Также в работе анализируются наиболее частые ошибки и даются рекомендации по онлайн-обучению незрячих студентов грамматике, лексике и четырем видам речевой деятельности.

Ключевые слова: студенты с нарушениями зрения, ассистивные технологии, онлайн-образование, дистанционное обучение, инклюзивная среда, стратегии обучения, ESL (английский как второй язык), доступность материалов, коллаборативные виды деятельности, учебные материалы, подготовка преподавателей, адаптация учебных материалов, формирование языковых навыков.

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Introduction

Education is one of the fundamental rights granted to everyone by the Universal Declaration of Human Rights. It seems evident that regardless of age, social status, profession, residence and so on everyone may and can study. For some people it is accessible without any issues, but some people constantly face challenges. In this paper we focus on describing practical solutions to problems of teaching English as a second language (ESL) online to master's students with visual impairments in an inclusive group. Most of the research explores the role of technology in teaching English to students with special educational needs and how it can be adapted for students with visual impairments. However, there is a lack of methodologies and resources specifically designed for teaching English online to visually impaired students. Our research seeks to address this gap by describing the strategies and approaches used in the ITMO University online inclusive course to improve students' English language learning outcomes, specifically their receptive and productive skills. Visually impaired students who apply to university typically possess at least basic English and have prior experience of learning the language across all four language skills: listening, reading, writing, and speaking. Therefore, university teachers are not required to build foundational foreign language competence. Consequently, the aim of this research was to identify, systematize, and outline approaches, methods, and means to help visually impaired university students develop their language skills in an online inclusive class.

It is essential to note that there is no universal notion when talking about students with visual impairments as sometimes it depends on the degree of the impairment or otherwise a term is used in a broader sense. However, in research articles it is possible to read such terms as VIS (visually impaired students), VIL (visually impaired learners), or BVI (blind and visually impaired) learners, or students with visual impairments. Thus, notion of visual impairment encompasses a range of malfunctions such as visual acuity, visual field, color vision, contrast sensitivity, photophobia, diplopia, loss of vision, visual perception issues, visual distortion, or some combinations of those [Teaching English..., 2021]. In this paper, we primarily use the abbreviation VIS, which stands for visually impaired students. However, since the degree of visual impairment can vary significantly from person

to person, every student with visual impairment may need individual adaptations to instructional practices and learning materials.

In general, according to estimates of the World Health Organization there are 285 million visually impaired people globally [A multilingual..., 2024]. Given this large population, we are convinced that finding ways to teach English to visually impaired students is of immediate interest, as learning English improves their communication skills, broadens their perspectives through team and project work, and enhances their prospects for future studies and careers [Teaching English..., 2021]. As a huge number of scientific papers throughout the world are published in English, their use in academic research enables students to get updated information, actualize their study, and publish their research outcomes, promoting science.

Furthermore, it allows students to learn about the latest research and practices in their field from colleagues around the world. Moreover, according to research, learning English as a foreign language, if it is organized properly, vigorously facilitates cognitive competencies (HOTS – higher order thinking skills) and ICT literacy which are a priority for employers. Applicants and employees with these skills are more competitive and efficient as it implies development of 4Cs, namely, communication, collaboration, critical thinking, and creation skills [Arif et al., 2024]. Therefore, ensuring accessible and effective English language education for VIS is crucial for their full participation in academic and professional life.

However, this task is complicated, as teaching English to VIS is hindered due to the lack of adapted teaching materials and the fact that teaching foreign language is mostly based on visual teaching materials [Efstathiou et al., 2015; Villalba, 2022]. Despite development of modern technologies and advancements nowadays, students with special educational needs continue to encounter challenges throughout the educational process. In many countries students with disabilities and special educational needs can attend either general school classrooms and integration classes, following a common or specialized program or special education schools, or they can get homebound instruction [Efstathiou et al., 2015]. The choice depends on a number of factors such as the wish of the student and their family, the readiness of the institution to provide the required environment, or the degree of the impairment.

Universities in Russia as well as in many other countries [Efstathiou et al., 2015] can provide access to VIS to: 1) materials in Braille, large print or audio format, 2) three dimensional or haptic teaching aids, 3) visual information presented in the class, 4) digital teaching materials, and 5) assistive and computer technologies. Also, a variety of supporting materials is helpful for VIS, namely, embossers, bold-lined paper, CD players, magnifiers, telescopic aids, tactile objects, tactile construction sets and models, tactile maps, tactile images, systems rendering text to synthetic speech, reading software, touch tablets with synthetic speech, which verbally describe the material while the student touches it, etc. All these can be handy for teaching English as well as other subjects, but they are not always instantly available. Practically, it means that the teacher delivering the class should take on responsibility for all these options, as printing materials in Braille requires special

equipment, supplies, and time as it is done for one particular students; digital teaching materials should be adapted well in advance.

Still, even if the materials are printed in Braille, most university teachers cannot check the written Braille text, as they do not have special education and competence in it. In case of special education, for instance, secondary schools for VIS, teachers are trained and aware of designing the teaching materials themselves, but it is not the case for university education in general. The majority of teachers are not informed about the needs of VIS [Kocyigit et al., 2015]. University teachers must take a course of inclusive education, sometimes specified course for teaching VIS, but it is hardly possible to find a course aimed at teaching foreign languages to VIS.

Nonetheless, whether the university teachers are qualified for VIS or not, they have to invest their time to master their competence and adapt instructional materials to meet the needs of visually impaired students. Consequently, university teachers have to allocate extra time and resources to find or create specialized teaching materials in their tough daily routine, which, on the other hand, leads to excessive workload. For example, according to research [Kroum et al., 2017], teachers have to: 1) adapt teaching and learning materials to make them perceivable and understandable by VIS, 2) provide special equipment and supplies required for students with visual impairment, 3) ensure remedial work or extra help in subject areas when needed, 4) act as an intermediary between a student's family and the educational institution.

To address this issue, research (questionnaires and semi-structured interviews) was carried out to reveal what materials and instruments English language teachers use in their work with VIS, what challenges they encounter, and how they overcome them [Efstathiou et al., 2015]. The results of that research illustrated that respondents apply a variety of resources: magnification software, software adapted for visually impaired students, telescopic aids, reading software, general education software, tactile construction sets and models, English books for the blind, Braille materials, audio books, magnifiers, and similar tools. While most poll results indicated the difficulty in acquiring and producing these resources, it was highlighted that all respondents primarily use audio materials for all formats (classwork, homework, project work). This method proves to be the most accessible and applicable for VIS [Villalba, 2022; Zahra et al., 2022].

Unfortunately, in practice, research shows that teachers often utilize almost the same teaching techniques and materials for both sighted students and students with visual impairments, which contradicts the suggestions that the visually impaired learners have different social behaviors and learning styles [Başaran, 2012; Kocyigit et al., 2015]. Throughout the educational process, teachers primarily rely on their own expertise, assistive computer technologies, and smartphone-based assistive technologies.

Frequently, teachers refine their techniques for teaching visually impaired learners by trial and error [Kocyigit et al., 2015]. Moreover, they feel it is not their responsibility to seek and provide teaching materials to visually impaired students and "tend to expect materials to be provided to them" [Efstathiou et al., 2015, p. 71].

However, we should bear in mind that students with visual impairments are students with special educational needs, and they do require special approaches, methods, techniques, and instruments. To support this argument, it should be mentioned that the oral approach, situational language teaching, the audio-lingual method, as well as the total physical response approach, have been found beneficial both for sighted students and students with visual impairments [Villalba, 2022]. Furthermore, research shows that advanced preparation of teaching materials for students with special educational needs also benefits sighted students [Villalba, 2022].

When examining the challenges visually impaired students and their teachers face, researchers group them into two categories [Kocyigit et al., 2015; Villalba, 2022]. They do not consider the impairment itself, though it drastically influences the perception of the world.

The first group is emotional challenges, which are negative or discouraging feelings students might encounter that can affect their interaction with the world. Among these emotional challenges are the teacher's feeling of inadequacy when realizing they have to work with a student with special educational needs, anguish, frustration, fear of failing, and unconscious bias. When asked about factors affecting the general experiences of visually impaired learners with English as a foreign language in Turkey, they listed the presence of biased teachers, biased institutions, and a lack of quality service by disability support units among negative factors, and the presence of supportive EFL teachers, supportive peers, and well-functioning disability support units among positive ones [Ekinci et al., 2024]. This indicates that their experiences vary significantly across different settings, which may seem contradictory.

The second group is pedagogical, as it implies the choice and modifications of teaching and learning methods that mediate and facilitate the perception and interaction with the world. Pedagogical challenges include a lack of institutional support, adapting materials for VIS, redesigning lesson plans, recognizing multisensory skills, evaluating materials for VIS, Braille knowledge, a lack of inclusive education training, a lack of devices, time constraints, and other related issues. The reliance of common teaching processes on visualization is also considered an obstacle by teachers, who often feel unsure how to replace visual aids for visually impaired learners [Kocyigit et al., 2015].

To cope with emotional and pedagogical challenges, researchers [Villalba, 2022] suggest using an array of strategies, such as using the native language, translating, reducing speed, screen description, questioning, modeling, listing, increasing motivation, giving positive feedback, eliciting information from visuals (when possible), compensating, checking understanding, and providing emotional support (affective scaffolding).

General recommendations for teaching students with visual impairments have been already formulated by researchers and practitioners. The most common ones [Разработка..., 2022; Шанявская, 2023; Abduvokhidova, 2021; Kroum et al., 2017; Teaching English..., 2016] include advice: 1) to explain any visuals (the teacher or peers should describe and comment on the visual in detail and spell the words if

any), 2) to give oral instructions persistently (it concerns all assignments and activities both intellectual and spatial), 3) to replace raising the hand with audible signal (it refers to all students in the group as raising the hand by a peer remains imperceptible for VIS and hinders their understanding of the current situation), 4) to provide tactile learning experience (although it is not always feasible, still some tactile perception can be realized in class, for instance, rocks, stones, wood, shells, foods and liquids, matters, fabrics, geometric forms, beads, seeds, yarn, fruit, vegetables, toys, clothes, pens, pieces of furniture, etc. VIS can visualize by means of a physical object rather than by a good auditory commentary), 5) to address all students by names (it helps visually impaired students know who is talking and identify their peers on the sound of the voice), 6) to give additional time to complete works (almost all assignments and tests imply assistive technologies for VIS to read and accomplish them, consequently, they need more time), 7) to treat all students equally (the use of certain modifications of materials and teaching styles does not mean double standards for students, moreover, lowering expectations does not serve impaired students. Moreover, students with visual impairment should participate in all class activities as well).

Methods and Materials

In this part of the article, we outline the methods and approaches used in our online General English language course for an inclusive group of Master's students.

To start the research, we resorted to critical analysis and synthesis of the literature available on the topic to structure the accessible knowledge. Further on, we completed the theoretical knowledge with practical experience of ITMO University teachers of English working with students with visual impairments, who were members of an online General English language course for an inclusive group of first-year Master's students, elementary (A2) level. The age of all course participants ranged between 20 and 40, and most of the students majored in IT and programming. The classes were held on the Zoom platform, and the Cambridge English Empower Elementary A2 textbook was used as the primary resource for the course.

Results and Discussion

Providing accessibility of reading and writing materials

Current literature offers limited and often outdated guidance on how to organize accessibility of reading and writing materials for VIS. The blind students in the inclusive group gave us some tips on how to optimize Word document accessibility for their screen-reader software. Our literature review identified a significant gap in effective teaching methodologies for reading and writing among visually impaired students, a finding reinforced by the consensus of other researchers in the field [Гулая и др., 2017]. Table 1 presents a summary of literature-derived solutions for teaching English to visually impaired students [Lintangsari et al., 2020].

Table 1 – Barriers, accommodation, and assistive technologies for VIS

Barriers	Accommodation	Assistive technology
VIS cannot access reading materials in printed form	Providing reading materials in an accessible format such as Word, PDF, or ePUB	Screen reader such as JAWS or NVDA
VIS cannot access visual concepts such as diagram, colors, table, etc.	Teacher needs to describe visual concepts	Alternative text attached to the visual provide VIS with a clear description of the visual
VIS are struggling in taking notes, summarizing, and understanding all lecture materials presented in visual concepts	Teachers should provide materials in advance to provide VIS enough time to learn it. Teachers can allow VIS to record and use handheld devices during classes	Slate, Stylus, Picture Descriptor software such as cloud vision, note taking software such as Evernote, write pad and so on
Written examination	Teachers can provide an assistant to VIS during exam. Assistant will read questions and write answers on the answer sheet. Teachers can design examination in form of audio, Braille, or Word file	Recorder, laptop, Braille translation software, Braille printer

While some accommodations and assistive technologies in the table are outdated or unavailable, others are particularly useful. For instance, we could not use Braille for a number of reasons. First, our visually impaired students did not know Braille because it is a time-consuming and complex process. Second, there are not enough Braille materials for teaching English. Third, nowadays new modern competitive technologies are available.

In contrast, the importance of providing materials prior to the class cannot be overestimated. Research shows that VIS have more advantages in learning foreign languages than sighted learners due to stronger verbal memory and assistive technologies [Tran et al., 2020]. Therefore, providing teaching materials prior to the lesson can be a good way to facilitate the work of VIS. First, it helps visually impaired students keep up with the pace of the class and review all necessary information in advance. Second, some reading tasks, such as skimming and summarizing, can present extra challenges for visually impaired students. The ability to repeatedly review material, pausing or rewinding as necessary, makes the flipped classroom approach especially helpful for blind students who require extra time for processing printed information [Alkhawaldeh et al., 2021]. Therefore, in our inclusive group, prior to each lesson, blind students had access to Word files containing textbook materials and unit vocabulary lists (with Russian translation)

for the upcoming class session. To ensure accessibility, all assignments and materials were sent and received via Telegram chat due to its convenient text-to-speech software.

Students with visual impairments also gave us some tips on how to optimize Word document accessibility for their screen-reader software. Specifically, for writing tasks, students advised replacing blank spaces or underscores in fill-in-the-blank exercises with a series of dots because their screen readers failed to recognize gaps, hindering their ability to identify gaps in the text. Due to their access to study materials before the class, visually impaired students demonstrated a better understanding of new grammar concepts compared to sighted students.

Although this pre-lesson preparation promoted faster completion of reading and writing exercises, VIS still needed extra time to navigate through Word files looking for the appropriate page or exercise. To address this problem, the teacher copied each exercise from the Word file and pasted it directly into the blind students' Telegram chat.

AI Image Descriptions: Benefits and Drawbacks

Discussing pictures and visuals poses significant problems for visually impaired students. We believe that AI-generated speech that closely resembles native speaker pronunciation can be used as an alternative to the picture description by one of the sighted students. In our opinion, using voice AI description of pictures may reduce the risk of pronunciation error fossilization, a risk particularly high in a group of elementary-level students.

In this course, we attempted to utilize several AI software programs that convert images to speech in order to explore their potential and to adapt pictures for VIS. The AI software programs we tried included Seeing AI, Image Chat, and the Image Describer Chrome extension. Our experience revealed that most of the AI-generated image descriptions used language beyond the comprehension level of our A2 English learners, resulting in the decision not to incorporate them into the classroom. However, we suggest they hold potential for upper-level VIS, as an alternative to traditional read-aloud by sighted students in inclusive classrooms.

Fostering independent collaborative learning in Zoom: developing reading, writing, speaking and listening skills

While learning foreign languages, students with visual impairments encounter different challenges in all four skill areas (listening, reading, writing, and speaking) that affect their verbal, spelling, and organizational skills among others [Teaching English..., 2016; Tran et al., 2020]. Reading activities are not a great challenge for students with visual impairments nowadays thanks to screen readers and audio software devices [Tran et al., 2020], although it requires additional time to listen and re-listen to the text while completing assignments. Listening and speaking activities are much more accessible, but writing still remains challenging, although students can use a laptop to type a text or speech-to-text software.

One more issue to keep in mind in the inclusive classroom is peers' interaction. We found strong evidence supporting the effectiveness of collaborative activities in inclusive education and adapted this idea for our course. While teaching reading and writing, we tried to utilize a variety of interactional patterns, including

individual work, pair work, group work, and whole-class work described in literature as an effective strategy for teaching English to visually impaired students in a group setting. The study carried out in Turkey found that sighted children initiate interaction with others easier and more frequently that their peers with visual impairments do and they interact more with sighted peers than with students with visual impairments. The fact of placing visually impaired students with sighted students in the same setting does not necessarily lead to interactions between the two groups [Başaran, 2012, p. 218]. Researchers witnessed that VIS may experience problems with gaining reception within the community [Villalba, 2022] and developing their communication skills may be challenging [Zahra et al., 2022]. Below are some examples of the tasks from the Cambridge English Empower A2 textbook which we used to improve our students reading, speaking, writing and listening skills while fostering their independent collaborative learning within Zoom breakout rooms.

Example 1. The goal of this activity was to improve our students reading and writing skills while fostering their independent collaborative learning within breakout rooms on the Zoom platform. The task required students to match nine clock images to corresponding sentences, e.g. “It's four minutes to five.” To meet the needs of visually impaired students, the nine sentences were sent to Telegram chat. Then, VIS were paired with sighted students and assigned to breakout rooms. In a breakout room the sighted student used Russian to tell times in the images. The student with visual impairment had to select the corresponding sentence from the Telegram chat and repeat it in English. Then students switched their roles. The visually impaired student had to listen to the sentences in English in Telegram chat, choose the one and tell time in Russian to the sighted partner who had to choose an appropriate sentence in English from the textbook. Then students were invited back to the virtual classroom where their answers were checked. After that, students continued working in breakout rooms, where they had to think of five more examples of times, quiz each other, and submit their written answers to chats.

Example 2. Another example was the textbook's job picture-matching task, which was adapted for pair work in breakout rooms. Sighted students looked at the pictures and described the jobs in Russian, while visually impaired partners had to say these jobs in English and write them down in Telegram. Using their Telegram entries, visually impaired students verbally quizzed their sighted partners in Russian, who responded verbally and in writing (English) in the Zoom chat. All the written answers were then reviewed in class.

We agree with other scientists that teachers should pay close attention to English punctuation when working with VIS, particularly punctuation signs and their usage. Teachers and peers are recommended to direct VIS attention to bold or italic fonts, currency symbols, decimals, and so on [Шанявская, 2023]. Also, the focus should be set on the use of capital letters as sometimes it is crucial and on words with aphonic letters and double consonants, for example, Wednesday, gallery, list – least, aunt – ant, as well as homonyms, such as weak – week, two – too, by – buy – bye, etc. [Разработка..., 2022; Шанявская, 2023; Abduvokhidova, 2021; Kroum et al., 2017; Teaching English..., 2016].

Interactive tasks in Zoom: developing speaking and listening skills

Research shows that when developing listening skills, it is necessary to consider that VIS have no visual support and audio texts should be perceived and understood without visual support [Шанявская, 2023]. We all learn through multiple senses; therefore, most learners count on their visual and auditory senses when studying a foreign language. The role of the visual and audio materials in foreign language teaching is obvious; however, when a learner fails to use one of these senses, they are more likely to compensate it using another one intensively, which the teacher is to notice and refer to it to achieve a successful teaching process. Auditory input is one of the ways that visually impaired students gain the information. Listening has been discovered to be more efficient for visually impaired students when compared to reading. As indicated by Röder et al. [Röder et al., 2000], using a variety of auditory tasks ensures higher activation in occipital cortex of blind people's brain.

What is more, the blind tend to develop additional aural sensitivity, enabling them to acquire specific skill to distinguish and imitate particular sounds without anu formal instruction, thus, they appear to be able to effortlessly acquire a native-speaker accent in a very short time.

Taking all these points into consideration, it is necessary to introduce the course materials in two ways: audio and screen-reader-friendly. By providing audio tasks the learners are focused on pronunciation and an illusion of a real presenter talking to a learner in conversational style, thus reducing the stress and boosting students' interest to the task itself. What is more, the speaking/listening mode is the most logical, acceptable and natural way to interact and is supposed to be "a successful means of conveying information to the mass"…"only audio can reproduce authentic aural stimuli, the two most common being spoken words and music" [Moloo et al., 2018, p. 103-104]. When teaching visually impaired learners online, firstly the presentation of information in such a way helps to develop awareness of pronunciation features in the target language (intonation, sounds, cohesion, etc.), expand vocabulary and improve speaking skills. It is also essential that audio tasks provided are up-to-date, relevant to some specific topic and containing all actual vocabulary. In addition, educators are supposed to give clear oral instructions to all audio tasks and discuss results orally.

Prior to the class, blind students get audio file and tasks optimized in Word in Telegram chat. Then, in class all students are given the oral instructions for the listening task and all questions are discussed orally before listening. Then students can listen to the audio and do all tasks individually then review them during group work. The opportunity to hear the audio and get tasks before the class enables VIS to complete the task faster, and they do not require extra time to do it.

Example 1: speaking activity, discussion

In the textbook students complete the task about risky jobs and listen to the conversation about Ice-road truckers based on the prior reading task. Firstly, questions and tasks (True or False statements) are copy pasted in Telegram chat to VIS prior to the lesson. In class, all tasks are discussed orally in the whole group, audio is played in Zoom twice afterwards. Teachers welcome students to discuss

their answers while blind students are actively involved in this discussion. Some oral activities can be provided as after listening task. All students can work in smaller groups in breakout rooms and speculate on the most risky jobs they know, presenting their results in the form of a mind map. VIS can take an active part in this activity offering their examples and support.

When designing a course, teachers strive for making the course engaging for the learner by using bright pictures, interest-provoking topics, cultural phenomena, etc. Unfortunately, most of these methods do not work for the blind. One of the ways to engage the learner, especially a lower-level learner, into the course is to set real-life tasks and demonstrate the way to act in such situations. By making the tasks serious and realistic, we teach learners to face regular contexts and deal with real-life situations in English. Thus, Role-play tasks for some real-life situations or Case study tasks can be the most effective ways to develop speaking and communication skills. It can be more helpful to make mixed groups of sighted learners and visually impaired students as they have different experience and life perception; simultaneously, this approach can allow teachers to integrate different tasks into mixed groups work as sighted students can assist visually impaired learners, e.g., describe images or graphs for them.

Example 2: speaking activity, interview

All students are assigned to get more information about their peers' families and conduct a survey in class. They prepare a list of questions (using Present or Past Simple) and then shared into small groups they interview all their colleagues changing roles interviewer-respondents. The aim of the task is to interview as many people as possible and make a conclusion about families in their group (better as statistical data). This activity never poses any problems to VIS to complete, and they are actively engaged in work of their groups.

Thus, using games and oral activities can be an effective tool to improve speaking skills in visually impaired students. This group of English learners can greatly benefit from class discussions and interactive activities as many blind learners have aptitude for speaking and communicating activities. To make audio tasks more engaging for visually impaired students, teachers can create some word games motivating students to learn new vocabulary, as well as follow-up discussion activities to role-play some real-life cases using new words and grammar constructions.

Considering the evidence that VIS possess strong verbal memory [Tran et al., 2020] and the proven benefits of providing VIS with learning materials in advance [Arif et al., 2024] we recommend supplying blind students with Word files containing the textbook materials and translated vocabulary lists before each class. For teaching specific language materials like vocabulary and grammar, we recommend to share grammar rules with students before the lesson via a platform with text-to-speech functionality, such as Telegram. For writing activities, VIS require access to an electronic device to type the assignment and submit it, consequently requiring a little more time.

In our class we utilized a variety of interactional patterns, including individual work, pair work, group work, and whole-class work. Challenging the claims of

[Villalba, 2022] and [Zahra et al., 2022] that VIS struggle with communication, our VIS demonstrated successful collaboration with sighted students. The sighted students readily communicated with VIS, creating an effective learning partnership. This finding is also strongly supported by evidence from other researchers [Демьяненко и др., 2022; Разработка..., 2022], who also advocate for collaborative activities in inclusive education. Thus, we suggest that collaborative activities between visually impaired and sighted students are an effective teaching approach in the inclusive classroom.

The analysis of the most common students' mistakes in our class revealed that visually impaired students' writing errors aligned with existing research. Specifically, some VIS commonly demonstrated a lack of capitalization at the start of sentences. They also exhibited other errors such as inaccurate transcription, grammatical mistakes, and letter/syllable manipulations (e.g., omissions, additions, incorrect word spacing), all of which are well-documented in the literature [Lailiyah, 2020]. Spelling and punctuation can also be challenging for students with visual impairments, despite their good memorization skills.

A notable characteristic of some VIS is their tendency to speak English too fast in a somewhat robotic manner, likely due to their frequent exposure to high-speed text-to-speech programs. Notwithstanding this fact, we believe that using AI speech programs to describe pictures can be an alternative to sighted students' oral descriptions of the pictures. Taking into account that elementary English level students often mispronounce words, this approach may help prevent pronunciation error fossilization in VIS. However, due to the advanced language used in most AI-generated image descriptions, we chose not to include them in our A2 English classroom. Nevertheless, we believe they would be beneficial in inclusive groups with advanced English learners. Further research is necessary in this area.

Also, we found that teachers can make audio and speaking tasks more engaging for visually impaired students by creating word games to promote vocabulary learning and follow-up discussions that involve role-playing real-life situations using newly learned words and grammar.

Conclusion

Although students with visual impairments encounter certain challenges while studying, in general, and learning English, in particular, most of these challenges can be diminished and subdued. Teachers managing the educational process should consider different ways to overcome pedagogical issues hindering teaching and learning English on the part of educators and VIS. At the same time, they ought to be ready to allocate extra time and efforts to organize the educational process to the best advantage.

In our study we focused on possibilities granted by online learning, as it provides various formats, namely: individual work, pair work, group work, and whole-class work, and ensures development of all four language skills. It is evident that VIS benefit greatly from working in mixed groups or teams having an opportunity to interact and manage tasks with their sighted peers.

Considering all examples and recommendations described previously, the most effective ways to boost VIS' involvement in classwork proved to be using

collaborative approach; providing all tasks and materials prior to class in the text format (Word) with comprehensive explanation of the assignments and in the order they will be completed in class; providing clear instructions before all tasks assigned to students; implementing more interactive and collaborative activities that will allow blind and visually impaired students take an active part in classwork and feel more comfortable.

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