

From Silence to Participation: Technology-Supported English Learning for Students with Down Syndrome

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Nithya Sakthivel

Research Scholar

Karpagam Academy of Higher Education, Coimbatore

Dr. S. Selvalakshmi

Professor and Head, Department of English

Karpagam Academy of Higher Education, Coimbatore

Abstract

Inclusive education has seen the emergence of a focus on the need to meet different learning and communication requirements in ordinary classrooms. Nevertheless, the practice of English Language Teaching (ELT) is usually focused on fluency, quick oral response and standard speech performance that can also restrict the involvement of people with Down Syndrome unintentionally. Such learners often show retarded expressive speech development and strong visual learning skills and a need to interact socially. The paper discusses the relationship between technology-assisted English learning and transforming classroom experiences through facilitating effective communication and interaction. The presentation is an analysis of pedagogical use of digital and assistive technology including visual learning apps, augmentative and alternative communication (AAC), speech-support software, and interactive multimedia platform. These are multi-modal tools of understanding, responding and expressing ideas even when the verbal speech is evolving at a slow pace. Technology enables repetitive practice, visual reinforcement and other communication avenues, which in turn will lower performance anxiety and build confidence in the learner. Instead of perceiving silence as a sign of incompetence, the paper allows reformulation of silence as a consequence of communicative impediments that are formed due to the conventional teaching requirements. Technology is a facilitative tool that helps in making students transitioning between passive learning and active participation in the English learning activities. Using clear-cut examples of classroom-based practice, the paper illustrates how communication-based ELT practices can be used to foster inclusion, socialization, and functional use of language by students with Down Syndrome. This paper concludes that inclusive pedagogy facilitated by technology does not only promote language learning, but also enable learners to be autonomous, dignified, and participating to make English classrooms fair places where all learners can gain communicative voices.

Keywords: Down Syndrome, Communication, Technology, Language Inclusion.

Today, inclusive education has become a key concept of the contemporary classroom, aiming to ensure that every student, regardless of their abilities and backgrounds has an equal opportunity to learn and interact (Ferguson, 2008; Kozleski et al., 2015; Alekhina et al., 2018). Over the recent past, the classroom setting of English

language teaching has increasingly accommodated the needs of students with varied linguistic abilities, learning styles, and level of development (Sedova and Navratilova, 2020; Rusdiansyah and Sudana, 2024). Such diversity forces educators to adopt teaching strategies, which are flexible, accommodative, and sensitive to the needs of all students (Kozleski et al., 2015; Yotta, 2023).

Among this category of learners, one must mention people with Down Syndrome, who often have difficulties with communication, speech production, and language processing (Dolva et al., 2010; Dolva et al., 2011). It is these challenges that make participation in English language learning activities particularly challenging. Traditional approaches to English Language Teaching (ELT) tend to focus on the aspects of fluency, fast reaction, and standard patterns of speech, which are not always able to accommodate learners with differences in communication (Ferguson, 2008; Sedova and Navratilova, 2020). Even though such approaches may accommodate some students, they have the unwanted effect of isolating students with communication difficulties. As a result, many students with Down Syndrome may remain silent at the classroom discussion not because they lack ideas or understanding, but because the classroom environment fails to effectively meet their needs and requirements in terms of communication (Dolva et al., 2011; Sanders, 2013).

Under this premise, there exist hopeful prospects of creating more inclusive language learning environments due to the integration of technology and facilitating tools. Speech-to-text software, visual learning platforms, interactive language apps, and AI-based communication tools represent other sources of freedom in which learners can express themselves (Johnson & Mutlu, 2025; Rusdiansyah and Sudana, 2024). These devices allow students to learn at their pace, reduce the stress of talking, and encourage different communication skills (International Review of Research in Mental Retardation, 2026; Yotta, 2023). Therefore, the presented work attempts to analyse the ways in which technology-enhanced practices in the English Language Teaching can help learners with Down Syndrome to move on the path of silence to being able to participate actively in the classroom interactions. This paper examines the potential of assistive and online tools to present the practices that can help to facilitate the practices of inclusive teaching and help students with Down Syndrome to become more confident and involved in the process of learning the English language (Alekhina et al., 2018; Johnson and Mutlu, 2025).

The major objective of the research is to examine the communication challenges facing students with Down syndrome during English Language Teaching (ELT) classes. Speech articulation, vocabulary, memory, and language comprehension have been identified as the major difficulties faced by learners with Down Syndrome and may affect the active engagement of this group of people in language learning processes (Dolva et al., 2010; Dolva et al., 2011; Sanders, 2013). The research concerning language development also explains that learners with developmental distinctions might need extra processing time, systematized contact, and supportive communication settings to involve effectively in language learning (Allen and Hulme, 2006; Weisleder and Fernald, 2013).

Nevertheless, the practices associated with traditional ELT often support fluency, rate, and standardized varieties of speech delivery in a manner that may indirectly restrict the involvement of learners with communication disparities (Scarborough and Zellou, 2013; Sedova and Navratilova, 2020). These issues are thus critical to the determination of factors that affect learning experiences of students with down syndrome in language classes. The second study objective involves determining how the technology-enhanced learning interventions can play a role in shaping the language acquisition of the learners with Down syndrome. The latest advances in the sphere of educational technologies have brought a range of digital instruments, such as speech recognition systems, visual learning platforms, interactive isomorphic applications of languages, and AI-enabled communication technologies (Johnson & Mutlu, 2025; Jiang et al., 2022; Kroesch et al., 2022).

It has been pointed out in research that the said technologies could potentially offer alternative means of interaction, personalised learning experiences, and encouraging responses to learners with unique requirements (Impact of the Information and Communication Technologies on the Education of Students with Down Syndrome, 2020; International Review of Research in Mental Retardation, 2026; Yotta, 2023). The third goal is to establish integrative pedagogical practices that facilitate participation and interaction among the pupils with down syndrome during ELT lessons. The research aims to contribute to the inclusive language learning process and meaningful participation of learners with different abilities by studying flexible teaching methods and the enhancement of the process with technology (Ferguson, 2008; Kozleski et al., 2015; Alekhina et al., 2018; Rusdiansyah and Sudana, 2024; Chun et al., 2016; Yakubjonova, 2024).

Down Syndrome is a hereditary disorder, a consequence of having one more supernumerary copy of chromosome 21, which affects the physical development, intellectual acquisition and behavioural forms (Antonarakis et al., 2020; Grieco et al., 2015). Down Syndrome is a disorder characterised by the appearance of some physical features, usually exhibited by persons, as well as having different degrees of intellectual disability. Nevertheless, it should be noted that every person with Down syndrome has different skills, hobbies, and learning possibilities (Chapman, 2019; Sanders, 2013). In educational settings, these features matter to the establishment of inclusive and supportive learning settings that respect the diverse learning requirements (Ferguson, 2008; Kozleski et al., 2015; Alekhina et al., 2018).

Cognitively, learners with Down syndrome might take more time to process information, recall instructions, and build up language skills (Karmiloff-Smith et al., 2016; Allen and Hulme, 2006). Their development of learning can also be slower, and clarity of explanations, repetition, visual aids, and organized instructions tend to help them (Grieco et al., 2015; Sanders, 2013). Nevertheless, a high desire and willingness to communicate and engage among a subset of learners with Down syndrome is evident when the latter are properly guided and encouraged to participate (Abbeduto et al., 2007; Chapman, 2019).

One of the major peculiarities of language development among people with Down syndrome is the discrepancy between receptive and expressive language skills. Receptive language is a skill of hearing or reading language, and expressive language is a skill of speaking or writing (Abbeduto et al., 2007; Chapman, 2019). It has been researched that numerous people with Down syndrome are characterised by greater receptive language proficiencies than expressive language proficiencies (Karmiloff-Smith et al., 2016; Allen and Hulme, 2006). This implies that students can possibly learn the classroom directions and discourse more than it is possible to communicate their thoughts in words. This differentiation can assist instructors in not underestimating the understanding of students and using supportive verbal and nonverbal communication patterns that enable the latter to convey their meanings through various channels of interaction (Chun et al., 2016; Sedova and Navratilova, 2020; Yotta, 2023).

Students with Down syndrome usually have a few communication challenges that can affect their involvement in classroom processes, especially in language learning settings such as English Language Teaching (ELT). Delayed speech development is one of the typical problems. Many learners with Down syndrome need more time to start speech and could have problems with pronunciation and articulation (Chapman, 2019; Abbeduto et al., 2007). The speech clarity due to physiological factors (differences in oral tone and speech coordination) may complicate a verbal communication (Grieco et al., 2015; Antonarakis et al., 2020). Such issues associated with speech may even make learners feel too insecure about engaging in verbal classroom tasks (Sanders, 2013).

The other difficulty is on the limited vocabulary development and sentence construction. Students with Down Syndrome might learn new words more slowly and struggle to make longer and more

complicated sentences (Allen and Hulme, 2006; Karmiloff-Smith et al., 2016). Consequently, they can use short phrases or basic expressions to convey their ideas (Abbeduto et al., 2007; Wijnen, 1990). This does not however, imply an absence of understanding. It seems that, according to research, learners with Down syndrome tend to know more language than they can articulate orally (Chapman, 2019; Weisleder and Fernald, 2013). This expressive restriction can at times inhibit them in expressing themselves in a classroom dialogue or language learning exercise.

Also, most classroom activities are associated with students providing fast answers during verbal communication, i.e., responding to questions, discussing issues in a group, or taking part in an impromptu speech. Students with Down Syndrome might require more time to process and structure their answers to questions (Scarborough and Zellou, 2013; Sedova and Navratilova, 2020). In classroom settings with an emphasis on speed and instant reactions, such students can be anxious or afraid to contribute (Rosenfeld and Rosenfeld, 2006; McLaughlin, 2011). The knowledge of these communication issues can guide teachers to provide positive learning conditions, enabling learners to experience enough time and various forms of expression, which forms more inclusive studying in the ELT classrooms (Alekhina et al., 2018; Chun et al., 2016; Yotta, 2023; Rusdiansyah and Sudana, 2024).

Even though people with Down syndrome can have some communication problems, they also have some learning advantages which can be successfully applied to the educational environment. A good visual learning capability is one of the strengths. Visual aids (pictures, charts, flashcards, multimedia resources) can be effective with many learners with Down syndrome (Chapman, 2019; Grieco et al., 2015). The visual materials might contribute to the improved comprehension of the concepts and retention of the information, including the language learning activities where visual cues and images may assist learners with vocabulary and understanding (Herrero et al., 2018; Jiang et al., 2022). The use of the visual aid in the classroom is consequently significant in enabling such students to experience meaningful learning (Sanders, 2013).

The other strength is that they respond positively to repetition and structured learning. Due to Down Syndrome, learners usually enjoy a routine, step-by-step directions and repetition of language patterns (Karmiloff-Smith et al., 2016; Allen and Hulme, 2006). Through repetition, vocabulary, grammar patterns, and sentence structure are reinforced and thus the students are able to develop their communication skills over time (Abbeduto et al., 2007; Wijnen, 1990). Predictability and safety are also advantages of structured learning environments that may promote the confidence and interest of learners in classroom activities (Sanders, 2013; Chapman, 2019).

Besides, a substantial number of people with Down syndrome show that they prefer to socialise and learn together. Studies show that students with Down syndrome usually like working with their colleagues, group activities, and interactive learning processes (Dolva et al., 2010; Dolva et al., 2011). The given social stimulus becomes especially helpful in language classes where communication and interaction are the key factors of language acquisition (Dornyei, 1998; Sedova and Navratilova, 2020). In the process, when the teachers create activities that facilitate collaborative effort and beneficial peer interaction, the learners with Down syndrome might feel free and encouraged to engage in it, slowly gaining more confidence in their communication skills (Alekhina et al., 2018; Chun et al., 2016; Yotta, 2023; Rusdiansyah and Sudana, 2024).

Inclusive English Language Teaching (ELT) is associated with the idea that every student, irrespective of their abilities and learning differences, should be allowed to contribute meaningfully in language learning (Ferguson, 2008; Kozleski et al., 2015; Alekhina et al., 2018). Inclusive pedagogy is an idea that insists on the equal opportunities of learning, and it is based on the possibility to modify the teaching methods, materials and the way of classroom organisation to meet the needs of different learners (Chun et al., 2016; Rusdiansyah and Sudana, 2024; Yakubjonova,

2024). Inclusive ELT classroom teachers understand that learners acquire and share knowledge differently; hence, they need to be flexible in instruction to facilitate the development of each student (Sedova and Navratilova, 2020; Yotta, 2023).

An important feature of inclusive ELT is taking care of the various communication requirements of learners. Though a certain number of students might display their knowledge using spoken words, other students might use visual aid, signs, or technology as effective means of communication (Herrero et al., 2018; Jiang et al., 2022). The identification of such diverse communication forms will enable teachers to create lessons that will be more inclusive and accommodating to every student (Johnson & Mutlu, 2025; Kroesch et al., 2022). Inclusive practices thus promote the incorporation of visual and other support tools, group activities, and assistive technologies and various learning strategies in order to make the students with various abilities actively engage in the learning process (Impact of the Information and Communication Technologies on the Education of Students with Down Syndrome, 2020; International Review of Research in Mental Retardation, 2026).

Nevertheless, common ELT approaches typically focus on speaking fluency, pace, and performance assessment, especially when it comes to the speaking processes (Scarborough and Zellou, 2013; Sedova and Navratilova, 2020). A lot of classroom activities involve students to be on their feet and speak with confidence and show the language proficiency by means of immediate verbal interaction (Dornyei, 1998; Rosenfeld and Rosenfeld, 2006). Although such expectations can be beneficial to some students, they have the unintentional effect of excluding learners with communication issues, such as the student with Down Syndrome or speech-related variations (Chapman, 2019; Sanders, 2013).

Here, the issue regarding the role of silence in the classroom becomes relevant. Just because people are silent does not necessarily mean that they are unable or incapable of understanding. Alternatively, it could indicate the barriers in communication, time in processing or confidence factors (Coplan, 1985; McLaughlin, 2011). The acknowledgment of silence as a learning process also encourages educators to rethink participation in more inclusive forms, and learners can become active with various types of participation and expression (Chun et al., 2016; Yotta, 2023).

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The strategies involving technology can be critical as they help to establish inclusive English Language Teaching (ELT) classrooms, especially on the learners with Down Syndrome who may have speech-related issues and problems with language production and expression (Alekhina et al., 2018; Kozleski et al., 2015). Visual-based language instruction is one of the methods that proves to be effective, the processes involve using images, symbols and flash cards as well as short videos to introduce and practice vocabulary and language structures. It has been found out that visual learning abilities of several learners with Down Syndrome can be very high; hence, visual aids can be used to improve understanding and enable the learners to memorize new information and concepts much better (Chapman, 2019; Grieco et al., 2015). The learning of a language also becomes less complicated thanks to visual materials, which do not need to think much to grasp complicated verbal descriptions of the process (Herrero et al., 2018; Jiang et al., 2022).

The use of the Augmentative and Alternative Communication (AAC) equipment as an important strategy to help students with oral communication difficulties is another strategy. Online communication boards and symbolic applications enable students to build sentences using pictures or symbols which indicate words and concepts (Sanders, 2013; Kroesch et al., 2022). These tools allow students to communicate their ideas even in the case when verbal communication is difficult to use, thus promoting active and social engagement in class activities (Johnson and Mutlu, 2025; Impact of the Information and Communication Technologies on the Education of Students with Down Syndrome, 2020).

Moreover, the online tools that can facilitate the interactive learning may be used to make the learning of a language more interesting and accessible. Digital storytelling, multimedia projects, language learning games, etc., help the learners practice language skills in meaningful and creative situations (Dörnyei, 1998; Rusdiansyah and Sudana, 2024). Such interactive environments make them more motivated and enhance learner involvement in the learning process (Yakubjonova, 2024; Yotta, 2023).

Lastly, the speech practice tools, pronunciation applications and voice recording, can be used to help the learners form a slow yet steady improvement in speech. Recording and listening to the speech that they utter, learners may become much more aware of the patterns of pronunciation and gradually improve their articulation (Scarborough and Zellou, 2013; Sedova and Navratilova, 2020). In general, these types of technology enhanced strategies can make ELT classes more inclusive, offering numerous options to communicate as well as to learn a language (Chun et al., 2016; International Review of Research in Mental Retardation, 2026).

Teaching classroom lessons with a case-based approach will offer some valuable information on how technology-enhanced instructional methods may aid in the inclusion of English language teaching (ELT) classrooms. When teaching students with Down syndrome in classes, educators will be able to develop structured interventions that involve the integration of technology with supportive pedagogical methods that facilitate effective involvement (Ferguson, 2008; Kozleski et al., 2015; Alekhina et al., 2018). These strategies illustrate how students can transition at a slow pace through activities of passive observation to active learning of languages (Rusdiansyah and Sudana, 2024).

An example about it is the technology supported ELT activities including digital flashcards, interactive vocabulary programmes and multimedia presentations. Images, short videos, or animated stories can be used by the teachers to introduce new vocabulary so that the learners can comprehend word meanings visually. It has been found that the visual and multimedia media may prove to be of great use in increasing the understanding and memory of learners with Down Syndrome (Herrero et al., 2018; Grieco et al., 2015). Language acquisition is also even more entertaining and approachable as the students can train vocabulary using interactive applications where they can match pictures and words or they can listen to the pronunciation example (Jiang et al., 2022; Chun et al., 2016).

The other relevant strategy is organised communication practices that will progressively train learners to communicate their ideas. Instructors can refer to online communication boards or sentence-building programs during which learners can choose pictures or words to construct simple sentences (Sanders, 2013; Kroesch et al., 2022). These kinds of organized activities make students less anxious and gives them definite assistance in case they struggle with spontaneous speaking exercises (McLaughlin, 2011; Scarborough and Zellou, 2013).

The collaborative learning through peer-supported learning can also be important in the inclusive classrooms. The digital storytelling, role-playing activities, or cooperative language games are group activities that promote interaction among students (Dolva et al., 2010; Dolva et al., 2011). Peers have the opportunity to demonstrate the use of language and support in the process of working, which encourages social communication and interaction (Dornyei, 1998; Sedova and Navratilova, 2020).

Under such nurturing strategies, students with Down Syndrome should over time be able to move by not being active observers at the classroom, but participants in language learning activities. Efforts toward confidence and communicative competence as well as enhanced sense of inclusion can thus be achieved through technology-based learning environments as well as collaborative ones in ELT classrooms (Johnson & Mutlu, 2025; Yotta, 2023).

The pedagogical consequences of making sure that technology is integrated into inclusive English language teaching (ELT) classrooms include significance to teachers, curriculum developers, and schools. Among the important implications is that teachers need to be trained on using assistive and educational technologies. The teachers are at the centre of introduction to inclusive practices; thus, they need to acquire knowledge and skills necessary to successfully introduce digital and assistive tools into the classroom (Chun et al., 2016; Jiang et al., 2022). Educators should be provided with such tools as Augmentative and Alternative Communication (AAC) systems, applications of visual learning, and speech-support technologies, which they should introduce during their professional development programs and which may help learners with communication challenges (Kroesch et al., 2022; Johnson & Mutlu, 2025). Teachers are capable of applying these tools into class learning with a rigorous training to implement them meaningfully and better cater to the needs of students with diverse communication needs (Rusdiansyah and Sudana, 2024).

The other significant implication is in relation to multimodal learning materials development. Teaching materials used in inclusive ELT incorporate various types of feedback in the form of text, images, audio, and video to suit the various types of learners (Yotta, 2023; Kirby et al., 1988). Diverse resources enable students to receive information in many different ways, and this approach can offer a significant benefit to students with a Down syndrome to enhance their understanding and memorization (Herrero et al., 2018; Grieco et al., 2015). Thus, the use of visual aids, engagement-style activities, and the simplified structure of language that will help to embrace people with disabilities should be integrated into the lesson plans and teaching materials (Sanders, 2013; Chun et al., 2016).

It is also necessary to create a supportive classroom environment which would help in promoting the inclusion. Educators ought to foster patience, compassion, and team learning in such a way that students who have communication challenges feel free when engaged in the classroom learning activities (Ferguson, 2008; Kozleski et al., 2015). The classroom environment should be favorable to anxiety and help learners feel more confident about the language learning process (Dornyei, 1998; Sedova and Navratilova, 2020). Lastly inclusive pedagogy must also seek to encourage involvement and independence among learners. Through technology-based strategies, students will be empowered to develop language and confidence since they will be able to slowly express themselves in a manner that best satisfies their abilities (Alekhina et al., 2018; Impact of the Information and Communications Technologies on the Education of students with Down syndrome, 2020). Active participation and independent learning can be used by teachers to empower learners with Down syndrome to develop stronger communication skills and improved sense of belonging when learning in ELT classrooms (Chapman, 2019; Abbeduto et al., 2007).

Although technology holds great promises to facilitate inclusive methods in the English Language Teaching (ELT), there are a few issues and constraints that should be addressed in adopting technology-based learning to a student with Down syndrome. Inability to have adequate technological resources in some learning settings is one of the greatest obstacles. In a lot of schools, especially in less-fortunate areas, the use of digital devices, the presence of a stable internet connection, and assistive technologies can be limited (Jiang et al., 2022; Impact of the Information and Communication Technologies on the Education of Students with Down Syndrome, 2020). Such digital divide may help avoid the continuation of using technological tools in the classroom by the teacher, thus constraining the possible positive impact of technology-facilitated inclusive educational methods (Kroesch et al., 2022; Johnson and Mutlu, 2025).

The other major problem is insufficient training of teachers on the usefulness of inclusive technologies. Most teachers might not have heard of such assistive aids as augmentative and alternative communication (AAC) systems, speech-support software, or other learning platforms unique to students with various learning needs (Chun et al., 2016; Sanders, 2013). In the absence of an adequate level of professional development and support in a technical environment, teachers might have difficulties in applying these technologies to their teaching methods (Rusdiansyah and Sudana, 2024; Alekhina et al., 2018). Thus, the entire educative capability of technology in promoting inclusive education would not be fully exploited.

Digital dependence exposes the language learning environment to the risk of overreliance as well. Even though technology has the potential to increase levels of access and interaction, excessive reliance on digital resources can decrease the potential to have an authentic interaction, social interaction, and collaborative learning (Dornyei, 1998; Sedova and Navratilova, 2020). The social aspect of the language learning is the fact that meaningful communication with both peers and a teacher is all that is needed to develop language competence (Weisleder and Fernald, 2013; Scarborough and Zellou, 2013).

Lastly, the ethical aspect of digital technologies usage is also significant as it touches upon the matter of privacy, data security, and responsible use of technology. Most educational apps are storing user information, and it is crucial to make sure that the personal information of the students is treated safely and reasonably (Chung, 2013; Johnson & Mutlu, 2023). Thus, the ethical and responsible considerations that teachers and schools should apply to using technology on inclusive ELT classrooms are the responsible policies and practices (Ferguson, 2008; Kozleski et al., 2015).

This paper emphasizes the increased significance of technology-enhanced methods of facilitating inclusive teaching of English Language (ELT). In fact, with the growing diversity of classes, teachers have to develop the methods of instruction that will not only accommodate the different abilities and communication needs of students (Ferguson, 2008; Kozleski et al., 2015; Alekhina et al., 2018). In the case of students with Down syndrome, the traditional ELT models with the focus on speed, fluency, and instant verbal feedback can sometimes be restrictive (Chapman, 2019; Abbeduto et al., 2007). In this regard, technological integration serves as an excellent possibility to enhance accessibility, interaction, and meaningful communication in language learning settings (Chun et al., 2016; Jiang et al., 2022).

One of the main viewpoints that are highlighted in this paper is the necessity to rethink silence in the classroom. Silence as a form of not knowing or the inability to know should not always be viewed that way but can instead be a representation of the barrier in communication, processing time, or opportunities to express oneself (Sedova and Navratilova, 2020; McLaughlin, 2011). Considering silent as a potential communication problem instead of disengagement, teachers can work on the creation of inclusive pedagogy that ensures that students are able to express themselves through various types of communication (Chun et al., 2016; Yotta, 2023).

The use of technology is significant in facilitating such participatory inclusiveness. Learners can gain other opportunities to practise language skills and communicate their ideas by using digital tools, assistive technologies of communication, interactive multimedia platforms (Herrero et al., 2018; Kroesch et al., 2022; Johnson and Mutlu, 2025). The technologies are able to lower the communication anxiety, enforce repetition and build confidence in the learners to use the English language progressively (Scarborough and Zellou, 2013; Dörnyei, 1998). In general, this study adds to the study of the inclusive language education by showing the potential of using technology-based interventions to enable students with Down syndrome to cease as passive participants in the ELT classrooms and become active participants (Rusdiansyah and Sudana, 2024; Impact of the Information and Communication Technologies on the Education of Students with Down Syndrome, 2020). It also focuses on the possibility to integrate technological solutions with positive learning methods and facilitating classroom settings (Sanders, 2013; Kozleski et al., 2015). Moreover, it establishes possibilities of new studies regarding emerging tools of digital technologies, instructional models, and teacher training approaches that can empower inclusive learning in English language instruction further (Yakubjonova, 2024; International Review of Research in Mental Retardation, 2026).

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