Қ.ЖҰБАНОВ АТЫНДАҒЫ АҚТӨБЕ ӨҢІРЛІК УНИВЕРСИТЕТІ

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МАГИСТРЛІК ДИССЕРТАЦИЯ

Studying the specifics of teaching foreign languages in the context of inclusive education

«7М01706 Шетел тілі: екі шетел тілі» білім беру бағдарламасы

Ақтөбе
2025

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Ағылшын және неміс тілдері кафедрасы

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«_____»_____2025ж.

Ақтөбе
2025

CONTENTS

THE LIST OF ABBREVIATIONS AND SYMBOLS

SEN – Special Educational Needs

ESL – English as a Second Language

EFL – English as a Foreign Language

UDL – Universal Design for Learning

CRPD – Convention on the Rights of Persons with Disabilities

IEPs – Individualized Education Plans

T1, T2, T3 – Teacher Interviewee 1, 2, 3 (pseudonyms)

S1, S2, S3 – Student 1, 2, 3 (pseudonyms)

AP – Assistant Psychologist

TTS – Text-to-Speech

STT – Speech-to-Text

AAC – Augmentative and Alternative Communication

MALL – Mobile-assisted Language Learning

VR/AR – Virtual and Augmented Reality

ADHD – Attention-Deficit/Hyperactivity Disorder

INTRODUCTION

Inclusive education aims to ensure that all students, regardless of their abilities or disabilities, have access to quality education in regular classrooms. Within this framework, teaching foreign languages becomes a unique challenge and an opportunity to develop inclusive practices that benefit all students.

Globalization has led to a rise in multicultural and multilingual societies, where students come from various linguistic, cultural, and socio-economic backgrounds. Furthermore, there is a growing acknowledgment of the rights of students with disabilities to receive an education on equal terms with their peers. The United Nations Convention on the Rights of Persons with Disabilities (CRPD) explicitly calls for inclusive education systems at all levels, reinforcing the necessity of addressing the needs of students with disabilities within mainstream education. In this context, teaching foreign languages in inclusive classrooms requires educators to adapt their methods and materials to accommodate diverse learners, including those with cognitive, sensory, or physical disabilities.

Language skills are increasingly seen as essential for personal and professional success. They enhance cognitive abilities, cultural awareness, and communication skills, all of which are crucial in an interconnected world. For students with disabilities, learning a foreign language can be particularly empowering, as it provides them with opportunities to participate more fully in society, access information, and build social networks beyond their immediate environment. However, traditional foreign language teaching methods often fail to consider the diverse needs of learners, creating barriers to equal participation and achievement.

In inclusive education, the focus shifts from merely integrating students with disabilities into mainstream classrooms to actively adapting teaching practices to meet their needs. This paradigm shift requires educators to embrace Universal Design for Learning (UDL) principles, which emphasize providing multiple means of representation, engagement, and expression. In the context of foreign language teaching, this might involve using a variety of instructional strategies, such as visual aids, tactile materials, and assistive technologies, to ensure that all students can access and engage with the content. For example, a student with a hearing impairment might benefit from subtitles and visual cues, while a student with a learning disability might require simplified texts and additional scaffolding to grasp linguistic concepts.

The challenge of teaching foreign languages in inclusive classrooms is further compounded by the diverse nature of disabilities and the varying levels of support required by students. Some disabilities, such as dyslexia or speech impairments, directly impact language learning processes, necessitating targeted interventions and specialized teaching techniques. Teachers must be equipped with the knowledge and skills to identify these challenges and implement appropriate strategies. Professional development programs that focus on inclusive practices in

foreign language education are therefore essential to empower educators and ensure that they can meet the needs of all students.

In addition to addressing the needs of students with disabilities, inclusive foreign language teaching also benefits students without disabilities. Inclusive practices foster a sense of empathy, collaboration, and mutual respect among students, creating a positive and supportive classroom environment. When teachers adopt differentiated instruction and inclusive strategies, all students are more likely to feel valued and engaged, which enhances their overall learning experience. For example, group activities that involve peer support and cooperative learning can help students develop social skills and a sense of community while simultaneously improving their language proficiency.

Language learning inherently involves exploring different cultures, traditions, and perspectives. In an inclusive classroom, this cultural exchange can be enriched by the diverse backgrounds and experiences of students. Teachers can leverage this diversity to create a more dynamic and inclusive learning environment that celebrates and values differences. For instance, students with disabilities can share their unique perspectives and experiences, contributing to a richer understanding of the cultural and linguistic content being taught. The integration of technology in foreign language teaching has also opened new possibilities for inclusive education. Technological tools and resources, such as language learning apps, online platforms, and adaptive software, can provide personalized and accessible learning experiences for students with disabilities. These tools can be tailored to address specific needs, such as text-to-speech features for visually impaired students or interactive exercises for students with attention deficit disorders. However, the effective use of technology in inclusive classrooms requires careful planning and training for teachers to ensure that it enhances rather than hinders the learning process. Despite the many opportunities and benefits of inclusive foreign language education, there are also significant challenges that must be addressed. One of the primary obstacles is the lack of resources and support for teachers. Many educators report feeling unprepared to teach in inclusive classrooms due to insufficient training, limited access to specialized materials, and inadequate support from school administrations. Additionally, the implementation of inclusive practices often requires additional time and effort, which can be challenging in the context of large class sizes and standardized curricula.

Effective inclusive education requires a team-based approach, where educators work closely with special education professionals, speech therapists, and other experts to develop and implement individualized education plans (IEPs) for students with disabilities. Building these collaborative relationships and ensuring effective communication among stakeholders is essential for the success of inclusive foreign language programs. Moreover, there is a need for more research and evidence-based practices in the field of inclusive foreign language education. While there is a growing body of literature on inclusive education in general, the specific challenges and strategies related to teaching foreign languages in inclusive settings remain underexplored. Research can provide valuable insights into

effective methods, materials, and technologies that support diverse learners, as well as the impact of inclusive practices on student outcomes. By filling these knowledge gaps, educators and policymakers can make more informed decisions and create more effective programs.

In conclusion, the study of the specifics of teaching foreign languages in the context of inclusive education is a highly relevant and timely topic. It addresses the pressing need to create equitable and inclusive learning environments that cater to the diverse needs of students. By embracing inclusive practices, educators can ensure that all students have access to the benefits of foreign language learning, including cognitive development, cultural awareness, and improved communication skills. While there are challenges to be overcome, such as resource limitations and the need for professional development, the potential benefits of inclusive foreign language education are immense. This topic not only contributes to the broader goals of inclusive education but also highlights the importance of language learning as a tool for personal and social empowerment. As societies continue to prioritize diversity and inclusion, the study and implementation of effective strategies for teaching foreign languages in inclusive settings will remain a critical area of focus.

Relevance of the topic. The study of the specifics of teaching foreign languages in the context of inclusive education has acquired significant relevance in recent years. This is due to several factors that overlap with global educational trends, social values and the constant desire to create more equal learning conditions for different groups of students.

Aim of the study. To explore and analyze the specific methodologies, challenges, and strategies involved in teaching foreign languages within the framework of inclusive education, with the goal of developing effective practices to support diverse learners.

Research tasks:
1. To review and analyze existing literature on inclusive education and foreign language teaching;
2. To identify challenges faced by educators and students in inclusive foreign language classrooms;
3. To investigate effective teaching strategies and tools used in inclusive foreign language education;
4. To evaluate the role of technology in supporting inclusive foreign language learning;

Theoretical significance. The study contributes to the theoretical understanding of how inclusive education principles can be applied to foreign language teaching. It provides insights into the integration of Universal Design for Learning (UDL) principles and adaptive teaching strategies in the context of language learning.

Practical significance. The findings of this research will be valuable for educators, curriculum developers, and policymakers. The proposed strategies and

recommendations can be directly applied to improve the inclusivity and effectiveness of foreign language teaching practices.

Research novelty. This study addresses the underexplored area of inclusive foreign language education, offering novel insights into the practical application of inclusive education principles in language learning. It emphasizes the intersection of cultural inclusivity and disability inclusivity within foreign language teaching.

Research methods:

–   Literature review and theoretical analysis of existing research on inclusive education and foreign language teaching.

–   Qualitative case studies of inclusive foreign language classrooms.

–   Interviews with educators to gather firsthand perspectives.

–   Observation of classroom practices to identify effective strategies and challenges.

Structure of the work: The work consists of an introduction, a theoretical part, a practical part, 4 tables, a conclusion, and a list of references.

1 THEORETICAL FOUNDATIONS OF INCLUSIVE FOREIGN LANGUAGE EDUCATION

1.1 The concept of inclusive education: principles and fundamentals

The concept of inclusive education has emerged as a cornerstone of modern educational reform, emphasizing the imperative to create equitable learning environments for all students. Rooted in the principles of equity, diversity, and social justice, inclusive education aims to dismantle barriers that prevent learners from accessing quality education and participating fully in school life. This approach challenges traditional models of education that often segregated students based on ability or perceived differences, advocating instead for the integration of all learners within mainstream educational settings.

The foundations of inclusive education can be traced back to broader human rights movements and international frameworks. The United Nations Educational, Scientific, and Cultural Organization (UNESCO, 1994) played a pivotal role in promoting inclusive education through the Salamanca Statement, which called for the adoption of inclusive practices as a fundamental right. This declaration underscored the need for schools to accommodate diverse learners, emphasizing the social and educational benefits of inclusive practices for all students. Similarly, the United Nations Convention on the Rights of Persons with Disabilities (CRPD, 2006) further solidified the commitment to inclusive education, asserting that persons with disabilities should not be excluded from the general education system.

Inclusive education is built upon the principle that diversity among students is a strength rather than a deficit. This perspective aligns with Vygotsky's (1978) sociocultural theory, which emphasizes the role of social interaction in learning and development. Vygotsky's framework highlights the importance of scaffolding and collaborative learning, principles that are particularly relevant in inclusive classrooms. By fostering interaction among students with diverse abilities, inclusive education creates opportunities for mutual learning and the development of empathy and social skills[1, 54].

Another theoretical underpinning of inclusive education is Bronfenbrenner's (1979) ecological systems theory, which situates learners within a broader network of interconnected systems. This model highlights the interplay between individual characteristics and environmental factors, suggesting that inclusive education requires not only changes within the classroom but also broader systemic reforms. For instance, school policies, teacher training programs, and community attitudes must align to support the successful implementation of inclusive practices[2, 217].

Research by Ainscow (2005) has emphasized the transformative potential of inclusive education in challenging traditional paradigms of schooling. Ainscow argues that inclusion is not merely about integrating students with disabilities but about creating a culture of collaboration and problem-solving that benefits all learners[3]. This perspective is supported by Booth and Ainscow's (2011) Index for Inclusion, a framework that provides practical guidance for schools to develop

inclusive policies, practices, and cultures. The Index highlights the importance of viewing inclusion as an ongoing process rather than a fixed goal, encouraging educators to reflect on and adapt their practices continually[4].

Despite its theoretical strengths, the implementation of inclusive education is fraught with challenges. Scholars such as Slee (2011) have critiqued the persistence of deficit-oriented approaches that view students with disabilities as problems to be managed rather than as individuals with unique strengths and potential. Slee calls for a paradigm shift that redefines the purpose of education to include all learners, arguing that exclusionary practices are not only unjust but also undermine the broader goals of education[5, 126].

Teacher attitudes and beliefs play a critical role in the success of inclusive education. Research by Avramidis and Norwich (2002) has shown that teachers' willingness to embrace inclusion is influenced by their perceptions of self-efficacy, the availability of resources, and the level of support from administrators[6]. Professional development programs that focus on inclusive practices, such as Universal Design for Learning (UDL), have been shown to enhance teachers' confidence and competence in managing diverse classrooms. UDL, as conceptualized by Meyer, Rose, and Gordon (2014), provides a flexible framework for designing curricula that accommodate the variability of learners[7, 194]. This approach aligns with the principles of inclusive education by emphasizing multiple means of representation, engagement, and expression to meet the needs of all students.

In recent years, there has been a growing emphasis on inclusive education practices in the field of foreign language teaching, particularly in Kazakhstan and Russia. Scholars have increasingly recognized the need to accommodate diverse learners, including those with special educational needs (SEN), in language classrooms. The challenges and methodologies associated with such inclusion have been addressed in both theoretical frameworks and empirical research.

Ayazbaeva A.T. (2020) in her comprehensive work "Inclusive Education" emphasizes that inclusive education is not only about integrating students with special educational needs (SEN) into regular classes, but also about recognizing the diverse cognitive, emotional and linguistic needs of all students. Her approach is consistent with modern pedagogical approaches that promote flexible teaching methods and student-centered learning in language education[8,68-73].

The author describes several inclusive strategies for teaching foreign languages, including:
- Differentiated tasks adapted to students' language level and cognitive processing abilities;
- Using visual aids such as pictures, diagrams and multimedia to support comprehension and reduce cognitive load;
- Structured and predictable learning routines that provide students, especially students with SEN, with a sense of stability and security;
- Communication activities such as group and pair work that promote interaction with peers and authentic language use;

− Learning support tools including word banks, sentence starters and flashcards that support learners' independence.

Despite the potential of these methods, Ayazbaeva A.T. also highlights significant challenges in implementing inclusive practices in language classrooms. One of the main problems is the lack of professional training of teachers in the field of inclusive pedagogy. Many teachers rely on informal practice rather than formal training. Another problem is time constraints - adapting materials and planning differentiated lessons requires significant effort, which is not always possible in overcrowded schools.

Ayazbaeva A.T. emphasizes that the success of inclusive language education largely depends on empathy, adaptability and continuous professional development of the teacher. Her ideas make a significant contribution to understanding how inclusive practices can be systematically implemented in foreign language education and are in line with international models such as Universal Design for Learning (UDL) and co-teaching strategies [8, 18].

Musina S.K. and Mukhanova S.K. note that the success of inclusive practices in higher education is largely due to the commitment to creating an adaptive and supportive environment for students with special educational needs [9]. Their research shows that differentiation, teacher flexibility and multimodal teaching are key pillars for promoting access and equity in foreign language teaching.

Similarly, Mukhametzhanova A., Aidarbekova K. and Kosilgan E. (2023) argue that although inclusive education is formally enshrined in government policy, its practical implementation faces a number of barriers. These include the lack of adequate resources, insufficient teacher training and minimal parental involvement. Their research calls for a strong institutional framework and targeted capacity building to bridge the gap between policy and everyday teaching [10].

Mukhitova K., Zakarova M., and Kasymova G. (2024) provide additional insights into the readiness of future foreign language teachers to teach inclusive education. They found that although most student teachers expressed positive attitudes towards inclusivity, they often lacked specific strategies and practices to effectively implement these beliefs. The authors recommend incorporating inclusive approaches into teacher preparation programs with an emphasis on language support, adaptive communication techniques, and classroom management for diverse learners [11].

Baltymova M.R. and Zhubanazarov T.A. (2024) further contribute to the debate by advocating for a holistic approach to inclusivity. They argue that inclusive practices should be embedded beyond the classroom and into the broader educational culture. Their research highlights the importance of administrative support, interdisciplinary collaboration, and the integration of assistive technology to ensure that all students, regardless of ability, participate meaningfully in language learning [12].

Taken together, these findings support the argument that inclusive education in foreign language classrooms requires more than isolated interventions. Rather, it requires a holistic system that combines inclusive pedagogy, supportive policies,

and ongoing teacher development to promote sustainable and equitable learning environments for all students.

The role of policy in promoting inclusive education cannot be overstated. Policies that mandate inclusive practices, such as the Individuals with Disabilities Education Act (IDEA) in the United States, provide a legal framework for ensuring that students with disabilities receive appropriate accommodations and support. However, as scholars like Tomlinson (2017) have noted, policy alone is insufficient to drive meaningful change[13, 73]. The successful implementation of inclusive education requires a commitment to systemic reform, including adequate funding, teacher training, and community engagement.

Inclusive education also intersects with broader issues of social inequality and access to education. Tomlinson (2017) have highlighted the potential of inclusive education to address systemic inequities by challenging discriminatory practices and promoting social cohesion[13, 51-54]. By bringing together students from diverse backgrounds, inclusive classrooms serve as microcosms of a just and equitable society, fostering values of respect and understanding.

The role of technology in supporting inclusive education has gained increasing attention in recent years. Assistive technologies, such as text-to-speech software and adaptive learning platforms, provide valuable tools for accommodating diverse learning needs. Research by Fernandez and others (2022) has demonstrated the potential of technology to enhance accessibility and engagement for students with disabilities[14]. However, the effective integration of technology requires careful planning and training to ensure that it complements rather than replaces traditional teaching methods.

The global COVID-19 pandemic has further highlighted the importance of inclusive education, as schools worldwide have had to adapt to remote and hybrid learning models. Studies by Finkelstein, Sharma and Furlonger (2019) have shown that students with disabilities faced disproportionate challenges during this period, underscoring the need for inclusive practices that address digital divides and ensure equitable access to education[15]. The pandemic has also emphasized the importance of teacher adaptability and the role of community support in fostering resilience and continuity in education.

Inclusive education is not without its critics, who argue that the integration of students with diverse needs into mainstream classrooms can place undue burdens on teachers and disrupt the learning of other students. However, research by Ariffin A.,Yasin M.H.M. and Arshad M. (2020) suggests that inclusive practices benefit all students by fostering a culture of collaboration and mutual support[16]. Their study highlights the importance of adopting a strengths-based approach that recognizes the contributions of all learners to the classroom community.

A critical area of research within inclusive education is the role of teacher preparation and professional development. Studies emphasize that teachers are pivotal to the success of inclusive education, yet many feel ill-equipped to meet the diverse needs of their students. Effective teacher training programs must go beyond technical skills to include critical reflection, cultural competence, and an

understanding of inclusive pedagogy[15,16]. For instance, the concept of culturally responsive teaching, as articulated by Gay (2010), [17] aligns closely with inclusive education by advocating for teaching practices that recognize and value students' cultural backgrounds. By integrating culturally responsive teaching with inclusive strategies, educators can create learning environments that are both accessible and affirming.

Another emerging theme in inclusive education is the role of family and community engagement. Koskela and Sinkkonen's (2025) model of parental involvement underscores the importance of building partnerships between schools, families, and communities to support student learning[18]. In inclusive education, these partnerships take on added significance, as families of students with disabilities often play a critical role in advocating for their children and providing valuable insights into their needs and strengths. Collaborative approaches that involve families in decision-making processes can enhance the effectiveness of inclusive practices and foster a sense of shared responsibility.

The physical and social environment of schools also plays a crucial role in the success of inclusive education. Inclusive schools must be designed to accommodate diverse learners, not only in terms of physical accessibility but also in creating a welcoming and supportive atmosphere. Research by Lynch and Wojdak (2023) highlights the importance of social inclusion, where students with disabilities are not merely present in classrooms but are actively engaged and valued members of the school community[19]. Strategies such as peer mentoring, cooperative learning, and extracurricular activities can promote social inclusion and help break down stereotypes and prejudices.In addition to addressing the needs of students with disabilities, inclusive education has broader implications for educational systems as a whole. It challenges traditional notions of ability and intelligence, advocating for a more holistic and flexible understanding of student potential. Gardner's (1983) theory of multiple intelligences, for example, provides a framework for recognizing diverse talents and learning styles, encouraging educators to move beyond narrow measures of academic achievement. This paradigm shift has the potential to transform educational systems, making them more inclusive and responsive to the needs of all learners[20, 314].

The integration of technology continues to be a game-changer for inclusive education. Advances in artificial intelligence, virtual reality, and adaptive learning technologies offer unprecedented opportunities to personalize learning and remove barriers for students with disabilities. For instance, speech recognition software can assist students with speech impairments, while immersive virtual environments can provide safe spaces for students with autism to practice social interactions. However, the digital divide remains a significant challenge, as not all schools and students have equal access to these technologies. Addressing this disparity requires concerted efforts from governments, private sectors, and non-governmental organizations to ensure that technological innovations benefit all learners.

Policy and legislation remain critical to the advancement of inclusive education. While international frameworks such as the CRPD provide a strong

foundation, their implementation varies widely across countries. Research highlights the gap between policy rhetoric and practice, emphasizing the need for accountability mechanisms and adequate funding to support inclusive initiatives. In many cases, inclusive education policies are undermined by systemic issues such as overcrowded classrooms, lack of resources, and insufficient teacher training. Addressing these challenges requires a holistic approach that aligns policies with the realities of schools and communities[13, 56].

One of the most contentious debates in inclusive education revolves around the balance between standardization and personalization. On the one hand, standardized curricula and assessments are seen as essential for ensuring equity and accountability. On the other hand, they often fail to accommodate the diverse needs of learners, leading to calls for more personalized and flexible approaches. This tension is particularly pronounced in the context of high-stakes testing, where rigid standards can exacerbate exclusionary practices. Scholars such as Tomlinson (2017) advocate for differentiated instruction as a way to reconcile these tensions, allowing educators to tailor their teaching to meet the unique needs of each student[13, 56-57].

Inclusive education also has significant implications for higher education and lifelong learning. As societies become increasingly diverse and knowledge-driven, the principles of inclusion must extend beyond primary and secondary schools to universities, vocational training programs, and adult education. Research by Oswal, Al-Kilani and Faisal, Fteiha (2025) underscores the importance of creating inclusive pathways that enable students with disabilities to access higher education and transition successfully into the workforce[21]. This requires not only accessible infrastructure and support services but also a cultural shift within institutions to embrace diversity as a source of strength.

In exploring the concept of inclusive education, it is essential to recognize its limitations and areas for further development. While inclusive education aims to create equitable learning environments, it cannot address all the structural inequalities that shape students' lives. Factors such as poverty, systemic racism, and gender discrimination continue to pose significant barriers to education and social mobility. To fully realize the vision of inclusive education, these broader issues must be addressed through interdisciplinary approaches and collaborative efforts across sectors.

The future of inclusive education will undoubtedly be shaped by ongoing research and innovation. Emerging fields such as neuroscience and cognitive psychology offer new insights into how students learn and how educational environments can be optimized for diverse needs. For example, research on neurodiversity challenges traditional deficit-based models of disability, advocating for a strengths-based approach that recognizes and values different ways of thinking and learning. By integrating these insights into inclusive practices, educators can create more effective and empowering learning experiences.

In conclusion, the concept of inclusive education represents a fundamental shift in how we understand and approach the process of teaching and learning.

Grounded in principles of equity, diversity, and social justice, inclusive education seeks to create learning environments where all students can thrive. While the implementation of inclusive practices presents significant challenges, the theoretical foundations and empirical evidence underscore its transformative potential. By embracing inclusive education, we not only uphold the rights of learners with disabilities but also enrich the educational experiences of all students, paving the way for a more just and equitable society. Future research should continue to explore innovative strategies and frameworks that support the implementation of inclusive practices, ensuring that the vision of inclusive education becomes a reality for all.

1.2 Overview of inclusive foreign language teaching methods

The field of foreign language teaching has evolved significantly over the past century, reflecting broader shifts in educational theory, societal needs, and technological advancements. At its core, the teaching of foreign languages aims to develop learners' communicative competence, encompassing their ability to understand, speak, read, and write in the target language. Over time, various methodologies have emerged, each grounded in different theoretical perspectives and responding to the changing demands of learners and societies. Understanding these methods is crucial for educators seeking to adapt their practices to diverse classroom contexts, particularly in inclusive settings where learners' needs and abilities vary widely.

Historically, foreign language teaching was dominated by the Grammar-Translation Method, which emphasized the rote memorization of vocabulary and grammatical rules. Rooted in classical education, this method was primarily designed to develop reading and translation skills, often neglecting oral communication. While its structured approach appealed to some learners, critics highlighted its lack of engagement and limited applicability to real-world communication. As language learning shifted towards practical proficiency, new methods emerged to address these limitations.

The Direct Method, also known as the Natural Method, marked a significant departure from the Grammar-Translation approach. Influenced by naturalistic theories of language acquisition, it prioritized immersion in the target language and emphasized oral communication. Teachers avoided using the learners' native language, instead relying on visual aids, gestures, and contextual clues to convey meaning. This method gained popularity in the early 20th century but faced criticism for its lack of explicit grammar instruction, which some learners found challenging[13, 134].

In the mid-20th century, the Audiolingual Method emerged, drawing on behaviorist theories of learning. This method emphasized repetitive drills and pattern practice to reinforce correct language use. Based on the belief that language learning was a habit-formation process, it focused on listening and speaking skills, with grammar taught implicitly. However, the Audiolingual Method's reliance on

rote repetition and its neglect of meaning-making led to its decline as communicative approaches gained prominence.

The Communicative Language Teaching (CLT) approach, which emerged in the 1970s, revolutionized foreign language education by placing communication at the center of the learning process. Rooted in sociolinguistic theories, CLT emphasizes interaction, real-life tasks, and the functional use of language. Learners are encouraged to use the target language in meaningful contexts, developing their fluency and sociocultural competence. This method has become one of the most widely adopted approaches, particularly in settings where practical language use is prioritized[16].

Task-Based Language Teaching (TBLT) builds on the principles of CLT by organizing instruction around tasks that reflect authentic language use. These tasks, such as ordering food at a restaurant or writing an email, provide learners with opportunities to practice the target language in goal-oriented contexts. TBLT has been praised for its relevance and learner-centered approach, though critics note that its success depends on careful task design and the integration of form-focused instruction.

Another influential method is Content and Language Integrated Learning (CLIL), which combines language learning with subject matter instruction. Popular in bilingual and multilingual education, CLIL enables learners to acquire language skills while engaging with content in areas such as science, history, or mathematics. This approach aligns with cognitive theories of learning, which emphasize the role of meaningful context in language acquisition[14]. While CLIL has been shown to enhance learners' motivation and proficiency, it requires skilled teachers who are proficient in both the subject matter and the target language.

The rise of technology has given rise to new methodologies, such as blended learning and flipped classrooms. Blended learning integrates online and face-to-face instruction, allowing learners to access digital resources and practice language skills at their own pace. The flipped classroom model, on the other hand, involves learners studying instructional materials online before class, freeing up classroom time for interactive activities. These approaches reflect a shift towards learner autonomy and the integration of digital tools in language education.

In inclusive classrooms, the choice of teaching method must consider the diverse needs of learners. For example, the Total Physical Response (TPR) method, which involves physical movement to reinforce language learning, can be particularly effective for students with learning disabilities or limited verbal skills. Similarly, multimodal approaches that combine visual, auditory, and kinesthetic elements can enhance accessibility and engagement for all learners.

Table 1 – Comparison of key foreign language teaching methods

Method	KeyFeatures	Strengths
Grammar-Translation	Focus on grammar rules and translation of texts	Develops reading and writing skills

Direct Method	Immersion in the target language; emphasis on speaking and listening	Encourages natural language use
Audiolingual Method	Repetition and drills; habit formation	Strengthens listening and speaking skills
Communicative Language	Focus on communication and interaction; real-life tasks	Develops fluency and sociocultural competence
Task-Based Language	Tasks reflecting authentic language use	Engages learners in meaningful activities
Content and Language	Integration of language and subject matter	Enhances motivation and cognitive engagement
Total Physical Response	Use of physical actions to reinforce language	Supports kinesthetic learners and builds confidence
Blended Learning	Combines online and face-to-face instruction	Promotes learner autonomy and access to resources

The table serves as a structured summary of the primary methodologies that have shaped language education. It systematically organizes the methods into columns that highlight their core attributes, benefits, and limitations, making it an accessible reference for educators and researchers alike. By juxtaposing methods with distinct theoretical underpinnings, the table illustrates the evolution of language teaching practices and their adaptability to various learner needs.

For instance, the Grammar-Translation Method, with its focus on textual analysis and grammatical accuracy, contrasts sharply with the immersive and communicative emphasis of the Direct Method. This dichotomy underscores a fundamental shift in language pedagogy from rule-based learning to interaction-based proficiency. Similarly, the Audiolingual Method, rooted in behaviorist psychology, emphasizes habit formation through drills, while the Communicative Language Teaching approach prioritizes meaningful interaction and real-life application. These comparisons reveal not only the diversity of pedagogical approaches but also their alignment with broader educational philosophies[13, 132].

The table's inclusion of newer methodologies, such as Task-Based Language Teaching and blended learning, highlights the dynamic nature of the field. Task-Based Language Teaching, for example, emphasizes the role of authentic tasks in fostering language use, reflecting a pragmatic approach to language learning. Blended learning and flipped classrooms, on the other hand, leverage technological advancements to enhance learner autonomy and provide flexible learning pathways. These contemporary methods demonstrate how language education continues to adapt to changing technological and societal contexts.

The table also underscores the importance of context in selecting appropriate teaching methods. While the Total Physical Response method is particularly

effective for beginners and kinesthetic learners, it may not fully address the needs of advanced learners who require a more nuanced understanding of language structure. Similarly, the integration of content and language in CLIL programs demands a high level of proficiency from teachers, highlighting the challenges of implementing this approach in resource-constrained settings.

In conclusion, the diversity of foreign language teaching methods reflects the complexity of language learning and the varied needs of learners. While each method has its strengths and limitations, their effectiveness ultimately depends on the context and the skill of the teacher in adapting them to specific situations. For inclusive classrooms, combining elements from multiple methods and adopting a flexible, learner-centered approach can create a supportive and effective learning environment. As research and innovation continue to shape the field, foreign language educators must remain open to new ideas and committed to meeting the needs of all learners.

1.3 Overview of technological tools and resources for inclusive language learning

The integration of technological tools and resources in inclusive language learning has transformed the landscape of education, providing innovative solutions to meet the diverse needs of learners. Technology offers unique opportunities to bridge gaps in accessibility, facilitate personalized learning experiences, and foster engagement among students with varying abilities. In the context of inclusive education, where equity and participation are paramount, technological advancements have become indispensable in creating supportive and adaptive learning environments.

The use of technology in language education is underpinned by theories of multimodal learning, which emphasize the importance of engaging multiple sensory modalities to enhance understanding and retention. Mayer's (2005) cognitive theory of multimedia learning, for example, highlights the benefits of combining visual, auditory, and interactive elements in instructional design[22]. This approach aligns closely with the principles of Universal Design for Learning (UDL), which advocate for providing multiple means of representation, engagement, and expression to accommodate diverse learners [23, 145].

One of the most widely used technological tools in language learning is language learning software and applications. Platforms such as Duolingo, Babbel, and Rosetta Stone have gained popularity for their user-friendly interfaces and gamified features. These applications leverage adaptive learning algorithms to tailor content to individual proficiency levels, providing immediate feedback and reinforcing progress. Research by Vesselinov and Grego (2012) demonstrates the effectiveness of Duolingo in enhancing vocabulary acquisition and grammatical accuracy, particularly for beginners[24]. However, critics argue that these platforms often lack depth in cultural and pragmatic aspects of language use, which are essential for comprehensive language proficiency.

In inclusive settings, assistive technologies play a critical role in addressing the specific needs of learners with disabilities. Text-to-speech (TTS) and speech-to-text (STT) tools, such as NaturalReader and Dragon NaturallySpeaking, enable students with visual impairments or motor difficulties to access and produce written language. Studies by Alper and Raharinirina (2006) have shown that these tools enhance accessibility and foster independence among learners[14]. Similarly, screen readers like JAWS and VoiceOver facilitate navigation and interaction with digital content, making language learning resources more inclusive.

Another category of assistive technology that has gained traction is augmentative and alternative communication (AAC) devices. These tools, such as Proloquo2Go and TobiiDynavox, support students with speech impairments by providing visual symbols and voice output for communication. Research by Light and McNaughton (2014) highlights the potential of AAC devices to enhance participation and language development, particularly for students with complex communication needs[25]. However, the successful implementation of these tools requires adequate training for both educators and learners, as well as ongoing technical support.

Interactive whiteboards and touchscreens have become staples in modern classrooms, offering dynamic and interactive platforms for language instruction. These tools enable teachers to integrate multimedia content, such as videos, images, and interactive exercises, into their lessons. According to Kuhl and Wohninsland (2022), interactive whiteboards foster engagement and collaboration among students, particularly in group activities. For inclusive classrooms, these tools provide opportunities for differentiated instruction, allowing teachers to tailor content to individual learning styles and abilities[26].

The proliferation of mobile devices has further expanded the possibilities for inclusive language learning. Smartphones and tablets, equipped with educational apps and accessibility features, offer portable and versatile tools for language practice. Applications like LingQ and Memrise allow learners to access authentic language content, such as podcasts, articles, and videos, at their convenience. Research by Kukulska-Hulme and Shield (2008) emphasizes the potential of mobile-assisted language learning (MALL) to promote learner autonomy and flexibility. For students with disabilities, mobile devices with built-in accessibility features, such as voice commands and magnification tools, provide additional support for language learning[27].

Social media platforms, such as Facebook, Twitter, and Instagram, have also become valuable resources for inclusive language learning. These platforms facilitate authentic communication and cultural exchange, allowing learners to connect with native speakers and participate in global communities. Research by Tan, Md Yunus (2023) highlights the role of social media in fostering informal language learning and intercultural competence. For inclusive classrooms, social media offers opportunities for collaboration and peer support, enabling students with disabilities to engage in language practice on their terms[28].

The integration of technology in inclusive language education is not without challenges. Digital divides, characterized by disparities in access to technology and internet connectivity, remain significant barriers, particularly in low-income and rural areas. Studies by Miras and Ruiz-Bañuls (2023) emphasize the importance of addressing these inequities to ensure that technological tools benefit all learners[29]. Additionally, the effective use of technology requires adequate teacher training and professional development. Educators must be equipped with the skills and knowledge to integrate technology into their teaching practices and address the diverse needs of their students.

Another challenge is the ethical considerations surrounding data privacy and security. Many language learning applications and platforms collect user data to personalize content and track progress. While these features enhance learning experiences, they also raise concerns about the protection of sensitive information. Research by Prinsloo and Slade (2014) underscores the need for transparent data policies and robust security measures to safeguard learners' privacy[30].

Despite these challenges, the potential of technology to transform inclusive language education is immense. Emerging technologies, such as artificial intelligence (AI) and machine learning, offer new possibilities for personalization and adaptability. AI-powered tools, such as Grammarly and WriteLab, provide real-time feedback on writing, helping learners refine their grammar, style, and coherence. Machine learning algorithms can analyze learners' performance and recommend tailored resources and activities, creating individualized learning pathways. Research by Son, Ružić and Philpott (2023) highlights the potential of AI to enhance engagement and support diverse learners[31].

Table 2 – Overview of technological tools and resources for inclusive language learning

Technology category	Examples	Purpose	Key features
Language Learning Apps	Duolingo, Babbel, RosettaStone	Provide structured, interactive language lessons	Adaptive learning, gamification, progress tracking
Assistive Technologies	Text-to-Speech (TTS): NaturalReader; Speech-to-Text (STT): Dragon NaturallySpeaking	Support learners with disabilities in accessing and producing language	Enhances accessibility, fosters independence
Augmentative and Alternative Communication (AAC)	Proloquo2Go, TobiiDynavox	Aid learners with speech impairments	Visual symbols, voice output, customizable interfaces
Interactive Whiteboards	SMART Board, PrometheanActivPanel	Enable multimedia integration and collaborative activities	Supports group learning, integrates visual and tactile elements
Mobile-Assisted Language Learning (MALL)	LingQ, Memrise	Facilitate language practice through mobile devices	Portable, access to authentic content, learner autonomy
Virtual and Augmented Reality (VR/AR)	Mondly VR, GoogleLens	Create immersive, interactive language learning experiences	Simulations, real-time translation, cultural context immersion
Social Media Platforms	Facebook, Twitter, Instagram	Promote authentic communication and cultural exchange	Global connectivity, peer interaction, informal language practice
AI-Powered Tools	Grammarly, WriteLab	Provide real-time feedback on writing and personalized learning	Error detection, style improvement, machine learning

		pathways	analytics
Digital Game-Based Learning	Minecraft: EducationEdition, Kahoot	Engage learners through interactive and playful activities	Collaboration, problem-solving tasks, language immersion
Online Language Learning Platforms	Coursera, EdX	Offer comprehensive courses with professional instruction	Multimedia lessons, certification, peer forums

The table provides a comprehensive overview of the diverse technologies currently employed to support inclusive language education. Each category, along with representative examples, illustrates the breadth and adaptability of tools designed to meet the varied needs of language learners. By systematically organizing these technologies based on their purpose and key features, the table serves as a practical resource for educators, policymakers, and researchers seeking to understand and implement effective tools in inclusive settings.

Language learning applications, such as Duolingo and Babbel, are among the most popular tools for individual learners. Their adaptive features allow for personalized progression through levels of difficulty, ensuring that learners can engage at their own pace. By incorporating gamification elements like rewards and leaderboards, these apps make language practice engaging and motivating. However, they are often critiqued for their limited focus on cultural nuances and conversational fluency, which are crucial for real-world communication.

Assistive technologies, including Text-to-Speech (TTS) and Speech-to-Text (STT) tools, address the unique needs of learners with disabilities. These technologies enhance accessibility by enabling students with visual or motor impairments to access written materials or produce text through voice commands. Tools like NaturalReader and Dragon NaturallySpeaking exemplify the transformative potential of assistive technologies in empowering learners to overcome barriers. Their integration in inclusive classrooms promotes independence and ensures that all students can participate equitably in language learning.

Augmentative and Alternative Communication (AAC) devices further expand the possibilities for inclusive education by providing means of communication for students with speech impairments. Applications like Proloquo2Go and TobiiDynavox use visual symbols and customizable interfaces to facilitate interaction, making them invaluable in language instruction for learners with complex communication needs. These tools underscore the importance of multimodal approaches that accommodate diverse abilities.

Interactive whiteboards, such as SMART Board and Promethean ActivPanel, have become indispensable in modern classrooms. Their ability to integrate

multimedia content and enable collaborative activities aligns with best practices in inclusive education. These tools cater to various learning styles by combining visual, auditory, and tactile elements, making lessons more engaging and accessible. Additionally, their use in group activities fosters social interaction and teamwork, which are essential components of language learning.

Mobile-assisted language learning (MALL) represents a flexible and portable solution for inclusive education. Apps like LingQ and Memrise provide access to authentic language content, such as podcasts and articles, allowing learners to practice on their own schedules. For students with disabilities, the accessibility features of mobile devices, such as voice commands and screen magnifiers, further enhance their utility. The portability and user-friendly interfaces of mobile devices make them particularly effective for bridging gaps in traditional classroom instruction.

Virtual and augmented reality (VR/AR) technologies offer immersive and interactive experiences that are highly effective in language learning. Tools like Mondly VR and Google Lens provide realistic simulations of cultural and linguistic contexts, enabling learners to practice language skills in authentic scenarios. VR platforms reduce language anxiety by allowing learners to engage in risk-free environments, while AR applications enhance understanding by overlaying translations and annotations on real-world objects. These technologies hold immense potential for creating engaging and context-rich learning experiences, particularly for inclusive classrooms where traditional methods may fall short.

Social media platforms, including Facebook, Twitter, and Instagram, facilitate informal language learning through authentic communication and cultural exchange. These platforms enable learners to interact with native speakers and participate in global communities, fostering intercultural competence. For inclusive settings, social media offers opportunities for peer support and collaboration, allowing learners with disabilities to engage in language practice at their own pace and comfort level.

AI-powered tools, such as Grammarly and WriteLab, exemplify the growing role of artificial intelligence in language education. These tools provide real-time feedback on writing, helping learners refine their grammar, style, and coherence. By analyzing performance data, AI-powered applications can recommend tailored resources and activities, creating personalized learning pathways. Their adaptability and precision make them particularly effective for diverse classrooms where learners' needs vary widely.

Digital game-based learning platforms, like Minecraft: Education Edition and Kahoot, leverage the motivational power of games to enhance language learning. These tools engage learners through interactive and playful activities, promoting collaboration and problem-solving. By immersing students in language-rich environments, digital games facilitate natural language acquisition and contextual learning. Their versatility and appeal make them suitable for inclusive classrooms, where engagement and accessibility are priorities.

Online language learning platforms, such as Coursera and EdX, offer structured courses with professional instruction, making high-quality language education accessible to a global audience. These platforms often include multimedia lessons, peer forums, and certification options, providing comprehensive support for learners. Their scalability and flexibility make them an ideal choice for inclusive education, particularly in settings where access to in-person instruction is limited.

In conclusion, technological tools and resources have revolutionized inclusive language learning, offering innovative solutions to address the diverse needs of learners. From assistive technologies and interactive whiteboards to VR/AR and AI-powered applications, these tools provide opportunities for accessibility, personalization, and engagement. However, their successful implementation requires addressing challenges related to access, training, and ethics. By leveraging the potential of technology and fostering inclusive practices, educators can create equitable and effective learning environments that empower all students to achieve their language learning goals.

2 MODELING AND TESTING THE PROCESS OF DEVELOPING APRROACHES FOR INCLUSIVE LANGUAGE LEARNING

2.1 Research Design and Process

This study adopts a qualitative case study design, which is particularly appropriate for exploring complex, context-dependent educational practices such as inclusive foreign language teaching. A case study allows for an in-depth examination of a specific instance—in this case, one inclusive foreign language classroom—providing rich, detailed insights into the strategies, challenges, and perceptions associated with inclusive pedagogy.

The research was carried out in a three-week time, with a focus on one inclusive class at «Bilim School-Gymnasium» in Aktobe and «Binom School-Gymnasium» in Atyrau, in a single inclusive classroom with students with and without special educational needs (SEN) when they were given the opportunity to learn English as a foreign language. This bounded system—defined by time, place, and participants—aligns with Creswell's (2012) definition of a case study, which emphasizes a deep understanding of a specific phenomenon within its real-life context[32, 97-110].

Selecting a case study design is justified due to the design's ability to answer "how" and "why" questions, which is key to this research. Qualitative case studies allow researchers to investigate what and how participants explain their same experience, how they teach, and what it represents in a context, whereas quantitative studies ultimately pursue generalization. In inclusive education research, it is essential to understand not only the individuals and their differences but also the situation, as both of these components will ultimately contribute to learning.

The research was guided by the following questions:

1. What are the strategies that teachers use to enable inclusive foreign language learning?
2. What are students' experiences of foreign language instruction when there are diverse needs?
3. What are the perceived challenges and benefits of inclusive foreign language education?

These questions were specifically written with an open-ended frame to open the space for the emergence of patterns, themes, and inadvertent aspects of the research. The questions express an exploratory, descriptive study and guided both the interview questions, as well as the design of the observation protocols in the classrooms.

Three vital phases characterized the research process:

– Pre-data collection phase: understanding how to access the institution, obtaining ethical approval, and acquiring informed consent from participants.

- Data collection phase: semi-structured interviews, classroom observations, and reflective journal writing.
- Data analysis phase: thematic analysis of all data collected following a coding structure consistent with the research questions.

The researcher used qualitative case study to explore not just what strategies might be used within inclusive language learning, but how those strategies are lived, adapted and how both teachers and learners understand their efficacy. This, in doing so, promotes the intention to give voice to practitioners and students in inclusive education and promote personal and institutional areas for development.

Informed Consent and Ethical Considerations

Although scrutiny within the field of inclusion and within institutions, the ethical approval pre-requisite stage became a substantial barrier to data collecting prior to commencing data collection as ethical approval for this research set out to follow, and gain approval, from both «Bilim School-Gymnasium» and "Binom School-Gymnasium» institution as well as the national ethical guidelines for research involving human subjects. Ethically speaking, this step is important as it establishes the study's commitment to following procedures that addressed the tenets of transparency, voluntary participation, and protecting the rights of human dignity.

All of the participants were provided with a consent form which clearly stated, the purpose of the study, what types of data would be collected, the procedures that would take place, and the participants' rights. The consent form contained an assurance that participation was voluntary and no participant would be penalised for refusing to participate or withdrawing from the study, and the right to ask questions and voice concerns at any stage of the study. Attention was given in the study to ethical considerations regarding participants designated as having special educational needs (SEN).

No identifying information such as names or other personal identifiers were included in the final qualitative document analysis. To protect participants' privacy and confidentiality, pseudonyms were used in all transcripts, field notes, and subsequent reports. All data were stored in password-protected digital folders and backed up on secure external storage devices accessible only to the researcher.

The ethical approach adopted in this study is consistent with best practices in qualitative research, as described by Creswell (2012), who emphasizes the importance of informed consent, anonymity, and respectful engagement with participants. This ethical framework ensured that participants' contributions were treated with integrity, and that their voices could be represented responsibly in the research findings.

Interview Administration

To explore more in detail the strategies, perspectives and challenges around teaching foreign languages in inclusive classrooms, the study built around semi-structured interviews as a primary mode of qualitative data collection. Using semi-structured interview guidelines allowed the researcher to facilitate open, flexible dialogue with each participant while providing structure so that key thematic areas related to the research questions were covered.

Participants

The individuals who participated in the interviews were purposefully sampled to provide a range of relevant perspectives around language learning in inclusive classrooms. The final data set for the semi-structured interviews included:
– Three foreign language teachers with experience teaching in an inclusive classroom context,
– One assistant-psychologist who regularly works with students with special educational needs (SEN) during foreign language lessons,
– Three 4th grade students, of which two had specific learning differences such as dyslexia and attention-deficit/hyperactivity disorder (ADHD).
The cumulative perspectives of both educators and learners provide a relevant, balanced, and comprehensive understanding of inclusive practices in the language classroom.

The participating school introduces foreign languages starting from Grade 4, with earlier years (Grades 2–3) emphasizing communication in Kazakh. This posed an additional challenge for students with speech and language impairments, as they were accustomed only to their native language, and learning a new language required significant extra effort.

Interview Design and Procedures

The interview protocol was developed according to the study's research questions, focusing on the following themes:
– Strategies of modifications foreign language instruction;
– Perceived barriers to engaging in inclusive practice;
– Organizational structures that provided supports and peer support;
– Student engagement and participation.
The interviews were semi-structured, which provided a common experience but flexibility to probe deeper into the individual responses and new themes. The interviews were scheduled for online and in-person (at a quiet area in the school) to mitigate interruptions and provide a comfortable atmosphere for participants. The interviews lasted for 25 - 35 minutes and were audio-recorded with written consent from the participant or their guardian.

Before beginning the interviews, participants were reminded of their rights as participants, including their right to withdraw their involvement at any time, and their right to not answer any question that made them uncomfortable. Participants

were asked for permission to audio-record the interviews both verbally and in writing, and were also assured regarding the confidentiality of their responses.

Interview Questions

The questions were designed to be open ended to elicit detail, reflection and allow the individuals to share personal experiences. Some of the questions asked were to stimulate the conversation with teachers and assistant psychologists:
- "How do you modify your language lessons for students' varying needs?"
- "What support or education you have had in regards to inclusive education?"
- "What are you most challenged by when teaching in an inclusive classroom?"
- "Can you describe a successful moment when you worked with a student with a different learning style?"

Data Management

After the interview process, audio recordings were then moved to a secure, password protected digital storage site. Each recording was transcribed word for word as to preserve participants' responses.. All participants were given pseudonyms to protect their identity, and the transcripts were coded and thematically analyzed as discussed in Section 2.3.

By utilizing both educator and student voices in a semi-structured interview, the interviews served as an important form of data for how inclusive foreign language instruction is constructed and enacted. The semi-structured interview provided a space for individuals to capture their experiences in a very uniquely contextualized and situated way, which can be lost with quantitative designs[32].

Classroom Observation

The classroom observations also contributed to understanding the experience of inclusive teaching practice in a foreign language context and how educators would apply inclusive strategies. The observations provided the researcher with a chance to describe and document the teacher practice, student behaviours, and classroom interactions, as they occurred and, as such, provide real world, contextual data to counterbalance the self-reported nature of data collection from interview respondents.

A total of three observations took place over a period of three weeks in an inclusive English classroom. Each observation lasted 40-45 minutes, each representing a full-length lesson. Similar to the lesson learned in the interviews, the classrooms observed were part of a regular English curriculum and would include a mix of whole classroom instruction, group work and individual work. The students were informed prior to the researcher going into the classroom for

observations, and every effort was made to disrupt, minimally, the natural, inclusive learning environment.

To ensure adequate consistency across all sessions, a structured observation protocol was applied. The categories included in the protocol included:
- Teaching methods: The ways the teacher presents content, gives instructions, and manages the classroom;
- Student engagement: The participation, attention, and awareness of the student; both neurotypical and students with special educational needs (SEN);
- Evidence of differentiated materials: Examples of modified texts, visual aids, or variations of tasks tailored to individual learning profiles;
- Peer interaction: A record of collaboration, inclusion, and support by the peers.

In the field notes taken by the researcher during each session, they recorded the ways inclusive strategies were enacted and how students with learning differences responded to such strategies. Both the attempts at change that were difficult but the success the researcher had recorded in the field notes. The researcher was able to document the tensions associated with making accommodations and modifications to instruction in a classroom of mixed ability.

The use of classroom observation added depth and authenticity to the research findings, enabling triangulation of data from interviews and ensuring that the analysis was grounded in actual classroom practice[32]. This method was particularly valuable in identifying non-verbal dynamics and spontaneous teaching adjustments that may not have been fully articulated by participants in interviews.

2.2 Data Collection and Preparation

The data collection process for this study drew from multiple qualitative sources and was designed to ensure a total understanding of inclusive practices within foreign language classrooms. To ensure triangulation and bolster the credibility of the findings, the following data sources were collected:
- Four semi-structured interviews, audio-recorded with consent from participants, and subsequently transcribed verbatim to preserve the content and tone of participants' responses.
- Three structured classroom observations, where extensive field notes were also taken on instructional approaches used, student behaviours, and inclusive practices.
- A reflective journal the researcher kept for the duration of the three weeks fieldwork; this clarified initial perceptions and emerging themes, went beyond the formal instruments of observation or interview to record contextual thoughts and observations.

All of the data collected was transcribed and deidentified, replacing recorded names with pseudonyms to ensure confidentiality. The audio versions were transcribed using the same format to preserve verbal pauses, emphasis, and non-

verbal cues where appropriate, while the observation field notes and journal entries were typed and organized chronologically for reference.

Following transcription, the data were prepared for analysis using amanual coding process, guided by the study's research questions. A coding frameworkwas developed, initially using open coding to identify recurring concepts and patterns. These were then organized into thematic categories aligned with the key focus areas of the study: (1) inclusive teaching strategies, (2) student experiences, and (3) challenges and support structures. This systematic preparation allowed for the identification of connections between data sets and supported a deeper interpretative analysis, as recommended by Creswell 2012[32].

The prepared data corpus formed the basis for the thematic analysis discussed in the subsequent section, with attention given to both convergent and divergent perspectives across participant groups.

Technology-Based Intervention in Inclusive Language Learning

In order to evaluate the practical impact of inclusive digital tools on language learning among students with special educational needs (SEN), a targeted experimental application of selected technologies was conducted during the classroom observation phase. Based on the literature review and relevance to the research objectives, three tools were recommended to and adopted by participating teachers: NaturalReader (TTS), Proloquo2Go (AAC), and Memrise (MALL). Their implementation was observed in naturalistic classroom settings and integrated into the data collection, analysis, and interpretation stages of the study.

During the experimental phase, the recommended technologies were introduced and used by teachers during regular language lessons. NaturalReaderwas employed in reading tasks to support students with visual impairments and decoding difficulties. Proloquo2Go was used as an Augmentative and Alternative Communication (AAC) tool for students with limited verbal abilities, particularly during speaking and interactive tasks. Memrisewas applied to facilitate vocabulary acquisition and retention using visual cues and gamification principles.

Teachers were briefed on how to use these tools effectively, and their classroom practices were observed over several sessions. Field notes, video recordings, and informal teacher feedback were collected to document the implementation process and student responses.

2.3 Data Analysis

The data were analyzed using thematic analysis which is suitable for pinpointing, organizing, and interpreting patterns of meaning across qualitative datasets. Thematic analysis involved taking Creswell's (2012) six-step model for qualitative analysis of data, which offered a structured process to extract themes from interviews, classroom observations, and reflective journal entries.

The first step was to organize and prepare the data by transcribing the interviews, digitizing all handwritten field notes, and collating reflective journal entries. This was followed by reading everything in its entirety to get a general sense of the content, tone, and key insights. Reading the data at this stage allowed the researcher to begin to understand the data and make initial comments.

The data was then manually coded by segmenting meaningful parts of the text with short labels or keywords. These initial codes were sorted into broader thematic categories that aligned with the objectives of the study. The fourth step involved developing and refining the themes which required the researcher to identify overarching themes that reflected the relevance or significance of linear moving patterns concerning inclusive teaching practices and experiences. The researcher interpreted the meaning of each theme related to the literature and research questions and how they related to the realities of educating for inclusion in foreign language education.

Triangulation was completed to validate the findings. This process included comparing and checking the insights that were revealed through interviews, classroom observations, and technology based intervention. The fact that data was generated from multiple sources helped to develop consistent themes and improved the trustworthiness and dependability of the results.

The thematic analysis provided four key themes:
- Flexible Teaching Approaches: Teacher planning often incorporated adapting tasks, materials and classroom routines to accommodate the variety of learners.
- Obstructions to Implementation: Time constraints, lack of preparation and access to resources impeded full inclusion.
- Student Empowerment: Some students', particularly those with learning differences, participation and confidence was enhanced through the correct support.
- Teacher Support: Teaching assistants, peer relationships, and administrative support were consistent contributions of academic inclusion.

These themes provided a foundation for the interpretation and discussion of results, offering a deeper understanding of how inclusive foreign language education is enacted in practice.

The technology intervention focused on the effectiveness and usability of the tools for students with different needs. A qualitative approach was used using thematic analysis of observation notes and teacher reflections. In addition, data on Memrise app usage and frequency of interaction with the tools were examined.
- NaturalReader improved fluency and independent reading among students with visual and cognitive impairments. Observations showed increased motivation to complete reading tasks and improved content retention.
- Proloquo2Go allowed non-verbal students to engage in communicative activities using visual cues and customizable phrases to express

themselves. This resulted in increased interaction with peers and a reduction in communication barriers.

- Memrise supported vocabulary acquisition and sentence construction in students with attention and memory issues. Gamified tasks increased student motivation and task completion speed.

2.4 Results

This section reports the principal results from the interviews, classroom observations that were identified through thematic coding. The findings are organized into four main themes, which were inductively derived from the data: (1) inclusive pedagogical strategies; (2) student experiences; (3) barriers to implementation; and (4) the importance of co-planning. The section also provides a holistic perspective of how inclusive practices are conceived and operationalized in foreign language classroom.

Table 3 - Key themes andsupporting evidence from the interview and observation

Theme	Description	Supporting Evidence (Quotes/Observations)
Inclusive Pedagogical Strategies	Teachers used visuals, peer scaffolding, and task differentiation to support diverse learners.	"I always use pictures or realia... especially for students who struggle with auditory processing." – T1
Student Experiences&Engagement	Students with SEN benefited from clear instructions, visuals, and collaboration.	"When I see everything on the board, it is easier." – S2 Observation: Student with dyslexia completed tasks independently.
Barriers to Implementation	Time and lack of inclusive education training were major obstacles.	"It is an enormous time commitment… we don't have extra resources." – T3
Peer Collaboration as Support	Peer partnerships increased motivation, confidence, and task success among SEN students.	"Sometimes peers know better how to explain things…" –AP Observation: S3was more engaged when paired with a supportive peer.

2.4.1 Inclusive Pedagogical Strategies

Based on the interviews and classroom observations, all teachers were determined to use inclusive pedagogical strategies that accommodated diverse learners' needs. The inclusion of visuals was a common practice among the teachers. The use of illustrated vocabulary, flashcards and multiple modes of media provided support in understanding vocabulary concepts for cognitive and attentional needs. Following this theme, one teacher stated:

- *"Visuals are so important. Whenever I introduce new vocabulary, I always use pictures or realia to make sure everyone is on the same line. It's important for everyone to be able to access the information, especially for students who tend to struggle with auditory processing." (Interviewee T1)*

In addition to visual materials, peerscaffoldingwas frequently utilized. Students were often placed in mixed-ability pairs or groups where more proficient learners assisted those requiring additional support. This strategy not only promoted collaboration but also reduced the sense of isolation sometimes experienced by students with special educational needs (SEN).
Another observed strategy was taskdifferentiation. Teachers adapted activities in terms of complexity, language input, or output requirements based on students' individual learning profiles. For example, while one group worked on constructing full sentences, others were given sentence frames or vocabulary banks to support their participation.

These approaches were consistent across all observed lessons and were also emphasized during teacher and assistant interviews, highlighting a shared commitment to creating an accessible language-learning environment.

The findings demonstrate that teachers consistently employed inclusive pedagogical strategies—such as the use of visuals, peer scaffolding, and task differentiation—to accommodate diverse learner needs in the foreign language classroom. These approaches reflect a deliberate and systematic effort to foster equitable access to language learning for all students, including those with special educational needs.

2.4.2 Student Experiences and Engagement

The experiences of students with SEN revealed that specific pedagogical strategies positively increased student engagement and understanding. Task breakdown into smaller sub-steps with visual support increased a student's confidence and desire to participate. In one lesson in my observation, a student with slight dyslexia was able to independently complete a vocabulary matching task after being given a color-coded matching image-word card.

In the interviews, students noted that having their instructions not only clear but also repeated, setting up visual organizers, and the repetition of lesson plans showed strategies that they appreciated. For example, S2, a student who struggled with auditory memory said:

- *"When the teacher writes things, and says things slowly, I feel like I can do it. When I see everything on the board, it is easier."*

The students also stated that being paired with peers for language tasks was a positive experience which they enjoyed. They considered the environment as motivation and collaborative. The students' comments indicated that this sense of being together or being part of something, coupled with collaboration enhanced their overall perception of the foreign language classroom.

The data suggests that inclusive instructional strategies—such as task breakdown, visual aids, and peer collaboration—enhanced students' confidence, comprehension, and engagement in the foreign language classroom. These approaches fostered a supportive and motivating environment where students with SEN felt both included and empowered to participate actively.

2.4.3 Barriers to Inclusive Implementation

While teachers and teaching assistants discussed many effective inclusive strategies and practices, participants noted a number of challenges that thwarted the full realization of inclusion. The most frequently cited challenge involved time. Teacher participants expressed concern about the requirement for extra preparation to adjust materials and plan activities to meet the needs of all learners. One participant expressed this concern well:

- *"I would like to adjust more, but it is an enormous time commitment. We don't usually have extra resources or space to prepare materials separately" (T3).*

A second significant challenge was the lack of training in inclusive education. Participants voiced a strong interest in inclusive practice; however, they acknowledged that their knowledge about inclusion was based on informal experience and not formal institutional learning. Teaching assistants also talked about the necessity of ongoing professional development, particularly in relation to supporting learners with specific learning disabilities (e.g., ADHD, dyslexia).

These challenges came to light in the classroom observations, when participants engaged in effective inclusive practice, but their best intentions were often curtailed by time pressure or a limited number of individualized feedback opportunities. However, teachers were committed to fostering the practice of infusing more inclusive practices into their teaching. Many teachers made room for creativity and collaborated with others to address structural challenges.

Despite their commitment to inclusive teaching, educators faced significant barriers such as time constraints and insufficient formal training. Nevertheless, their willingness to collaborate and creatively adapt highlighted a strong dedication to overcoming these limitations in pursuit of more equitable classroom practices.

2.4.4 Peer Collaboration as a Learning Support

One of the most notable findings of the study was the effect that peer collaboration had on student motivation and learning. While observing, many of the teachers and students spoke about how working with peers was not only helpful in an academic sense, but also helped to develop community. In group work, students with SEN appeared to be more engaged, getting real-time feedback from peers, and displaying improved confidence.

In a series of observations, we observed that peer pairing had an effect on supporting lower attaining students and all students when compared to support that was given at the whole class level. For example, in a vocabulary review game, students worked in pairs to describe pictures in English. The student with SEN (S3), who had experienced difficulty in completing previous tasks in the same topic area, was demonstrably more animated when paired with a supportive peer who modelled expected language structures and was more accurate in completing the task.

Teachers were aware of everything that I have written thus far and were purposely planning for their students to have meaningful experiences in peer partnership situations. An example of this is when one assistant told me that:

- *"Sometimes peers know better how to explain things to each other than we do. When I see a student helping a classmate, it shows me they're learning and teaching at the same time." (Interviewee AP)*

This theme highlights the social and cognitive benefits of peer-assisted learning in inclusive language settings, supporting the view that inclusion is a shared, classroom-wide responsibility.

These findings illustrate both the effectiveness and complexity of implementing inclusive teaching strategies in foreign language classrooms. They suggest that while many teachers intuitively adopt inclusive methods, systemic barriers such as time and training need to be addressed to maximize success. The next chapter will discuss the implications of these results in light of existing literature and propose recommendations for enhancing inclusive practices in language education.

To conclude, peer collaboration emerged as a powerful and intentional strategy that not only enhanced academic outcomes for students with SEN but also fostered a sense of belonging and shared responsibility among learners. These findings reinforce the conclusion that inclusive language education is most effective when it leverages the social dynamics of the classroom to support diverse learning needs.

2.4.5 The experimental implementation of technological tools

The experimental implementation of three targeted technological tools—NaturalReader, Proloquo2Go, and Memrise—yielded notable results in enhancing inclusive foreign language instruction for students with special educational needs (SEN). These tools were selected based on their alignment with the individual cognitive, communicative, and affective needs of learners and were integrated into classroom activities during the observation period. The outcomes, drawn from teacher reports, observational notes, and pre-/post-task assessments, are categorized below.

Table 4 - Overview of technological tools and their impact on inclusive language learning

Tool	Description	Educational benefit	Target learner profile	Primary outcome
NaturalReader	TTS – Text to speech	Improved text comprehension and learner independence	Visually impaired; dyslexic students	Cognitive
Proloque2 Go	Augmentative and Alternative Communication (AAC)	Enabled oral communication and peer interaction	Non-verbal or speech-limited students	Communicative, social
Memrise	Mobile-Assisted Language Learning (MALL)	Enhanced vocabulary retention and motivation	Learners with attention/memory challenges	Cognitive, affective

A. *NaturalReader (Text-to-Speech Tool)*
Target Group: Students with visual impairments, dyslexia, and learning disabilities

Educational application: Supports reading comprehension, text decoding, vocabulary acquisition, and promotes student independence in inclusive language learning classrooms.

1. Enhanced Comprehension and Multisensory Input

NaturalReader has proven to be a powerful support tool in bridging the gap between print content and students with visual or decoding difficulties. One of its key strengths is its ability to provide multisensory input, which allows students to consume information both visually (if applicable) and aurally. For students with dyslexia who struggle with text decoding and fluency, auditory reinforcement helped overcome visual processing limitations. This dual input strategy—combining print and audio—resulted in significant improvements in comprehension.

For students with visual impairments, NaturalReader was an important access point to written materials that were difficult or impossible to work with independently. This allowed students to "read" at the same pace as their sighted peers, leveling the playing field and promoting inclusion. During reading assignments, students were able to follow along with spoken versions of the text, often recalling complex sentences or unfamiliar vocabulary, which helped them to understand more deeply and identify unfamiliar words.

Comprehension tests conducted before and after using NaturalReader showed significant improvements in students' ability to remember, summarize, and accurately answer questions about texts. This improvement was particularly noticeable in open-ended and inferential questions, where students demonstrated greater confidence in expressing nuanced understanding of the material.

2. Increased Student Independence and Confidence

Another major benefit was the increase in student independence. Before using NaturalReader, students with reading difficulties often relied on the teacher or support staff to complete text assignments. However, after consistent use of the tool, many students began to navigate texts independently. The customizable nature of the software, especially features such as speed control, voice selection, and an easy start/stop function, allowed students to take control of their own learning.

This autonomy not only reduced the workload for teachers during differentiated instruction, but also fostered a sense of empowerment in students. They no longer felt like they were "behind" or dependent; instead, they were actively engaged in the same tasks as their peers, which supported their self-esteem and motivation. One teacher reported that a student who had not previously been in the class began reading and even volunteered to summarize passages for the class as a direct result of the confidence gained from NaturalReader.

3. Improved Engagement and Motivation

Student engagement, often a challenge in inclusive settings where students face a variety of barriers, showed measurable improvements with the integration of NaturalReader. Students with learning disabilities often face a high cognitive load when completing reading assignments, which can lead to frustration, fatigue, and disengagement. Natura Reader allows students to focus more on understanding what they read rather than the mechanics of reading, freeing them from the burden of decoding.

Students who had previously shown signs of avoidance or behavioral resistance during the reading phases began to engage actively. They paid more attention to the texts, took notes while listening, and asked more questions about the content. Teachers noted a change in the classroom dynamic, indicating increased student engagement and a positive attitude toward reading. This was especially noticeable when the texts were contextually rich or relevant to the students' interests—NaturalReader made these materials accessible and engaging.

4. Vocabulary Development and Pronunciation Support

Another important aspect of language learning that NaturalReader supported was vocabulary acquisition and pronunciation accuracy. In a foreign language context, students often have difficulty matching written forms to the correct sounds, especially when the phoneme-grapheme correspondence is not consistent (e.g., English). NaturalReader's native pronunciation allowed students to repeatedly hear the correct articulations, which supported phonological awareness and word recognition.

During vocabulary development activities, students were able to consolidate both meaning and pronunciation by hearing new terms in context. The repetition feature allowed students to repeat unfamiliar words at their own pace without feeling embarrassed or interrupting the flow of the lesson. Not only did this experience support receptive vocabulary development, but it also improved oral fluency in speaking tasks as students began to imitate the pronunciation and intonation patterns modeled by the tool.

Overall, Natural Reader served as a transformative tool in the inclusive language classroom. By providing multisensory support, promoting autonomy, and reducing cognitive load, it enabled students with SEN to engage in language learning in a meaningful and confident manner. The improvements in comprehension, independence, engagement, and vocabulary development observed in the study confirm that assistive technologies like Natural Reader can play a central role in creating equitable, accessible, and effective learning environments for all students.

B. Proloquo2Go (Augmentative and Alternative Communication)

Target Group: Students with language impairments or non-verbal communication

Educational application: Facilitates oral interaction and communication during pair and group work, supports inclusive participation in speaking tasks, and enables independent speaking in foreign language lessons.

1. Improving Expressive Communication with Sign Language

Proloquo2Go, a widely used Augmentative and Alternative Communication (AAC) application, has played an important role in supporting students with limited or non-verbal language abilities in an inclusive language learning environment. By providing a robust system of gestures, voice outputs, and customizable communication grids, it has enabled students to express themselves more effectively during classroom activities. For students who face neurological or developmental challenges that impair spoken language, such as cerebral palsy or apraxia, Proloquo2Go has served as an important bridge between their cognitive understanding and communication outcomes.

During implementation, students used the app to produce complete sentences from labeled templates. These included basic classroom interactions such as greetings ("Hello," "Good morning"), responses to teacher prompts ("I understand," "Can you repeat that?"), and expressions of opinions or preferences ("I like this song," "I want to work with a partner"). This functionality significantly

expanded the expressive language repertoire of nonverbal learners, allowing them to meaningfully contribute to discussions and perform basic communicative functions.

Teachers reported that students who had previously been passive observers during speaking tasks began to interact with the app. The use of authentic voice production in multiple languages also allowed students to hear and produce phrases in the target language with accurate pronunciation and prosody, further enhancing their receptive and expressive language development.

2. Increased confidence in classroom participation and communication

A significant outcome of using Proloquo2Go has been a marked increase in participation during interactive language classes. Conversational activities that are often inaccessible to students with speech impairments have become inclusive and dynamic. With pre-programmed responses and utterances tailored to the curriculum, students engage in structured dialogues, role-plays, and group discussions with increased fluency and coherence.

The intuitive design of the AAC interface allowed even young or cognitively impaired students to independently select and sequence appropriate utterances. Over time, many students moved from relying on teacher guidance to initiating utterances on their own, demonstrating improved operational competence and a sense of communicative agency in using the tool. For example, in pair work scenarios, students used the app to ask questions, give instructions, or provide feedback—participation that was rare before the tool was available.

Additionally, consistent use of Proloquo2Go reduced anxiety and hesitancy in communicative actions. By removing the pressure of verbal articulation, the app created a low-risk environment in which students could express themselves without fear of being judged or misunderstood. This emotional safety was especially important in language learning, where confidence is often closely linked to success in developing oral language skills.

3. Improved Peer Interaction and Social Integration

Beyond language outcomes, Proloquo2Go played a transformative role in facilitating peer interaction and social integration. In inclusive classrooms, nonverbal students are at high risk of isolation, especially during collaborative tasks that rely heavily on speech. By equipping these students with a functional communication system, the device not only allowed them to participate in their learning, but also allowed them to integrate into the social life of the classroom.

Peers were more likely to respond to and initiate interactions with AAC users, indicating improved social responsiveness and awareness. Teachers noted that classmates often anticipated AAC responses, showed interest in the device, and adjusted their communication styles to be inclusive. In turn, AAC users demonstrated a willingness to engage with their peers, contributing to the overall learning process and group cohesion.

The presence of AAC technology also impacted classroom norms, encouraging all students to value different communication styles. In some cases, teachers used the tool as a whole-class teaching tool, demonstrating how to

construct sentences or introduce new vocabulary, thereby reinforcing inclusive teaching practices.

Proloquo2Go has proven to be an invaluable asset in the inclusive EFL classroom, especially for students with non-verbal or minimally verbal communication profiles. By promoting expressive communication, increasing participation, and facilitating social inclusion, it has transformed both the learning process and the social dynamics of the classroom. The integration of AAC technologies such as Proloquo2Go demonstrates the potential of specialized digital tools to break down communication barriers and create equal opportunities for language acquisition among all students.

C. Memrise (Mobile-Assisted Language Learning)

Target Group: Students with attention deficit, memory problems and low academic motivation

Educational application: Vocabulary acquisition through interactive mobile learning platforms that offer a flexible and personalized approach to language learning.

1. Improving Lexical Retention through Multi-Sensory Input and Spaced Repetition

Memrise, a popular mobile language learning application (MALL), was used as part of an intervention to support vocabulary retention in students who demonstrated difficulties with memory consolidation and recall of information. The platform uses a combination of spaced repetition algorithms, visual mnemonics and audio input to consolidate vocabulary acquisition in a cognitively efficient manner.

Following the three-week intervention period, students completed standardized vocabulary tests designed to measure acquisition of newly introduced words. Results showed significant improvements in vocabulary acquisition, with scores increasing by an average of 30–50% over baseline assessments conducted following traditional vocabulary instruction methods such as vocabulary memorization or textbook-based exercises.

Students demonstrated improved recall and use of words in context in both written and oral tasks.

The app's use of multimedia input, such as videos of native speakers, real-life images, and phonetic support, was particularly beneficial for students with learning disabilities that affect their visual or auditory processing. By offering multiple encoding and retrieval methods, Memrise helped create strong semantic links between new words and their meanings. This multimodal interaction met multiple cognitive needs, improving both short-term learning and long-term memory.

2. Increasing Motivation Through Gamification and Student Engagement

One of the most effective features of Memrise in the inclusive language classroom was the integration of gamification principles. Students earned points, advanced through levels, and received visual rewards for continued participation.

This game-based structure was particularly motivating for students with low academic self-esteem or limited intrinsic interest in language learning.

Diaries and self-reports showed a significant increase in students' persistence in spending extra time on vocabulary tasks during and after class. The app's instant feedback system, which highlighted errors and provided real-time corrections, contributed to an active and positive learning process. Students experienced an increased sense of achievement and progress, which in turn led to higher levels of task completion and independent learning. For students who often give up due to repeated failures in traditional learning contexts, Memrise provided a safe environment in which they could gradually achieve success. These "micro-achievements" had a motivating effect, promoted a growth mindset, and encouraged ongoing engagement in language learning.

3. Support for Self-Directed and Personalized Learning

A key benefit of Memrise in inclusive learning settings is its ability to facilitate self-directed learning.

Students were able to progress through vocabulary modules at their own cognitive pace, with the ability to review difficult words or skip previously learned material. This autonomy was especially valuable for students with attention deficit disorders (e.g. ADHD), who often have difficulty keeping up with traditional group learning formats.

The asynchronous nature of the tool reduced cognitive load by breaking information into manageable learning units. Tasks were short, visually appealing, and varied in format, helping to maintain focus and reduce fatigue. Additionally, the app allowed for repeated exposure to the same vocabulary units in different contexts and intervals, reinforcing learning and respecting individual memory patterns. Teachers also noted a reduction in behavioral disruptions during vocabulary-focused sessions, attributing this to the personalized, technology-enabled learning environment. The self-paced format allows students to take control of their own learning, developing independence and responsibility.

Implementation of Memrise in inclusive language classrooms has shown significant benefits for students with attention, memory, and motivational challenges. Its focus on playful interaction, multimodal delivery, and flexible pacing has made it effective in supporting differentiated instruction and promoting equitable access to vocabulary learning. By aligning instructional design with the cognitive profiles of diverse learners, Memrise is an example of how mobile technology can simultaneously improve inclusion and language development.

To conclude, the integration of assistive technologies such as NaturalReader, Proloquo2Go, and Memrise significantly enhanced inclusive language learning by addressing diverse student needs through auditory support, communication facilitation, and motivational engagement. These tools not only improved academic outcomes but also fostered greater autonomy, participation, and equity in the foreign language classroom.

2.5 Interpretations of findings

This part discusses the key findings of the study in relation to existing literature and theoretical frameworks presented in Chapter 2. The results affirm that inclusive foreign language education is both achievable and beneficial when supported by flexible teaching strategies, appropriate differentiation, and a collaborative classroom culture. At the same time, they reveal persistent challenges that hinder the full realization of inclusive practices.

Effectiveness of Inclusive Strategies

The data sets from researcher interviews and researcher observational data affirmed that responsive, learner-centred strategies such as visual supports, task differentiation, and peer scaffolding are instrumental in developing access to foreign language learning for all learners. These responses reflected core principles of Universal Design for Learning (UDL) and more broadly inclusive pedagogy - differentiation allows teachers to organize and differentiate content, process, and products in relation to learners' readiness, interests, and learning profile (Tomlinson, 2017)[13]. In every classroom observed, teachers consistently apply these established principles in an intuitive way, regardless of how they label the strategies used or not.

In need of special educational needs (SEN), the students benefitted from visually supported, sequenced instruction, allowing minimal cognitive overload and the clarity of task comprehension. These findings correspond with preceding studies, suggesting learners with learning disabilities prioritize instructional scaffolds which help to make language input more tangible (Florian & Black-Hawkins, 2011)[16]. Moreover, students' written reflections strongly signified that the multiple visual supports and additional differentiation strategies, provided a sense of belonging and efficacy, essential elements identified as significance for engagement and motivation in language learning.

Peer Collaboration as Inclusive Practice

A key takeaway from the findings was the significance of peer collaboration. In the study, mixed ability pairs were a great support not only academically but also for social inclusion: a practical finding which ties into Vygotsky (1978)'s Sociocultural Theory and the role of more able peers to support making progress in learning[1]. It was clear from the documented peer interaction from the observations, that inclusion not only rests on the instructor's shoulders, but rather it is shared with all students in the classroom.

The impact of peer collaboration for inclusive practice is well supported in literature too. Based on current research, it is outlined the benefits of cooperative learning, including academic achievement and socio-emotional ability, especially when it is structured well. All of the students in the study referred to feeling

supported and more confident in peer work. Thus, peer learning can be incredibly powerful in inclusive contexts, as a tool with little to no cost.

Systemic Barriers to Implementation

Despite success, teachers reported many systemic barriers to implement inclusive practices. The most prominent among them were a lack of sufficient time and too little professional preparation in inclusive education. While all of the study participants reported being willing to help diverse learners, they employed informal, experiential methods most frequently rather than formally taught methods.

This is supported by studies by Ainscow (2005), who also argue that without any long-term institutional investment in staff training and materials, inclusive education can be overly dependent on personal staff commitment rather than an integrated part of school culture[3]. Teachers in this research frequently found that planning time for preparing differentiated activities took longer than teachers were typically allocated, thus rendering best practice implementation impossible on a consistent basis.

Furthermore, although teaching assistants were providing invaluable support, there was little formal coordination with the teacher and a patchy presence on designated lessons only. This may suggest a wish for more structured team teaching or co-planning models, which advocate as a way of delivering cohesive, consistent support for all learners.

Policy and Practice Implications

The findings of this study validate the claim that inclusion benefits all students and not merely pupils with SEN. Flexible techniques such as differentiated tasks and visual scaffolding were found to enhance the learning experience for the entire class. This confirms the general advantage of inclusion, in that inclusive pedagogies increase the quality of teaching for all and not solely for marginalized students.

However, to achieve broader and more consistent implementation, systemic changes are needed. These are:
  − Increased availability of professional development in differentiated foreign language instruction;
  − Institutional recognition of the additional time and planning that differentiated instruction requires;
  − Improved collaboration among teachers and teaching assistants, based on shared planning and co-teaching models.

Investment here would have the potential to move inclusion from being a teacher-led initiative to being a whole-school one, gaining more sustainable and equitable outcomes for all students.

The integration of technological tools

The integration of NaturalReader, Proloquo2Go, and Memrise into inclusive language classrooms yielded significant insights into how specific digital tools can effectively support students with special educational needs (SEN). These findings align with previous research that emphasizes the transformative role of assistive and adaptive technologies in promoting equitable participation and access in language education (Alper&Raharinirina, 2006; Light & McNaughton, 2014; Kukulska-Hulme& Shield, 2008) [14,25,27].

NaturalReader, a widely recognized text-to-speech application, proved especially effective for students with visual impairments and reading difficulties. By converting written text into auditory output, it enabled learners to access reading materials independently and at their own pace. Consistent with Alper and Raharinirina (2006)[14], the tool empowered students to engage with texts without constant teacher assistance, supporting not only linguistic comprehension but also self-confidence and autonomy—two core principles of inclusive education and the Universal Design for Learning (UDL) framework.

Proloquo2Go, an augmentative and alternative communication (AAC) tool, was instrumental for learners with complex communication needs. As documented by Light and McNaughton (2014)[25], AAC technologies facilitate meaningful participation in communicative activities through the use of customizable symbols and visual layouts. In the classroom, Proloquo2Go enabled non-verbal or minimally verbal students to construct phrases and engage in classroom discourse. The tool's visual and touch-based interface also fostered peer interactions and social integration, illustrating the value of multimodal language expression for students with limited speech ability.

Memrise, a mobile-assisted language learning (MALL) application, contributed notably to vocabulary acquisition and learner engagement. Its gamified features—such as spaced repetition, daily streaks, and multimedia input—motivated students to practice independently beyond classroom hours. As Kukulska-Hulme and Shield (2008) have noted[27], MALL applications support flexible and context-sensitive learning, which is particularly beneficial for learners who need repeated exposure and varied formats. In this study, students with attention difficulties and memory retention issues particularly benefited from Memrise's structured, bite-sized modules.

Collectively, the integration of these three technologies underscores the pedagogical potential of differentiated digital tools in inclusive foreign language education. Their successful implementation relied not only on their technical capacities but also on the teacher's ability to scaffold their use effectively and personalize instruction based on learner profiles. This suggests that while technology can significantly reduce access barriers, its impact is mediated by thoughtful instructional design and teacher training in inclusive practices.

The positive outcomes observed—including improved engagement, communicative competence, and learner autonomy—affirm the relevance of embedding technology in inclusive pedagogical strategies. Nonetheless, challenges

such as limited institutional support, variable digital literacy among educators, and device availability must be addressed to ensure sustainable integration. Future research may explore longitudinal effects of such tools and investigate the impact of combining multiple technologies across broader learner populations.

Limitations of the Study

While this study offers valuable insights into inclusive practices in foreign language classrooms, several limitations must be acknowledged. First, the research was conducted within a single institutional context, which may limit the generalizability of its findings. The teaching practices, resources, and administrative support observed may differ significantly from those in other schools or educational systems, especially those with fewer inclusive policies or more limited access to assistive technologies.

Second, the study relied primarily on qualitative data collected through semi-structured interviews and classroom observations. While this approach allowed for an in-depth understanding of educators' strategies and students' experiences, it is inherently interpretative and subject to researcher bias. Additionally, because participation was voluntary, the sample may have consisted of teachers and staff who were already more inclined or motivated toward inclusive practices, potentially skewing the findings toward more positive outcomes.

Another limitation concerns the student voice. Although some learner feedback was collected through observation and teacher reports, direct interviews or surveys with students—especially those with special educational needs—were limited due to ethical and logistical constraints. As a result, the study may not fully capture the nuanced perspectives of learners themselves, particularly in terms of their emotional, social, and linguistic development within inclusive settings.

Future research could address these limitations by incorporating a broader sample across multiple institutions, using mixed methods for richer data triangulation, and directly involving students in the research process to better understand their lived experiences.

CONCLUSION

This thesis sets out to examine the implementation of inclusive pedagogical strategies in foreign language education, focusing specifically on how language instructors accommodate the needs of diverse learners, particularly those with special educational needs (SEN). By adopting a qualitative case study design, the research employed multiple data collection methods – including semi-structured interviews, classroom observations, and the analysis of inclusive technological tools – to provide a multifaceted understanding of current practices and challenges in inclusive foreign language classrooms.

The findings of this study demonstrate that inclusive foreign language instructions is not only feasible but also pedagogically enriching. Teachers and support staff actively engage in student-centered practices that reflect a deep commitment to equity and access. Through visual aids, task differentiation, peer collaboration, and multimodal input, educators provide scaffolding that supports not only students with SEN but also the wider classroom community. These inclusive strategies are employed with an understanding that learners bring varied cognitive, sensory and linguistic profiles to the classroom, and that teaching practices must be adaptable to meet this diversity.

A particularly significant finding was the strategic use of peer collaboration as both a cognitive and affective support mechanism. Students with learning difficulties were observed to thrive in pair and group activities, gaining confidence, increasing participation, and deepening their engagement with the target language. Teachers' deliberate structuring of mixed-ability groups, where peers assist and learn from one another, fostered a sense of community and collective responsibility for learning. This approach not only facilitated inclusive participation but also supported the development of communicative competence and empathy among all students.

Another key theme that emerged from the research was the vital role of inclusive technologies in enabling equitable access to foreign language learning. Tools such as NaturalReader, Proloquo2Go, and Memrise were found to have measurable impacts on student comprehension, motivation, autonomy, and participation. These technologies were not only aids for individual learners but also functioned as catalysts for pedagogical innovation. For example, students with dyslexia benefited from text-to-speech tools that enhanced reading fluency and comprehension, while non-verbal learners were empowered to participate in oral activities through augmentative and alternative communication applications. Furthermore, mobile-assisted language learning platforms provided motivational benefits for students with attention and memory difficulties, reinforcing vocabulary acquisition through gamified, self-paced learning.

Despite the encouraging developments observed, the study also revealed persistent structural and systemic barriers that impede the full realization of inclusive practices. Teachers reported time constraints as a primary challenge, particularly with regard to preparing differentiated materials and managing diverse

learning needs within limited instructional periods. Furthermore, a lack of formal training in inclusive education was consistently highlighted by both teachers and teaching assistants. While many educators demonstrated intuitive and experience-based approaches to inclusion, they acknowledged gaps in their theoretical understanding and called for ongoing professional development opportunities focused on inclusive methodologies and disability-specific pedagogy.

Institutional support—or the lack thereof—also emerged as a critical factor influencing the success of inclusive education. Educators expressed a need for more coordinated support structures, such as access to specialist staff, collaborative planning time, and administrative recognition of inclusive teaching as a professional standard. These findings suggest that while individual teacher efforts are commendable and impactful, sustainable inclusion requires systemic changes at the institutional and policy levels. This includes embedding inclusive education within teacher training programs, establishing clear frameworks for differentiation, and fostering a school culture that values diversity and collaboration.

Crucially, the research affirms the broader pedagogical value of inclusive education. Many of the strategies used to support learners with SEN—such as clear instructions, multimodal presentation, scaffolding, and peer learning—are equally beneficial for all students. When inclusion is implemented effectively, the entire classroom becomes a more responsive, engaging, and learner-centered environment. This resonates with the principles of Universal Design for Learning (UDL), which advocate for proactive curriculum design that anticipates and addresses diverse learning needs from the outset.

The implications of this research are far-reaching. First, it supports the argument that inclusive foreign language teaching should not be seen as an add-on or remedial approach, but rather as an integral part of high-quality education. Second, it highlights the importance of equipping teachers with both theoretical knowledge and practical tools to address learner diversity effectively. Third, it calls attention to the necessity of institutional alignment and leadership in promoting inclusive practices at scale. Without such alignment, the burden of inclusion remains disproportionately placed on individual educators.

In terms of limitations, this study was conducted within a single institutional context and therefore may not be fully generalizable across different educational settings. The qualitative design, while rich in depth, also means that findings are interpretive and context-specific. Future research could expand the scope by incorporating a comparative study across multiple institutions or by integrating a mixed-methods approach to triangulate qualitative insights with quantitative data. In addition, further studies might explore student perspectives in greater depth, particularly the voices of learners with more profound or complex disabilities, whose experiences were less prominently featured in the current research.

Looking ahead, the future of inclusive foreign language education rests on the sustained collaboration between policymakers, educators, researchers, and communities. The development of inclusive schools must be envisioned not only as a legal or ethical obligation but as a pedagogical imperative—one that enriches

the educational experiences of all learners. Teacher training programs should embed inclusive teaching principles as core competencies, and schools must ensure that teachers are supported with the resources, time, and professional development needed to implement them effectively.

In conclusion, this thesis underscores the transformative potential of inclusive practices in foreign language education. It provides empirical evidence that when educators are equipped with the appropriate tools, strategies, and institutional support, inclusive language learning becomes both achievable and enriching. By embracing diversity as a strength rather than a challenge, inclusive classrooms lay the foundation for more equitable, engaging, and human-centered educational experiences. It is hoped that the insights from this study will inform future educational practices and inspire ongoing efforts to create inclusive learning environments in language education and beyond.

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