The Impact of ICT on Teaching and Learning of Foreign Languages: Strategies and Challenges

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Dedication

I extend my heartfelt gratitude to my father for having faith in me, even when I was as obstinate as a rock and utterly convinced that life was not designed to remain static. He challenged my narrow perspective, showed seeds of curiosity, and revealed that logic could be discovered in places I hadn't even considered exploring. Thank you for your immense patience and for never giving up on me, as I finally learned to change gears and continue moving forward regardless of the obstacles. Now, you possess a remarkable story about how I, the world's most headstrong child, succeeded, as to my mother and brother, who, through their unspoken actions, instilled in me the belief that certain paths are indeed meant to be pursued. Thank you for inspiring me, whether you noticed it or not, to chase larger aspirations and reinforce the idea that more is always within reach. More significantly, this achievement serves as evidence that worthwhile efforts often require time and every step, no matter how insignificant, matters. Here's to celebrating each milestone and understanding that greater accomplishments are merely part of the extensive journey together all share.

Specialized Analytical Summary

Title	The Impact of ICT on Teaching and Learning of Foreign Languages: Strategies and Challenges.
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Description	Monograph
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Contents	Las TIC han transformado el sistema educativo, un modelo que ha experimentado muchos cambios y sigue incluyendo diversos métodos. Esto ha convertido el aprendizaje en línea más común e interactivo para los estudiantes, permitiéndoles interactuar con el medio de una manera más natural.

	Esta investigación académica pretende analizar el impacto significativo de las TIC en la enseñanza y aprendizaje de un nuevo idioma, resaltando la implementación de herramientas innovadoras. Aprender de manera más natural es posible gracias a que las TICs han empezado desde hace cierto tiempo a lograr que los estudiantes puedan interactuar con contenido un poco más sencillo de asimilar por su distinción y forma de ser presentado. Las ventajas son descifrables, sin embargo, los retos causan aùn estrés porque su solución requiere de accesibilidad a estas herramientas, superar la inequidad que algunos enfrentan, falta de recursos que es difícil de superar y la infraestructura que a veces a pesar de los intentos es difícil de ver y anteceder a su inversión. El propósito consiste en dilucidar las ventajas, desafíos y potencial de una manera que pueda ser más claro ofrecer un contexto detallado de sus pros y contras para apoyar al potencial educativo y que estos resultados se vean notablemente a la exposición de algunas estrategias constructivas. La meta es sugerir estrategias y proporcionar un contexto sobre cómo pueden innovar y enfrentar los desafíos fundamentales en el sistema educativo, contribuyendo así a un cambio académico significativo. Esta investigación es importante porque conceptualiza tanto las ventajas y el impacto de las TIC en diferentes ámbitos de la vida como sus limitaciones dentro del contexto educativo. Se exploran estrategias para potenciar la obtención de nuevas habilidades, como aprender idiomas, enfrentando también desafíos

básicos. Al comprender la dinámica del sistema educativo, el presente trabajo tiene el fin de maximizar los resultados educativos en el contexto de las metodologías preponderantes y de las tendencias emergentes, brindando valiosas perspectivas a los actores del sistema educativo. La monografía se centra en la enseñanza y aprendizaje del idioma extranjero en función de las TIC. Marsh y Frigols (2012) contribuyen en el debate entre académicos sobre cómo el medio digital reinventa los ecos de enseñanza aprendizaje e implica contra los prejuicios tradicionalistas. El estudio toma un enfoque cualitativo, acogiéndose a las fuentes secundarias presentes para fundamentar el estudio del impacto de las TIC. El trabajo resalta que las TIC facilitan e innovan herramientas y habilidades lingüísticas al suprimir barreras físicas. Algunas de las estrategias incluyen métodos recientes que se han implementado, es necesario considerar la búsqueda de nuevos enfoques junto a su aplicación, algunos de estos ejemplos son la gamificación, intercambio en línea y participación en el uso de aplicaciones o sitios nuevos que facilitan el aprendizaje y la enseñanza de contenido y del idioma en áreas con escasos recursos. Además, el estudio ofrece sugerencias útiles para optimizar recursos y aprovechar las TIC en el ámbito educativo. Por lo tanto, la investigación concluye que la tecnología, en particular las TIC, es de gran influencia en la educación por su funcionalidad y trascendencia para reformar parámetros tradicionales.

	Por otro lado, las Tics facilitan a los estudiantes aprender diversas habilidades y maximizar los resultados en la enseñanza y aprendizaje de idiomas. Aun así, enfatiza sobre cómo avanzar al máximo con la competencia digital y superar los desafíos para aprovechar hasta las últimas ventajas de las TIC. En general, el estudio destaca la potencia revolucionaria de las TIC para luchar contra las desigualdades educativas y capacitar a los estudiantes para competir en entornos laborales globalizados, lo cual es fundamental dado que la educación sigue en evolución y requiere el apoyo de las TIC para mantener esta transformación.
Research Line	GELTI (Global English Language Teaching) Take part in creating the English language foreign language bachelor's program's learning and teaching methods, emphasizing English teaching experience. Similar to this, students who are interested in foreign languages can use ICT to advance their knowledge, skills, and competencies.
Conclusions	This monograph highlights the transformative influence of Information and Communication Technologies (ICTs) on education, particularly regarding foreign language learning and teaching.. The research illuminates how ICTs have revolutionized the educational context by setting some strategies that can be applied to learning and teaching in the classroom, offering applied, new, innovative methods or techniques that address the diverse needs of students. Subsequently, ICTs have significantly reshaped education in the way that technology takes part in

	every context when it needs innovation and changes that play a crucial role in setting a scenario where language uptake is more flexible. Every approach and trend possesses its pros and cons; however, these can be modified and adapted to better satisfy students' demands and academic needs that result in satisfaction. ICTs have indeed altered personal and professional dimensions, making education more friendly and engaging to attract students to develop powerful abilities by using tools that facilitate this action without so much effort. Even though these changes are evident in various contexts, they also reveal the profound impact of digital tools on contemporary learning and teaching, with profound effects that construct scenarios where the development of a language is dynamic. This transformation is not merely superficial; it touches the very essence of how knowledge is acquired and distributed, and since these tools are being innovated daily, it turns out that it is more common for daily and academic life to be resilient to equip students and tutors for better preparation. The integration of Information and Communication Technologies (ICTs) into education, specifically learning a language, has led students to acquire a new skill that motivates learners to succeed. The beneficial impacts of employing ICTs for learning foreign languages are particularly popular. To fully realize the advantages of ICTs, it is imperative to implement effective strategies that improve learning and teaching through these tools. This involves solving challenges such as

	accessibility, digital competence, and infrastructure shortages which can be present in the classroom. Finally, obstacles to the efficient use of ICTs include limited access to resources, insufficient digital literacy, and systemic issues led by management education. Beating these barriers is crucial for sustainable plans. First, a lot of effort is needed. However, the efficacy of education should be prioritized to pursue the goals of interested parties. The integration of ICTs (Information and Communication Technologies) offers opportunities to enhance motivation and communication, resulting in the right engagement of students with its content and its application. For this reason, tutors must pay attention to providing content and practical scenarios to facilitate the improvement of a better learning and teaching experience. The study concludes that ICTs have a significant influence on education, helping students acquire various skills and promoting language mastery outcomes, despite certain limitations. However, the research emphasises the necessity of developing digital competence and overcoming barriers to fully exploit the advantages of ICTs. Facing challenges with a logical plan, the acquisition of a language and any skills would be evident; also, digital competence, the development of technology, and existing issues would be dropped to change and there would be opportunities to get more advancement in education.
Advisor	Heriberto Gonzalez Valencia

Abstract

This work examines the transformative impact of technology on education, particularly how it has judged online learning and teaching to be increasingly prevalent and integrated tools to bridge learning gaps in obtaining a foreign language. Furthermore, it enhances the overall experience of developing a foreign language. Creating new, better learning and teaching experiences can be challenging, but with the use of digital trends, it can be possible, so that dynamic and engaging instruction can be reliable. Although these approaches improve educational outcomes, they also bring significant changes that influence styles of learning and teaching; however, the challenges accompanying these innovations are worthy of being proposed through concrete strategies. How do Information and Communication Technologies impact foreign language learning and teaching? ICT integration advances educational contexts, which results in better learning outcomes and additional advancements. Through an analysis of the advantages, difficulties, and effects of ICTs on students' lives, this work offers a viewpoint that encourages people to learn a language using ICTs. Among the challenges noted are those related to accessibility, ICT proficiency, social defects, involvement, conformity, over-reliance on technology, security concerns, and the availability of both material and intangible resources. Existing secondary qualitative data is the main source of data used in the methodology. Through constant innovation in tools and resources and adaptation of approaches and trends, ICTs may impact personal and academic lives. Strategies point out that low cost, sustainability, and efficient management can help avoid some obstacles. In conclusion, technology has a big impact and can teach students a lot of different skills. ICTs help to maximize language acquisition results, and using these tools can help members of the community. It is obvious that technology, and in particular ICTs, has completely changed several contexts, most notably

education. With the rise of language learning, there is a chance to adapt and foster new strategies that seem out of touch with current methods. ICT integration ought to spread, and solutions should be developed to deal with the difficulties encountered.

Keywords: Integration, Innovation, Foreign Language, Information and Communication Technologies (ICTs), Educational Technology, Pedagogy, Digital Learning, Social Impact, Educational Reforms, Challenges, Opportunities, Communication Strategies, Learning Resources, Skills Development, Educational Benefits.

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Introduction

The current academic status perceives that Information and Communication Technologies (ICTs) have transformed how communication is done, information is shared, and new skills are developed with more pros compared to traditional methods. Especially in the context of learning a language, these tools promote a better understanding of the language and provide opportunities to make the classroom scenario more accessible, interactive, and stimulating to get real practice that may fulfill potential needs. Nevertheless, substantial challenges may likely be present yet, some of these need to be reduced, especially those that include a lack of resources, digital literacy and adaptability to these digital environments that support the academic dynamic,

This monograph explores the impact of ICTs on foreign language learning and teaching, highlighting the challenges and strategies so that progress can be achieved in classroom settings through innovation and reflection on some trends and strategies. This study examines the benefits, challenges and potential of ICTs to comprehend how these tools shape educational outcomes and student acquisition of a language. Gaining insights into the influence of ICTs on students' academic experiences is going to be crucial because understanding these dynamics can create new opportunities.

ICTs have significantly changed everything in the educational context. Methods need to be adopted so the several obstacles that persist can be dropped by defining a systematic workflow that operates to be adopted and satisfy the educational needs resulting in adequate digital literacy, accessibility, participation and investment of digital infrastructure to break the cycle of poor application of ICTs and keep shaping the learning experience.

Significance of Study

The conceptualization of the relevance of ICT tools and weaknesses in this study is crucial. It underscores the benefits and the impacts on domains of instruction and learning approving strategies to control and innovate the learning and teaching experience by using nontraditional tools. Not only does it address the primary obstacles, but it also explores methods to enhance the potential of learning a new language. Outcomes in the acquisition of the language may break free and support the educational dynamics to innovate and get better results. The purpose is to prioritize the application of these tools and show relevance that the use can restrict limitations providing practical usage, changing some traditional paradigms and training members to use these tools with careful consideration.

Statement of the Problem

Information and Communication Technologies (ICTs) have become an indispensable aspect of language education; However, considerable challenges endure, particularly for marginalized communities. These groups frequently lack the requisite infrastructure for effective technological integration, which leads to disparate educational outcomes and complicates both community engagement and educational administration (Ogbomo, 2011). For example, the lack of access to essential resources inhibits many students from engaging fully in online learning environments, because certain communities do not possess ICT resources such as the internet or computers. This scenario provokes critical inquiries regarding whether substantial transformations can truly influence students' lives and how the integration of foreign language instruction via ICTs can foster development.

Objectives

General Objective

To analyze the impact of ICTs on foreign language learning and teaching, distinguishing some strategies and challenges in the educational context.

Specific Objectives

To identify the benefits of ICTs in foreign language learning and teaching.

To examine applications of ICTs environments for foreign language development.

To explore approaches and trends that are applicable through ICT integration.

To outline some challenges for implementing ICT in language competence.

Literature Review

Technology in Education

ICTs came into play to support the learning barriers, changing the face-to-face restriction to offer the same quality in education regarding content, and adapting everything to be produced in certain digital spaces, where teaching and learning emerged to be notably used in the educational system. All of this is a big improvement in quicker access, dynamic reproduction of content, new dynamics for participation and unconventional use of models to modify the learning experience by integrating technology in the classroom. George et al. (2024)

According to Babaniyazova and Kalimbetova (2021) Information and Communication Technologies (ICTs) are a set of dynamic and flexible tools that enhance how information is obtained in education, particularly in language acquisition. ICTs have transformed language improvement by personalizing the experience to suit diverse learning styles and cognitive characteristics.

According to Barrett et al. (2006) interdisciplinary methodologies can enhance the role of technology in both institutional and personal contexts. While some of these modifications may appear complex, certain frameworks are essential to cultivate improved social practices that adapt organizational processes to better fit the needs of students and institutions giving them opportunities to expand their reach and access to equitable learning environments.

As Jisc (2015) mentioned, digital technologies can effectively handle communication on a larger scale, allowing users to become more aware and critically analyze their impact and use. Martin et al. (2024) indicated that having the proper training to use these tools for professional and academic adjustments can significantly enhance lifestyle, helping vulnerable communities to

self-learn, adapt to a new flexible scenario and develop skills promoting access to education and contributing to its quality by ensuring everybody can benefit from it.

ICTs can also facilitate the management of data, and research, and contribute to high-quality education and content access. As a result, educational resources remain up-to-date and widely accessible, meeting the dynamic needs of students and educators and for other contexts such as the market job. Pareliussen et al. (2022) underlined that professionals should be in a network that constitutes connective professionalism with other external participants, challenging their proficiency. This collaboration shows how digitalization can be used to create opportunities for growth and noteworthy networks.

Halverson and Smith (2009) recognized major changes have been discussed, including investment in digital infrastructure and research in new methodologies, both supporting the innovation of the curriculum, competence for digital tools among members of the education and integration of these tools to redefine the way content is produced and taught.

Pros of ICTs in Education

ICTs offer a revolution in the way teaching is given. It offers numerous rewards to enable students to develop skills and allow them to manipulate these tools, some other advantages are:

- Skill Development: ICTs can produce students to have skills beyond the classroom, skills that will be useful not only in the educational context but also applicable to other contexts allowing students to put into practice this knowledge in different scenarios. (Mishra & Koehler, 2006).
- Constructivist Learning: Students will be able to study on their own since ICTs support the effective creation of more knowledge and skill development through self-learning,

unlimited resources and exploration of independent skills such as critical thinking or autonomy (Jonassen, 1999).

- Diverse and Context-Specific Learning Paths: George et al. (2024) expressed that ICTs provide dynamic and interactive learning supporting the student`s learning experience. In this way, students will be motivated to study at their own pace and create their path with the support of these tools. As Clark and Mayer (2011) stated, these tools help students become curious and explore content that suits their needs.
- Collaboration and Exchange: Andrin et al. (2024) declared some strategies and opportunities from ICTs are the chance to exchange data and communicate through unlimited digital tools that can significantly support the learning journey receiving real feedback and supporting meaningful interaction.
- Increased Motivation and Flexibility: Motivation is perceived differently by an individual, supporting the right way to boost motivation according to each personality should be considered by tutors so that students can have more success in the way they learn, choose content and achieve their goals by learning in the classroom or by their own. (Atkinson et al. 1968)
- Simplified Content and Organization: ICTs filter content by certain aspects such as organizing data by topics, setting proper software and hardware tools, and setting clear paths adapted to the learner. This makes learning material more accessible and easier for students to follow and allows tutors to customize methodologies. (Arvind & Sharma, 2024)

Cons of ICTs in Education

Despite the benefits mentioned above some restrictions persist. Some disadvantages need to be mentioned:

- Technical Issues: Samal (2024) mentioned some disruptions may appear in the form of frequent technical issues because of slow service or internet access. Apart from this, software or hardware problems may appear to interrupt the lesson, these delays are uncontrollable and can cause intermittence in the learning process.
- Dependency on ICTs: Bjarne et al. (2022) revealed that technology may dominate some contexts, and relying too much on it may cause pressure on the profession challenging them to change in a way it works to develop with the use of it and not depend on to remain the same.
- Security Concerns: Data security is a critical issue with ICT tools because information can be spread. Prieto et al. (2017) assured that without proper controls and safe usage practices, sensitive and unauthorized information may be exposed causing data breaches or unauthorized access, posing significant risks.
- Investment Requirements: Samal (2024) actively highlighted that significant investment is needed to adapt the institution to high-quality improvements, this can be done through financial investment on a big scale for some improvements in equipment, training programs and ICT tools.
- Inequality in Access: Not all students have equal access, especially those who live in rural or far areas. Martin et al. (2024) all of these ICT tools are missing because of the location and there is no access to these resources. This digital divide can lead to exclusion or disparities that can cause limited educational opportunities.

According to Poudel (2022) some benefits of accessibility include the use of authentic resources, a comfortable space for interaction, focus group teams, exposure to the foreign language, and the development of autonomy for students to create their own learning process and

knowledge dataset. Tutors can also prepare better and access unlimited high-quality resources to present to the students. On the other hand, obstacles are categorized into three levels: micro (teacher behaviors), meso (institutional environment), and macro (external barriers). Despite the presence of pros and cons, both members of the system have gained an advantage, and even more members of the community can collaborate.

ICT in Foreign Language Instruction

Learning a language traditionally can be quite challenging. Slabe et al. (2024) indicated ICT allows businesses to stay active and organisations in education may be also present. Some ICT tools may be online learning platforms, virtual scenarios and digital resources even if face-to-face lessons may be stopped for any reason.

Lata et al. (2024) claimed that some recent updates and tools such as social media can provide resources for teaching and learning a foreign language which can facilitate communication and opportunities to connect spontaneously. Moreover, Babaniyazova and Kalimbetova (2021) defined multiple tools that can be used, apart from social media platforms, others can be forums, videos, and audio resources. Indeed, these ICT tools are not just limited to language learning but also offer the opportunity to learn through diverse methods to enhance the technical skills required.

ICTs enable meaningful interactions that facilitate communication, this involves sharing information, and docs and interacting in real-time with versatile tools from everywhere physically or remotely. Some tools may be related to social media such as platforms like WhatsApp and Zoom, which allow learners to stay connected with every learner or tutor, ensuring consistent practice and interaction. (Smith, 2024)

Overall, these examples clearly illustrate how ICTs are applicable to language, driving social, and cultural transformations, as previously discussed. ICTs not only provide content but also create opportunities for learners and tutors to develop technological literacy. In this context, these tools streamline the language acquisition process, saving time and enhancing efficiency. Resources such as social media can significantly facilitate language learning with minimal effort. However, the effectiveness of these tools depends on the learner's specific needs and the intended purpose of their learning. (Lindecrantz, 2024)

According to Abraham et al. (2022), the powerful role of ICTs in improving the quality of language learning content is undeniable. This advancement has prompted reflection on how ICTs contribute further to language formation and what effects are being observed due to their implementation. Today, teachers act as facilitators rather than the sole source of knowledge, as ICTs provide content more dynamically and actively. This shift requires both teachers and students to develop new competencies, integrating these tools into classrooms and forcing pedagogical approaches to adapt to the interdependence between technology and education. Consequently, this transformation reflects the need to embrace new environments and paradigms to meet the demands of contemporary language education.

Bjarne et al. (2022) demonstrated how digital technology may act as a tool for enabling collaboration through diverse scenarios, expanding the ability to connect and exchange information easily connecting with students, tutors and external experts. Thanks to ICT tools collaboration, communication, interconnection, exchange and technical support for mechanical tasks can be possible which can transform work and academic practices. Now, traditional physical teaching has been moved to be interactive, remote learning, accessible and more

tailored. Helping students survive barriers by using flexible and self-paced learning methods and instruction.

Mwalongo (2011) found tutors can use ICTs for notes, preparation of lessons, creating exams and multiple dynamic activities. Nevertheless, tutors must perfectionate their practice since they are used for basic uses. Some effort should be made to look for technical tools that support the methodological practice, as well as using a variety of tools that incorporate multimedia tools.

As Halverson and Smith (2009) explained, ICTs can support technologies that enhance learning by enabling access to educational resources both inside and outside the school setting. By offering accessibility, the goals of traditional learning are transferred and modified to meet curricula and students' needs. This system can include efficient activities, track progress, and provide tailored content to help learners reach their potential.

Kurbanoğlu et al. (2023) defended that the relationship between students and tutors during these encounters can impact content efficacy as well as emotional states, such as anxiety. Consequently, the major proposition is that face-to-face learning achieves better results in reducing these negative emotional states and improves the academic relationship with the tutor. The usefulness of ICTs in learning a foreign or second language is extremely powerful. These tools are now prevalent worldwide, often occupying spaces not initially designed for educational purposes.

Approaches and Methods for ICT Practice

There is not a miracle methodology, one or multiple ones should be implemented so that it can be effective for teaching and learning practice. According to Richards and Rodgers (2014) a successful lesson implemented by a tutor is one that shows how many approaches and methods

are used effectively rather than how much knowledge he has. Besides, a holistic and eclectic perspective should be applied, this means the integration of traditional and modern approaches (predominant principles) methods (practical uses) and techniques (activities to develop new skills).

Richards and Rodgers (2014) supported some approaches and methods to provide an overview of the methodologies and strategies that teachers can use to integrate technology with language instruction. Using these approaches, methods or techniques, educators can reach their potential by enhancing the learning experience and their practice itself to leverage skills and create a more dynamic environment capable of improvement and tailored to meet the student's needs.

Canale and Swain (1980) accentuated the importance of creating a communicative environment where students can communicate in various contexts. The approach Communicative Language Teaching (CLT). It can be enhanced by AI, making tutors and peers the protagonists, and providing real-time feedback to stimulate communicative sessions that make the experience more immersive. Interaction and real conversations are motivated to be applied on the learning journey. Alharbi (2024) acknowledged that ICT can help education to cope with some limitations since it provides interactive tools such as apps, or platforms, as well as online tools that can facilitate communication in real-time facilitating the use of CLT to encourage participation. Kurbanoğlu et al. (2023) indicated that students may feel lonely due to the extent of content and isolation because of the restriction of face-to-face scenarios. However, through ICT and distance education, opportunities for tutors to use these tools can be approved facilitating support, communication in real-time and immediate feedback in the purchase of a skill.

Ellis (2003) underlined that Task-Based Language Teaching (TBLT). It can be adapted to apply to real life, supporting them to suit future problems and solve them through their learning journey. Ramesh et al. (2024) confirmed that TBLT promotes participation, ICT promotes support by providing interactive tools and resources and both combined can create meaningful and immersive real-life tasks that can facilitate language proficiency and tactics to develop skills in real-world contexts.

The **Whole Language Approach.** Enables communication and information handling. The Whole Language Approach emphasizes that all skills should work interdependently and be incorporated into every lesson. This system provides both input and output, preparing students for real-life contexts. Ken Goodman (1986) advocated prioritizing input and output simultaneously, creating an integral process for authentic contexts. Ramesh et al. (2024) proposed that platforms, virtual scenarios, simulation and problem-solving activities using ICT can improve relevant competence for self-drive decisions.

Flipped Classroom. Preparing in advance is essential and fosters autonomy as independence grows. This approach creates more time for classroom practice. Bergmann & Sams, (2012) postulated that by having the content beforehand, students can be on the same page, actively apply their knowledge, receive feedback, and interact with the material during class. Accessing content at home and seeking in the classroom active participation and learning. Dai et al. (2025) flipped classrooms include integrating face-to-face and virtual education. Nevertheless, integrating more trends such as virtual reality and deep learning may propose a potential change to personalized teaching and make learning more adaptable to generate more knowledge and competencies. This can be also valid for language learning since it might induce

students to get more vocabulary, and improve their fluency and shared opinions during conversational times

Graham (2006) defined Blended Learning. It can be defined as “using both face-to-face and online systems to provide sources that offer flexibility, autonomy, and efficient use of technology.” This approach helps students adapt to different types of environments, effectively combining traditional face-to-face methods with online digital tools. Key elements include personalization to adapt content, the use of various platforms, and an array of resources and tools to enhance the learning experience. Benson et al. (2025) upheld the importance of a blended approach in which Learning Management Systems (LMS) are designed and used appropriately taking care of equality and showing the relevance of the content. Besides, it is required to use more digital tools for more updates in the creation of better learning environments, communication and knowledge appropriation.

Mobile Assisted Language Teaching (MALL). It is among the most flexible. Students can use it continuously and choose the content that interests them, which helps them start and maintain consistency. Mobile devices can be used effectively for language learning, making the amount of time and usage directly responsible for their results and pace. Kukulska and Shield (2008) described it as the use of mobile devices that open the doors to unlimited resources, fostering personalized and collaborative learning without any limitations. As George et al. (2024) dictated institutions and organizations have changed and assisted tools are used for education purposes such as mobile phones, laptops or devices.

Digital Trends

It used to be difficult to obtain content and information, frequently requiring lengthy trips to libraries to locate the required resources. But with the rise of artificial intelligence and digital learning, getting information doesn't always require going to a place or much effort.

Pluzhnikova. (2025) prioritized modern digital technologies to optimize the teaching and learning process. It defines that there is a growth in the use of these digital tools since these tools increase motivation in students to use for learning and tutors for improving their methodological lessons with more success.

Educators and students must work together to prioritize education and embrace current and emerging trends as they work to fully utilize technology. The success of this adoption depends on the skills that students must acquire. Abraham et al. (2022) said teachers must concentrate on these skills to guarantee that students acquire both hard and soft skills through ICT training, allowing for learning to occur whenever and wherever they choose, and aiding innovative teaching methods.

Joosten et al. (2020) have classified digital innovations into two distinct categories: primary and secondary trends. These trends seek to close gaps and better equip students to learn through creative means by increasing the efficiency of knowledge development. With an emphasis on student-centred learning, they enable students to advance in their education without being unduly methodical. The following list includes a few of these trends:

Gamification. Visually it is appealing by nature, and people frequently play them for extended periods. By adding games to the classroom, gamification takes advantage of this tendency. Alonso et al. (2025) studied the impact of gamification on learning performance, the results were accepted by learning which resulted in being more motivated, attentive and

versatile. Consequently, retention of the content was found to gain validation for the education process. Apart from that it is possible to integrate competency through points, badges or leaderboards to motivate students, as well as ICT tools such as Kahoot, Quizzes, and PowToon can achieve tough outcomes without so much effort perceived by students.

Learning a course doesn't have to be a physical, sequential process anymore. Since the material can now be accessed virtually thanks to MOOCs (Massive Open Online Courses). Location, prior knowledge, and set schedules are no longer issues. Huang (2025) declared that MOOCs can offer great flexibility and great value for tutors and learners to learn by themselves or using regulations. It gives learners a space with relevant content, and it can be used with ICT tools without any trouble. Succeeding using it depends on the value perceived by students of the content, space and barriers to get access to.

It takes time to modify instructional strategies so that each student's needs, interests, and learning styles are considered when personalizing content. This procedure is made easier by Adaptive Learning. Which gives students individualized instruction to help them meet the required learning objectives. Activities, resources, instruments, and evaluations should also be in line with these pedagogical approaches. Stated differently, it entails leveraging technology to address the unique educational requirements of learners. (Joosten et al. 2020)

Artificial Intelligence. Made to complete tasks more quickly and efficiently, which reduces waiting time and boosts output. On the other hand, Dai et al. (2025) stated that virtual reality can expect an adaptive learning scenario where students can be immersed and achieve integration of visuals, data, interactive context and intelligent interactions. Specifically, the learning path can be improved by the efficiency of virtual flipped intelligent models.

Blended Learning. It is a method ensure that activities and instruction are supported by technology by skillfully fusing online digital tools with traditional face-to-face methods. Infrastructure elements will also be essential, such as having computers in the classroom in addition to other tools and resources. A plus would be integrating LMS to ensure goals and barriers such as accessibility can be faced. (Benson et al. 2025)

Challenges in Learning a Foreign Language Using ICTs

Obstacles to the Use of ICTs in Education

Ogbomo (2011) underscored various challenges associated with the integration of Information Communication Technology (ICT) in educational settings, some of these are accessibility, proficiency in using technological tools, participation and security for data. Key issues encompass effectiveness; the success of ICTs often relies on the educational members' correct use and investment. Additionally, costs cannot be ignored, as the substantial expenses associated with tools, infrastructure, maintenance, training and electricity are frequently overlooked.

Mwalongo (2011) identified a lack of access to ICT resources, as well as the need for training and limited technical support for experts. In developing countries, this may be likely to be more present and students and tutors face challenges such as reliable internet, hardware and software tools that require investment for these specific tools.

George et al. (2024) presented other dilemmas, considering that un-updated infrastructure may produce disparities, as well as digital literacy may produce sustainability, all these pose significant challenges that require adequate infrastructure, security, inclusive data, training for tutors and investment to ensure students or institutions with low incomes or differences may not fall behind.

Analyzing the performance of traditional methods alongside digital trends is essential (because it reveals insights into their respective effectiveness. Bjarne et al. (2022) elucidated that digitalization may be an obstacle that requires attention since learners may not accept traditional methods that require effort anymore and can lose practical skills acquired from the first years of their education such as handwriting creating overdependency on technology and interacting less with physical scenarios. According to Gut et al. (2021), certain skills develop distinctly in both contexts. Digital learners, for example, exhibit greater dependency and heightened social awareness; they do not take punishments lightly and encounter abstract challenges. On the contrary, traditional learners are typically more logical and critical thinkers, but they often experience greater mental fatigue as a result of their learning processes.

Kurbanoğlu (2023) insisted that self-efficacy and anxiety are presented when students interact with the unlimited resources and content ICT tools offer. Regulation by tutors and support is a key element to consider since without that, the understanding, performance and outcomes of students may be affected, that's why ICT should be on a loop to offer a supportive learning environment where learners can find significant help, instant feedback, and a community to move forward with others.

Slabe et al. (2024) emphasized limitations in accessing education, some of these are government policies enhancing affordable ICT infrastructure and helping maintain sustainability for facing contingencies of accessibility contributing to lifelong learning and physical resources from learners. Since success depends on facing those challenges, measures for sustainable growth should be contemplated.

Benson et al. (2025) studied another point that has been omitted which is how inclusivity and accessibility should be ranked for those with disabilities since the content is widespread for

all but does not have in mind those who cannot perceive the content in the same way. For this reason, certain measures should be taken to represent those who cannot enjoy these digital tools with the same action and engagement so that basic principles in education are not avoided.

Shehata et al. (2025) exposed some implications related to the challenges that persist in the education system, some of these are; the resistance that educational members still have since they are afraid of being replaced by technology in their duties, administrations also facing issues in structuring the correct policies and designing plans to execute the integration of new technologies, sustainability remains to be difficult to employ since students and teachers may not use these digital resources, tools and methodologies all the time because adaption lacks support and infrastructure and social trends are not approved because investment in infrastructure and more importantly, literacy in using and approving these are not taken.

Strategies for Effectively Using ICTs

Education must adapt to new technological advancements and become more sustainable. To provide the desired high-quality education, a variety of strategies that assist higher management in the educational setting are needed. The government can envision and support these community-beneficial strategies. According to Andrin et al. (2024), important strategies include:

1. Adopting Learner-Centered Methodologies: George et al. (2024) indicated that changes in digital technology should open a new environment, tutors must work hard so that students can enhance their skills and expertise to know how to access and approve all the available information, be more independent and use critical thinking to disseminate data actively.

2. Equality in Accessibility: Accessibility may include trouble because infrastructure is not adequate, ensuring proper resources is key.

3. Creating an Inclusive Environment: Bjarne et al. (2022) suggested digital tools can reduce barriers to collaboration between learners and experts while using software tools and global resources to make a cooperative learning experience.

4. Decentralizing Resources to Meet Institutional Objectives: Using meaningful experiences to benefit other departments helps decentralize resources effectively.

5. New Assessment Procedures: Assessment methods can be created by ICT tools to evaluate student performance.

6. Meeting Professional Development: Mwalongo (2011) supported the idea that learners or professionals can use ICT for skill development since resources such as webinars, professional networks and more can be found for invaluable continuous learning that may perfect their practice.

These tactics have the power to create boundaries and turn obstacles into chances that the community and educational administration can seize. Thus, even with limited infrastructure or investment, these strategies can meet the demands of the digital era. Abraham et al. (2022) designated that to overcome obstacles like inequality, and a lack of acceptance, participation, and competence among educational members, educational institutions can adapt to changes and accomplish their mission and community goals by investing in infrastructure, training for ICT and development or integration of these tools.

ICT can be used for instructional design keeping in mind proper strategies and methodologies that align with the learner. The subsequent points should be taken when creating lesson plans for the classroom. (Abraham et al. 2022)

1. Audience: Gardner (1983) implied tutors must adjust to the unique learning styles of their students. This can be achieved by identifying triggers and analyzing their cognitive

learning styles, capabilities, skills, and types of intelligence. Experiential theory can be employed to construct strategies for language acquisition by incorporating practical learning experiences. These experiences, whether tangible or abstract, engage students and encourage them to apply what they have learned.

2. Learning Approach: Arficho et al. (2022) revealed that teachers can acquire technological and pedagogical skills that improve their capacity to facilitate content in a way that effectively supports their jobs by integrating ICTs with pedagogical approaches. Teachers can now serve as mediators thanks to this integration, which enhances their ability to share excellent content and improves their ICT instructional design. As a result, students become more proficient, and teachers become more proficient in using technology to teach. They do, however, stress that teachers must master these abilities because these results cannot be attained with only rudimentary ICT competency.

3. Scope: Students are increasingly engaging in real-time interactions with peers from diverse cultural backgrounds as a result of the increasing prevalence of remote learning facilitation. O'Rourke (2019) drew attention to the growing acceptance of bilingual education and virtual exchange programs. This trend is best illustrated by the utilization of diverse online technologies, including platforms, synchronous tools, websites, and collaborative networks. Effective language outcomes require dynamic learning experiences, which these tools provide, expanding their use to a bigger scale that was unreachable.

4. Resources Available: Technology has a major impact on students' motivation, interactive learning, and communication skills. Marsh and Frigols (2012) pointed out that the use of digital tools lessens prejudices, presents fresh difficulties, and allows for flexible access to

learning materials, all of which enhance learning and make it more applicable to communication in the real world.

5. Method of Assessment: Ramesh et al. (2024) emphasized that through ICT constant evaluation and feedback are possible so that performance can be tracked for designing new methods of improvement providing meaningful feedback.

6. Variation in Teaching: Technology offers powerful resources for language learning distinction. To design an effective supported learning path, ICT can be used as an add-on where teachers become competent and aware of the importance of designing material for effective teaching and learning processes. (Richards, 2005)

Methodology

The current work shows the influence of ICT on learning and teaching of a foreign language. The methodology relies on qualitative existing secondary literature reviews that were peer-reviewed and published in reliable databases. Joosten et al. (2020) noted that digital tools may enhance some education practices providing some opportunities to give space for innovative trends in the classroom that may be beneficial for students. Similarly, Huang (2025) underscored how ICT may support tutors to perform their job in the language instruction practice. For this reason, utilizing secondary data may provide a broad perspective to deepen understanding of ICT in education and its implications.

A library-based, descriptive methodology was adopted, allowing for a wide synthesis of existing works while retaining the fundamentals of the topic. The comprehensive view that this work offers, provides insights from several authors without depending on just primary data.

Data was collected by using some academic databases such as Google Scholar, Taylor and Francis, Research Gate and more. All the information collected was using qualitative data filtering articles, books and publications related to ICT in education and foreign languages. However, Samal (2024) indicated that the quality of the sources was paramount, as only those deemed reliable were included. This approach ensured a thorough understanding of the topic, though it required a careful selection process for recent publications from the last 10 years, complemented by older studies when necessary.

Keywords related to ICTs in language learning, digital tools, and technology in the classroom were mainly used as resources. How the data was filtered by two screenings, the first one by checking relevance in titles and abstracts and, the second one by reviewing the literature review of texts through inclusion and exclusion criteria. Although the process was meticulous, it

was crucial for a comprehensive analysis. For organization, data was ordered in subtopics for further analysis, some of them related to pros, cons, obstacles and strategies of ICT.

Some challenges that may be present are proper citation and interpretation bias of secondary sources to avoid plagiarism and ensure the reliability of the information. Also, reliance on secondary data can present challenges; secondary sources may lack clear perspectives or coherent insights that may be accurate for the topic and specific question research. Finally, Shehata et al. (2025) indicated that one dispute may be that some outdated information can be found during work that may have changed until now, but it was exposed because it set foundational knowledge.

Technology has an intersection with education and a foreign language instruction process since ICT can mediate language instruction for learners so that they can achieve more progress in the classroom or outside of it. However, further empirical research is necessary to explore real-world applications and effects of these tools in the classroom. (Smith, 2024)

Results

ICTs are complementary tools that work together in several contexts and can be applied to the educational context. These tools can enhance autonomy and flexibility by fostering a dynamic approach to teaching and learning. (Chandran et al. 2020)

ICT's Positive and Negative Effects

Jayaprakash and Pillai (2022) exposed some positive effects such as accessibility, improvement of teaching methods, cost efficiency and skill development through digital tools. On the other hand, some negative ones are inequality and dependency which causes limited critical thinking and analysis by learners. Others are limitations in the adoption of tech tools as well as fear for privacy and security.

Teaching with ICT

ICTs are not just tools for education but are powerful. ICTs allow individuals to see the world from a perspective of improvement and efficiency. While seeking improvement, some changes may arise, and strategies can be proposed to enhance procedures or activities. George et al. (2024) mentioned the integration of these tools has shown more engagement by students and more participation through animated tools, videos and a mix of resources using digital platforms. Nevertheless, some considerations need to be considered, as ICTs do not work as a miracle pill. Various factors must work in conjunction with ICTs, as technology alone cannot achieve much. It is through investment, innovation, participation, social support, and the investigation of groups that new systems and trends, such as ICTs in the classroom, are gradually integrated to facilitate content delivery on specific topics or even entire curricula.

According to Mwalongo (2011), the impact of ICT relies on the rich content that is exposed through these digital tools since they can provide engagement and authentic materials

that can result in a more productive learning experience as well as the attainment of the language without disruptions and in a productive way.

Barriers

Arvind & Sharma (2024) stated that thanks to ICT tools marginalized populations that struggle to stay updated with education may take advantage of these software or hardware tools since content resources and audio-visual tools can boost motivation. Additionally, Köylü (2023) indicated that ICTs promote the participation of learners through the use of tools such as screen readers, translation software, and online learning platforms, bridging gaps for students with disabilities, specifically for those in remote areas, or those learning a foreign language. As a result, this will address inclusivity, administrative management and high-quality resources aimed at reaching all communities.

ICTs have transformed language learning by integrating various methods that not only help with acquiring a new language but also support training in other fields. Platforms like Moodle or Coursera provide access to online or distance education, breaking down barriers and enabling students to connect with academic networks. These platforms allow learners to study a language or gain expertise in another field, offering flexibility in how and when learning occurs. (Arvind & Sharma, 2024)

Strategies

ICTs can be enhanced to perform better in the educational system, as managing the entire system can be complex and requires all members to work interdependently. Strategies should focus on recognizing and motivating students to reach their potential. Additionally, Joosten et al. (2020) exposed some factors such as equality, inclusivity, participation, resilience, and training that need to be considered by the management system and government. Furthermore, working

towards developing new skills in individuals through ICTs can help students adapt to new environments and use their acquired skills to create even more. Shehata et al. (2025) showed that adequate infrastructure, a proper environment, electricity, participation, adaptability by community and educational system members, as well as sustainability, constitute some challenges. Therefore, it is necessary to acknowledge that ICTs offer several benefits due to their extensive reach and scope. Nevertheless, without addressing and overcoming these obstacles, the benefits cannot be fully enjoyed by every part of the community as they should be.

Mwalongo (2011) recreated the notion that administration can be able to recover from administrative processes and make them more efficient through ICTs since these tools can keep track of information, progress, and updates, saving time for documentation and tasks.

Alternatives for the classroom

The findings suggest transformative potential for ICTs in education and beyond academic purposes. Andrin et al. (2024) stated that ICT does not eliminate all the existing limitations. Instead of relying solely on itself, it depends on factors such as supportive educational policies, investment, community adoption, and gradual classroom integration. Education can be enriched and applied significantly to various contexts that may further institutional goals.

As ICTs become more embedded in education, the key issue of accessibility persists. Arvind et al. (2024) assumed that developed countries may possess adequate infrastructure, unlike developing nations that encounter challenges due to a lack of essential tools, such as computers, electricity, or even the internet. This disparity illustrates both the division and inequality that ICT may help address but also highlights its prominence in certain regions.

Poudel (2022) extended insights into foreign language acquisition, noting that ICT significantly impacts learning by providing flexibility to study at any time and from anywhere,

regardless of learners' location, level, or learning style. Furthermore, the use of ICT enhances the learning experience by ensuring constant feedback, resources, and personalized learning, while new methodologies may lead to high-quality learning experiences for tutors.

The findings align with the objectives by investigating common concepts about learning, the role of ICTs in education, their advantages and disadvantages, as well as effective teaching and learning methods or approaches. Additionally, understanding these aspects aids in proposing strategies that utilize learning theories and new trends. It is vital to consider obstacles and ensure all stakeholders respond urgently and proactively to address them, rather than allowing issues such as space, infrastructure, or accessibility to hinder progress.

The transformative potential of ICTs in teaching and learning also reveals a critical gap in their application. Despite being tools for innovation and new methodologies, tutors often supplement ICT with traditional methods, resulting in the use of outdated approaches with new resources. It is strongly recommended to implement new methodologies and strategies tailored to learners' needs, as this is essential to fully leverage ICTs to enhance learning outcomes and meet modern educational demands (Halverson & Smith, 2009).

Competence in teaching plays a crucial role in this transformation. The proficiency of teachers frequently determines the extent to which ICTs can improve the educational process. However, high costs, accessibility limitations, and factors such as lack of electricity pose significant barriers. Providing affordable access to ICT resources, along with long-term professional training, can equip instructors with the tools and innovative options necessary to adopt progressive approaches in their practice. This, in turn, can position ICT integration as a dynamic and evolving process that aligns with the changing needs of learners (Mwalongo, 2011).

Recommendations based on the present research include conducting studies on specific quantitative measures regarding the outcomes of children, adolescents, and adults using ICTs. These studies should detail the results, including how effectively students utilized ICTs and the specific outcomes that emerged. Secondly, integrating economic, social, and cultural factors with artificial intelligence can transform not only the educational system but also influence societal changes in work environments, lifestyles, income generation, and various activities. Thirdly, although some tools and platforms have been developed, they remain underutilized due to a lack of awareness. Investigating a deeper understanding of how ICTs can enhance skill acquisition may prove relevant. Finally, exploring new strategies and challenges related to learning methods, and novel techniques, or merging fields such as psychology, neuroscience, and linguistics, may enrich this study, making it more technical and fostering a deeper understanding of other factors.

Conclusions and Recommendations

It is clear that the development of technology significantly influences education. It regulates data organization, promotes new systems and paradigms, and offers a variety of tools and resources that are continuously innovated to meet educational needs and adapt to changes in teaching and learning objectives. ICTs serve as an unlimited repository of tools that can facilitate global communication in specific contexts, manage data, and store information. This information can be organized to maximize outcomes and enhance both learning and teaching experiences. Society can benefit from the advantages of ICTs, including innovation, creativity, accessibility, personalization, interactivity, and skill development, affirming its potential to provide even greater benefits through increased usage.

ICTs are a set of tools that allow the creation and sharing of new data for various purposes in many fields, fostering growth in diverse sectors. In education, ICTs can improve the learning and teaching experience, enabling learners and tutors to develop their skills voluntarily developed in foreign language and other educational contexts. ICT also impacts academic and professional aspects by improving communication and the management of information. The pros and cons of ICTs highlight that they are in progress, and new tools and methods will continue to refine their impact in various contexts.

However, obstacles such as accessibility, technology competence, participation, and security need to be prioritized as ICTs progress. There is significant potential in digital learning innovation, with advancements occurring daily in every context. Quality, accessibility, and time are being addressed, while skills such as critical thinking, inventiveness, and lifelong learning are prioritized to provide students with resilience in adopting technological trends.

Structured and logical frameworks have been applied in the learning environment. Learning methods and trends provide explanations to follow an organized path that leads to academic modifications. However, some of these frameworks still need to be modified to respond to every personalized need a student may have. Nowadays, content is partially personalized and traditional methods prioritized all the time. Nevertheless, some modifications are still in progress since questions about what, why, and how a specific student learns to bring several internal things such as motivation and external considerations such as digital trends.

Since students need to know how to operate tools and find resources, the same applies to tutors who are teaching and learning through them for both academic purposes and professional development. Community members, management, and government influence, along with what they bring to the table, such as management policies, investment opportunities, participation, and the ability to work interdependently with others, are essential to making the educational environment more friendly and improving learning outcomes.

Specifically, instead of focusing on the limitations of tools and resources, it is recommended to identify strategies that support the mastery of a foreign language. Thanks to the flexibility of these tools, language learning can result in fluency through empirical learning supported by tech tools and resources that also provide opportunities for meaningful interactions with input or output results. Undoubtedly, tech tools and ICTs are extra support, not a miracle process that will work on their own. Internal and external factors may affect the results.

Making learning methods, approaches, and trends applicable in academic scenarios can assist in benefiting students and teachers. This approach makes classes more enjoyable and impactful for all members, helping to accomplish community, institutional, and personal goals.

In summary, ICT possesses the potential to innovate education and enhance quality. Specifically in the teaching and learning of foreign languages, success depends on addressing limitations and strategies to overcome disparities and develop new strategies that make ICT adapt to educational needs. Factors such as investment, infrastructure, participation and proper integration suggest better performance, some improvement in collaboration, accessibility and adaptation is key to achieving more capacity for change. The impact of ICT is wide, applied to teaching and learning. It includes new paradigms and frameworks that can be functional in the classroom daily, some steps will depend on the cultivation of new practices, training and integration of these tech tools.

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