



THE IMPACT OF LANGUAGE LEARNING APPS AND ONLINE COURSES ON LANGUAGE LEARNING: PROBLEMS AND PROSPECTS

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Abstract

Technology has transformed the language learning process by providing virtually limitless instructional possibilities for learners to access at any time and location. A review of the available literature suggests that technology-enhanced language learning, or CALL, could improve the accuracy of language use, motivation, and autonomy of the learners. Indeed, mobile apps and online courses offer customized learning plans, self-guided lessons, and immediate feedback, which can positively impact language acquisition and skill mastery. With all the advantages CALL programs provide, there is still a need to consider the appropriateness of learner's proficiency level, learning style, and technical resources when designing and implementing these programs. It has also been stressed that continuous evaluation and assessment of learning objectives and outcomes needs to be incorporated into the development of language learning apps and online courses. This study adopts a descriptive research design to analyze the role of technology in language learning through the Sociocultural Theory of Learning (SCT), focusing on the impacts of language learning apps and online courses on learning outcomes. This study relied on a number of published articles as a source of data. The research indicates that the advantages of language learning applications include enhanced motivation and improved vocabulary, among other things; however, there are some disadvantages as well, including minimal feedback, lack of social interaction, technical difficulties, and excessive dependence on technology. These findings highlight the insights regarding the impact of technology in language learning, noting at the same time that technology frameworks and tools require careful implementation in teaching and learning languages.

Keywords: *Language learning; Technology; Online courses; Language learning apps; Digital tools.*

1. Introduction

New technologies have significantly impacted language learning by providing unique opportunities for learners to pursue self-directed learning (Chapelle, 2003; Egbert & Hanson-Smith, 2007). The growth of language learning applications and online courses has improved access to quality language learning resources for people around the world, regardless of their geographical location or socio-economic status (Kukulski-Hulme & Shield, 2008; Levy & Stockwell, 2006). The literature shows that the integration of technology in language learning positively impacts linguistic accuracy, motivation, and learner autonomy (Hinkelman & Gruba, 2012; Thomas & Reinders, 2010). Language learning



applications and online courses have customizable paths toward achieving defined goals, enjoyable activities, and skill acquisition which all aid in personalized feedback (Mishan, 2005; Nakata, 2011). Moreover, some studies highlight the potential of technology to improve collaboration, interaction, and community spirit among learners (Garrison & Anderson, 2003; Hampel, 2013; Kern, 2006). As an example, online discussion boards and social media platforms can provide learners with opportunities for authentic interaction and exchange of feedback (Chapelle, 2007; Warschauer, 2007).

Despite the growing popularity of language learning apps and online courses, there appears to be a lack of comprehensive research evaluating the effectiveness of these tools on language learning outcomes. Some researchers have noted concerning aspects related to the use of tools in technology-enhanced language learning, such as the absence of digital motivation and interaction on the part of the learners or insufficient aid from the instructors (Bax, 2003; Laurillard, 2007). This study aims to fill this gap by utilizing Vygotsky's (1978) Sociocultural Theory of Learning (SCT) to examine the impact of technology, specifically language learning apps and online courses, on young adults' language learning outcomes. The SCT posits that language learning aids like apps, videos, and podcasts offer a multitude of symbolic resources for learning a language. It also argues that language as one of the symbolic resources mediates the processes of learning and development of the mind. In addition, the present study aims to add to the debate on technology in the context of language learning by examining the triangulated relationships between technology, language learning, and educational results.

2. Technology in language learning

In the contemporary world of learning, the adoption of technology has transformed every aspect of education. From computers, the internet, and sophisticated software to even smartphones, learners are given diverse options with numerous educational tools. Technology has authoritatively changed the traditional forms of teaching and even transformed teachers' roles into facilitators of learning (Chapelle, 2003; Egbert and Hanson-Smith, 2007). This section specifically dealt with some of the technology used in language learning such as Computer Assisted Language Learning (CALL), Mobile Assisted Language Learning (MALL), Online Language Learning Environments, Social Media, and even Virtual Reality.

2.1. Computer-Assisted Language Learning (CALL)

In simpler terms, Computer-Assisted Language Learning, or CALL is the application of computers and technology in the process of learning new languages (Levy & Stockwell, 2006). CALL has intensified over the past few decades with emerging technology and teaching methods (Chapelle, 2003). The development of CALL has gone through several phases, each reflecting changes in technological and pedagogical advancements (Warschauer, 2004). The initial phase started in the 1960s with language learning being enhanced through the use of mainframe computers (Higgins, 1983). The second phase starting in the 1980s, triggered the personal computer revolution, bringing with it CALL software (Levy, 1997). The 1990s marked the beginning of the third phase with the advent of the internet and online CALL tools (Chapelle, 2003). The onset of the 2000s marks the current phase where mobile devices, social networking, and even virtual reality technology are now a part of teaching languages (Kukulska-Hulme & Shield, 2008).

CALL has multiple forms, and each has unique traits and pedagogical goals (Levy & Stockwell, 2006). These include:

- i. Drill and Practice: This form of CALL utilizes exercises and repetitive drills to refine specific skills in a language (Higgins, 1983).
- ii. Simulation: Simulation creates worlds and environments for more authentic practice of language skills (Crookall, 1994).



- iii. Game-Based Learning: Game-based learning employs games as a technique for a more enjoyable way to practice language skills (Garcia-Carbonell, 2001).
- iv. Virtual Reality: This form of CALL develops immersive and interactive environments for language learning with virtual reality technology (Lan, 2015).
Language learners can benefit from CALL in the following ways:
 - i. Increased Motivation: Motivation is one of the areas that can improve with CALL because learners respond positively to interaction and engagement in learning (Garcia-Carbonell, 2001).
 - ii. Improved Accuracy: Positive accuracy outcome is associated with CALL due to the mechanisms for instant feedback and correction (Chapelle, 2003).
 - iii. Enhanced Autonomy: The use of CALL can enhance learner autonomy with the greater choices provided within the learning environment (Hampel, 2013).
 - iv. Availability of real-world materials: CALL can provide learners with videos, podcasts, and other articles as materials written in an authentic language (Kukulska-Hulme & Shield, 2008).
While providing benefits, CALL also presents the following challenges:
 - i. Technological difficulties: Problems with connection and software malfunctions can be detrimental to CALL (Levy & Stockwell, 2006).
 - ii. Absence of evaluation: CALL is frequently devoid of helpful evaluations and scaffolding for learners who require more help (Chapelle, 2003).
 - iii. Minimal engagement: CALL may be limiting regarding the amount of engagement offered to learners who prefer face-to-face social interactions (Hampel, 2013).
 - iv. Equity and access: The absence of equity and access, especially in relation to the parts of society that are considered to be the intended users of such technologies, may limit the effectiveness of CALL (Warschauer, 2004).

2.2. Mobile-Assisted Language Learning (MALL)

Mobile-Assisted Language Learning is defined as the use of mobile devices like mobile phones, smartphones, and tablets in language learning (Kukulska-Hulme & Shield, 2008). MALL has become prominent lately because of the increase in mobile device usage and the creation of language-learning applications (Chapelle, 2003). The history of MALL can be divided into several stages each marked with significant advancements in technology and pedagogy (Kukulska-Hulme & Shield, 2008). The first stage, which started in the early 2000s, included the introduction of mobile devices which came with basic functions, text messaging and email (Levy & Stockwell, 2006). In the middle of the 2000s, the second stage started and mobile language learning applications were developed that provided learners with interactive language learning activities and exercises (Chapelle, 2003). In 2010, the current stage started when mobile phones became available to most people and more sophisticated mobile language learning applications were developed (Kukulska-Hulme & Shield, 2008).

Different types of MALL have unique features, characteristics, and educational goals (Kukulska-Hulme & Shield, 2008). Some important types of MALL are:

- i. Mobile-assisted language learning applications: These educational tools facilitate language learning through various interactive activities such as vocabulary enhancement, grammar, and listening exercises (Chapelle, 2003).
- ii. Mobile-assisted language learning games: These games promote active and enjoyable language learning through traps, quizzes, role-playing, and many other activities (Garcia-Carbonell, 2001).
- iii. Mobile-assisted podcasts: These serve as audio materials for learners of the language as they provide content such as news, stories, and conversations (Chapelle, 2003).



The benefits of MALL for language learners are numerous, such as:

- i. Greater mobility: Students can use MALL to learn languages at their own convenient time and from any part of the world (Kukulska-Hulme & Shield, 2008).
- ii. Increased motivation: MALL enhances the motivation to learn because of its engaging and interactive nature (Garcia-Carbonell, 2001).
- iii. Improved learner autonomy: MALL can increase autonomy by giving learners more control over the environment in which they study (Hampel, 2013).
- iv. Availability of authentic materials: MALL enables students to obtain real-life linguistic materials such as news, video, and podcast feeds (Chapelle, 2003).

Mobile-assisted language learning (MALL) has several benefits, yet, there are a number of challenges that must be overcome, such as:

- i. Technical Problems: MALL suffers from technical issues like connection, and device compatibility, as well as other several other problems (Levy & Stockwell, 2006).
- ii. Lack of Feedback: MALL is often deficient in providing feedback, support, guidance, and help from instructors, especially for students with low capabilities (Chapelle, 2003).
- iii. Disruptions: MALL can be interrupted by social media and email notifications (Hampel, 2013).
- iv. Fairness and Availability: MALL can be impacted by fairness and availability issues, especially for learners who do not possess mobile gadgets (Warschauer, 2004).

2.3. Online Language Learning Environments

Online language learning environments are understood as virtual spaces that enable learners to interact with language instructors, other learners, and a variety of electronic resources to aid in learning a language (Garrison & Anderson, 2003). The most notable being the advancement of technology and the increased focus on learning languages through the internet (Chapelle, 2003). Each of them is classified differently depending on the specific features and teaching objectives of each (Hampel, 2013). Below is a list of common types of online language learning environments:

- a) Learning Management Systems (LMS): Dispersed by educational institutions, LMS systems grant each student the opportunity to access various digital materials, including, but not limited to, videos, podcasts, and interactive activities. Furthermore, they can communicate and interact with their instructors and classmates (Mishan, 2005).
- b) Virtual Learning Environments (VLE): VLE platforms provide students with immersive and interactive language learning experiences, including virtual reality simulations, games, and role-plays. (Garcia-Carbonell, 2001)
- c) Online Language Learning Communities: It helps learners socialize and interact with peers and native speakers using complex modern software like discussion boards, social networking, and video conferencing (Kern, 2006).

Language learners benefit from the following features of online language learners' environments:

- i. Improved Scheduling Needs: Kukulska-Hulme and Shield (2008) state that online language learners' environments offer learners the flexibility to learn anytime and anywhere.
- ii. Equitable Access: Warschauer (2004) states that online learners' environments offer learners equal access to high-quality language instruction and resources irrespective of their geographical locations or socio-economic backgrounds.
- iii. Surge in Learner Control: Hampel (2013) states that learners have more control over their learning environment when learning online, which allows them to take ownership of their learning and make decisions about their learning pathways.



- iv. Sustained Improvement Through Formative Feedback: Online language learners' environments provide learners with multiple avenues for feedback and assessment by instructors and peers which Chapelle (2003) states enhances learners' proficiency and accuracy.

Despite the advantages of the online language learners' environments, several barriers need to be fixed, including:

- i. Technical Issues: Levy and Stockwell (2006) identify problems with connectivity and software glitches as some technical issues affecting online language learners' environments.
- ii. Reduced Human Interaction: Kern (2006) states that the lack of social interaction and humane interaction within the online language learners' environments negatively affects learners' motivation and engagement.
- iii. Social Responsiveness: The availability of socio-economic resources impacts learning outcomes and experiences for diverse language learners, students with disabilities, as well as students who do not have ready access to technology (Warschauer, 2004)

2.4. Social Media and Language Learning

Kern (2006) argues that social media platforms like Facebook, Twitter, and Instagram offer learners genuine opportunities to practice and interact with native speakers of the language. For instance, Mishan (2005) highlighted that learners can partake in online discussions, post content pertaining to the language in question, and interact with native speakers via social media. It is important to note the benefits of social media for language learning, such as:

- i. Authentic language practice: Chapelle (2003) noted that social media enables learners to engage with language in multiple ways, including reading, writing, listening, and speaking.
- ii. Social interaction: According to Kern (2006), social media allows learners to communicate with both natives and non-natives which enhances language skills as well as appreciation of other cultures.
- iii. Cultural exchange: As learners, Hampel (2013) argued that social media allows them to share their cultural practices, traditions, and values, which enhances their understanding of cultural exchange.
- iv. Access to language resources: Levy and Stockwell (2006) stated that social media as a platform enables learners to access various resources such as apps, videos, and podcasts focusing on language learning.

Using social media for language learning also poses a variety of challenges such as the following:

- i. Distractions: Kukulska-Hulme and Shield (2008) state that social media is distracting and most learners struggle to carry out language learning activities effectively.
- ii. Limited feedback: Social media does not offer learners adequate feedback relevant to their language use which impedes progress in language acquisition (Chapelle, 2003).
- iii. Inauthentic language use: Social media does not provide learners with genuine opportunities for the use of the language as such use is often restricted to short messages or posts; Kern, 2006.
- iv. Cyberbullying and online harassment: In addition, social media poses some challenges to learners' such as cyberbullying and online harassment (Hampel, 2013).

2.5. Virtual Reality and Language Learning

Developing language skills through virtual reality (VR) frameworks can be 'engaging' and 'exciting' since these paradigms provide learners with virtual immersive environments (IE Singapore, 2015). VR can recreate authentic language contexts, enabling learners to receive genuine practice in speaking and interacting in the language (Lan, 2015). There are numerous advantages when using VR in teaching a language, these include:



- i. Engagement and Motivation: VR offers immersive and interactive experiences, which can increase motivation and enhance the learning process (Lan, 2015).
- ii. Authentic Language Learning Opportunities: Role-plays, simulations, and virtual field trips in VR give learners authentic opportunities to practice the language (Chapelle, 2003).
- iii. Personalized learning: The use of VR enables learners to experience different learning materials designed to fit their specific requirements (Hampel 2013).
- iv. Improved cultural understanding: Accessing different virtual locations in VR helps learners understand different cultures which broaden their cultural knowledge (Kern, 2006).

Though using VR has many advantages, there are a few disadvantages when it comes to learning languages:

- i. Technical difficulties: Issues with the hardware and software can interfere with learning and the overall experience of VR (Levy & Stockwell, 2006).
- ii. Lack of funding: Many learners and even some institutions do not have the financial means to afford the VR equipment and software (Lan, 2015).
- iii. Scarce content: Regarding the teaching and learning of language skills, there is very little content available in VR, and producing quality content tends to be expensive and time-consuming (Chapelle, 2003).
- iv. Health risks: VR can cause a number of health issues such as strained eyesight, headaches, and nausea, all of which can reduce the overall learning experience (Hampel, 2013).

3. Impacts of Technology on Language Learning

3.1. Language Learning Apps and Their Impacts on Language Learning

Over the past several years, learning a new language has become easier due to the emergence of language learning applications (Kukulska-Hulme & Shield, 2008). These apps can facilitate language learning in numerous ways, including providing interactive lessons and exercises with adequate feedback and assessment (Chapelle, 2003).

These can be categorized into several different groups:

- a) Language Learning Platforms: language learners are provided with interactive exercises, lessons, and assessments within the same app (e.g., Duolingo, Babbel).
- b) Vocabulary Builders: these apps mainly focus on helping learners build their vocabulary using engaging games and activities (e.g., Quizlet, Vocabulary.com).
- c) Language Exchange: allows learners to connect with native speakers of the target language for practice and cultural exchange (e.g., HelloTalk, Tandem).
- d) Language Learning through Games: These apps support language learning through game-based activities such as interactive puzzles and challenges (e.g., Lingua.ly, Lingodeer).

Language Learning Applications have ever-changing positive impacts:

- i. Reduced lack of motivation: The use of interactive and deeply immersive experiences creates an increase in motivation and engagement towards the language learning materials (Lan, 2015).
- ii. Improved vocabulary: The use of interactive apps for language learning has been shown to develop learners' vocabulary through games and other activities (Cobb, 2007).
- iii. Enhanced language practice: Language learning applications have been shown to provide opportunities for practice with the language through lessons and problem sets (Chapelle, 2003).
- iv. Access to authentic materials: Learners can access genuine language materials like videos, podcasts, and news pieces through language learning applications (Chapelle, 2003).

Apps for learning languages also have a few drawbacks, such as:



- i. Limited feedback: These types of applications do not offer sufficient feedback on the learners' use of the language, which can impede learning (Chapelle, 2003).
- ii. Lack of human interaction: The absence of face-to-face dealings in these apps may cause a decline in motivation and retention among learners (Hampel, 2013).
- iii. Technical issues: The apps are subject to numerous technical issues including connection troubles and software problems which greatly interfere with the learning process (Levy & Stockwell, 2006).
- iv. Over-reliance on technology: The apps may encourage excessive dependence on technological resources, undermining the learners' independent initiative and self-guided study skills (Kukulska-Hulme & Shield, 2008).

3.2. *Online Courses and Their Impacts on Language Learning*

Online courses are defined as educational programs offered wholly or partially on the Internet (Kukulska-Hulme & Shield, 2008). These courses are widely accepted in this modern age as they bring ease of accessibility and flexibility for learners to acquire new knowledge and skills (Chapelle, 2003). Types of online courses include the following:

- a) Self-Paced Online Courses: A type of course that enables learners to progress through coursework at their own pace with help from online tutors or discussion forums (Hampel, 2013).
- b) Synchronous Online Courses: These courses involve interaction between learners and instructors in real time through video conferencing or chat (Chapelle, 2003).
- c) Asynchronous Online Courses: A type of course where lectures and coursework are pre-recorded, allowing learners the flexibility of completing tasks with no deadline (Kukulska-Hulme & Shield, 2008).
- d) Blended Online Courses: A type of blended learning course that combines online learning with face-to-face teaching, either in a classroom or lab session (Garrison & Kanuka, 2004).
- e) Massive Open Online Courses (MOOCs): MOOCs are open online courses available to anyone who has internet access and are offered on a large scale (Koller et al., 2013).

These are only a few of the impacts related to online courses in learning a new language:

- i. Improved access: Technology has improved learners' access to teaching and learning resources as devices such as phones, computers, and the internet have become ubiquitous, regardless of their socio-economic status or location (Warschauer, 2004).
- ii. Enhanced autonomy: Online courses provide learners with more control over their environments, thus enabling, greater ownership of the learning process (Hampel, 2013).
- iii. Access to genuine publications: Through online courses, learners can access genuine language materials such as videos, podcasts, and news reports (Chapelle, 2003).

Despite these benefits, online courses still negatively impact language learning by:

- i. Limited feedback: Online courses provide learners with little feedback regarding their use of the language which may impede progress in language learning (Chapelle, 2003).
- ii. Lack of human interaction: The lack of human interaction during the course may have a negative impact on motivation and learner engagement (Hampel, 2013).
- iii. Technical issues: Online courses are prone to technical problems like connectivity or software issues that hinder the learning process (Levy & Stockwell, 2006).
- iv. Over-reliance on technology: The use of online courses tends to foster overdependence on technology which is detrimental to learner autonomy and self-learning skills (Kukulska-Hulme & Shield, 2008).



4. Transformative Potential of Technology in Language Learning

According to Chapelle (2003), language acquisition technology has transformed language learning by giving us a wide range of resources and tools. Technology-enhanced language pedagogy has the potential to augment the quality of relational and personalized activities, as well as the immersion offered. Such an approach to teaching not only enhances the ease of acquiring a language but also increases motivation and cultural appreciation (Kukulska-Hulme & Shield, 2008).

4.1. *Personalized Learning*

Technology, as per Hampel (2013), provides a unique learning opportunity for each learner that corresponds to their competency and preferred style of learning. For instance, algorithms in adaptive learning systems, like Knewton (2013), perform self-calibrations of the learning material's difficulty based on the preceding performance of the learner. Moreover, Learning Management Systems (LMS) assist instructors in tracking learner activity and provide tailored experiences such as feedback and guided learning pathways (Moodle, 2020). Furthermore, language learning mobile applications such as Duolingo and Babbel offer custom interactive lessons, quizzes, and games to foster increased engagement with the learning materials (Duolingo, 2020).

4.2. *Interactive and Immersive Learning*

In the words of Chapelle (2003), technology can enable learners to actively participate and engage with the materials that help facilitate language learning. For example, Lan (2015) explained how virtual reality and augmented reality offer immersive learning through virtual field trips, complex simulations, and 3D modeling. Furthermore, dynamic materials such as video clips, podcasts, and recordings help enhance the learning environment (Kukulska-Hulme & Shield, 2008). In addition, multimedia resources can be fostered through social networks which promote collaborative project-based learning (Warschauer, 2004).

4.3. *Cultural Understanding and Exchange*

As stated by Kern (2006), technology can facilitate the comprehension of different cultures, which helps nurture global citizenship and language acquisition. For example, Kern (2006) discussed how Zoom and Skype as social media platforms enable learners from different geographical regions to participate in language and cultural exchange; Hampel (2013) stated that educational social media such as Facebook and Twitter allow learners to interact with native speakers, sharing culture and ideas, and discussing matters with them; and Kukulska-Hulme and Shield (2008) highlighted that educational culture's blogs and online museum sites offer learners authentic cultural materials which enhance cultural understanding.

5. Challenges and Limitations

While many strides have been made through technology in language learning, it also poses some challenges like technical problems, equity, access, and pedagogical issues (Chapelle, 2003).

- i. Technical issues – Connectivity challenges alongside software issues are some of the hindrances to effective learning (Levy & Stockwell, 2006).
- ii. Equity and access – Certain learners are not technologically inclined, and this poses challenges in equipping them for language courses (Warschauer, 2004).
- iii. Pedagogical challenges – There is a need for instructors to receive proper training on how to use technology in their lessons, lest they remain obsolete with modern teaching aids (Kukulska-Hulme & Shield, 2008).



6. Recommendation

Taking into account these constraints, it is necessary to design more sophisticated frameworks for the use of applications and online models that are capable of addressing most if not all weaknesses of previous approaches with regards to technical connectivity and software glitches, as well as the pedagogical issues that have undermined their relevance in language learning. Equity and access issues can also be solved by providing all interested parties with the requisite modern tools and technologies, which eliminates the oftentimes unrecognized barriers to opportunities for language learning.

7. Conclusion

Technology's role in language learning has transformed the existing paradigms of how we train and hone language skills. The growth of language learning applications and online classes is now part and parcel of the learning process because it promotes greater flexibility, accessibility, and interactivity. Learners' productivity as a result of language learning apps and online courses is intricate; nevertheless, it undeniably improves productivity, motivation, and cultural exposure. However, it is equally pertinent to analyze the drawbacks and issues associated with these apps and courses, such as technical difficulties, poor feedback systems, and the potential for over-reliance.

Both language educators and students need to know the advantages and disadvantages of such tools to be effective and avoid relying solely on traditional methods. Ultimately, integrating technology into education requires considering the interplay of technology with language learning and the learners' needs. The globalization of the world alongside more engaging, effective, and accessible approaches to education enables us to accept and revolutionize language learning through technology.

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