AN ANALYSIS OF USING TECHNOLOGY IN LANGUAGE LEARNING IN THREE FLAGSHIP JOURNALS

ÖNDE GELEN ÜÇ DERGİ ÖZELİNDE DİL ÖĞRETİMİNDE TEKNOLOJİ KULLANIMI ÜZERİNE BİR İNCELEME

Galip KARTAL[1]

Özet: Bu çalışma, son 10 yılda (2010-2019) üç adet bilgisayar destekli dil öğretimi odaklı amiral gemi dergisinde (Language Learning & Technology, CALL ve ReCALL) yayınlanan teknolojiyle dil öğrenimi araştırmaları üzerinde yapılan çalışmaları incelemektedir. Bu dergiler Sosyal Bilimler Atıf İndeksinde (SSCI) indekslenmektedir ve yalnızca teknolojinin dil öğreniminde kullanımı ile ilgili makaleler yayınlamaktadır. Makale seçimi için belirlenen ölçüt, çalışmaların bir dil alanında (örneğin ana dil becerileri, dilbilgisi, kelime bilgisi, kaygı ve özerklik) belirli bir teknolojik araç kullanmanın yararları üzerine deneysel kanıtlar sunması gerektiğidir. Yayınların eğilimlerini, metodolojilerini, teorilerini, araştırma odağını, kullanılan teknolojiyi ve dil öğrenme faydalarını izlemek için toplam 286 çalışma tespit edilmiş ve içerik analizi tekniği kullanılmıştır. Bulgular, yaygın olarak kullanılan teknolojilerin derlem (veriye dayalı öğrenme), bilgisayar aracılı iletişim, sanal dünyalar, blog oluşturma, wiki'ler, tele-iş birliği ve altyazı olduğunu göstermiştir. Teknolojiden en çok yararlanan dil alanları; yazma, kelime bilgisi, konuşma, okuma, özerklik, telaffuz, dinleme, dilbilgisi, pragmatik, kaygı, hata düzeltme ve motivasyondur. Çalışmalarda teknolojiyi, dille ilgili yardım ve teşvik sağlayarak dil öğrenimini desteklemek için kullanıldığı bulunmuştur. Sonuçlar, teknolojiyi dil öğrenimine entegre etmenin bazı sonuçları doğrultusunda tartışılmaktadır.

Anahtar Sözcükler: *Dil öğrenme, teknoloji, eğilimler, sistematik inceleme, teknoloji odaklı dergi.*

Abstract: This study probes into the research studies on language learning with technology published in three CALL-focused flagship journals (Language Learning & Technology, CALL, and ReCALL) in the last 10 years (2010-2019). These journals are indexed in the Social Science Citation Index (SSCI) and they solely publish articles on the use of technology in language learning. The established criterion for article selection is that the studies should provide empirical evidence on the benefits of using a specific technological tool on a language area (e.g. main language skills, grammar, vocabulary, anxiety, and autonomy). A total of 286 studies were identified and the content analysis technique was used to track the publications' trends, methodologies, theories, research focus, the technology used, and language learning benefits. The findings showed that the commonly used technologies were corpus (data-driven learning), computer-mediated communication (CMC), virtual worlds, blogging, wikis, telecollaboration, and captioning. The language areas that mostly benefited from technology were writing, vocabulary, speaking, reading, autonomy, pronunciation, listening, grammar, pragmatics, anxiety, error correction, and motivation. The studies utilized technology mainly to support language learning by providing language-related assistance and encouragement. The results are discussed in line with some implications for integrating technology into language learning.

Keywords: *Language learning, technology, trends, systematic review, CALL-focused journal.*

---

[1] Dr. Öğr. Üyesi, Necmettin Erbakan Üniversitesi, Ahmet Keleşoğlu Eğitim Fakültesi, İngiliz Dili Eğitimi Anabilim Dalı, kartalgalip@gmail.com, ORCID: https://orcid.org/0000-0003-4656-2108

Introduction

Technological developments have transformed the structure of learning and allowed learning anytime and anywhere. Therefore, advances in technology have been instrumental in developments and led to changes in every field including education. One of the deeply and positively affected areas is language teaching. Technology as assistance to teaching immediately, profoundly, and positively contributes to the learning of a second or foreign language. As a result, a great deal of research has been conducted into the use of emerging technologies to enhance language learning. The integration of technology into language learning results in numerous studies and even language-specific educational technology journals.

The body of research in Computer Assisted Language Learning (CALL) has been growing dynamically and recent studies illustrate the potential of using technology in language learning. When the definitions of the CALL are considered, it can be said that there is an epistemological change in the understanding of it. CALL is defined as "the search for and study of applications of the computer in language teaching and learning" (Levy, 1997, p. 1). This definition puts emphasis on computer technology. In another definition after eight years, Egbert (2005) believes that "CALL means learners learning language in any context with, though, and around computer technologies" (p. 4). As a new branch of applied linguistics which has strong ties with autonomy and computer science (Beatty, 2013), CALL has been applied generally via Web 2.0 tools which are web-based platforms where users can add and edit content, conduct tasks, and share data or deliverables. Some of the Web 2.0 tools are blogs, wikis, digital file-sharing sites, podcasts, and virtual environments. Numerous Web 2.0 tools can be used via smartphones. Therefore, the CALL can be considered as a branch of linguistics that covers the mobile-assisted language learning (MALL), which has become an important issue for researchers and practitioners since the ubiquitous presence of smart devices has resulted in the design of multiple smartphone applications. Today, mobile devices have become the primary way to engage with the world. As Hockly (2013) ascertains "the future is increasingly mobile, and it behoves us to reflect this in our teaching practice" (p. 83). Mobile phones, smartphones, iPods, tablet PCs help users reach information anywhere and anytime. These devices can be used as a tool for learning, sharing and retrieving information. They also offer diverse benefits for language learning by allowing room

for learner autonomy, student-centred teaching, user-created content, individual and collaborative learning, and effective student interaction (Liu, Navarrete, Maradiegue, & Wivagg, 2014).

The selection of the appropriate technological tool is important for researchers, teachers and learners. As Reinders and White (2016) argue "technology has become ubiquitous and ever-faster developments are putting considerable pressure on our conceptualisation of language learning and teaching" (p. 150). Technological developments allow learners to access increasingly rich environments for language learning. Similarly, important shifts have been made towards learner-centredness (Nunan, 1988), which is a significant factor that has made the notion of 'learner autonomy.' Defined as the ability to take responsibility (Holec, 1981) or the capacity to take control over one's own learning (Benson, 2001), learner autonomy has become a crucial issue in language learning because if learners take responsibility for their own learning, their learning becomes more efficient (Chan, 2016; Illes, 2012). A similar phenomenon is teacher autonomy, which requires teachers "to have a degree of agency themselves, together with requisite knowledge, attitudes, and skills to foster autonomy" (Reinders & White, 2016, p. 146). CALL teacher autonomy depends on the ability to utilize, create, and manage technological tools (Kessler, 2010).

Background and the Research Questions

There has been a remarkable increase in the number of systematic reviews of research studies as they allow tracking the developments in a particular field over time (Hallinger, 2013). Literature provides various review studies on CALL and MALL (Burston, 2013; Golonka, Bowles, Frank, Richardson, and Freynik, 2014; Shadiev, Hwang, & Huang, 2017). However, the present review of research, which does not discriminate CALL and MALL, is rare in terms of the amalgamation of mere reputable CALL-focused language learning journals. These three journals were taken as the flagship journals, since they are the only CALL-focused language teaching journals indexed in the SSCI. The comprehensible discussions on technology in language learning support the journal selection criterion of the present study (see Chun, Kern, & Smith, 2006; Son, 2018). Although there are some other SSCI educational technology journals that publish articles on language learning with technology, these three educational technology journals are the only ones that merely publish on language learning. Therefore, these journals are the only CALL-focused language teaching and learning journals indexed in SSCI. The journals indexed in the SSCI use

rigorous and stringent criteria before publishing articles and they have stronger impacts in the field (Duman, Orhon, & Gedik, 2015).

There is a great deal of CALL and MALL tools and this might result in a lack of access to knowledge about new technologies (Zeng, 2015). Users of these tools need to "look beyond gross decontextualized measures of effectiveness to understand effectiveness in terms of the specifics of what people do with computers, how they do it, and what it means to them" (Kern, 2006, p. 189). The flagship journals with their reliable theoretical underpinnings might help researchers and teachers in their efforts to take control of the technology that serves as an aid to enhance language learning. Having motivated from these considerations, the current review aimed at exploring the impact of technology and computers in the field of language education over the past 10 years. An analysis of the experimental research was conducted in highly reputable three flagship journals in the areas of language skills (i.e. reading, listening, speaking, writing, grammar, vocabulary, and pronunciation) and other language areas (e.g. pragmatics, motivation, willingness to communicate, punctuation, anxiety). Therefore, this review sets out to investigate research trends, the common technologies, theories, the research topics, and the available methodologies used in technology-assisted language learning. The following research questions guided the current review study:

1.   What are the trends, theories, and methodologies in the CALL-focused flagship journals?
2.   What are the technologies used in language learning?
3.   What are the research topics and language learning benefits?

Methodology

This study investigated the technologies used in the experimental studies published in three flagship journals. The three-musketeer language learning and technology journals were used in this review: Language Learning & Technology, Computer Assisted Language Learning (CALL), and European Association for Computer-Assisted Language Learning (EUROCALL), which is known as ReCALL. These journals are CALL-focused educational technology journals. Table 1 provides overall information regarding the journals under scrutiny.

Table 1

Information Regarding the Three Flagship Journals

Journal	Start Date	Publication Frequency	Publisher	Indexed	Impact Factor (2018)	ISSN
Language Learning & Technology	1997	3 issues per year	-	SSCI	2.113	1094-3501
CALL	1990	8 issues per year	Routledge Taylor & Francis	SSCI	2.018	1744-3210
ReCALL	1989	3 issues per year	Cambridge University	SSCI	1.361	1474-0109

Article Selection Criteria

This review limits itself to the experimental studies that must include real human participants and an implementation. Therefore, this paper missed out meta-analyses, perceptions, exploratory studies, discourse and conversation analysis studies. Also, the review included studies that specifically mentioned the language area that is affected by the technological tool. Moreover, this review excluded language teacher development studies. In other words, this current review included the articles that used technology as an aid to language teaching and learning.

This study investigated the technologies used in the experimental studies published in three flagship journals. This review included 286 studies after conducting the article selection criteria. There were 96 articles from LL&T, 126 from CALL, and 64 from ReCALL. The findings are given under the categories of characteristics of the studies (settings, sample sizes, and theories), the technology used, and the language learning benefits.

Findings

This study investigated 286 research studies published in three CALL-focused language learning journals. The findings were classified into three main categories considering the research questions: findings regarding the trends, methodologies, and theories; the technology used; and the research topics and language learning benefits.

Findings Regarding Trends, Methodologies, and Theories

As for the first research question, the trends, methodologies and theories were analysed. Table 2 shows the results regarding the setting of the participants.

Table 2

The Setting of the Studies

Setting	f
University (undergraduate and graduate)	230
K12	18
Other (private institution, adults)	38

The analysis of the settings showed that the majority of the studies were conducted with university students. There were 18 studies conducted with K12 learners. There were 38 studies conducted at other settings including private language institutions and open education institutions. The analysis also included the participants of the studies. The participants were grouped under four categories: <10, 10-20, 21-50, and >50. The analysis of participants is illustrated in Table 3.

Table 3

The Participants in the Selected Journals

Participant	f
<10	33
10-20	51
21-50	95
>50	101

As Table 3 shows, there are both small-scale and large-scale studies, in which the number of participants ranged from 1 (Park & Kinginger, 2010) to 43000 (Friðriksdóttir, 2018). Six studies lacked information about the number of participants. Another focus of the current study was theories that guided technology use in language learning. The analysis of the theories showed that CALL research utilized the tenets of social constructivism, interactionist second language acquisition (SLA), second language acquisition, collaborative learning, self-regulated learning,

learning styles and strategies, activity theory, the community of inquiry model, technological pedagogical content knowledge (TPACK), multimodal analysis of interaction, cognitive theory of multimedia learning, dual-coding theory (Paivio, 1971, 1986), ubiquitous learning, noticing hypothesis (Schmidt, 2001), negotiation of meaning, item response theory, learning memory, memory-based strategic framework for vocabulary learning (Ma, 2014), and situated learning theory (Brown, Collins, & Duguid, 1989). The most utilized ones were social constructivism and interactionist SLA theories, which were actualized via task-based language teaching (TBLT) and negotiation for meaning. While some of the studies utilised available Web 2.0 tools or apps, some of the studies used self-developed tools to include the appropriate theory.

Findings on the Technology Used

The findings regarding the type of technology used in reviewed articles were given in a word cloud (see Figure 1) and in Table 4.
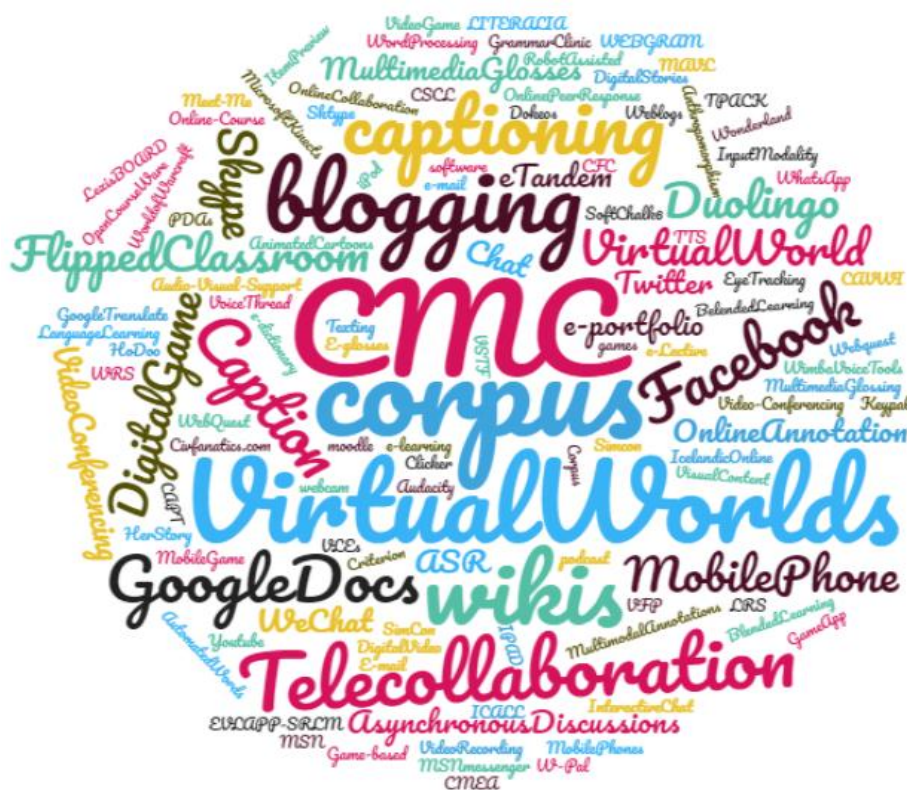

Figure 1. Word cloud of the used technologies

As is seen in Figure 1, the CALL-focused SSCI journals mostly published articles on CMC, corpus, virtual worlds, blogging, and captioning.

Table 4

The Technologies Used in the Studies

Technology	The ones used in the analysed studies
Audio & video discussions	VoiceThread, Literalia, eTandem, Audacity
Blogs	Blogger, Weblogs, Edublogs
Chats	Skype, MSN Messenger
Corpora & Concordancers	COCA corpus, BNC, Movie Corpus, Learner Corpora, Web concordance, CWIC
Information Networking	Evernote, Friendfeed, Ubernote, Keeppy, Your verbal zone, W-pal
Resource Sharing	Google Docs, Youtube
Social Networking	Twitter, Facebook, Google +, MySpace, SimCon, Halef
Student Response System	Kahoot, Criterion, LRS
Virtual Worlds & MMORPG (Massively Multiplayer Online Role-Playing Game)	Second Life, World of Warcraft, Wonderland, Blackboard, Synthetic worlds
Web Search Engines	Google, Yahoo!
Wikis	Edmodo, Webquest, PBwiki
Smart Phone Apps	WhatsApp, Duolingo, WeChat, EVLAPP-SRLM
Game Apps	HoDoo, Civfanatics.com, Conjugation Nation,
Other	Microsoft Speech Application, Spaceteam

Note: Some of these tools or apps are customised by the scrutinised studies

Table 4 shows the specific technology used in the studies with the general category of the specific technological tools. Although there are numerous examples to a specific technology category (e.g. virtual worlds), the table included the ones used in the reviewed studies. For example, some available virtual worlds are Active Worlds, Croquet, Open Sim, Second Life, Quest Atlantis, and World of Warcraft. As the table shows this study found that only Second Life and World of Warcraft are used.

Findings Regarding the Research Topics and Language Benefits

The analysis of the research topics focused on the findings of the received articles regarding language learning benefits and the findings are shown in Table 5.

Table 5

The Language Learning Benefits of the Technology

Main Theme	Sub-Theme	f
Writing	punctuation, argumentative essay, revision, lexico-grammatical use, process writing, academic writing,	59
Vocabulary	collocations, technical vocabulary, idioms, incidental vocabulary, formulaic language	49
Speaking	oral fluency, negotiating for meaning	35
Reading	extensive reading,	13
Autonomy	collaborative autonomous learning abilities, autonomous learning, learner independence	13
Pronunciation		10
Listening		9
Grammar		9
Pragmatics	refusals, expressing gratitude	7
Anxiety	speaking anxiety, communication anxiety	7
Error correction		7
Motivation		6
General learning	four skills, general proficiency	6
Corrective feedback		5
Collocation	verb+noun	4
Collaboration		3
Metacognition		2
Strategy		2
WTC		2
Feedback	oral feedback, written feedback	2

Note: This table includes themes that appeared more than one time

The analysis of the use of technology for teaching four skills revealed that researchers utilized technological tools to develop writing, speaking, reading, and listening respectively. There was one study on interpersonal communication, intercultural communication, intercultural development, intercultural competence, discourse restructuring, negotiating for meaning, learner interpretation, cognitive learning, language awareness, tandem learning, self-efficacy, self-learning, and linguistics development.

The sub-themes of the main skills are also provided because "[M]easuring language proficiency and L2 development resist being reduced into a simple set of discrete categories such as speaking, listening, reading, and writing" (Blake, 2016, p. 137). Additionally, linguistic

knowledge cannot be limited to four skills (Blake, 2016). Another issue with language learning with technology is learner autonomy. As Reinders and White (2016) put forward "Now that everyday technologies have emerged as contemporary dwelling places for language learning, learner autonomy is required, developed, and exercised in ways that we are only just beginning to understand" (p. 152).

Discussion

Research studies published at top-ranked journals are beneficial for both researchers and teachers to integrate technology into language teaching and learning. The flagship journals might also contribute to the discussion of using or integrating technology. Using a technological tool can be simply considered as exploiting it. However, integrating a technological tool requires theoretical considerations. A research study without theoretical underpinnings cannot provide a pedagogical rationale and thus it cannot go beyond using data collection tools (Perraton, 2000). There are numerous studies on language teaching with technology that does not underpin the method of a well-established theory (Kartal, 2019). However, integrating technology into an educational setting requires a deep understanding of the theory lying behind the application. A revision of the studies published only in these flagship journals might contribute to the understanding of the role of technology in language teaching as they attach significance to the theory-practice relationship. These journals are also indexed in the SSCI, which requires rigorous and stringent criteria for publication (Duman et al., 2015).

The studies published in the flagship journals were found to utilize the tenets of numerous theories such as cognitive theory of Multimedia Learning (Mayer, 2014, 2005), dual-coding theory (Paivio, 2007, 1986, 1971), collaborative learning, ubiquitous learning, noticing (Schmidt, 2001), negotiation of meaning, item response theory, learning memory, memory-based strategic framework for vocabulary learning (Ma, 2014), situated learning theory (Brown, Collins, & Duguid, 1989). Most used theories were social constructivism and interactionist theory, which is parallel to previous research on CALL specific theories (Akayoğlu, 2019; Chapelle, 2005, Hubbard & Levy, 2016; Kern, 2006, Son, 2018). This finding is not surprising because new technologies assist easier interaction, collaboration, and cooperation that lay the foundation of social constructivism.

Research in these journals explores the complex relationships among learners, teachers, content, and technology, which is also acknowledged by Kern (2006). Still, most benefitted areas were determined. In the analysis of the educational benefits of the technological tool, it was found that these practices had positive effects on mostly writing and vocabulary. These findings are in line with a review study on the use of mobile instant messaging (MIM) by Kartal (2019), who found that writing and vocabulary are the most positively affected skills. This finding is similar to Son (2018) who conducted a study on the topics of five educational technology journals publish only language-focused research (CALICO Journal, CALL-EJ, Language Learning & Technology, CALL, and ReCALL) that writing, mobile learning, and vocabulary learning have been the most prevalent ones.

The use of emerging technologies can help improve the effectiveness of language teaching. However, as Warschauer and Meskill (2000) assert, "the key to successful use of technology in language teaching lies not in hardware or software but in "humanware"; therefore, it all boils down to "our human capacity as teachers to plan, design and implement effective educational activity" (p. 307). Language teachers have a set of beliefs, philosophies, and expectations when they come to any teaching situation (Richert, 1991). The current global focus on teacher development has been a major concern for teachers, teacher educators, researchers as a result of the fact that teachers are the major actors who have the most impact on student achievement (Darling-Hammond, 2006; Tellez & Waxman, 2006). Therefore, this review situates itself within the growing literature of technology and language learning, and the indispensable role of teachers in utilizing emerging technologies.

The use of technology as reported in the literature on language teaching follows the historical timeline of available technology. This present study showed that most popular ones are CMC, Web-based language learning (WBLL), and MALL, which is also the case in another study by Son (2018). Foreign language speaking was assisted by generally CMC by using tools such as Skype and Google Hangout, which allow users to exchange video, images, and text in real-time. This finding is parallel to Blake's (2016) findings. A study conducted with MSN messenger was conducted with a MIM (e.g. WhatsApp) later. This shows that the language teachers and learners should know how to integrate a technological tool rather than how to use it. Integrating emerging technologies requires understanding the theoretical underpinnings of the specific tool. For

instance, a teacher, who uses Kahoot in her classes, should know that it is Student Response System (SRS) and SRSs can be used in the classroom to increase the interaction between teachers and learners.

The findings also showed that the participants developed positive attitudes towards the technological tools used in the studies. This finding is in line with previous research which showed that learners had positive perceptions towards CALL (Son, 2018) and MALL (Shadiev et al., 2017). It was revealed that CALL provides many educational affordances including not only language proficiency but also positive attitudes towards technology use. The satisfaction level and enjoyment of users are essential because enjoyment plays a significant role in determining a person's behaviour (Yi & Hwang, 2003).

Conclusion

This study adopted content analysis to examine all experimental articles published in three CALL-focused educational technology journals within the scope of SSCI between 2010 and 2019. More specifically, it investigated the linguistic, literary, and affective affordances of technology in language learning. The findings have revealed that there is considerable consensus with regard to the use of technology within the field of language education. The findings of this review affirm that the use of technology has affected language learning positively. Learner feedback on the technology used was mainly positive, and users appeared to engender high levels of motivation and positive attitudes. There are numerous technological tools available for language teaching and learning. Selecting the appropriate tool may turn into a challenging process for teachers and students. Golonka et al. (2014) suggest "caution before being led down the golden path of technology" (p. 93). Therefore, this review, which included only CALL-focused SSCI journals, would provide a roadmap for teachers, learners, and researchers since the articles published in the SSCI journals have stronger impacts in the field (Duman et al, 2015).

Dissemination of technology is non-negotiable in all educational settings and for students of all. Some suggestions can be made for future studies. A future study may review the empirical studies that influence reading, writing, speaking, listening, vocabulary, pronunciation, and grammar separately. In addition, a further review might include other SSCI educational technology journals that publish language learning articles besides the other areas of education (e.

g. British Journal of Educational Technology, Computers & Education; Journal of Computer-Mediated Communication). This review focuses more on technological tools rather than focusing on methods used in the articles. A future study, therefore, can examine the research model, data collection, and analysis tools of the studies.

References

Akayoğlu, S. (2019). Theoretical frameworks used in CALL studies: A systematic review. *Teaching English with Technology, 19*(4), 104-118.

Beatty, K. (2013). *Teaching and researching computer-assisted language learning*. New York, USA: Routledge.

Benson, P. (2001). *Teaching and researching autonomy in language learning*. London: Longman.

Blake, R. (2016). Technology and the four skills. *Language Learning & Technology, 20*(2), 129–142.

Burston, J. (2013). Mobile-assisted language learning: A selected annotated bibliography of implementation studies 1994–2012. *Language Learning & Technology, 17*(3), 157–224.

Cárdenas-Claros, M. S., & Gruba, P. A. (2014). Listeners' interactions with help options in CALL.*Computer Assisted Language Learning*, *27*(3), 228–245.

Chan, H. W. (2016). Popular culture, English out-of-class activities, and learner autonomy among highly proficient secondary students in Hong Kong. *Universal Journal of Educational Research, 4*(8), 1918-1923.

Chapelle, C. A. (2005). Interactionist SLA theory n CALL research. In J. L. Egbert & G. M. Petre (Eds.), *CALL Research Perspectives* (pp. 53-64). Mahwah, NJ: Lawrence Erlbaum.

Chun, D., Kern, R., & Smith, B. (2016). Technology in language use, language teaching, and language learning. *Modern Language Journal, 100(Supplement 2016)*, 64– 80.

Darling-Hammond, L. (2006). Constructing 21st-century teacher education. *Journal of Teacher Education, 57*(3), 300-331.

Duman, G., Orhon, G., & Gedik, N. (2015). Research trends in mobile assisted language learning from 2000 to 2012. *ReCALL, 27*(02), 197–216.

Egbert, J. L. (2005). Conducting research on CALL. In J. L. Egbert & G. M. Petrie (Eds.), *CALL research perspectives* (pp. 3–8). Mahwah, NJ: Lawrence Erlbaum.

Friðriksdóttir, K. (2018) The impact of different modalities on student retention and overall engagement patterns in open online courses, *Computer Assisted Language Learning, 31*(1-2), 53-71. https://doi.org/10.1080/09588221.2017.1381129

Golonka, E. M., Bowles, A. R., Frank, V. M., Richardson, D. L., & Freynik, S. (2014) Technologies for foreign language learning: a review of technology types and their effectiveness, *Computer Assisted Language Learning, 27*(1), 70-105. https://doi.org/10.1080/09588221.2012.700315

Hallinger, P. (2013). A conceptual framework for systematic reviews of research in educational leadership and management. *Journal of Educational Administration, 51*(2), 126-149.

Hockly, N. (2013). Mobile learning. *ELT Journal, 67*, 80-84.

Holec, H. (1981). *Autonomy and foreign language learning*. Oxford: Pergamon.

Hubbard, P. & Levy, M. (2016). Theory in computer-assisted language learning research and practice. In F. Farr & L. Murray (Eds.), The Routledge Handbook of Language Learning and Technology (pp. 24-38). Abingdon, Oxon, United Kingdom: Routledge. https://doi.org/10.4324/9781315657899

Illes, E. (2012). Learner autonomy revisited. *ELT Journal, 66*(4), 505-513.

Kartal, G. (2019). What's up with WhatsApp? A critical analysis of mobile instant messaging research in language learning. *International Journal of Contemporary Educational Research, 6*(2),352-365. https://doi.org/10.33200/ijcer.599138

Kern, R. G. (2006). Perspectives on technology in learning and teaching languages. *TESOL Quarterly, 40*, 183– 210.

Kessler, G. (2010). When they talk about CALL: Discourse in a required CALL class? *CALICO Journal, 27*(2), 376–392.

Levy, M. (1997). *Computer-assisted language learning: Context and conceptualization*. Oxford, England: Clarendon Press.

Liu, M. Navarrete, C. C., Maradiegue, E., & Wivagg, J. (2014). Mobile learning and English language learners: A case study of using iPod touch as a teaching and learning tool. *Journal of Interactive Learning Research, 25*(3), 373-403.

Nunan, D. (1988). *The learner-centred curriculum: A study in second language teaching*. Cambridge, UK: Cambridge University Press.

Park, K., & Kinginger, C. (2010). Writing/thinking in real time: Digital video and corpusquery analysis. *Language Learning & Technology, 14*(3), 31-50.

Perraton, H. (2000). Rethinking the research agenda. *International Review of Research in Open and Distance Learning, 1*, 10-19. https://doi.org/10.19173/irrodl.v1i1.5

Reinders, H., & White, C. (2016). 20 years of autonomy and technology: How far have we come and where to next? *Language Learning and Technology, 20*(2), 143–154.

Richert, A. (1991). Case methods and teacher education: Using cases to teach teacher reflection. In B. R. Tabachnich & K. Zeichner (Eds.), *Issues and practices in inquiry-oriented teacher education* (pp. 130-150). London: Falmer.

Shadiev, R., Hwang, W.Y., & Huang, Y. M. (2017). Review of research on mobile language learning in authentic environments. *Computer Assisted Language Learning, 30*(3–4), 284–303. https://doi.org/10.1080/09588221.2017.1308383

Son, J. B. (2018). Technology in English as a foreign language (EFL) teaching. In J. Liontas (Ed.), *The TESOL encyclopedia of English language teaching* (pp. 1–7). Malden, MA: Wiley. https://doi.org/10.1002/9781118784235.eelt0448

Tellez, K., & Waxman, H. (2006). *Preparing quality educators for English language learners: Research, policies & practices*. London: Lawrence Erlbaum Associates.

Warschauer, M., & Grimes, D. (2007). Audience, authorship, and artefact: the emergent semiotics of Web 2.0. *Annual Review of Applied Linguistics, 27*, 1–23.

Yi, M. Y., & Hwang, Y. (2003). Predicting the use of web-based information systems: Self-efficacy, enjoyment, learning goal orientation, and the technology acceptance model. *International Journal of Human–Computer Studies, 59*, 431–449.

Zeng, S. (2015). *English Learning with Web 2.0: An investigation into Chinese undergraduates' technology (non)-use and perspectives*. (Unpublished Doctoral Dissertation), London: UCL Institute of Education.

Geniş Özet

Giriş

Teknolojik gelişmeler öğrenmenin yapısını değiştirmiş ve her zaman ve her yerde öğrenmeyi mümkün hale getirerek eğitim dahil her alandaki gelişmeler ve değişimler için etkili olmuştur. Eğitim alanı özelinde en derinden ve olumlu olarak etkilenen alanlardan biri de dil öğretimidir. Teknoloji olumlu bir şekilde öğretmeye yardımcı olarak teknoloji ikinci veya yabancı dil öğrenimine katkıda bulunmuştur. Sonuç olarak, dil öğrenimini geliştirmek için yeni teknolojilerin kullanımı konusunda çok sayıda araştırma yapılmıştır. Teknolojinin dil öğreniminde kullanımı ve

entegrasyonu sayısız çalışmaya ön ayak olmuş ve hatta dile özgü eğitim teknolojisi dergileri kurulmuştur.

Uygun teknolojik aracın seçimi araştırmacılar, öğretmenler ve öğrenciler için önemlidir. Teknolojik gelişmeler, öğrencilerin dil öğrenimi için gittikçe daha zengin ortamlara erişmesini sağlamış ve benzer şekilde, "öğrenci özerkliği" kavramını ön plana çıkaran öğrenci merkezli eğitim yolunda (Nunan, 1988) önemli değişiklikler yaşanmasına ön ayak olmuştur. Sorumluluk alma kabiliyeti (Holec, 1981), kişinin kendi öğrenmesi üzerindeki kontrolü (Benson, 2001), öğrenen özerkliği dil öğreniminde çok önemli bir konu haline gelmiştir. Benzer bir konu da öğretmenlerin özerkliğidir. Bilgisayar destekli dil öğretiminde öğretmen özerkliği, teknolojik araçları kullanma, yaratma ve yönetme yeteneğine bağlıdır (Kessler, 2010). Bu nedenle bu araçları etkin ve doğru kullanabilmek oldukça önemlidir.

Amaç

Bilgisayar destekli dil öğretimi araçlarının çok büyük bir kısmı bu yeni teknolojilere erişimde ve onları etkin bir şekilde kullanımda destek almayı gerektirmektedir. Ön plana çıkan dergiler, güvenilir sağlam teorik temelleri ile araştırmacılara ve öğretmenlere dil öğrenimini geliştirmeye yardımcı olan teknolojinin kontrolünü alma çabalarında yardımcı olabilir. Bu düşüncelerden hareketle bu çalışma teknoloji ve bilgisayarların dil eğitimi alanındaki son 10 yıldaki etkilerini araştırmayı amaçlamaktadır. Çalışmada, deneysel araştırmaların analizi, dil becerileri (diğer bir deyişle okuma, dinleme, konuşma, yazma, dilbilgisi, kelime bilgisi, telaffuz) ve diğer dil alanlarında (pragmatik, motivasyon, isteklilik gibi) çok saygın üç amiral dergisinde yapılmıştır. Bu nedenle, bu çalışmada çalışmaların eğilimleri, kullanılan teknolojiler, teoriler, araştırma konuları ve teknoloji destekli dil öğreniminde kullanılan mevcut yöntemler incelenmesi amaçlanmaktadır.

Yöntem

Bu çalışma, kendisini gerçek insan katılımcıları ve bir uygulamayı içermesi gereken deneysel çalışmalarla sınırlandırmaktadır. Bu nedenle meta-analizler, algı, söylem ve konuşma analizi çalışmaları analize dahil edilmemiştir. Ayrıca, teknolojik araçtan olumlu etkilenen dil alanından özellikle bahseden çalışmalar seçilmiştir. Ayrıca, bu derleme, dil öğretmeni geliştirme çalışmalarını kapsam dışında bıraktı.

Bu çalışma, teknoloji ile dil öğretimi konusunda üç amiral gemi dergisinde yayınlanan deneysel çalışmalarda kullanılan teknolojileri araştırmıştır. Bu dergilerde son 10 yıldaki toplam çalışma sayısı 380'dir ve bu çalışmada makale seçim kriterlerini yürüttükten sonra yapılan 286 çalışmayı içermektedir. Language Learning & Technology dergisinden 96, CALL isimli dergiden 126, ve ReCALL dergisinden 64 adet makale analize dahil edilmiştir. Bulgular, araştırmaların özellikleri (çalışmanın gerçekleştirildiği ortam, örneklem büyüklükleri ve teoriler), kullanılan teknoloji ve dil öğrenmenin yararları kategorileri altında verilmiştir.

Bulgular

Çalışmaların çoğunun üniversite öğrencileriyle yapıldığını göstermiştir. İlköğretim öğrencileriyle 18 çalışma ve özel dil kurumları ve açık eğitim kurumları dahil olmak üzere diğer ortamlarda da 38 çalışma yapılmıştır. Katılımcı sayısının bir ile 43000 arasında değiştiği küçük ölçekli ve büyük ölçekli çalışmalar vardır. Teorilerin analizi, bilgisayar destekli dil araştırmalarının sosyal yapılandırmacılık, etkileşimli ikinci dil edinme, işbirlikli öğrenme, kendi kendini düzenleyen öğrenme, öğrenme stilleri ve stratejileri, etkinlik teorisi, sorgulama modeli topluluğunun ilkelerini kullandığını göstermiştir. En yaygın kullanılanları görev temelli dil öğretimi ve anlam için müzakere yoluyla gerçekleşen sosyal yapılandırmacılık ve etkileşimli ikinci dil öğretimi teorisidir. Çalışmaların bazıları mevcut teknolojik araçları kullanırken, bazıları uygun teoriyi içermek için kendi geliştirdikleri araçları kullanmıştır.

Bulgular, yaygın olarak kullanılan teknolojilerin derlem (veriye dayalı öğrenme), bilgisayar aracılı iletişim (CMC), sanal dünyalar, blog oluşturma, wikiler, tele-iş birliği ve altyazı olduğunu göstermiştir. Dört becerinin öğretilmesi için teknolojinin kullanılmasının analizi araştırmacıların sırasıyla yazma, konuşma, okuma ve dinleme için teknolojik araçları kullandıklarını ortaya koydu. Kişilerarası iletişim, kültürlerarası iletişim, kültürlerarası gelişim, kültürlerarası yeterlilik, söylem yeniden yapılanması, anlam için pazarlık, öğrenen yorumlama, bilişsel öğrenme, dil bilinci, ikili öğrenme, öz yeterlik, öz-öğrenme ve dilbilim gelişimi üzerine bir çalışma yapılmıştır.

Sonuç

Bu çalışmada, SSCI kapsamında 2010 ve 2019 yılları arasında sadece teknolojinin dil eğitiminde kullanımına yönelik makale yayınlayan üç eğitim teknolojisi dergisinde yayınlanan tüm deneysel

makaleler içerik analizine tabi tutulmuş ve çeşitli sonuçlara ulaşılmıştır. Bulgular, dil eğitimi alanında, teknolojinin kullanımı konusunda önemli bir fikir birliği olduğunu ortaya koymuştur. Bu çalışmanın bulguları teknoloji kullanımının dil öğrenimini olumlu yönde etkilediğini doğrulamaktadır. Kullanılan teknolojiyle ilgili öğrenenlerin geri bildirimleri çoğunlukla olumludur ve çalışmaların katılımcıların yüksek düzeyde motivasyon ve olumlu tutumlar ortaya koyduğu bulunmuştur. Dil öğretimi ve öğrenimi için çok sayıda teknolojik araç olduğu için uygun olanın seçilmesi zorlu bir sürece dönüşebilir. Bu çalışma sayesinde araştırmacılar, öğretmenler ve öğrenciler SSCI dergilerde kendine yer bulmuş bu araçlar bu araçlar arasından amaçlarına uygun seçim yapabilecektir. Bu nedenle, yalnızca teknoloji odaklı SSCI makalelerini içeren bu çalışma, öğretmenler, öğrenciler ve araştırmacılar için bir yol haritası sağlayacaktır.