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Research on Voscreen in English language education: A systematic literature review and content analysis

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Recently, there has been a surge in adopting mobile-assisted learning technologies, particularly mobile language learning apps (e.g., Duolingo, Babbel, and Memrise). Despite being a promising mobile tool, Voscreen has yet to receive due recognition from academics in English language education contexts. Regional studies have not investigated this mobile app, leaving manifold gaps in the literature regarding its pedagogical affordances and drawbacks. To this end, combining systematic literature review and content analysis, this study intends to fill this literature gap. It aims to systematically review all publications (e.g., research articles, reviews, conference papers) on Voscreen in English until 2023. The study included articles published in English on Voscreen in 2023, including the app's name in the article title, and indexed in ERIC, Google Scholar, Scopus, and the Web of Science. Adopting the PRISMA 2020 guidelines, the study systematically and content-wise examined 12 out of 27 publications after exclusion criteria (non-English, duplicates, inaccessible documents, articles published after 2023). The study's motivation is twofold: (i) to document the research on Voscreen in English language education contexts and identify its advantages and disadvantages and (ii) to guide future research by revealing the research gaps. The results indicate a regional concentration on the app's impact on language learning, the prevalence of specific skills (e.g., listening and vocabulary), less methodological diversity, and several technical limitations. However, positive user attitudes and efficiency in aural and lexical improvement are also cited, underscoring the app's importance. The article concludes the limitations of the review studies and directions for future research, highlighting the need for ongoing exploration and development in this field.

Keywords: content analysis, e-learning, foreign language education, MALL, systematic literature review, Voscreen

Technological integration from a historical perspective

Contemporary language learners are born into a technology-dominated world, therefore holding growing expectations of extra-scholar language learning. Educators and institutions resort to technology to tackle practical teaching demands in response to this need. However, technological integration into language education has not been haphazard but systematic and in line with technological advancements. Starting with phonographs in the early 1900s for listening to native speakers, radio broadcasts between the 1920s and 1930s, language laboratories in the 1940s, followed by filmstrips and educational films, and television broadcasts until the 1960s, technologies have evolved and found their place in language education (Mikropoulos et al., 2014). In the 1960s and 1970s, the audiolingual approach relied heavily on audiotapes (cassette tapes) as the primary resource for language learners in educational settings and at home (Davies et al., 2014).

The introduction of computers in the 1980s gave rise to the emergence of computer-assisted language learning (CALL), allowing for self-paced, interactive, and personalized learning (Gruba, 2006; Kohnke, 2023). Accordingly, students could access videos and multimedia in the late 1980s and early 1990s (e.g., Rosetta Stone) (Otto, 2017). The emergence of the Internet in the 1990s transformed how people learn languages, resulting in the popularity of online learning platforms that provided learners with diverse resources and the opportunity to engage with others instantly (Warschauer & Healey, 1998). In the 2000s, mobile technology and smartphones became increasingly popular, allowing language learners to practice at their convenience (Godwin-Jones, 2017). Language learning mobile applications (apps) have incorporated gamification elements, transforming the language practice process into a game by incorporating points, levels, and rewards (Shortt et al., 2023). Additionally, these apps utilize adaptive algorithms to modify the lesson difficulty according to the learner's advancement (Jagušt & Botički, 2019). Furthermore, social aspects enable users to engage with fellow learners and individuals who speak the language natively (Kukulska-Hulme & Shield, 2008).

From the 2010s until now, artificial intelligence (AI) and machine learning have propelled advancements in language learning (Deng, 2018). AI enables tailored and flexible learning experiences by analyzing individual strengths and weaknesses to generate custom exercises (Gligorea et al., 2023). Equally, speech recognition technology facilitates speaking practice with instant feedback, a capability previously confined to traditional classroom settings (Jiang et al., 2023).

Harnessing technology in language education

Richards (2015) distinguished between ways to include technology in language learning: technology as a tool (e.g., online dictionaries and text-to-speech software), technology as a tutor (e.g., language learning apps and instructional

websites), and technology as a medium (e.g., the Internet and social media). On the other hand, Levy (2010) categorized technology use according to learner-teacher interaction levels:

- physical (e.g., smartphones and computers)
- management (e.g., learning management systems and Google Classroom)
- apps (e.g., Zoom and WhatsApp)
- resource (e.g., educational websites and online news)
- component technology (e.g., grammar checkers and electronic dictionaries)

Regardless of the level, integrating technology in language education has been shown to offer considerable benefits for learners, teachers, and institutions. The merits for learners include increased access to English, authentic interaction, flexible learning, endorsing various methods of learning, focus on sundry skills, appropriateness for mixed-ability classrooms, fostering active learning, learner autonomy, alternative assessment, engaging materials, heightened motivation, low affective filter, and collaborative and situated learning (Ahmadi, 2018; Chun et al., 2016; Kukulska-Hulme & Viberg, 2018; Richards, 2015; Zhang & Zou, 2024; Wang et al., 2020).

In addition, the perks for language teachers comprise promoting learner-centered teaching, mixed-level students, extending the classroom to the outside world, enriched curriculum, developing manifold teaching strategies, assigning new roles to teachers, placing greater responsibility on teachers, enhancing educational contexts, providing practical support, increased opportunities for monitoring student progress, and fostering teacher development (Chun et al., 2016; Kessler & Hubbard, 2017; Kessler, 2018; Lang-Raad & Witty, 2022; Rahimi, 2024; Zhong & Wakat, 2023). Moreover, technological integration provides institutional advantages, including enhanced school reputation, personalized teaching approach, improved learning outcomes, curricular flexibility, and administrative simplification (Castro, 2019; Haleem et al., 2022; Mukred et al., 2021; Schmid et al., 2023; Shattock, 2017).

Numerous pedagogical affordances were also cited for language skills, thanks to technological integration (Blake, 2016). Some advantages for speaking skills are increased practice opportunities (through apps), immediate feedback, authentic input through multimodality, personalized learning through AI-based platforms, increased confidence due to stress-reduced virtual platforms, asynchronous speaking practice, and monitoring progress (Bernacki et al., 2021; Chen, 2024; Gönülal, 2020; Heil et al., 2016; Jaramillo, 2022; Sun & Yang, 2022; Tsai, 2023). In addition to shared benefits, integrating technology avails listening skills through interactive and various activities, enhanced exposure to different English varieties, access to context-specific content, and informal listening (Afrilyasanti et al., 2024; Chun et al., 2016; Kılıçkaya et al., 2022; Lee et al., 2024; Trinder, 2017).

The advantages for reading skills involve vocabulary expansion, reading practice, test preparation, sentential and textual awareness, fluency

development, phonics, support for struggling readers, data-driven feedback, gamification, enhanced focus on higher-order skills, instant access to definitions/translations (Blake, 2016; Graesser et al., 2019; Hedgcock & Ferris, 2018; Park & Warschauer, 2016; Reiber-Kuijpers et al., 2021; Richards, 2015). Equally, writing skills can greatly benefit from technology integration in terms of revision and editing tools, writing process improvement, collaborative writing, sharing/showcasing work, interactive whiteboards, personal writing through blogs, and journal writing (Lamond & Cunningham, 2022; Lee, 2020; Richards, 2015; Teng, 2021; Warschauer, 2010; Williams & Beam, 2019). Apart from primary language skills, technology integration further assists in vocabulary learning and teaching through online dictionaries, mobile apps, search engines, gamification, and progress tracking (Chen et al., 2020; Gao & Pan, 2023; Golonka et al., 2014; Levy & Steel, 2015; Nishioka, 2020).

Grammar teaching and learning can also benefit from technological incorporation through diagnostic assessment, integration with other skills, monitoring progress, corpus-based tools, and multimodality (Götz & Granger, 2024; Hegelheimer, 2007; Heift & Vyatkina, 2017; Pinto-Llorente et al., 2017). Further advantages can be derived from technological integration for pronunciation learning and teaching concerning access to native and non-native language models, enhanced listening skills, exposure to various English varieties, data-driven insights, automatic speech recognition, AI-assisted chatbots, and computer-mediated assessment (Agarwal & Chakraborty, 2019; Bashori et al., 2024; Pennington & Rogerson-Revell, 2019; Vančová, 2023; Zhu et al., 2024; Zou et al., 2020).

Despite these affordances, integrating technology might also pose potential downsides. For instance, technological tools may lead to dependence among language learners (Zhai et al., 2024). Also, educational tools may not be accessible to all language learners equally, creating a digital divide (Kohnke et al., 2023). Similarly, overreliance on technology tools may further result in reduced human interaction (Xia et al., 2025). In addition, focusing on tech tools might also be distracting due to pop-up ads and other interface features (Hsieh et al., 2021). Moreover, several technical hiccups might arise while using technology tools for language learning (Topal, 2024a). Additionally, previous researchers cited manifold privacy and security concerns regarding technology use (Rawas, 2024; Topal, 2024a). Furthermore, technology integration into classrooms may require teacher training and technology adaptation (Karataş et al., 2025), which may arise as another concern. In that sense, teachers who feel a lack of self-confidence or efficacy may experience emotional and professional burnout because of inability to use or integrate technology (Yang & Wang, 2024).

CALL and MALL in language education

The integration of technology in language education can be broadly referred to as technology-assisted language learning (TALL), which encompasses computer-assisted language learning (CALL) and mobile-assisted language learning (MALL). Levy (1997) briefly defined CALL as “the exploration and study of

computer apps in language teaching and learning” (p.1). Warschauer (1996) divided CALL into three developmental stages: behavioristic (until the 1980s), communicative (early 1990s), and integrative (late 1980s). The first phase involved computer use as a tutor and behavioristic language programs based on grammar drills and pronunciation software (Richards, 2015). The second phase included computers for learning language skills with increased opportunities for learner interaction and choice (Richards, 2015). The last phase involved Internet and multimedia use, with integrated skills learning and teaching in computer programs or websites (Richards, 2015).

CALL has altered language education by incorporating multimedia, interactivity, and technology into language learning (Chun et al., 2016; Levy & Stockwell, 2006). It provides various advantages, such as personalized learning, exposure to authentic materials, and interactive tasks (Gillespie, 2020). However, it also presents challenges like decreased human interaction and excessive technological dependence (Allam et al., 2023). Nevertheless, with the progress of AI, CALL is constantly developing, establishing itself as an essential tool in contemporary language education (Edmett et al., 2023).

On the other hand, MALL is included in CALL and refers to language learning supported or improved by a portable mobile device (Chinnery, 2006). Based on principles like ubiquitous learning and gamification (Viberg et al., 2020), it leverages these devices’ portability, connectivity, and multimedia features to provide adaptable, student-focused education that can take place anytime, anywhere (Stockwell & Hubbard, 2013). It provides various learning opportunities and flexibility but presents challenges like digital distractions and the digital divide (Kukulska-Hulme & Shield, 2008; Stockwell, 2022).

Overall, using CALL and MALL in language education offers personalized learning, increased engagement, and multimedia-rich environments for collaborative language learning. However, both pose specific downsides and should, therefore, be cautioned. Combining these approaches might enhance language acquisition through interactive and learner-centered experiences, addressing potential limitations such as technical barriers and unequal technological access.

Research on mobile apps in language learning

Mobile apps have become essential for learning a new language, providing adaptable, engaging, and readily available tools for learners of every proficiency level (Heil et al., 2016). Critical features of language learning apps include gamification, microlearning, multimodality, personalization, and real-time interaction (Kohnke, 2023; Shortt et al., 2023). These apps offer a range of functions, including building vocabulary, practicing pronunciation, and engaging in authentic conversations with native speakers (Godwin-Jones, 2011). Numerous apps were shown to provide various pedagogical affordances in previous studies. For example, Loewen et al. (2019) reported positive correlations between the time spent on Duolingo and learning gains. Similar findings

were cited by Jiang et al. (2021), reporting that Duolingo contributed positively to reading and listening.

Similarly, Walker (2015) revealed positive perceptions and perceived improvement in Latin vocabulary learning using Memrise. In another study, Mendes de Oliveira et al. (2023) showed that Babbel Intensive assisted in overcoming learner difficulties related to their vocabulary, grammar, and speaking abilities through customized classes. Equally, Rosell-Aguilar (2018) demonstrated that Busuu users considered the app valuable for improving their language knowledge, especially in vocabulary, with many relying on it as their primary language-learning source. In a comparative study, Zhao et al. (2024) indicated that Duolingo and Hello Talk improved students' willingness to communicate, with the first app having a slightly more pronounced impact. In his review, Topal (2024c) declared that the Tandem app fostered personalized learning options, practical skills development, diverse feedback, and intercultural awareness.

Moreover, Jensen and Cadierno (2024) reported positive vocabulary reception and production outcomes through Mondly. Will and Cardoso's (2024) study suggested that Pimsleur might be a valuable resource for improving spoken proficiency through its distinctive methodology and mobile features. In his study reviewing the Lirica app, Topal (2024b) exhibited that the main points are teacher-friendliness, integrated skills practice, and cultural awareness cards, with full content accessible only to premium users.

Research on language learning mobile apps has generally highlighted their potential to enhance diverse language skills, flexibility, and personalization for learners through interactive experiences, diverse resources, and community interaction. However, challenges such as digital distractions and inconsistent curricula were also addressed (Heil et al., 2016; Metruk, 2022). Further research is therefore required to maximize their effectiveness and integrate emerging mobile technologies.

The Voscreen app

Voscreen is a web platform and a mobile application for practicing English through authentic short video clips from diverse resources, including cartoons, documentaries, movies, and music videos. The team behind the tool developed a unique approach (i.e., Artificial Linguistic Intelligence for Visual Education – ALIVE) that serves as an artificial intelligence (AI) teacher to assist users with systematic exposure to appropriate and timely linguistic input (<https://www.voscreen.com/about/about>). Exploiting an extensive database, this AI instructor tailors content according to individual needs, thereby personalizing the learning process. The tool can be accessed freely online (<https://www.voscreen.com/>) or mobile (Google Play Store and App Store). With its user-friendly interface, Voscreen addresses all ages, from young to adult learners.

After signing up with their email addresses or using their Facebook accounts, users choose one of the five play modes: Life itself, voStep, voStructure, voRhythm, and voKids. Users are given a translation task after each video clip,

regardless of the play mode. They are asked to choose the correct meaning/translation in their target language (subtitles on or off). The tool currently provides translations in 21 languages. The first play mode (i.e., Life itself) displays random video clips. VoStep comprises five language levels (i.e., beginner, elementary, intermediate, upper, and advanced) and presents video clips according to the selected level. The third play mode (i.e., voStructure) allows users to watch video clips of about 27 grammar points. voRhythm offers English rhythm practice in five categories: 1–3 words, 4–6 words, 7–9 words, 10–12 words, and 13+. The last play mode (i.e., voKids) is designed for young learners, presenting them with three levels of video clips from cartoons and animated movies.

Users are provided with information on the main screen, such as the video title, number of views, video director, and producer. They can also add videos to their playlists for later use. They are informed about session frequency and true-false scores on the top middle page. They can access more details through their accounts, such as customizing their profiles, creating or subscribing to observation groups, chronological stats, scores, rankings (by all users), and theme choice (dark or light). Contact details and additional information (e.g., about the tool, disclaimer, privacy, and terms and conditions) are on the bottom page.

Research questions

Given the potential pedagogical affordances mobile apps provide for language learning, it has become urgent to critically evaluate and understand the pedagogical impact of widely used apps such as Voscreen. As one of the most downloaded English language learning applications, Voscreen is currently being adopted by both individual learners and educators across diverse contexts, yet its growing popularity is not matched by a proportional body of scholarly literature. This mismatch presents a critical gap in the research context. Moreover, as language learning preferences shift toward microlearning, audiovisual input, and gamified platforms (Alias & Razak, 2025; Gil-Aciron, 2025; Pattemore & Muñoz, 2024), Voscreen stands out for its distinctive features that align with these trends.

To address this timely need, the present study conducted a systematic literature review and content analysis of existing research on Voscreen to reveal current research trends and identify underexplored areas. Specific motivations for conducting this research on Voscreen include the app's potential for skills practice and development in English, gamified learning environment, increasing learner motivation and engagement, level/topic customization, contextual understanding, and addressing pedagogical approaches (e.g., audiovisual input and mobile learning). Accordingly, the subsequent research questions were addressed per research aims:

RQ (1): What are the documentary characteristics of the reviewed studies?

RQ (2): What are the methodological characteristics of the reviewed studies?

RQ (3): What pedagogical affordances of Voscreen were cited in the analyzed studies?

RQ (4): What pedagogical downsides of Voscreen were cited in the analyzed studies?

Method

The study employs a systematic literature review (SLR) to identify the literature conducted on Voscreen in English language education and systematic qualitative content analysis (QCA) to pinpoint the relevant documentary (i.e., document type, area of focus, journal titles, and journal indexing, publication year, number of authors, authors' countries, keywords, number of references, and number of citations) and methodological (i.e., research design, research method, research context, countries, sampling technique, sample size, and target population, data collection instrument, and data analysis) data. The SLR is a rigorous academic approach that comprehensively identifies and assesses all pertinent literature related to a specific topic (e.g., Voscreen) to draw conclusions about the investigated issue (Feak & Swales, 2009). On the other hand, the QCA is an effective analytical method for the subjective interpretation of qualitative data in a systematic and context-specific manner (Selvi, 2020).

The SLR is based on the updated guidelines of the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA 2020) (Page et al., 2021) (Figure 1). These guidelines are well-regarded in academic circles for their thorough and transparent methodology for conducting systematic reviews (Kolaski et al., 2023), which makes them an excellent framework for our research. A review protocol was developed to determine the data source, create a search strategy, formulate query strings, and establish inclusion/exclusion criteria. The study also employed a modified version of the paper classification form (PCF) developed initially by Sozbilir et al. (2012) and adapted to English language teaching by Yağız et al. (2016) for QCA categorization.

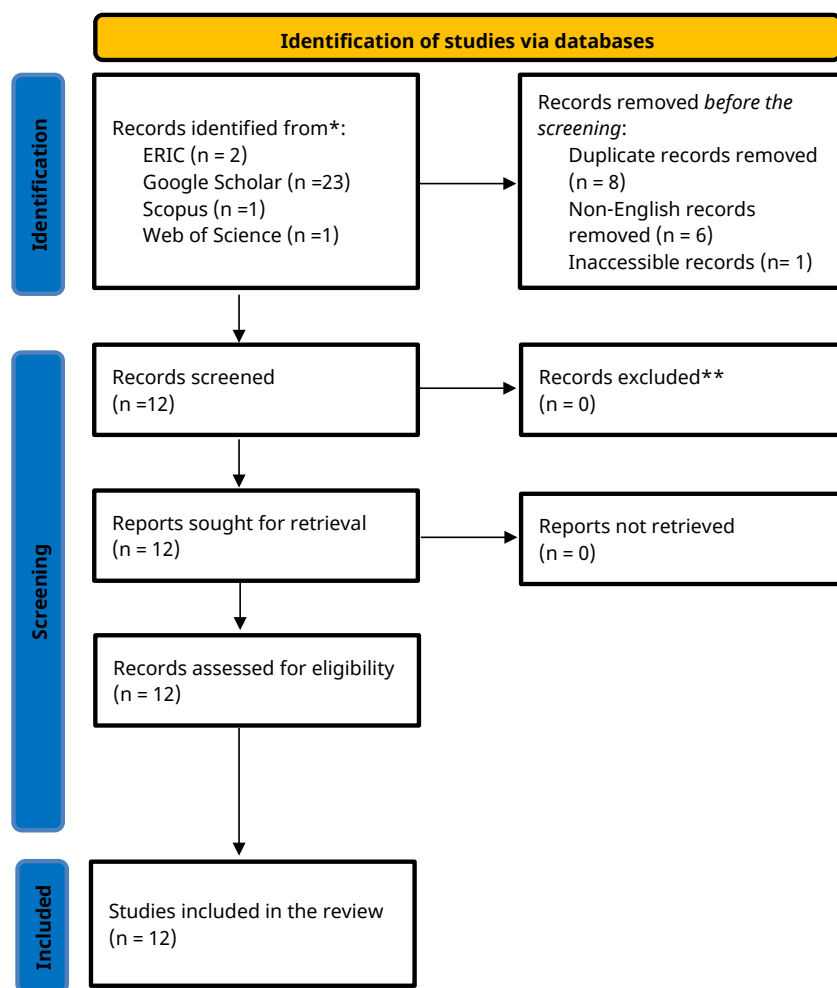


Figure 1. PRISMA flowchart for the SLR

Databases

The study included several databases for extensive disciplinary coverage, broad scope, large abstract and citation databases, rigorous selection criteria, and education-relevant literature. Education Resources Information Center (ERIC) focuses on education-related literature (Boudah, 2011; Robbins, 2001), making it particularly valuable for language education and educational technology research. Google Scholar is the most comprehensive academic search engine (Gusenbauer, 2019). It compiles sundry scholarly materials from diverse fields of study, making it viable for gathering even unconventional ones to ensure that a systematic literature review includes all relevant work. Equally, Scopus, with its access to high-quality, peer-reviewed research and advanced citation tracking (Baas et al., 2020), is essential in identifying leading studies and trends in an SLR, keeping you abreast of the latest developments. Ultimately, the Web of Science is well-suited for conducting systematic reviews that demand top-notch, peer-reviewed research and for evaluating citations to gauge the impact of research in a particular field (Zhu & Liu, 2020).

Search strategy

The query strings “Voscreen” and “Voscreen app” were typed in the four databases (ERIC, Google Scholar, Scopus, and WoS) included in the study. The query items were only searched in publication titles to include studies focusing on Voscreen. Twenty-seven documents (ERIC:2, Google Scholar:23, Scopus:1, and WoS:1) were screened after the search. A meticulous process of removing duplicate, non-English, and inaccessible records was undertaken, resulting in 12 papers being downloaded for analysis.

Inclusion and exclusion criteria

Document assessment criteria were established. Accordingly, research articles, conference proceedings, and review articles were included in the analysis. No temporal and documentary limitations were set. However, only publications with “Voscreen” in their titles, written in English, and conducted in English language education contexts were included. Non-English, duplicate, and inaccessible publications were excluded from the study. As part of the inclusion criteria, only peer-reviewed studies published in English were considered for this review. This decision was made to ensure consistency in analysis and accessibility of academic sources. However, it is important to acknowledge that this choice introduces a language bias, and relevant research published in other languages may have been overlooked.

Findings

Documentary characteristics of the reviewed studies

The 12 studies were meticulously analyzed, considering every aspect of their documentary content. This included publication types, areas of focus, publication venues, publication frequency, authors’ background, and word cloud of most frequent words in abstracts, ensuring a comprehensive understanding of the research.

The documents published on Voscreen offer a wide variety of content, including seven research articles, four reviews, and one presentation (Figure 2). This diversity of document types provides a broad perspective on the focus areas, which range from the product to listening, vocabulary, grammar, and oral performance (Figure 3).

Publication types



Figure 2. Type of publications analyzed in the study

Most publications (n=7, 58.3%) are original research articles, suggesting the researchers' interest in empirical investigations. It also shows that Voscreen research has moved beyond mere description towards a data-driven foundation. The next most common publication type is review articles (n=4, 33.3%), implying the growing but still emerging body of literature on Voscreen. Including one presentation (n=1, 8.3%) indicates the limited attention paid to Voscreen in conferences or workshops.

Areas of language focused in the analyzed studies

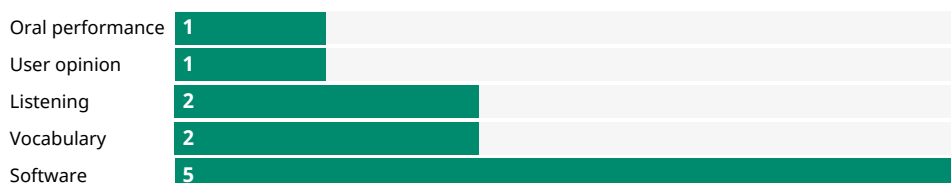


Figure 3. Areas of focus in the analyzed publications

As Figure 3 illustrates, the most focused area was the software itself, in parallel with the number of review studies (n=5) assessing Voscreen's usability, design features, pedagogical affordances, and technological limitations. Listening and vocabulary were the most commonly targeted language skills, aligning well with Voscreen's short video-based input format. Only one study (Alhawad & Almunif, 2020) addressed oral performance despite the app's potential to support pronunciation modeling and listening-speaking connections. Similarly, just one study (Celik, 2022) examined user opinion, which is surprising given the importance of learner experience and motivation in MALL. Overall, the findings heavily emphasize software evaluation and receptive skills (listening, vocabulary), while productive skills (speaking) and learner perspectives remain underexplored.

Concerning the venues where Voscreen studies were published, Table 1 demonstrates that the papers were primarily published in international journals (n=11), with one paper presented at an international conference. Six journals were published in Türkiye, remaining in Brazil, Canada, India, the USA, and Saudi Arabia. The Journal of Educational Technology and Online Learning (JETOL) included two documents regarding Voscreen in its volumes. Publication frequencies varied between one to six issues a year. The journals were mainly indexed in Google Scholar, with two in ERIC and one in Scopus and WoS. Additionally, two journals were published by academics, three by universities, and seven by private institutions.

Table 1. Characteristics of the publication venues

Publication venue	Country	Publisher	Publication frequency	Indexing	ISSN/ISBN
Journal of Educational Technology and Online Learning (JETOL)	Türkiye	Gürhan Durak	3 issues a year	ERIC	2618-6586
International Journal of Languages' Education and Teaching	Türkiye	Bilim Eğitim Kültür Akademi Derneği	4 issues a year	Google Scholar	2148-2705
Route Educational and Social Science Journal (RESSJOURNAL)	Türkiye	Ress Academy Publishing	6 issues a year	Google Scholar	2148-5518
Language and Technology	Türkiye	Selami Aydın	1 issue a year	Google Scholar	2717-7971
1st International Foreign Language Education Symposium	Türkiye	Gazi Üniversitesi Yayınları	N/A*	Google Scholar	978-975-507-295-1
i-Manager's Journal on English Language Teaching	India	i-manager Publications	4 issues a year	ERIC	2249-0752
TESOL Journal	USA	Wiley-Blackwell	4 issues a year	Scopus & WoS	1949-3533
Canadian Journal of Language and Literature Studies	Canada	Matis Translation Services	5 issues a year	Google Scholar	2564-2979
North Journal of Human Sciences	Saudi Arabia	Northern Border University	2 issues a year	Google Scholar	1658-6999
Open Minds International Journal	Brazil	Open Minds Publishing House	3 issues a year	Google Scholar	2675-5157
Language Education and Technology (LET)	Türkiye	Bursa Uludağ Üniversitesi	2 issues a year	Google Scholar	2791-7010

*N/A: Not applicable.

As Figure 4 illustrates, publications centered around 2017 and 2023. The fewest studies (n=1) were conducted in 2018, and the most (n=4) were conducted in 2023, implying a growing tendency in Voscreen research.

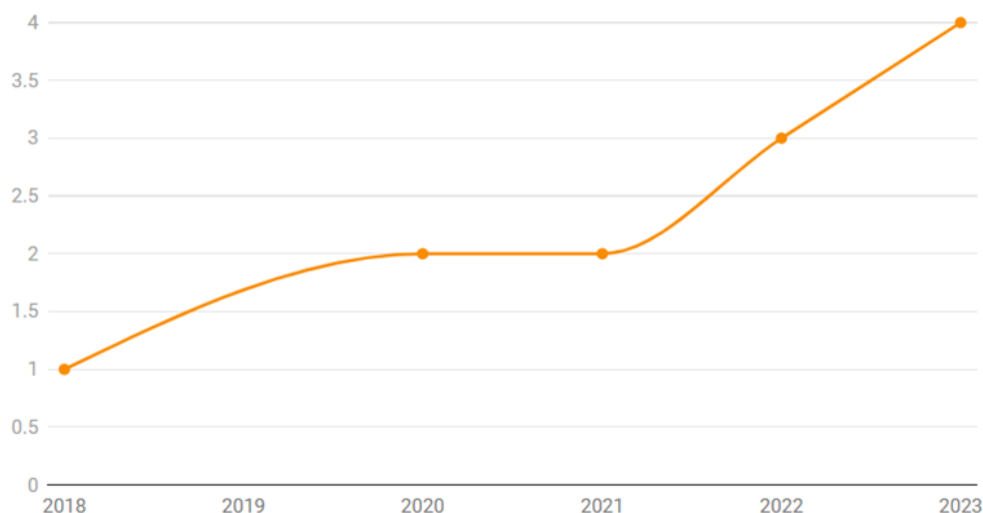


Figure 4. Chronological distribution of publications

Table 2 indicates the contribution of 17 authors to research on Voscreen. Of these, 10 were from Türkiye, three from Saudi Arabia, two from Iran, one from Brazil, and one from Iraq. Seven documents were published by single and five by multiple authors. Nine authors were males, and eight were females. The authors had a variety of academic titles, from teachers and graduate students to research assistants and lecturers.

Table 2. Authors' background

Author name	Title	Country	Affiliation
1. Ufuk TAYLAN	Teacher	Türkiye	Ministry of National Education
2. Ecem EKİNCİ	Instructor	Türkiye	Osmaniye Korkut Ata University
3. Mithat EKİNCİ	Instructor	Türkiye	Osmaniye Korkut Ata University
4. Dilara YÜCETÜRK	Teacher	Türkiye	Ministry of National Education
5. Ayfer Su BERGİL	Assoc. Prof.	Türkiye	Amasya University
6. İbrahim Halil TOPAL	Dr.	Türkiye	Gazi University
7. Süleyman Alperen ALTUĞ	Res. Asst.	Türkiye	Mardin Artuklu University
8. Ahmet ÖNAL	Assoc. Prof.	Türkiye	Süleyman Demirel University
9. Behcet ÇELİK	Lecturer	Iraq	Tishk International University
10. Ayşe MERZİFONLUOĞLU	Dr. Lecturer	Türkiye	Erzincan B. Yıldırım University
11. Fatma YILGIN	Researcher	Türkiye	Uludağ University
12. Basmah A. Abu-Ghararah	Assoc. Prof.	Saudi Arabia	Taibah University
13. Aisha O.M.K. ALHAWAD	Dr.	Saudi Arabia	Shaqra University
14. Samah AH ALMUNIF	Researcher	Saudi Arabia	Shaqra University
15. Musa NUSHI	Assoc. Prof.	Iran	Shahid Beheshti University
16. Ali MOMENI	PhD candidate	Iran	Allameh Tabataba'i University
17. Rivaldo Ferreira DA SILVA	MA student	Brazil	Uni. Federal de Campina Grande

The authors used 49 keywords, which can be grouped into six categories: technology and resources (n=11), software (n=11), skills learning (n=9), learning theories (n=9), language education contexts (n=8), and psychology (n=1). Figure 5 presents further details.

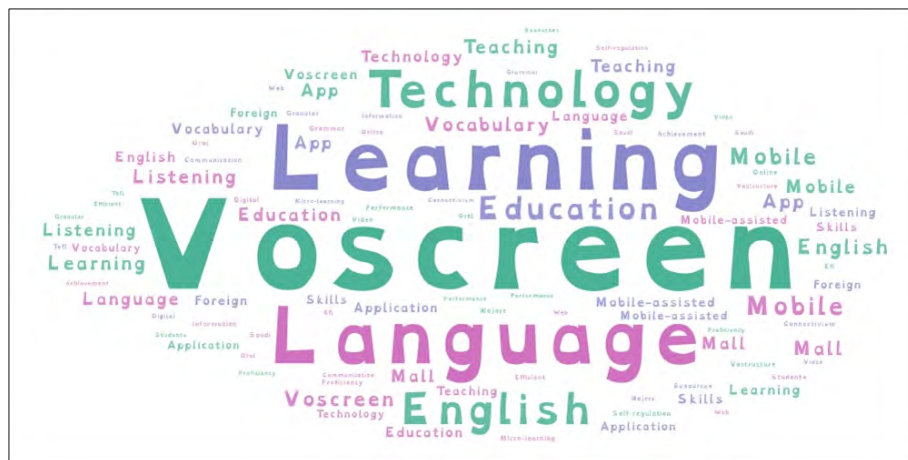


Figure 5. Word cloud of most frequent words in the article abstracts

Ultimately, the references and received citations of the reviewed publications were analyzed. Twenty-nine references were used on average in the 12 publications, with the most references (n=78) in Merzifonluoğlu's (2023) study titled Promoting Listening Skills with an Educational Tool: VoScreen and the least (n=3) in Nushi and Momeni's (2023) review called Learn English through Videos: A Review of Voscreen App. The total citations for the reviewed publications were 43, and the average citations per article were 3.5. While Taylan's (2018) review was cited the most (n=22), six papers received no citations as of October 2024.

Methodological characteristics of the reviewed studies

Subsequently, the 12 studies were analyzed regarding methodological content, including research design, research method, research context, countries, sampling technique, sample size, target population, data collection instrument, and data analysis.

The analysis of the designs and methods the authors used and the context where the research was conducted indicated the use of quantitative (n=2), mixed (n=4), and qualitative (n=6) research designs. Findings revealed the prevalence of qualitative, mixed, and quantitative designs. The research methods (Figure 6) adopted for these designs were survey (n=1), case study (n=1), experimental (n=1), explanatory (n=2), quasi-experimental (n=2), and review (n=5). As observed, review studies prevailed over other methods, followed by explanatory and quasi-experimental methods. Concerning research contexts, six studies were conducted in tertiary and one in primary education settings. The remaining five studies were review studies and thus inapplicable. These

review articles concerned Voscreen’s description and utilization in English language learning contexts.

Research methods

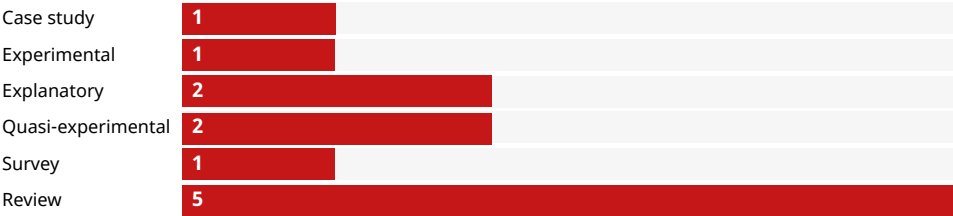


Figure 6. The research methods adopted in the reviewed studies

Further analysis (Figure 7) also revealed that the majority of the studies were conducted in Türkiye (n=8), followed by Saudi Arabia (n=2), Iran (n=1), and Brazil (n=1). Put differently, the studies on Voscreen spanned three continents: Asia, Europe, and South America, despite being scant.

Geographical distribution of research



Figure 7. The geographical distribution of the reviewed studies

Figure 8 shows that the sampling techniques did not apply to five review studies, including one study that did not mention the sampling technique adopted. The remaining studies mostly used random sampling (n=3), followed respectively by convenience (n=2) and snowball (n=1) techniques. Five studies were exempted from the sample size for the same reason. The remaining seven studies had 42.71 participants on average.

Sampling techniques

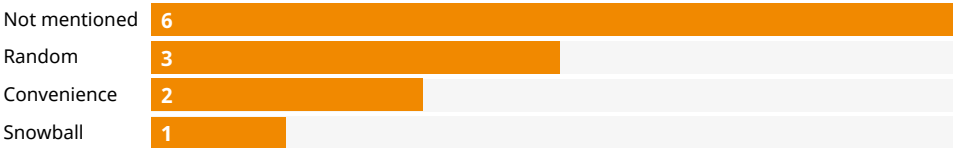


Figure 8. The sampling techniques adopted in the publications

Predictably, the target population included in these studies coincided with where they were conducted. Since the review studies also targeted English

language learners, they were grouped under the same category. Accordingly, five groups were formed (Figure 9): Brazilian EFL learners (n=1), Foreign language learners (n=4), Iraqi EFL learners (n=1), Saudi EFL learners (n=2), and Turkish EFL learners (n=4).

Target population

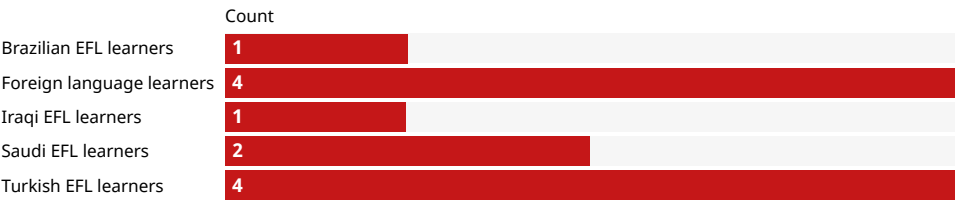


Figure 9. Distribution of target population in the analyzed studies

Ultimately, the study examined the instruments for data collection (Figure 10) and methods of data analysis (Figure 11). The authors principally used surveys/questionnaires and tests, along with semi-structured interviews. Considering the review studies using descriptive analysis, the authors mostly preferred this analysis type, followed successively by descriptive-inferential and inferential-content analyses.

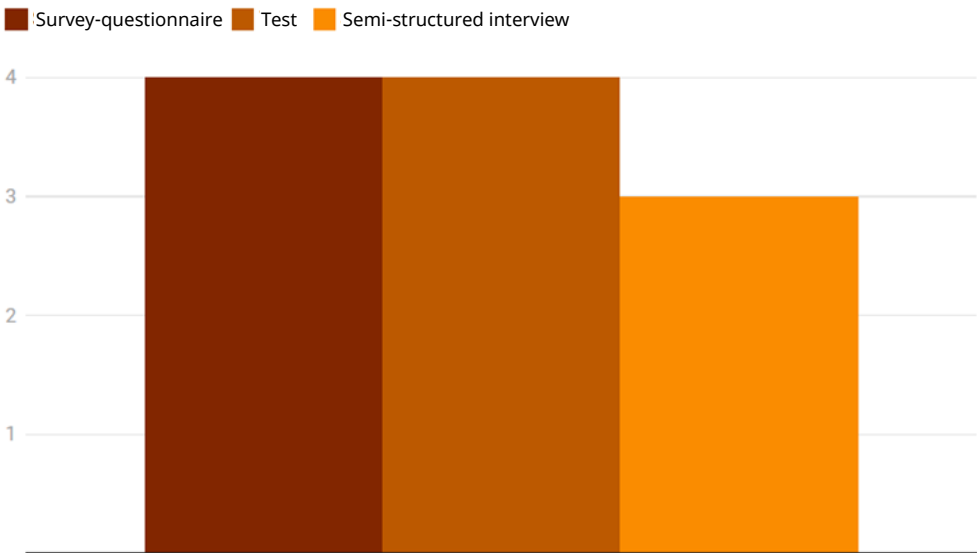


Figure 10. Data collection instruments used in the analyzed studies

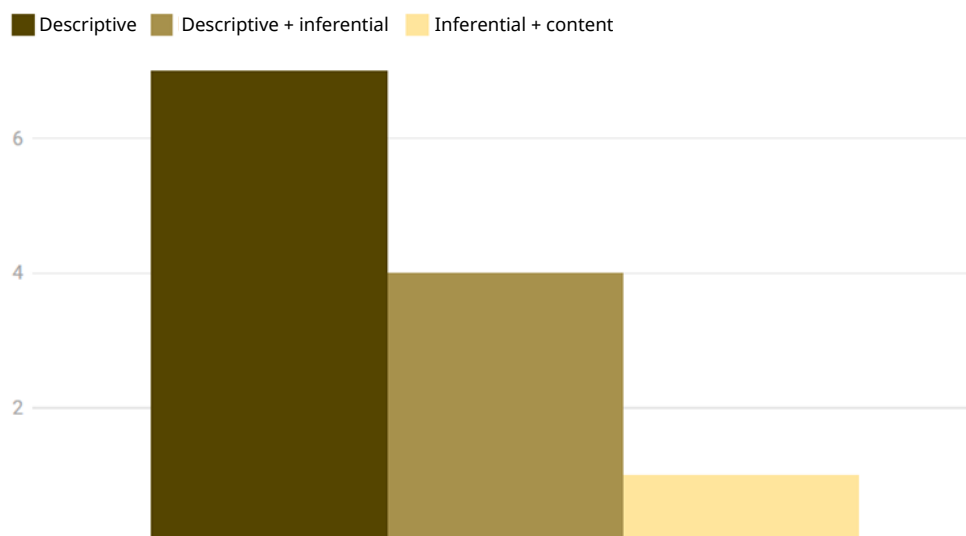


Figure 11. Data analysis methods used in the analyzed studies

Pedagogical Affordances of Voscreen

The analyzed publications were additionally examined for the reported advantages of Voscreen for language learning. To achieve this goal, the content of the studies was investigated, with significant findings summarized in Table 3.

Table 3. Summary of the reviewed publications for SLR

Document title	Author(s)	Aim	Finding
Voscreen online foreign language learning environment	Taylan, U.	to introduce the app to develop foreign language listening skills	can positively shape students' attitudes towards foreign language courses and help them achieve proficiency in foreign languages at their desired level
Voscreen as a listening aid: A digitalized learning experience	Ekinci, E., & Ekinci, M.	to explore the disparities in how elementary and intermediate-level Turkish EFL students perceive using the app as a tool to enhance listening comprehension	no significant difference in student perceptions, acknowledgment of Voscreen's effectiveness for listening
The effect of the Voscreen application on oral performance among Saudi EFL learners	Alhawad, A. O. M. K., & Almunif, S. A. H.	to examine how the app impacts the speaking abilities of Saudi EFL students	positive impact on oral skills and vocabulary expansion

Document title	Author(s)	Aim	Finding
The impact of the Voscreen application on vocabulary achievement.	Yüçetürk, D., & Bergil, A. S.	to explore the app's impact on 4th graders' listening and comprehension skills	significant enhancement of aural and comprehension skills in the experimental group
A critical evaluation of Voscreen as a microlearning tool for English language learning and teaching	Topal, İ.H.	to evaluate the app by providing its description and use in language education	presents a framework for implementing the app in language classrooms and
urges for more experimental research on the app's effectiveness in learning language skills			
Using Voscreen to enhance English language vocabulary learning	Altug, S. A., & Önal, A	to investigate the app's impact on students' vocabulary learning outcomes and their overall perception of ICT tools.	discernable advantages for vocabulary learning and teaching
Evaluation of Voscreen application used in self-regulation in English language learning according to user opinions	Celik, B.	to evaluate the app's effectiveness in supporting self-regulated English language learning based on user feedback	despite limitations, useful for English language learning
Learn English through videos: A review of the Voscreen app	Nushi, M., & Momeni, A.	to center on the app's characteristics, benefits, and limitations	lists the app's pedagogical affordances and drawbacks
Voscreen educational app: Its impact on teaching grammar to EFL students.	Abu-ghararah, B. A.	to examine the app's effect on EFL students' grammar improvement	reports enhancement in grammatical skills and knowledge
Using the Voscreen application as a pedagogical tool to improve students' listening and reading skills in the English language	Da Silva, R. F.	to describe the app for its potential in English language learning	recommends the app for listening and reading skills
Promoting listening skills with an educational tool: Voscreen	Merzifonluoğlu, A.	to investigate the app's effectiveness in improving listening abilities among college students.	reports significant differences between pretest-posttest listening scores and presents users' perceptions of the app's benefits, drawbacks, and suggestions for effective use
Strengthening EFL learners' autonomy: Exploring the Voscreen app and its impact on encouragement and engagement in technology-based language learning	Yılgin, F.	to describe the app and explain how to implement it in language classrooms	emphasizes the app's potential for vocabulary and listening and urges for adequate teacher training and technological competence

Although the five review studies tackled the same product (i.e., Voscreen), they differed slightly in content and findings. Taylan (2018), for example, argued that the app could help learners enhance their listening skills, develop positive language attitudes, and achieve the intended proficiency level. In his presentation paper, Topal (2021) laid the theoretical foundation, provided a pedagogical framework to implement Voscreen in language classrooms, and urged for experimental research for the app's impact on skills learning (e.g., listening, pronunciation, pragmatic competence, paraphrasing, translation, and vocabulary). Nushi and Momeni also evaluated the tool but added a comparative table that contrasted Voscreen with other popular mobile apps (e.g., Duolingo, Busuu, Babbel, Rosetta Stone, and Memrise) and concluded its integration into classrooms as a supplementary material that fosters student motivation and language development. Upon reviewing previous work, Da Silva (2023) evaluated the app and supportlessly mentioned its potential for pronunciation, reading, and listening skills. Finally, Yılgin (2023) also reviewed the app and cited its advantages for vocabulary, listening, and motivation.

In their mixed-method study, Ekinci and Ekinci (2020) reported no statistically significant difference in perception scores of elementary and intermediate students; however, they indicated positive learner attitudes because of the app's potential for aiding listening, increasing motivation, and tackling verbal-nonverbal language through multimodality. Alhawad and Almunif (2020) administered a survey to Saudi EFL learners and reported Voscreen's perceived benefits for speaking enhancement and vocabulary expansion. In their quasi-experimental study, Yücetürk and Bergil (2021) revealed the app's considerable effect on listening and vocabulary comprehension. Similar findings were reported by Altug and Önal (2022), concluding discernable advantages for vocabulary. Employing a user opinion study through a semi-structured interview, Celik (2022) narrated positive opinions about the app's content (e.g., level appropriateness, engagement, and learning support) and design (e.g., user-friendliness).

Furthermore, Abu-ghararah (2023) compared two groups and revealed Voscreen's significant impact on grammatical capabilities. Lastly, Merzifonluoğlu (2023) provided evidence of Voscreen's considerable impact on improving listening skills directly, along with pronunciation, vocabulary, familiarity with accents, relatable conversations, mobility, content versatility, heightened focus, enjoyable learning, competitiveness, heightened motivation, and studying with self-discipline indirectly.

Figure 12 summarizes Voscreen's potential advantages cited in the analyzed studies. The analyzed studies highlighted the app's potential for listening, vocabulary, and pronunciation gains.



Figure 12. Snapshot of Voscreen’s pedagogical affordances

Of the 12 reviewed studies, eight reported positive impacts of Voscreen on language learning skills, including listening, vocabulary acquisition, oral fluency, grammar, and learner attitudes. Three studies presented mixed or non-significant findings, suggesting perceived usefulness but limited evidence of measurable gains. Only one study (Topal, 2021) proposed a theoretical framework without direct assessment of language outcomes. Overall, while the findings indicate a predominant tendency toward Voscreen’s pedagogical value (specifically for listening and vocabulary skills), they underscore the need for further empirical research and experimental validation.

Pedagogical downsides of voscreen

The reviewed documents were further analyzed to determine Voscreen’s perceived downsides in English language education. Interestingly, a notable number of studies (6 out of 12) reported no specific drawbacks associated with its use (e.g., Abu-ghararah, 2023; Alhawad & Almunif, 2020; Altug & Önal, 2021; Da Silva, 2023; Taylan, 2018; Yücetürk & Bergil, 2021).

In contrast, six studies did identify various pedagogical limitations, which are thematically categorized in Table 4.

Table 4. Summary of studies reporting drawbacks

Study	Reported drawbacks
Ekinci & Ekinci (2020)	Lengthy/incomprehensible videos, absence of competitiveness, flawed assessment
Topal (2021)	Lack of clarity on video difficulty levels, lack of competitiveness, insufficient assessment, poor grammatical representation
Nushi & Momeni (2022)	Repetitive/unsystematic video delivery, vague vocabulary support, short response time, overly similar choices
Celik (2022)	Short video durations, lack of detailed test options, no note-taking feature, limited translation support
Merzifonluoğlu (2023)	Lack of competitiveness, long study time
Yılgin (2023)	No direct app drawback reported; emphasized the need for teacher training and ICT competence

The remaining studies (i.e., Abu-ghararah, 2023; Alhawad & Almunif, 2020; Altug & Önal, 2021; Da Silva, 2023; Taylan, 2018; Yüçetürk & Bergil, 2021) reported no drawbacks.

Concerning the downsides, most studies mentioned that Voscreen did not encourage competition, make a sufficient assessment, or provide level-appropriate video categorization. Equally, some studies cautioned against video repetition, insufficient vocabulary support, and short practice durations. Nevertheless, half of the analyzed studies did not report any drawbacks, which may reflect positive user perceptions or a limited critical focus in some research designs. These mixed findings indicate the need for more systematic evaluations of pedagogical design and learner experience in future Voscreen research.

Discussion

This study sought to illustrate the research agenda on Voscreen research in English language education contexts. The review was twofold: to conduct an SLR to systematically glean the relevant research from popular databases (e.g., ERIC, Google Scholar, Scopus, and WoS) and to perform a content analysis of the retrieved studies, all to document Voscreen research, reveal the pedagogical benefits and drawbacks, and provide directions for prospective research by unearthing research gaps.

Documentary qualities of the analyzed studies

The first research question addressed the documentary properties of the relevant research. Despite abundant research interests, the analyzed research comprised mostly review studies (n=5), implying significant research gaps concerning focus areas. Put differently, the existing research only went beyond the app’s pure description, albeit only a few studies exploring its impact on specific skills. Voscreen, in particular, has drawn scant interest, with only a

limited number of studies (12 in English) compared to other mobile apps. For instance, Duolingo has become a riveting research topic for hundreds of studies (e.g., Shortt et al., 2023) since its introduction in 2011. In contrast, Voscreen has received a different level of attention despite being launched a year after Duolingo.

Journal demographics indicated Türkiye's domination (n=6), aligning with the authors' nationalities. The studies were predominantly conducted in Türkiye, which might have resulted from the apps being developed by Turkish engineers and their popularity among Turkish EFL teachers and students (Kic-Drgas & Kılıçkaya, 2024). Similarly, Duolingo was mainly researched in American contexts because it is headquartered in the USA (Shortt et al., 2023). Another striking issue to note is that there had been no research in English-only publications on Voscreen for six years until 2018, when the first review was conducted by Taylan (2018), despite its introduction in 2012. However, research has shown a growing inclination since 2018, notwithstanding a stagnation between 2020 and 2021.

As for the areas focused in the analyzed studies, the findings reveal the prevalence of software description in review articles, indicating a need for more skill-specific, pedagogically grounded research, as current literature leans toward exploratory or evaluative work (e.g., Da Silva, 2023; Nushi & Momeni, 2022; Taylan, 2018; Topal, 2021; Yılgin, 2023). With vocabulary and listening as the commonly targeted skills, findings suggest Voscreen's suitability for input-based learning, which is consistent with its design and interface. The focus on receptive and lexical skills aligns well with previous research (Liu et al., 2018; Poláková, 2022). Limited focus on user experience and oral performance (or speaking skills) further indicate research gaps. However, previous studies deal with user opinions and speaking skills in MALL environments (Chan, 2024; Topal, 2024c), diverging from our results.

The majority were Turkish authors, although the academic titles varied considerably, from MA students and research assistants to associate professors. The diversity of academics might indicate a healthy academic exchange and intellectual cross-pollination in collaborations between academics at different career stages. The prevalence of Turkish authors can, on the other hand, be tied to the app's development and the growing interest in educational technologies for language learning in Türkiye (Özsarı & Saykılı, 2020; Solmaz, 2021). Academic affiliations mainly included universities despite two teachers from the educational ministry. With due interventions, valuable insights can be acquired into Voscreen's impact on language learning in primary, secondary, and tertiary education (Ishaq et al., 2020; Karabatzaki et al., 2018; Pimmer et al., 2016). The fact that Voscreen's VoKids (for young learners) feature has not yet been researched supports this claim.

Equally, the dominance of universities implies the prevalence of research in tertiary education contexts, as in previous research (Li et al., 2022), reinforcing our argument, likely to stem from several practical and institutional factors. First, lecturers and researchers at universities generally have more direct access to college students, who are readily available as research participants

through course enrollment and departmental networks (Webber et al., 2013). Second, higher education institutions often emphasize research productivity (Quimbo & Sulabo, 2014), providing academics with greater encouragement, time, and resources to engage in applied educational research (e.g., using mobile tools like Voscreen). Third, ethical clearance processes and participant consent procedures may be more streamlined or institutionally supported at the university level than in primary or secondary schools, where access to minors is more restricted (Bartlett et al., 2017). Together, these conditions help explain the concentration of Voscreen-related research in the higher education sector.

One notable pattern from the analysis was that publications were mostly single-authored (n=7), indicating the need for more multiple-authored contributions, including local and international collaborations. This trend may reflect the broader disciplinary norms in applied linguistics, where single-authored studies are more common (e.g., Ma et al., 2024) than in fields like computer science, where co-authorship is the norm, especially in technology-driven research (Correia et al., 2018). Also, the high number of publications with only one author may indicate a lack of collaboration across different fields, which could limit the creation of more inclusive frameworks that combine language learning theories and technological advancements. Geographical and institutional factors may also influence the trend. Some academic cultures may place a higher value on or provide incentives for single authorship (Lewis et al., 2012), which could have impacted the observed pattern in this review.

Concerning authorial background, Taylan (2018) received the most citations since it appears to be the first study conducted on Voscreen. Similarly, Ekinci and Ekinci's (2020) study got the second most citations, presumably because it was the first study exploring Voscreen's impact on language skills (i.e., listening). In some way, the first review and experimental studies co-support and illuminate future research on Voscreen's pedagogical advantages. While Taylan (2018) mentioned the app's potential as a listening aid, Ekinci and Ekinci (2020) supported his claim. Follow-up studies provided more evidence for the app's utilization in developing language skills, such as vocabulary (Altug & Önal, 2021), speaking (Alhawad & Almunif, 2020), grammar (Abu-ghararah, 2023), and pronunciation (Topal, 2021).

The keyword analysis revealed six categories (i.e., technology and resources, software, skills learning, learning theories, language education contexts, and psychology), suggesting key themes or interest areas in the analyzed research topic. The first classification's significance emphasizes the technological basis needed to efficiently utilize mobile applications (Harrison et al., 2013). As Roberts (2013) argued, mobile technologies have increased the accessibility of learning, thus creating equality. In this respect, it is essential to note that smartphones have contributed considerably to language learning (Godwin-Jones, 2017). Therefore, the authors have drawn attention to this aspect of Voscreen as a mobile language learning tool.

Equally, the second emerging category was software, implying Voscreen's design and features, which were cited as user-friendly and instant feedback

(Altug & Önal, 2022; Celik, 2022; Ekinci & Ekinci, 2020; Topal, 2021). Concurrently, the third keyword category (i.e., skills learning) supported the previous ones in that the authors reported Voscreen's positive impact on several language skills, including listening, vocabulary, and grammar through experimental studies (Alhawad & Almunif, 2020; Altgğ & Önal, 2022; Ekinci & Ekinci, 2020; Yüçetürk & Bergil, 2021). In addition to these skills, other studies recommended the app for its potential for pronunciation, pragmatic competence, translation, paraphrasing, and reading (Da Silva, 2023; Merzifonluoğlu, 2023; Topal, 2021), providing directions for future research. Regarding learning theories, "MALL" is a meaningful keyword since mobile-assisted learning is handled under this framework (Kukulska-Hulme & Traxler, 2005). As for language education contexts, the studies were mainly conducted with tertiary education students, implying the need for more research in other contexts, such as primary and secondary education. Additionally, more international studies are needed in diverse contexts since most research was carried out in Türkiye, except those by Yüçetürk and Bergil (2021) in primary education and Taylan (2018), who worked for the education ministry.

Methodological qualities of the analyzed studies

The second research question addressed the methodological properties of the reviewed studies. The reviewed research was primarily qualitative, followed by mixed and quantitative research paradigms, indicating a potential imbalanced distribution. Although such a variety of examinations potentially allows for a somewhat versatile understanding of Voscreen's role in language education and previous work on mobile language learning employs similar research methods (Bai, 2024; Hou & Aryadoust, 2021; Yükselir, 2017), the imbalance between methodological distribution (i.e., qualitative, quantitative, and mixed method designs) also signals a lack of statistical evidence, rich insights, and a holistic understanding of Voscreen's place in language learning and practice.

Concerning the research contexts, the higher concentration of studies in Türkiye, with fewer instances in Saudi Arabia, Iran, and Brazil, indicates that the research on Voscreen's impact on language education is mainly localized, particularly within Middle Eastern settings. Additionally, cultural factors and local attitudes toward technology in education might have influenced the app's reception and its perceived effectiveness (Almaiah & Mulhem, 2019). Although the research offers essential perspectives on how well the app works in Turkish schools, focusing on a specific region could create a bias, limiting the generalizability of the findings. Additionally, the app's influence in other educational settings, such as Western or other Asian countries, remains underexplored. Given Voscreen's support in 21 languages, more research is urged in other contexts, including English language learners from different linguistic backgrounds.

Regarding data analysis methods, most studies relied solely on descriptive statistics, suggesting that much of the current Voscreen-related research is exploratory or preliminary in nature, focusing on user feedback, basic trends, or tool evaluation without conducting deeper statistical testing. However,

while descriptive methods are valuable for mapping initial perceptions and usage, they provide limited evidence for drawing generalizable conclusions about effectiveness. Moderate use of descriptive and inferential methods (e.g., t-tests or ANOVA) indicates a positive trend toward methodological rigor in evaluating the pedagogical value of mobile apps like Voscreen. Limited use of inferential and content analysis methods suggests a missed opportunity in current research to integrate quantitative rigor with rich, contextual insights. A mixed-methods design would be especially valuable in MALL research, where user perceptions, motivation, and engagement are as important as measurable gains (Loewen et al., 2019). With a strong reliance on descriptive methods and only a few studies moving toward inferential or mixed-methods approaches, the data analysis trends reveal that the field is still in its formative stages.

The reviewed studies used various sampling methods to balance feasibility and applicability. Random sampling produced more dependable and widely applicable results on the app's efficacy (Yörük et al., 2022), while convenience or snowball sampling offered valuable but more limited perspectives on specific learner demographics (Mulisa, 2022). In addition, the studies' focus on Turkish, Saudi, Iranian, and Brazilian learners may limit their generalizability to other groups. Further research is needed to determine the app's effectiveness in different cultural and geographical contexts for English language learners. Moreover, while surveys allowed for quick and broad data collection on learner satisfaction and engagement, they were limited by potential self-reporting bias (Peng, 2023). Tests may have effectively quantified learners' language gains (Scotland, 2022) but may have overlooked the motivational or contextual aspects captured through semi-structured interviews (Liu & Yu, 2021).

Cited pedagogical affordances of voscreen

The third research question intended to reveal Voscreen's benefits cited in the analyzed articles. The SLR uncovered numerous advantages of the mobile application, which enhances language acquisition in various ways, encompassing practical skills, vocabulary expansion, and pronunciation improvement. These advantages are consistent with fundamental language learning objectives, such as fostering effective communication and attaining linguistic proficiency (Cumming, 2014; Sato & McNamara, 2019). While less frequently mentioned, benefits like self-discipline and verbal/nonverbal language support are crucial in facilitating learner autonomy and enhancing communicative competence. These seemingly minor factors greatly help learners interact with the language in diverse, real-life situations (Çakıcı, 2015). Equally, the app's effectiveness lies in offering repetitive exposure to language input, which is crucial for strengthening vocabulary and listening skills and enhancing overall comprehension (Ellis, 2015; Gass et al., 2020).

The importance placed on vocabulary and listening abilities throughout the research may suggest a strong emphasis on measurable language learning results, with less focus on intangible elements like pragmatic competence or verbal/nonverbal communication. This trend implies that future studies could

explore further how these less commonly discussed advantages contribute to holistic language development. The results align with Krashen's (1982) Input Hypothesis, especially in emphasizing the importance of vocabulary and listening abilities. It seems that apps that offer much exposure to the target language help with understanding and gradual language learning, concurring with well-known theories of second language acquisition (Kılıç, 2020). Furthermore, the app's robust support for improving vocabulary and listening skills could be further developed to help users improve their understanding of natural language use and familiarize themselves with different accents. Similarly, educators can integrate these apps into their teaching to help students enhance their language abilities.

The findings also mentioned positive learner attitudes toward using Voscreen in language learning (Alhawad & Almunif, 2020; Altug & Önal, 2022; Ekinici & Ekinici, 2020). The findings resonate with broader MALL research. For example, Kukulska-Hulme and Shield (2008) emphasized that learner acceptance and enjoyment are critical for sustained engagement. Stockwell (2013) also noted that affective factors (e.g., motivation and perceived usefulness) might promote learning outcomes. Similarly, the notion of "flow" (Csikszentmihalyi & Csikszentmihalyi, 1990), often cited in digital language learning literature, also supports the idea that tools perceived as fun and interactive can foster deeper engagement and more frequent language exposure. In sum, positive attitudes toward Voscreen might indicate strong potential for motivational engagement and serve as a valuable asset when supported by pedagogical planning.

Cited pedagogical downsides of Voscreen

The last research question aimed to discover the potential disadvantages concerning Voscreen's use in language education. The studies we analyzed highlighted several significant drawbacks in the app, including prolonged study sessions, absence of note-taking features, inadequate translation options, substantial similarity of test choices, and a lack of definitions and grammatical features. These findings underscore the need for interactive elements like note-taking, which contradicts the widely recommended methods in language education that prioritize active participation and customized learning (Chi & Wylie, 2014). The absence of grammatical features also impedes the learner's understanding of language frameworks, a key factor in achieving lasting proficiency (Lahmann et al., 2016). To address the issue of long study periods, we propose incorporating brief and diverse tasks, as well as fun breaks, to keep users engaged. Furthermore, including note-taking and personalized translation options could help learners reinforce their comprehension and fill in any knowledge gaps.

One significant issue we identified was insufficient information about videos and levels, which could challenge learners to assess their progress. According to scaffolding theory, having well-defined learning stages is crucial for effective knowledge acquisition, especially in language learning, where the content gradually increases in difficulty (Taber, 2018). Therefore, apps must offer more

precise distinctions between proficiency levels to ensure learners can access content that aligns with their skills. The short video duration (about 16 seconds) and excessively similar options further complicate effective language learning and practice. Previous research revealed varying results regarding the recommended video length for optimal learning (Demir & Birgili, 2024), with Al-Naabi (2020) claiming it to be between 5.5 and 9.5 minutes and Yu and Gao (2022) asserting that it must be less than five minutes. However, most studies' recommendations were video durations in minutes, not seconds, necessitating a rise in video length on Voscreen for optimal practice opportunities.

Moreover, the presence of competitive components in the app may positively affect the motivation and engagement of learners. Studies show that incorporating competitive aspects like leaderboards and challenges can significantly boost user motivation by creating a feeling of accomplishment and fostering a sense of community among learners (Yang et al., 2021). This underscores the importance of integrating such features into the app. Additionally, the lack of competition might limit peer interaction, essential for practicing and improving language skills (Kukulska-Hulme & Viberg, 2018). Future updates to the app could integrate gamification elements like skill-based challenges or time-bound competitions to promote more active engagement with the learning materials. However, the most pressing issue is the unreliable assessment methods, which hinder the app's effectiveness. Providing inaccurate or deceptive feedback can result in learner frustration and reduced self-confidence (Agricola et al., 2020). Users expressed dissatisfaction with the app's assessment tools, which frequently needed to match their learning requirements or skill levels, as emphasized in the review.

It is crucial to use practical assessment to track progress and allow learners to know their strengths and areas for improvement (Darling-Hammond, 2015). Unlike platforms that use gamification to keep users engaged and provide personalized feedback through data-driven assessments (e.g., Duolingo and Babbel), the app lacks these competitive and robust assessment features (Kukulska-Hulme & Shield, 2008). However, incorporating adaptive assessment techniques that respond to each learner's performance could make the app more reliable and effective. This would make the app more reliable and effective and make the learners feel valued and understood. For example, incorporating formative assessments that change difficulty based on user responses would offer personalized feedback and help guide learners toward proficiency.

Conclusions, limitations, and future directions

This study conducted an SLR and content analysis of 12 English-language studies to map the current research landscape on Voscreen, a mobile application used in English language education. The findings revealed that most research has been conducted in Türkiye, primarily within tertiary education contexts, and has focused on receptive skills such as listening and vocabulary. While learners generally hold positive attitudes toward the app, existing studies are limited in number, scope, and methodological rigor – relying primarily on

descriptive analysis and lacking representation across diverse educational levels and regions. Voscreen's pedagogical benefits included enhanced input exposure and learner motivation. However, the study revealed drawbacks such as limited assessment features, short video durations, and lack of interactivity.

The limitations to the current SLR and the directions for future research can be listed as follows:

- With only seven research articles, four reviews, and one presentation paper on Voscreen's effectiveness, the current findings may be less robust than they are. This underscores the urgent need for more comprehensive research to establish firmer conclusions. The examined documents encompass various topics, but this variety might lessen the thorough examination of particular learning goals, like speaking skills or long-term word recall. Essential aspects such as reading and writing, crucial for language learning, have yet to be thoroughly explored.
- Previous research has primarily focused on listening and vocabulary, leaving significant skills like reading, pronunciation, pragmatic competence, paraphrasing, and translation underexplored regarding Voscreen's influence. A broader investigation is necessary to grasp the app's educational potential fully. Longitudinal studies are crucial to determine whether Voscreen's advantages persist over extended periods, such as expanding vocabulary and enhancing listening abilities. Prospective studies that monitor learners' gradual development are needed to fill this gap in our understanding. Further research should prioritize broadening empirical investigations using more extensive and varied samples and robust experimental methodologies to enhance the body of evidence concerning Voscreen's influence on language learning.
- Future research should examine Voscreen's impact on learner motivation and engagement, especially compared to other language learning tools. Research could provide valuable insights into enhancing user experience and retention.
- Conducting comparative research on Voscreen and other well-known language learning platforms would help us understand their distinct benefits and drawbacks. This would assist educators in making better-informed choices when selecting digital tools for language instruction.
- Publications in Türkiye and a few other countries may have been influenced by specific educational practices, technological infrastructure, and linguistic needs, limiting the generalizability of the findings to less-represented regions like Africa or East Asia.
- The small number of studies in the review, especially with only one presented at a conference, raises concerns about publication bias, potentially limiting diverse findings.
- The gender distribution seems balanced, but the range of academic titles among faculty may affect research rigor. Future studies should explore how academic rank influences research focus, especially in pedagogical and theoretical investigations of Voscreen.

- The limited author collaboration may restrict critical analysis. Encouraging interdisciplinary and international collaborations could thus enhance future research quality.
- Future research should aim to increase the visibility of studies through open-access publishing, conference presentations, and collaborations with established researchers to enhance the impact of research on mobile apps in language education.
- Prospective studies should use empirical methods to test the app's impact on language learning outcomes. Studies should compare learning outcomes between app users and control groups to provide evidence of effectiveness.
- Future research should include primary and secondary education settings to assess how younger learners interact with and benefit from the app, providing insights into its applicability across different age groups and educational stages.
- Cross-cultural and multilingual studies are necessary to assess the app's performance across different cultural and linguistic contexts and its impact on learners from diverse backgrounds, including non-native speakers of the languages translated through the app (e.g., French, Italian, Spanish, Albanian, Persian).
- Future studies should employ random sampling to ensure that findings apply to a broader population of language learners.
- Future research should also include a broader range of participants representing diverse language learner groups.
- Future studies should adopt more mixed-methods approaches, combining quantitative measures of learning outcomes with more qualitative insights, such as real-time observations or ethnographic techniques, to capture the complex interactions between learners and the app.
- For a more thorough analysis, future studies should include inferential statistics, such as regression models, to explore the relationships between app usage and various learner outcomes. Multivariate techniques could also reveal how learner demographics or motivation levels interact with the app's effectiveness.
- Future research could consider using app usage logs or eye-tracking for more accurate insights into learner behavior during language learning.

Based on the English-language studies included in this review, there appears to be a notable gap in the academic literature on Voscreen between 2012 and 2018. Nevertheless, this observation is limited to English-language publications, and it is possible that relevant studies were conducted and published in other languages during this period. Therefore, the claim that Voscreen had not received academic recognition globally should be interpreted within the scope of the reviewed literature.

The discussion highlights these constraints and suggests potential areas for

future investigation, reinforcing the value of the research. This evaluates the existing research and outlines a path for additional exploration, reassuring educators and learners. Prospective inquiries could bridge the knowledge gaps regarding the effectiveness of Voscreen in language education, providing educators and learners with more dependable guidance on maximizing the app's benefits and instilling confidence in the research.

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