

YouGlish in English language education: A systematic review of relevant publications

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Highlights	Abstract
- YouGlish functions as an authentic tool that enhances contextualized language learning. - YouGlish supports various language skills simultaneously and provides real-life input for the learners. - The lack of feedback mechanisms and level adaptation limits YouGlish's effectiveness for structured learning.	Mobile-assisted learning technologies have received considerable attention recently due to their potential in helping learners improve foreign language proficiency. Despite being a promising computer-assisted tool, YouGlish, a mobile English learning tool, has received limited recognition from researchers worldwide, leaving a diverse gap in the literature regarding its pedagogical affordances and drawbacks. To this end, this study aims to document the research on YouGlish in English language education contexts and identify its technical and pedagogical advantages and disadvantages. It also aims to guide future research by revealing the existing research gaps. By adopting the PRISMA 2020 guidelines, the researchers conducted a systematic content analysis of all publications (e.g., research articles, reviews, conference papers) on YouGlish in English published until 2024. The results indicate the potential affordances of YouGlish. However, there are considerable research gaps since YouGlish is an emerging technological tool. Therefore, numerous studies employing diverse research methods, target populations, and languages across different research contexts are needed to corroborate the current study's findings.
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Keywords: <i>Computer-assisted language learning, foreign language education, systematic content analysis, YouGlish</i>	

1. Introduction

Technology can be leveraged as a tool, tutor, or medium for learning (Richards, 2015). Its use in education dates many decades back, with (i) language laboratories and audio recorders in the 1960s, (ii) computers, word processors, and text-editing programs in the 1980s, (iii) personal computers in the late 1980s, (iv) the introduction of the internet in the early 1990s, and (v) the prevalence of smartphones in the 2010s (Godwin-Jones, 2021; Kruse et al., 2023). The invention of computers has marked a significant change in language education (Mohsen et al., 2024). Warschauer and Healey (1998) divide the integration of computers in language learning (i.e., computer-assisted language learning) into three phases: behavioristic (the 1960s and 1970s), communicative (late 1970s and early 1980s), and integrative (late 1980s-early 1990s). Technological integration into language learning and teaching has embraced a revolutionary turn with the emergence of smartphones and artificial intelligence (Bennett & McWhorter, 2020; Shah, 2023).

That being the case, technology can be harnessed at five levels: physical (e.g., mobile phones and laptops), management (e.g., Google Classroom and Moodle), applications (blogs and social media platforms), resource (online news sites and video streaming platforms), and component technology (spell-checkers and electronic dictionaries) (Levy, 2010). Previous research on technology use at all levels has yielded

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encouraging findings regarding language learning and teaching (Su & Zou, 2022). At the physical level of technology use, for example, Şad et al.'s (2022) study indicated the potential benefits of smartphones on listening and speaking skills, with limited adverse effects reported by learners. At the management level, Terzioğlu and Kurt (2022) reported positive impacts of learning management systems on listening and speaking skills. At the application level, Barrot (2022) demonstrated that social media platforms (e.g., Twitter and WhatsApp) riveted language learners and teachers from diverse backgrounds. At the resource level, Dang and Long (2024) showed that online news can be an excellent resource for incidental vocabulary learning. Finally, at the component technology level, Heuberger (2020) asserted that monolingual online dictionaries offer manifold opportunities for language learning, including improved accessibility, multimedia features (e.g., pronunciation and videos), and customization.

Language learning websites have been such technological tools that have contributed to language education. Shield and Kukulska-Hulme (2006) discussed the pedagogical suitability of language learning websites. They suggested that websites should be evaluated in terms of pedagogical usability (i.e., academic context, academic content, general usability principles, and technical usability) rather than merely by generic usability (i.e., ease, user experience, and interaction/design). These websites have made language learning more flexible and materials more accessible, free from temporal and spatial constraints (Kurt, 2019; Priyatno, 2017). Incorporating interactive features (e.g., quizzes) and gamification into such websites has been another pedagogical affordance, contributing to engaging and motivating learning experiences (Adams & Du Preez, 2022). Such websites offer customization options and have also created personalized or self-directed learning opportunities tailored to learners' needs (Gerard et al., 2022). However, it is important to note that these websites may not suit all learners, with some containing inaccurate information and most requiring internet access (Metzger, 2007; Sihombing, 2020). Despite these limitations, previous research indicated manifold benefits of language learning websites for language skills, including reading (Dincer, 2020), listening (Barella & Linarsih, 2020), writing (Ebadi & Rahimi, 2019), speaking (Bashori et al., 2022), grammar (Bahari & Gholami, 2022), vocabulary (Nguyen, 2022), and pronunciation (Bashori et al., 2024).

One such website is YouGlish (short for You English). It is an online platform that presents users with a wide range of YouTube videos, contextualized to the pronunciation of vocabulary items entered in 21 languages (Miller, 2019; Topal, 2023a). Despite its primary focus on pronunciation, the website, which was initially launched as YouPronounce (Karatay, 2017), provides users with authentic language input that can be used to develop listening, vocabulary, grammar, and speaking skills. The related videos also include captions with the target word highlighted. Account holders are also provided with additional features, such as tracking their progress, adding words to their word lists, and access to vocabulary resources (e.g., definitions, parts of speech, synonyms, and sentence examples) (Topal, 2023a). Moreover, users might sign up for five-minute lessons or word of the day for spaced pronunciation practice.

YouGlish's popularity lies in its ability to demonstrate authentic vocabulary use across diverse accents (e.g., U.S. and U.K. in English; Spain and Latin America in Spanish) and contexts (depending on the video content) (Eom, 2024; Topal, 2022). Also, its integration with YouTube allows users to access extensive video content, which refreshes with new uploads, adding to the diversity, authenticity, and context (Ahmad et al., 2017). Exposure to multiple accents in 21 languages is YouGlish's advantage, contributing to the familiarity with native and non-native accents (Bui et al., 2024; Topal, 2023a). In addition, customization options in user accounts enable users to personalize their language-learning experiences, enhancing adaptability and flexibility (Henrichsen, 2021). Furthermore, the multimodality (i.e., aural, visual, and textual input) that comes naturally with videos fosters language learning and practice (Huang & Xia, 2024).

Despite the website's pedagogical affordances, YouGlish remains an under-researched language-learning platform. A quick literature review reveals that the app's investigation focuses primarily on English language learning (e.g., Fu & Yang, 2019; Prastyo et al., 2022). Also, the research contexts have mostly remained local (e.g., Eom, 2024; Kartal & Korucu-Kis, 2020), implying the need for more international contributions and collaborations. In addition, previous studies' primary focus on pronunciation features calls for more research into the app's effectiveness in assisting other language skills in languages other than

English. Considering these reasons, analyzing the existing research on YouGlish will display the current research trends and guide prospective researchers by revealing the research gaps. The scope of this study will be limited to research conducted in English language learning and teaching contexts. Accordingly, the synthesis will focus on the technical/pedagogical affordances and downsides of the website. To this end, this study conducted a systematic content analysis of research on the YouGlish platform to reveal the research trends and determine gaps. Accordingly, the researchers addressed the subsequent research questions:

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

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

RQ (3): Which affordances of YouGlish are identified in the relevant studies?

RQ (4): Which drawbacks of YouGlish are reported in the relevant studies?

2. Methodology

The research utilizes a systematic content analysis to uncover the studies conducted on YouGlish in English language education. It also employs systematic qualitative content analysis (QCA) to analyze relevant documentary and methodological data, such as document types, focus areas, journal titles, publication years, research designs, and data analysis methods. As suggested by Selvi (2020), the QCA is an effective method for interpreting qualitative data in a systematic and context-specific manner (Selvi, 2020).

The study adhered to the revised guidelines outlined in the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA 2020) (Page et al., 2021). Academic circles highly respect these guidelines for their comprehensive and transparent approach to conducting systematic reviews and meta-synthesis (Kolaski et al., 2023), making it an ideal framework for our research. We developed a review protocol to identify data sources, create a search strategy, formulate query strings, and establish inclusion/exclusion criteria. Furthermore, the study employed a modified version of the paper classification form (PCF), originally devised by Sözbilir et al. (2012) and adapted for English language teaching by Yağız et al. (2016) for QCA categorization.

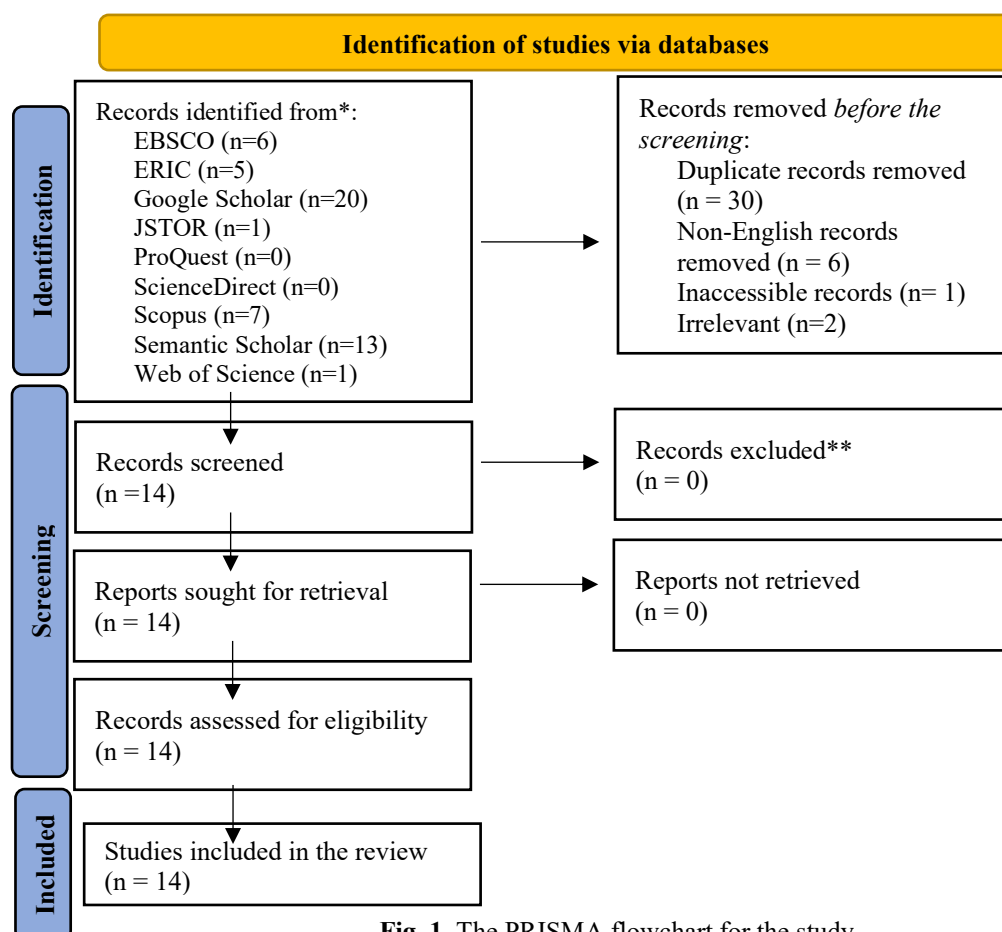


Fig. 1. The PRISMA flowchart for the study

2.1. Databases

The study encompassed multiple databases for comprehensive disciplinary coverage, an extensive scope, substantial abstract and citation databases, rigorous selection criteria, and literature pertinent to education. The Education Resources Information Centre (ERIC) specializes in education-related literature (Boudah, 2011), rendering it especially valuable for research in language education and educational technology. Google Scholar represents the most comprehensive academic search engine (Gusenbauer, 2019). It aggregates various academic resources from multiple disciplines, facilitating the inclusion of even unconventional materials to ensure a comprehensive review of all pertinent research. Similarly, Scopus, with its access to high-quality, peer-reviewed research and sophisticated citation analysis (Baas et al., 2020), plays a vital role in identifying prominent studies and emerging trends, ensuring you remain informed of the latest advancements. The Web of Science (WoS) is ideal for performing systematic syntheses requiring high-quality, peer-reviewed research and for assessing citations to measure the impact of research within a specific domain (Zhu & Liu, 2020). To further increase comprehensiveness and diversity, additional databases were included in the search: EBSCO, ScienceDirect, Semantic Scholar, JSTOR, and ProQuest.

2.2. Search Strategy

The query strings “YouGlish,” “YouGlish app,” and “YouGlish platform” were typed in the nine databases included in the study. The query items were only searched in publication titles to include studies focusing on YouGlish. Fifty-three documents (EBSCO: 6, ERIC:5, Google Scholar:20, JSTOR: 1, ProQuest: 0, ScienceDirect: 0, Scopus: 7, Semantic Scholar: 13, WoS:1) were screened after the search. A meticulous process of removing duplicate, non-English, irrelevant (i.e., not conducted in English language learning and teaching contexts), and inaccessible records was undertaken, resulting in 14 papers being downloaded for analysis.

2.3. Inclusion and Exclusion Criteria

PRISMA, 2020 guidelines were taken into consideration when establishing the document assessment criteria. There were no restrictions on documentary or temporal time. Nevertheless, only publications written in English, conducted in English language learning environments, and having the term “YouGlish” in their titles were included. The study excluded publications that were not in English, duplicates, irrelevant, or inaccessible.

2.4. Limitations

The search was restricted to publications that included the term “YouGlish” in their titles. Although this criterion enabled the researchers to identify studies explicitly centered on the platform and maintain a clearly defined review scope, it may have excluded studies that examined or employed YouGlish without naming it in the title. Therefore, the reviewed corpus may not represent the entire body of research involving YouGlish, and the findings should be interpreted as a mapping of publications explicitly focused on the platform.

3. Findings

The findings are organized into four headings in accordance with the research questions. First, the documentary characteristics of the analyzed studies are presented. Then, their methodological characteristics are listed. Finally, the possible advantages and disadvantages of YouGlish are provided.

3.1. Documentary Characteristics

Documentary characteristics include document type, focus area, journal titles, indexing databases, publication year, number of authors, authors’ countries, keywords, references, and citations. These qualities are crucial for revealing the use of reliable sources, alignment of literature with specific research topics, relevance, academic rigor, credibility, currency, period of interest, level of collaboration, geographical diversity, cultural/contextual influence, core themes, well-supported research foundation and academic impact.

As of October 2024, the publications on YouGlish included seven research articles, five review articles, and two book chapters (Figure 2). Concerning the focus areas in the analyzed studies (Figure 3), most studies addressed the product’s (i.e., YouGlish) descriptive features. Researchers equally concentrated on YouGlish’s impact on speaking skills and students’ perceptions. Additionally, an even number of studies (n=2) tackled lexicographical and pronunciation gains through YouGlish.

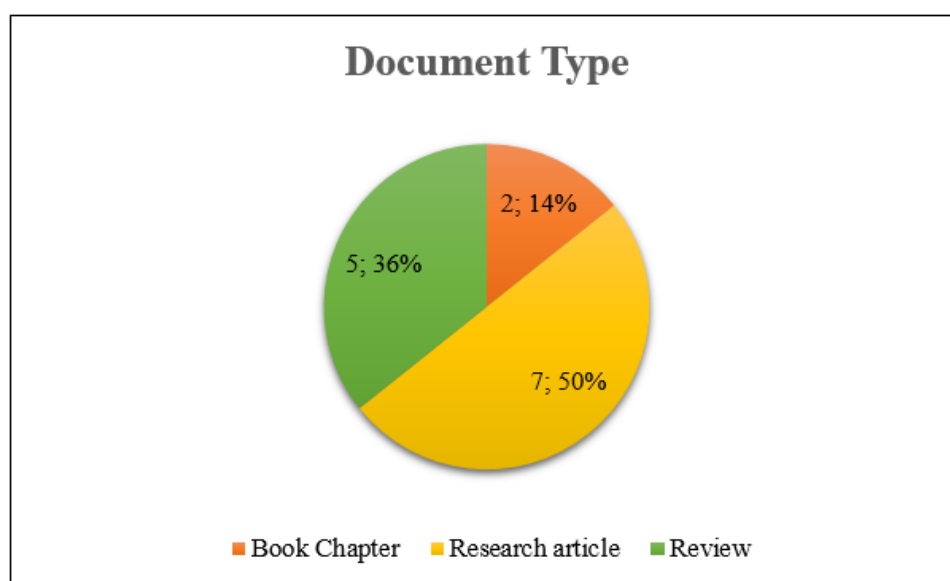


Fig. 2. Types of documents

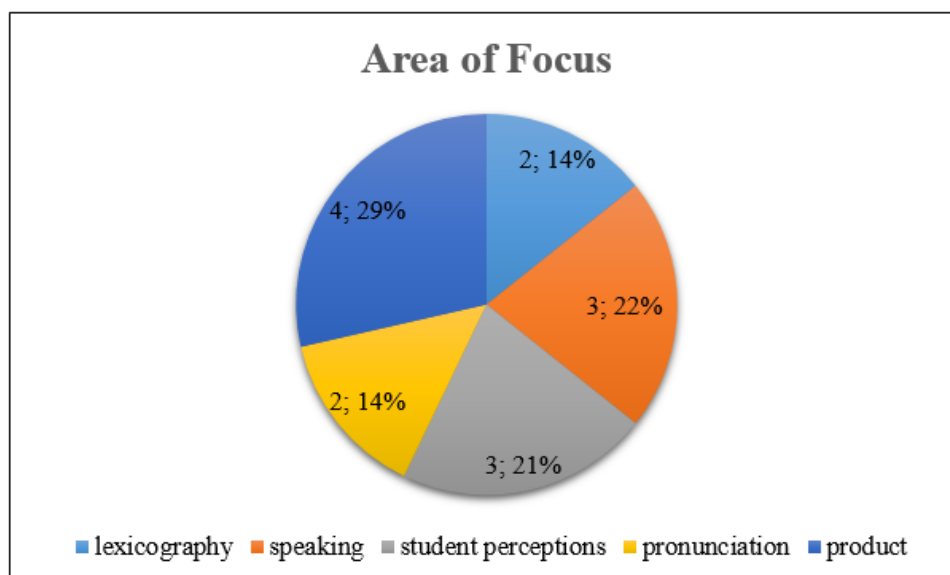


Fig. 3. Areas of focus

Interestingly, the publication venues (Table 1) that included YouGlish research varied. Two publications (i.e., Cacciato, 2024; Sardegna & Jarosz, 2022) found their place as book chapters published by Springer and Routledge, while the remaining research was published in different journals published by diverse organizations (e.g., universities and private organizations) in various countries (primarily the USA, followed by the U.K., Switzerland, and Indonesia). The venues that published YouGlish research were indexed in multiple databases (e.g., institutional repositories, EBSCO, Scopus, and WoS).

Table 1.

Journal Demographics

Publication Venues	Country	Publisher	Indexing
Proceedings of the 8th Pronunciation in Second Language Learning and Teaching Conference	USA	Iowa State University	Institutional Repository
Annual Review of Education, Communication, and Language Sciences	U.K.	University of Newcastle	EBSCO
The Electronic Journal for English as a Second Language (TESL-EJ)	USA	TESL-EJ	Scopus
Journal of Educational Technology & Society	Taiwan	International Forum of Educational Technology & Society	SSCI
Education and Information Technologies	Switzerland	Springer	SSCI
Theoretical and Practical Developments in English Speech Assessment, Research, and Training	Switzerland	Springer	Scopus
Lectura: Jurnal Pendidikan	Indonesia	Universitas Lancang Kuning	EBSCO
Journal of Digital Educational Technology	Greece	Bastas	Google Scholar
i-manager's Journal of Educational Technology	India	i-manager Publications	ERIC
Korean Journal of English Language and Linguistics	South Korea	The Korean Association for the Study of English Language and Linguistics	Scopus

Publication Venues	Country	Publisher	Indexing
IJOLEH: International Journal of Education and Humanities	Indonesia	Al-Kindi Center for Research and Development	Google Scholar
JOTSE: Journal of Technology and Science Education	Spain	OmniaScience	Scopus
Corpora for Language Learning	UK	Routledge	WoS
Bridging the Research-Practice Divide	USA	International Association for Language Learning Technology	MLA International Bibliography
The FLTMAG			

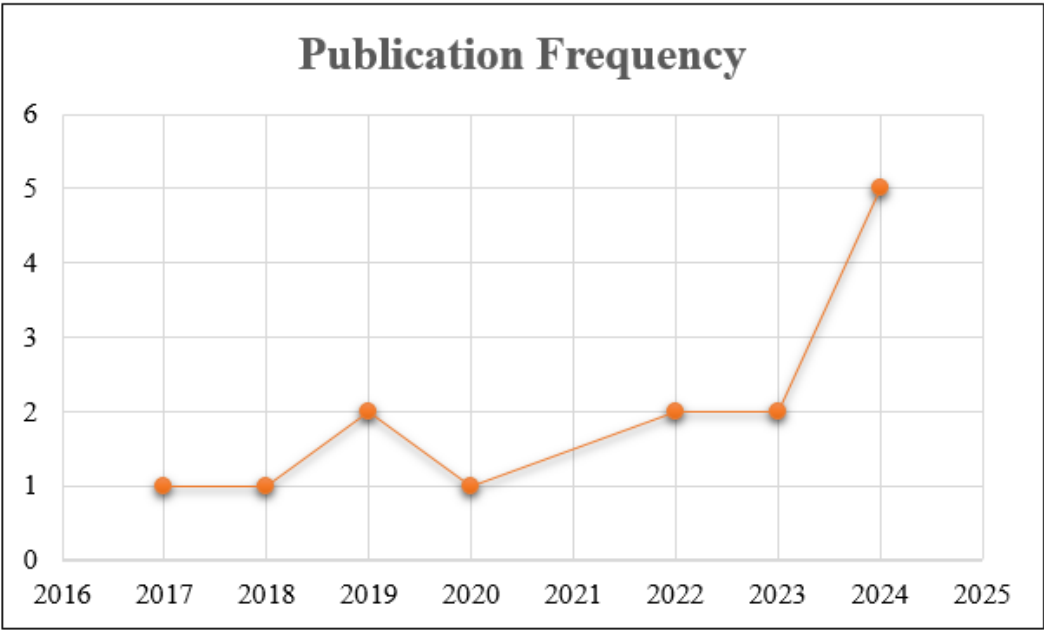


Figure 4. Publication frequency

As Figure 4 illustrates, interest in YouGlish has grown over the years, with the least number of studies (n=1) in 2017, 2018, and 2020 and the most (n=5) in 2024. Researchers conducted two studies in 2019, 2022, and 2023. The publications were more (n=8) single-authored than co-authored (n=6). Most authors were from Peru (n=7), followed by Türkiye and Indonesia (n=5). It is manifest from the general picture that YouGlish riveted scholars from diverse geographies, including Asian, African, European, North American, and South American countries.



Fig. 5. Authors' countries

The analyzed authors included 49 keywords in their publications. These keywords (Figure 6) can be grouped into six categories based on their content: pronunciation (e.g., accents of English and English word stress), digital learning and technology (e.g., autonomous learning, corpus, and educational technology), English language learning (e.g., EFL learners and orthographic rules), pedagogy and educational tools (e.g., implementation of YouGlish and speaking proficiency), social media (e.g., Twitter and social networking sites), and learners and teachers (e.g., learner cognition and pre-service teachers).

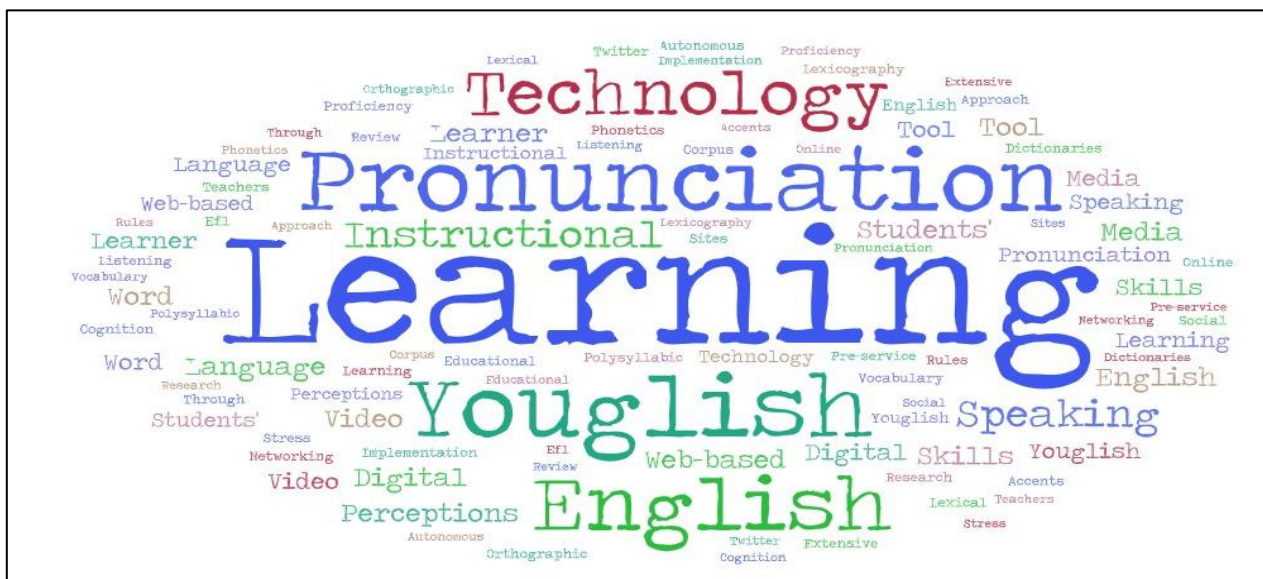


Fig. 6. Word cloud

Concerning referential data, the authors of 14 publications provided a total of 431 references ($M=30.78$), with Kartal and Korucu-Kis (2020) providing the most ($n=122$) and Amer (2024) providing the fewest ($n=2$). The total citations (Figure 7) were gathered using Google Scholar metrics. Accordingly, the top three publications with the most citations were Kartal and Korucu-Kis (2020, $n=28$), Fu and Yang (2019, $n=20$), and Miller (2019, $n=11$) and Sardegna and Jarosz (2022, $n=11$). Interestingly, 2024 publications were not cited as of October 2024. Another striking finding was the gradual decline in citations after 2020.

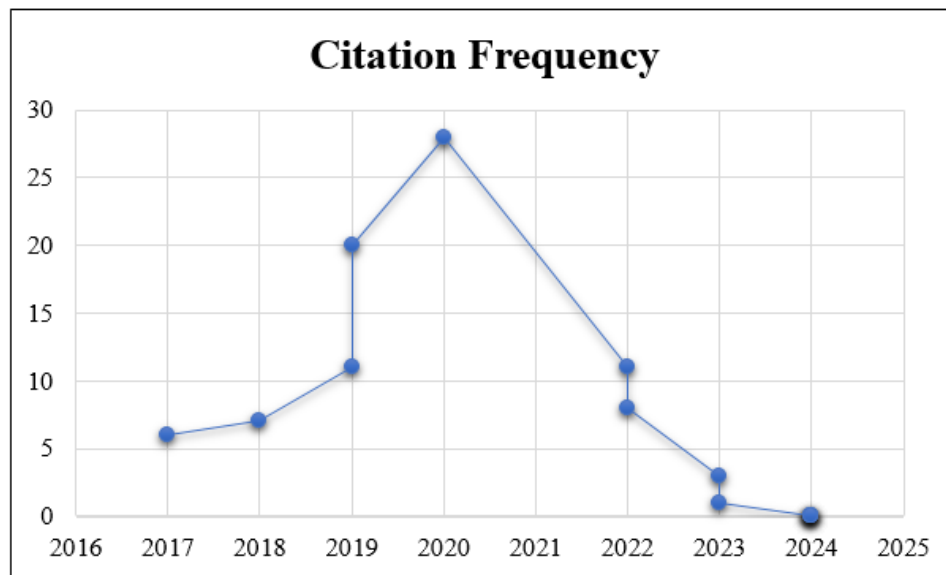


Figure 7. Citation frequency in years

3.2. Methodological Characteristics

Methodological characteristics include research design, research method, context, countries, sampling technique, sample size, target population, data collection instrument, and data analysis. These properties are essential to understanding research categorization, methodological rigor, research applicability, geographical differences, representativeness, generalizability, statistical power, reliability, relevance, accurate/valid measurement, and the soundness of evidence.

As Figure 8 illustrates, the majority of the analyzed studies employed qualitative research designs, followed by mixed and quantitative designs.

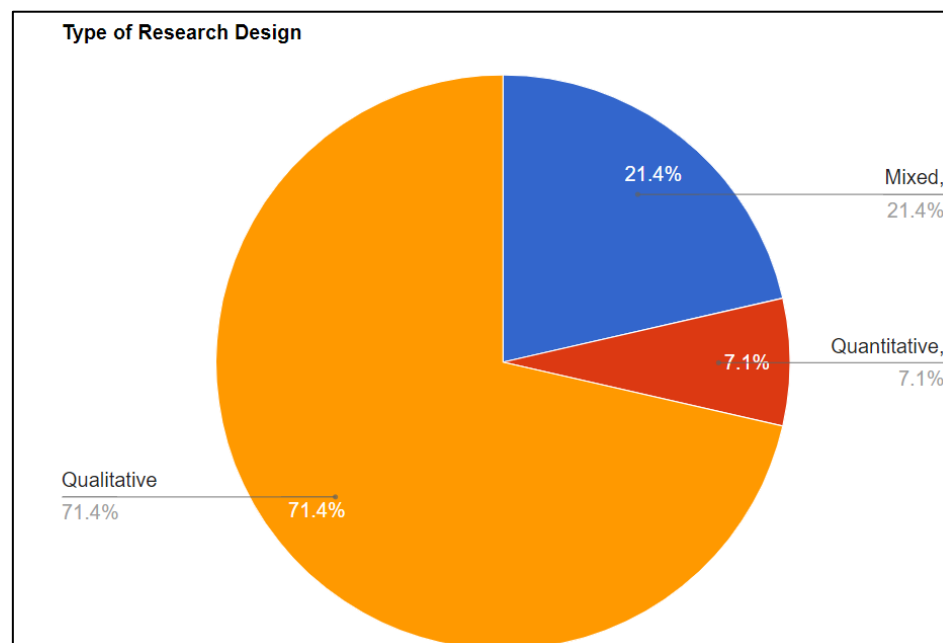


Figure 8. Type of research design

Concerning the contexts where these studies were conducted, most (n=8) were carried out in tertiary education, with one in secondary education. Since five studies were classified as review articles, their contexts were labeled “not applicable.”

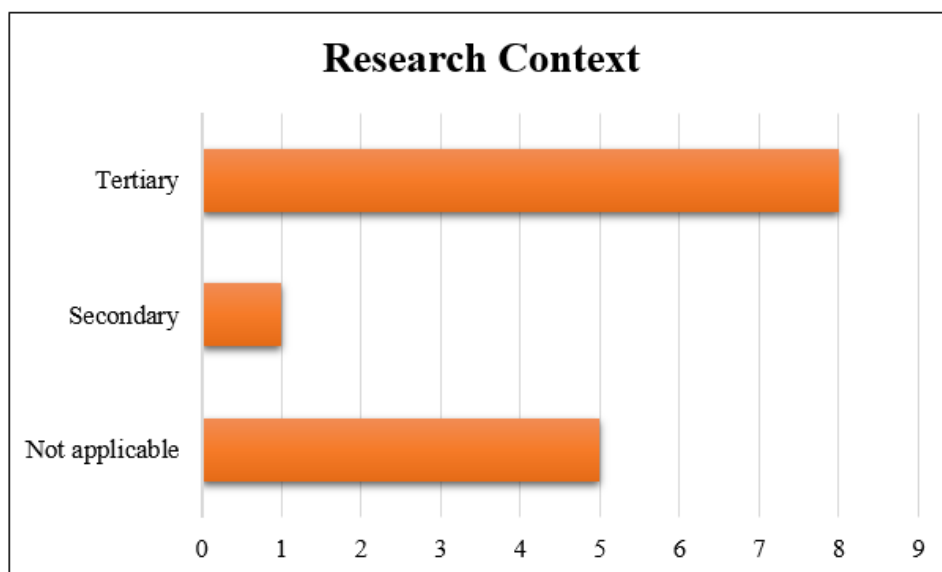


Figure 9. Research contexts

Türkiye and the USA were the leading countries in YouGlish research, followed by Indonesia (n=2) and the remainder of the countries in Figure 10.

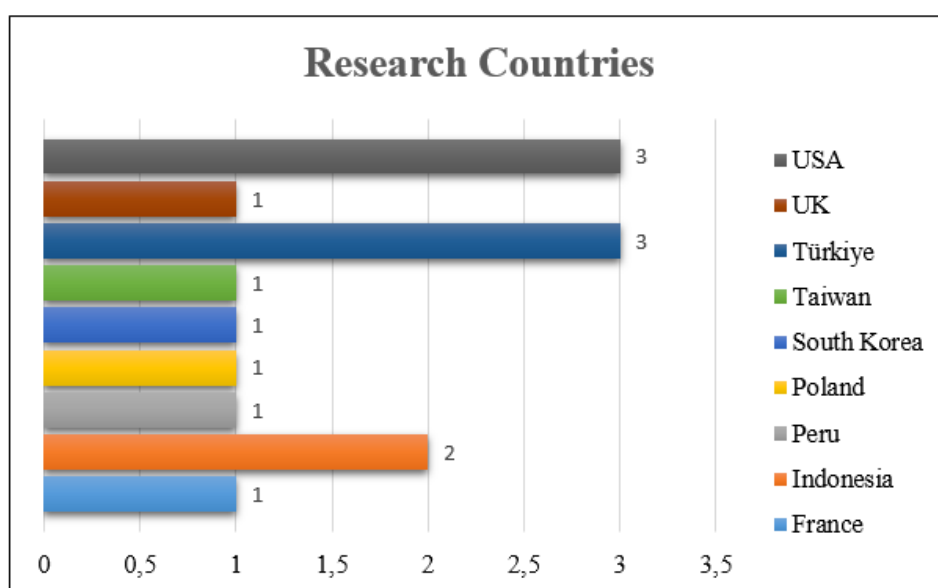


Figure 10. The countries where research was conducted

When review studies were excluded, the remaining studies exploited various instruments for data collection (Figure 11), with questionnaires and tests (e.g., pronunciation, perception, prediction, and retention) used the most and pronunciation trackers and learning logs the least.

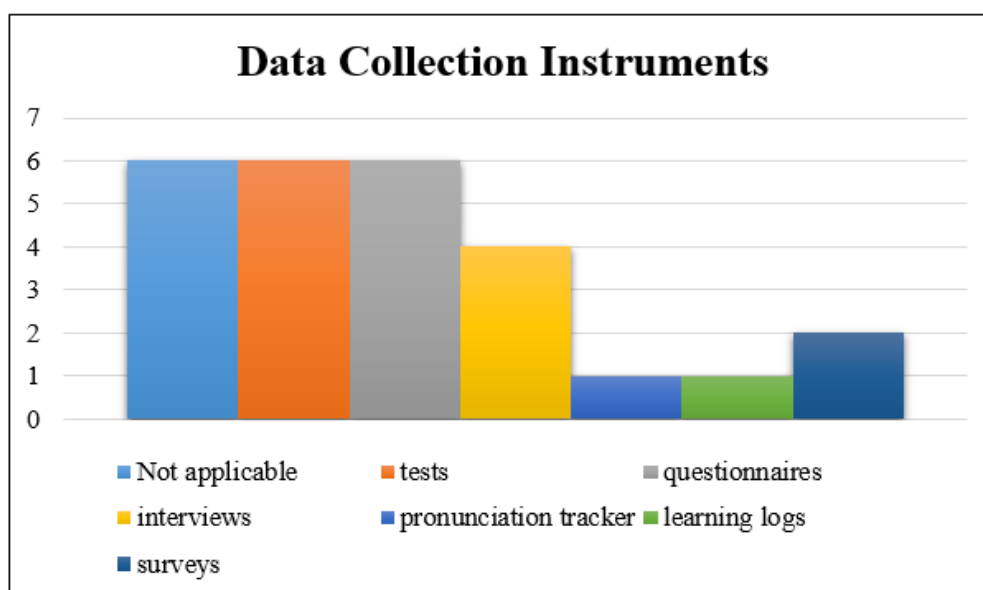


Figure 11. Data collection tools

The number of data collection instruments used in the analyzed studies has also affected the types of data analysis methods. Given the review studies that evaluated YouGlish were grouped under descriptive analysis, it is observable that most studies utilized this analysis method. The other studies also exploited content, thematic, and inferential analyses to answer their research questions.

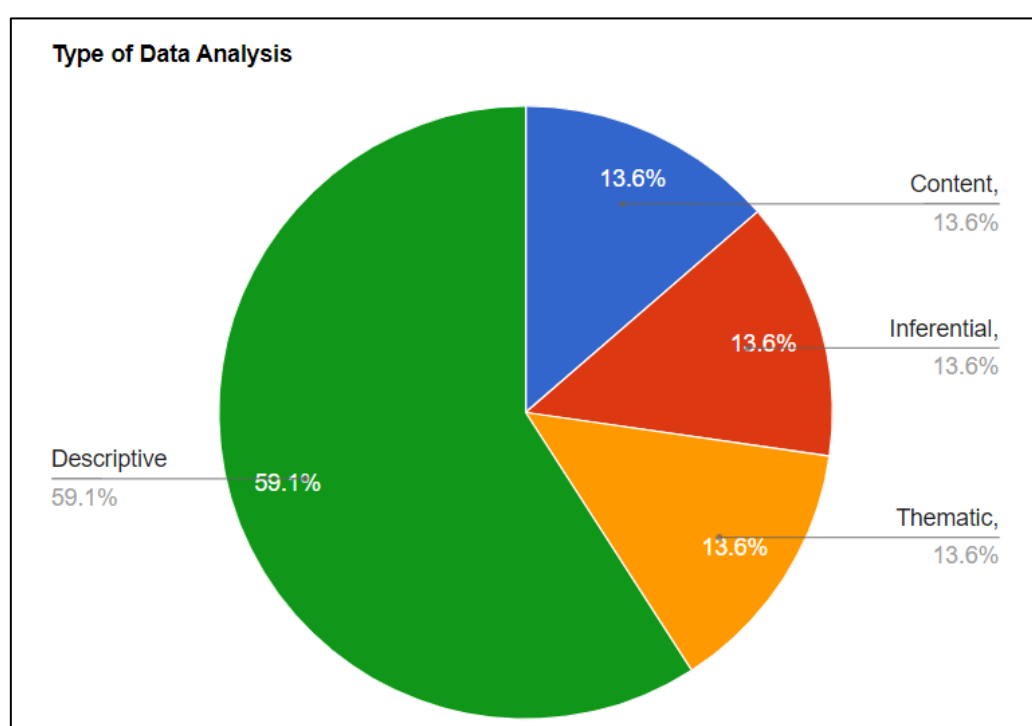


Figure 12. Data analysis methods

The review publications primarily discussed the potential use of YouGlish by foreign language learners. It was observed that the analyzed studies addressed EFL learners ($n=7$), foreign language learners ($n=6$), and pre-service teachers ($n=1$). Regarding the sampling techniques, the review studies were excluded from the analysis since they included no participants. Two more studies did not specify which sampling method they used. The remaining studies ($n=6$) employed nonprobability sampling techniques: convenience, purposeful, and voluntary. Equally, the sampling size varied between 9 and 93 ($M=39.12$) in the six studies that included participants.

3.3. YouGlish's Affordances

The content analysis of the focused studies revealed nine themes that can be grouped into two main categories: technical and pedagogical affordances (Table 2).

Table 2.

The technical and pedagogical benefits of YouGlish

Level	Sample Codes	Cited in
<i>Technical</i>		
usability & user experience	user-friendly, easy to use, easy navigation, fun user experience, stress-free environment, motivating	Amer, 2024; Eom, 2024; Karatay, 2017; Miller, 2019; Quispe-Vargas et al., 2024; Sardegna & Jarosz, 2022; Sukmawati et al., 2024
search & data-driven learning	rapidity of search results, data-driven learning	Cacciato, 2024; Miller, 2019
autonomy & flexibility	autonomous learning, self-paced learning, self-practice, monitor progress through account, accessibility & flexibility, extracurricular learning opportunities	Eom, 2024; Karatay, 2017; Miller, 2019; Prastyo et al., 2022; Sardegna & Jarosz, 2022; Topal, 2023a
linguistic resource	pronunciation database, lexicography, phonetic concordance, visual pronunciation dictionary	McCarthy, 2018; Topal, 2023a
<i>Pedagogical</i>		
pronunciation	pronunciation improvement, pronunciation aid, segmentals and suprasegmentals, intonation, word stress prediction and perception, specialized vocabulary pronunciation, authentic pronunciation input, phonetic transcription	Eom, 2024; Fu & Yang, 2019; Karatay, 2017; Karta & Korucu-Kis, 2020; Miller, 2019; Prastyo et al., 2022; Sardegna & Jarosz, 2022; Topal, 2023a, 2023b;
vocabulary	contextualized vocabulary, word usage, genre-specific vocabulary teaching, learning and retaining mispronounced words	Karatay, 2017; Miller, 2019; Sukmawati et al., 2024; Topal, 2023a
listening	spoken comprehension, exposure to native speaker talk, results in different English accents, access to English varieties and authentic conversations	Eom, 2024; Fu & Yang, 2019; Topal, 2023a
content quality & variety	quality content, authentic input, topic and content variety	Amer, 2024; Miller, 2019; Quispe-Vargas et al., 2024; Topal, 2023b
speaking	progress in oral skills	Fu & Yang, 2019; Quispe-Vargas et al., 2024; Sukmawati et al., 2024
proficiency	- improvements in oral proficiency - speaking proficiency	

Regarding technical properties, usability/user experience focuses on interface design, navigation, and user satisfaction with the platform's overall ease of use. Search and data-driven learning refers to how the platform uses data and algorithms to enhance learning and the efficiency of its search functionalities. Although autonomy and flexibility contain pedagogical implications (self-paced, autonomous learning), they rely heavily on the platform's technical design (e.g., progress check and flexible scheduling) to give users control over their learning experience. Features like tracking progress, accessibility, and the ability to learn at one's own pace are made possible by the platform's technological infrastructure. Finally, linguistic resources involve specialized content for lexicographers and phonetic databases. Though the content is educational, its integration and functionality rely on the platform's technical architecture to deliver expert resources to users.

Accordingly, the technical themes that emerged from content analysis fostered YouGlish's technical infrastructure for user-friendliness, motivating user experience, being a source of data-driven learning, supporting autonomy and flexibility, and being used as a linguistic resource. As for the pedagogical affordances, the analyzed publications indicated YouGlish's potential for pronunciation improvement,

vocabulary development, aural comprehension, content authenticity, relevance, variety, and speaking improvement.

3.4. *YouGlish's Downsides*

Nine themes grouped under two categories emerged as a result of the content analysis (Table 3).

Table 3.

The technical and pedagogical drawbacks of YouGlish

Level	Sample Codes	Cited in
<i>Technical</i>		
search & navigation problems	labor-intensive search, mismatch between accents (jumbled videos), not all results from native speakers	Eom, 2024; Fu & Yang, 2019; McCarthy, 2018
audio/accent quality & technical malfunctions	malfunctioning accents, variations between word tokens across accents, unstable internet connection, incomprehensible speech	McCarthy, 2018; Prastyo et al., 2022; Topal, 2023a, 2023b
lack of essential features	no speech production, no phonetic transcription	Karatay, 2017
user experience problems	impractical	Kartal & Korucu-Kis, 2020
<i>Pedagogical</i>		
lack of feedback & assessment	no feedback, lack of corrective feedback, lack of progress checks, lack of assessment	Karatay, 2017; Miller, 2019; Topal, 2023a, 2023b; Sukmawati et al., 2024
lack of level adjustments	inappropriate for lower-levels, inappropriate for teaching segmentals to low levels, not modified input	Kartal & Korucu-Kis, 2020; Miller, 2019; Topal, 2023a
lack of pronunciation guidance	unbalanced focus on segmentals and suprasegmentals, lack of guidance on pronunciation learning	Topal, 2023a
lack of motivational features	lack of competitiveness	Topal, 2023b
accent representativeness issues	lack of representativeness of accents	Karatay, 2017; McCarthy, 2018

Concerning the technical hiccups, the cited articles revealed challenges in interactions with the platform and learners' difficulties finding appropriate or reliable content efficiently (Eom, 2024; Fu & Yang, 2019; McCarthy, 2018). Problems with audio content/quality and malfunctions were also reported (McCarthy, 2018; Prastyo et al., 2022; Topal, 2023a, 2023b). Karatay (2017) reported missing features that limit the platform's ability to offer learners interactive or necessary pronunciation tools. Equally, Kartal and Korucu-Kis (2020) pointed to general usability issues, where the platform's design complicated navigation.

Regarding the pedagogical concerns, several studies highlighted the absence of feedback loops, progress monitoring, and evaluations that help learners track their improvements and correct errors (Karatay, 2017; Miller, 2019; Topal, 2023a, 2023b; Sukmawati et al., 2024). Several others pointed to a misalignment between the platform's content or difficulty level and the needs of beginner or lower-level learners, making the platform inaccessible for that group (Kartal & Korucu-Kis, 2020; Miller, 2019; Topal, 2023a). Topal (2023a) emphasized problems related to the pedagogical approach to pronunciation, either focusing too much on specific areas (segmentals vs. suprasegmentals) or lacking guidance altogether. Similarly, Topal (2023b) pointed to the absence of elements that engage learners (e.g., competitive or gamified features). Finally, some researchers claimed that the content did not provide learners with a wide or accurate enough variety of accents (Karatay, 2017; McCarthy, 2018).

4. Discussion

4.1. *Documentary Characteristics*

The blossoming of traditional education into more contemporary modes like blended, computer-assisted, and mobile learning, especially with the advent of computer, mobile, and AI technologies, has pushed educators and teachers to adopt pursuits congruent with such technology. Mobile and AI technologies have

made adaptive and customizable teaching and learning methods tailored to learners' needs accessible. Different language skills and learner needs have become target-driven thanks to such technologies. We now have mobile apps specifically for vocabulary (e.g., WordUp) and pronunciation (e.g., BoldVoice) or online resources like manifold online dictionaries (e.g., monolingual, bilingual, multilingual, thesaurus, collocation, and learner's) and language learning websites (e.g., Rosetta Stone and Babbel). YouGlish is one such digital tool that can be harnessed in language education. In this regard, this research analyzed studies on YouGlish conducted as of October 2024 to reveal the tool's technical/pedagogical affordances, downsides, and research trends, thereby identifying research gaps in the relevant literature and guiding future researchers.

The analyzed studies' documentary characteristics indicate that while YouGlish has garnered some attention, it remains an emerging field of study. The relatively limited body of work (i.e., 14 publications) suggests that the tool has yet to be fully explored, leaving substantial room for future research. The abundance of research focusing on the descriptive features of YouGlish has also followed a similar pattern in studies on other digital tools, such as Duolingo (Teske, 2017), Babbel (Nushi & Eqbal, 2018), and Memrise (Zhang, 2019). However, such digital tools have also received more experimental studies (e.g., Bajorek, 2017; Loewen et al., 2019; Walker, 2015), even outscoring descriptive ones. Therefore, studies, especially the ones utilizing quantitative, qualitative, and mixed methods, are increasingly needed in YouGlish literature.

The publication of two studies as book chapters (Cacciato, 2024; Sardegna & Jarosz, 2022) by major academic publishers (i.e., Springer and Routledge) suggests the recognition of YouGlish research in contexts where it is necessary to treat language learning extensively and thoroughly, positioning it among other significant academic work on language education. Additionally, the geographical diversity of the remaining studies, published across different peer-reviewed journals, indicates the international relevance of YouGlish as a tool for language and linguistics research. Moreover, indexing in diverse databases facilitates the accessibility and scholarly impact of these studies. The scarcity of research indexed in Scopus and WoS suggests the need for more rigorous and quality research to augment their academic visibility and credibility.

The sporadic interest in YouGlish in 2017, 2018, and 2020, with only one study each year, suggests that YouGlish was relatively new or not widely explored at the time. This slow adoption may have been caused by a lack of awareness or accessibility to the tool among researchers, as new technologies often take time to become popular in academic circles (Selwyn, 2021). YouGlish publications have been increasing, peaking at five in 2024, reflecting a growing interest in YouGlish for language learning and pronunciation research. This trend coincides with Duolingo research, which expedited after the app's introduction in 2012 (Shortt et al., 2023). The number of studies in 2019, 2022, and 2023 (two studies each) also shows uneven but growing recognition, possibly due to factors like competition from other tools and regional funding variations (Haessler et al., 2023).

The prevalence of single-authored publications on YouGlish could suggest that YouGlish is still in a niche research phase, attracting early adopters who independently investigate its applications (e.g., Karatay, 2017; Miller, 2019) before it becomes a more mainstream subject for larger, multi-authored research projects. Similarly, the geographical diversity of authors indicates global appeal for YouGlish, especially in non-English-speaking contexts (e.g., Peruvian, Turkish, and Polish) where the tool's use may be particularly relevant. The prominence of Peruvian authors does not necessarily suggest the tool's popularity in the Peruvian context, but the relevant article's publication by seven authors (i.e., Quispe-Vargas et al., 2024). A similar tendency was also observed in previous research on other digital tools, for example, a Rosetta Stone study published by four authors (Namaziandost et al., 2021) and a Duolingo study authored by five scholars (Shortt et al., 2023).

The keyword categories indicated the authors' potential research interests concerning YouGlish. Pronunciation, English language learning, pedagogy, and educational tools suggest YouGlish's implementation as an educational tool for learning or teaching English pronunciation. Similar studies conducted with other tools concerning pronunciation (e.g., Fouz-González, 2020; Franco et al., 2010) might

imply the need for digital tools for pronunciation learning, teaching, and assessment (Pennington & Rogerson-Revell, 2019). Also, the keywords categorized under learners and teachers hint at research on the perceptions of those stakeholders toward YouGlish. It is crucial to explore user perceptions to evaluate the tool's effectiveness and satisfaction, bridge the theoretical and practical gaps, support the tool's pedagogical implementation, and promote customization and personalization (Bansah & Darko Agyei, 2022). A similar approach was adopted for other digital tools in previous research (Jeon, 2024; Slamet, 2024). Lastly, the keyword category "social media" suggests YouGlish's integration with other social media platforms (e.g., Twitter) to augment pedagogical effectiveness (e.g., Kartal & Korucu-Kis, 2020). Hoek (2021), for instance, examined Duolingo's gamification on Instagram, concurring with our finding.

The variations in referential frequencies indicate the study's scope's narrowness (e.g., Amer, 2024) or broadness (e.g., Kartal & Korucu-Kis, 2020). Additionally, the absence of citations in 2024 publications could be due to their time to become known and recognized. However, the lack of citations also raises questions about how immediately relevant or visible these recent works are. This issue deserves further exploration as new research becomes more widely known and accepted in academic discussions.

4.2. Methodological Characteristics

Most studies on YouGlish favored qualitative designs, indicating a preference for exploratory methods, while mixed and quantitative approaches were less commonly used. The prevalence of qualitative research indicates a necessity for increased quantitative studies to offer statistical perspectives and more extensive generalizations. Similarly, the emphasis on higher education reveals a lack of YouGlish research at the high school level, suggesting the necessity of investigating its impact at an earlier stage of education. In addition, the focus on specific countries (e.g., Türkiye and the USA) in YouGlish research may indicate a geographical limitation, neglecting various linguistic and cultural settings. Additionally, using conventional tools such as surveys and assessments suggests there may be greater potential to leverage advanced technological approaches to monitor pronunciation.

Moreover, the predominance of descriptive analysis in review studies underscores the need for more robust inferential methods to uncover the underlying patterns in YouGlish's educational influence. Furthermore, the emphasis on EFL students suggests a specific group, so it would be valuable for research to explore a broader range of student profiles. Finally, nonprobability sampling methods, such as convenience and purposive sampling, used in the analyzed studies, yield nongeneralizable findings due to small average sample sizes, indicating a need for more reliable, probabilistic sampling methods.

4.3. YouGlish's Affordances

Technical features like rapid search results and data-driven learning tools supported autonomous, self-paced learning, enabling users to monitor progress through their accounts (Fan et al., 2021). The tool's accessibility and flexibility allowed learners to explore extracurricular opportunities (Hehir et al., 2021). The pronunciation database and phonetic concordance enhanced pronunciation skills via a visual pronunciation dictionary (Topal, 2023a). Regarding pedagogical affordances, the research highlighted the usefulness of YouGlish in helping learners achieve precise pronunciation through a wide range of real-life speech samples, consistent with previous work (Elimat & AbuSeileek, 2014; Gordon, 2023). Also, exposure to different situations and multiple instances of words used naturally helped individuals expand their vocabulary (Teng, 2023).

Additionally, YouGlish improved listening abilities by offering learners examples from native speakers with various accents and dialects (Eom, 2024; Fu & Yang, 2019), coinciding with earlier work (Gönülal, 2020; Terzioğlu & Kurt, 2022). In addition, the platform's real-life videos guaranteed that learners interacted with current, meaningful language in appropriate settings, as indicated in previous studies (Ho, 2021; Lee et al., 2024). Moreover, the wide range of videos encompassing various subjects helped learners encounter different language structures and styles. Similar findings were reported in previous scholarly work (Zabitgil Gülseren & Araz, 2024; Eisenlauer, 2020). Furthermore, users benefited from mimicking genuine speech patterns, which positively influenced their fluency and confidence when speaking, as supported in early research (Chen, 2024).

4.4. *YouGlish's Downsides*

The platform faces challenges with search and navigation, audio/accent quality, and technical malfunctions, which make interaction difficult. Users should, therefore, be provided with more robust solutions to enhance search and navigation systems and improve audio quality and accents to deliver a smooth technical experience. The lack of essential features and a poor user experience also worsen the usability issues. To enhance learning outcomes, adaptive learning elements like customized feedback, skill level modifications, and pronunciation support must be incorporated. The platform's educational effectiveness is limited by the lack of feedback and assessment tools, inadequate level adjustments, and pronunciation guidance. Therefore, the efficacy of motivational elements, such as gamification, in maintaining user engagement and improving learning outcomes must be assessed. Furthermore, it lacks motivational features and does not adequately represent diverse accents. Hence, studying the effects of including a wide range of accent representations to enhance learners' exposure to diverse linguistic inputs and real-life communication is crucial.

5. Conclusion

The present study aimed to explore research on YouGlish in English language education contexts, thereby revealing research trends and providing academic guidance for prospective researchers. Over one-third of the analyzed studies (n=5) were repetitively review studies describing the tool's technical and pedagogical features. Two studies were published as book chapters, with the remaining seven as peer-reviewed articles in specific contexts. All that leaves us with the urgent need for more thorough studies across diverse international educational contexts with the participation of language learners from different education levels. Despite the valuable insights the current research provides, it has remained limited to studies written in English on YouGlish in English-language teaching contexts. Additional examinations are therefore necessary. To this end, the following recommendations are offered for future researchers.

5.1. *Recommendations*

Based on the research findings and discussion, the study offers subsequent recommendations for prospective researchers interested in YouGlish:

- More in-depth studies are needed to examine the long-term impact and effectiveness of YouGlish on language skills, including pronunciation, lexicography, listening, vocabulary, and more.
- Comparative studies between YouGlish and other learning platforms are also necessary for gaining insights into the tool's relative effectiveness.
- Expanding the research by including more extensive and diverse populations is essential to corroborate and generalize the current findings.
- Exploration of YouGlish's impact in under-represented regions and contexts (e.g., non-Western or developing countries) is highly urged.
- Similarly, the potential of YouGlish for less commonly taught languages (e.g., Hebrew) or other languages supported by the platform (e.g., Japanese, Russian, and Portuguese) across diverse educational settings can also be examined.
- The proliferation of research in tertiary education contexts has necessitated the urgency of research in other education settings, like K-12 classrooms and vocational training.
- The effectiveness of YouGlish in different language proficiencies can also be investigated in cross-disciplinary research in collaboration with language teachers, instructional designers, and technology developers.

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Declaration of generative AI and AI-assisted technologies in the writing process

Generative AI tools were used solely to assist in identifying relevant studies during the literature review process. No AI tools were used in the analysis or interpretation of the study.

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