



# Boosting English Vocabulary through the WordUp App

Mobile vocabulary learning application for iOS and Android

<https://www.wordupapp.co/>

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## Abstract

Vocabulary is an essential component in language learning. In addition to its relationship with other language skills, such as pronunciation (form), reading (meaning), and grammar (use), vocabulary is required for language proficiency. In parallel, language learners must be equipped with specific amounts of vocabulary to comprehend texts of diverse genres (e.g., novels, newspapers, and movies). However, learning vocabulary is incremental, and this skill challenges many language learners in their language-learning journeys for several reasons. Nevertheless, emerging mobile technologies might mitigate the negative impacts on language learning (e.g., lack of motivation and engaging learning environment). In this regard, the present study evaluates a mobile app called WordUp using Kohnke and Moorhouse's (2022) framework.

## Keywords

WordUp, Mobile-Assisted Language Learning, mobile learning app, technology review, vocabulary learning

## 1. Introduction

Language proficiency is considered the ultimate attainment while learning a second/foreign language, and lexis and grammar are commonly viewed as the “building blocks” of language proficiency (Richards, 2015, p.297). Proficiency in a second/foreign language encapsulates a good command of all four skills, which might be expedited by lexis (Richards, 2015). Lexical knowledge encompasses “form (spoken, written, and word parts), meaning (form and meaning, concepts and referents), and use (grammatical functions, collocation, and constraints on use)” (Nation, 2005, p.49). Lexis is closely related to other language skills (e.g., grammar and pronunciation) (Nation, 2020). For instance, a word’s spoken form requires knowledge of pronunciation, while its written form requires knowledge of orthography. Similarly, using vocabulary involves the knowledge of grammatical functions and collocations (Nation, 2020). Second/foreign language learners must know different numbers of word families in order to comprehend 95% of diverse texts: 3,000 (spoken texts and movies), 4,000 (novels and newspapers), and 4,000-5,000 (reading comprehension) (Laufer & Ravenhorst-Kalovski, 2010; Nation, 2006; Webb & Macalister, 2013; Webb & Rodgers, 2009), this highlights the significance of vocabulary in language learning and teaching.

However, vocabulary learning is an incremental process involving frequent encounters with miscellaneous words in the long run (Richards, 2015). It is, therefore, essential for learners to develop a core vocabulary across various genres to be competent users of L2 vocabulary. Since “the more one engages with a word (deep processing), the more likely the word will be remembered for later use” (Schmitt, 2000, p.121), it is sensible to assert that learners should be equipped with manifold contextualised vocabulary practice. It also goes without saying that learners should be taught high-frequency and high-utility words for a meaningful learning process, which has become achievable thanks to technological advancements, such as computer-assisted corpora by which high-frequency words across diverse genres might be discovered effortlessly and expeditiously (Allan, 2008), and computer software and mobile applications for vocabulary practice (Lei, 2018).

One recent example of a mobile application harnessing artificial intelligence and corpus linguistics is WordUp, launched by the Geeks Foundation in 2019 to enhance vocabulary comprising high-frequency words by providing a personalised learning experience (<https://www.wordupapp.co/>). WordUp was selected for review for two main reasons. First, it provides users with tailored vocabulary practice. Second, knowledge maps offered by the app give users an overview of their progress. To this end, the current tech review initially presents a general description of the app. It then discusses the potential vocabulary learning opportunities and challenges. Next, it outlines the app’s technical characteristics before concluding with the app’s takeaways and limitations.

## 2. General description

Founded by Geeks Ltd, a non-profit arm of the Geeks Foundation and a London-based, award-winning software company, WordUp (Appendix I) is an innovative mobile app aimed at teaching and improving vocabulary (<https://www.wordupapp.co/>). With the successful adaptation of mobile-assisted language learning (MALL), WordUp hinges on four main principles: self-assessment, discovery of unfamiliar words, high-frequency and high-utility words, and contextualised learning. The app caters to learners of all ages and has 25 thousand words listed in 25 sets, beginning from the most to the least frequent 1000 words across various categories. These wordlists are created based on reliable sources such as Oxford (Nushi et al., 2022).

Regarding the first principle, WordUp provides learners several options to assess whether they know the displayed word. Learners can, for example, opt to be presented with the review words within varying vocabulary ranges (e.g., 1000th-25000th), during which they are provided with the pronunciation and examples of the target word, along with options such as “I know, Test me, and Learn” (Figure 1). Alternatively, learners may go to their account and select a particular vocabulary range (e.g., 8000th) in their knowledge map and self-assess the displayed lexical item (Figure 2). Learners are also supplied with the option to explore target lexical items in (i) movies and TV shows, (ii) 18 categories and

themes, and (iii) five different exams (Figure 3). A final option allows learners to make a direct query by simply typing an unfamiliar word into the search box (Figure 4). In light of the second principle, the app allows learners to discover new vocabulary items in the following ways: through randomly displayed words for review (Figure 1), by selecting a specific vocabulary range from the knowledge map (Figure 2), by browsing through movies, TV shows, categories, themes, and exams (Figure 3), or by searching for a specific word (Figure 4). Concerning the third principle, the app supplies learners with the most helpful and frequently used words in the English language by listing them in sets of one thousand (e.g., 1000th, 2000th, etc.), or by assisting learners in search of words in movies and TV shows as well as specific categories and themes. As for the fourth principle, the app provides learners with diverse contextualised resources to learn from, including word pronunciation, phonetic transcription, part of speech, sample sentences, target words included in quotes, captioned videos, music video clips, news stories, as well as word translations in the learners' native language.

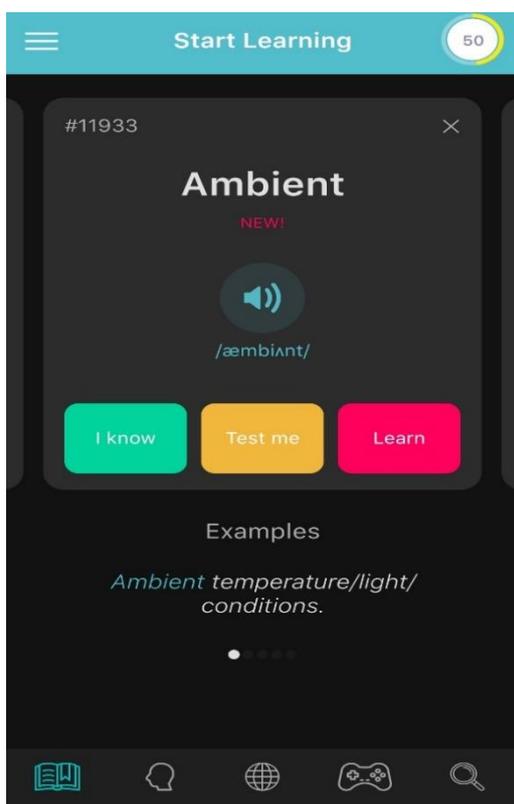


Figure 1. Start learning.

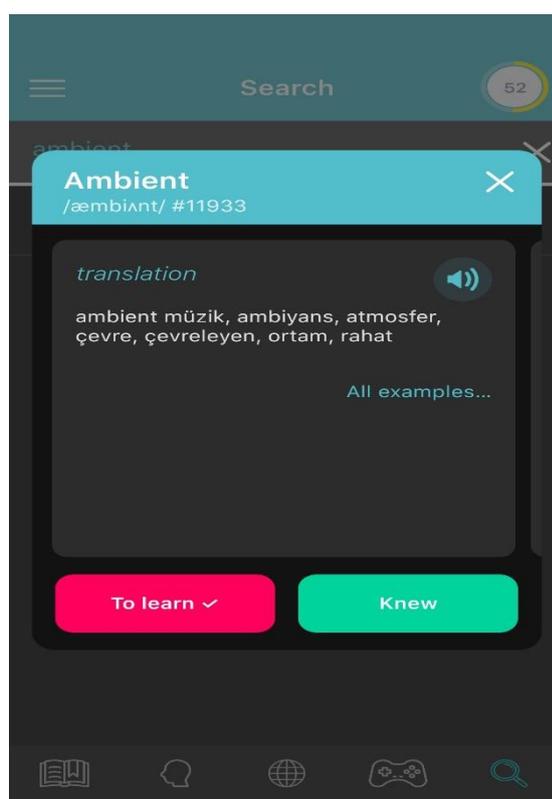


Figure 2. My account.

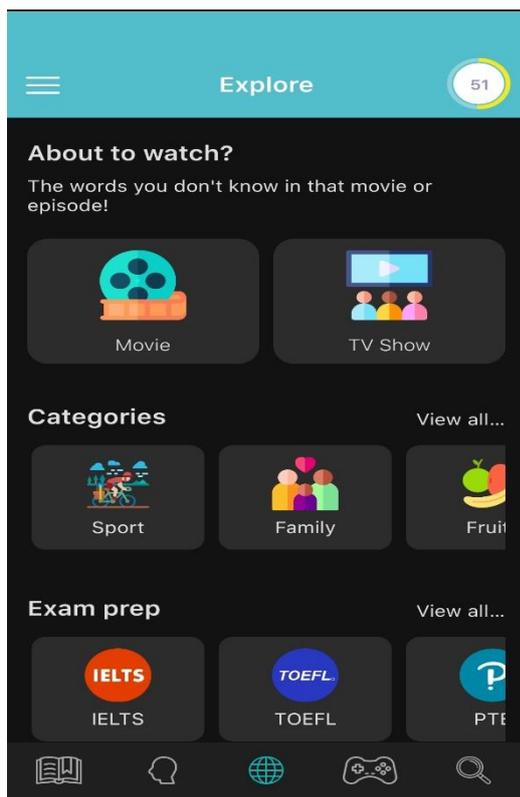


Figure 3. *Explore*.

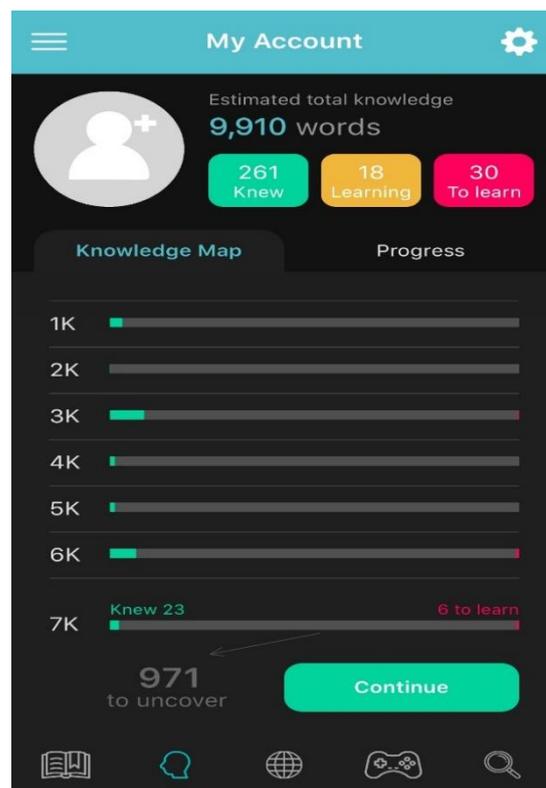


Figure 4. *Search*.

Users' learning experiences are supported by spaced repetition as well. Upon examining these resources, learners might select "Review tomorrow" or "Review in 3 days" to review the learnt words. There are additional review options such as "Review in 7 days, a month, three months, a year", at the end of which learners are expected to have learnt the target words for life. While reviewing, learners might also prefer to test themselves, in which case they are provided with definitions presented as multiple-choice items and are required to select the correct option. Apart from these, learners can also monitor their daily, weekly, and monthly progress in their profile, which indicates their reviewing activity in minutes compared to their predetermined learning goals. Learners might determine their learning goals by selecting from the five options: casual (5 min/day), regular (10 min/day), serious (15 min/day), champion (20 min/day), and Shakespeare (30 min/day).

Additionally, learners are provided with four options regarding translations in the native language while practicing vocabulary, i.e. never, before English definitions, after English definitions, and per English definitions. They are further presented with options about the best times to practice: just woke up, around breakfast, way to work or school, around lunchtime, way back home, and in bed. Upon selecting one of these, they are asked to enter a specific time they would like to practice. Yet another feature offered to learners, via their preferences, is the selection of accent for the pronunciation of the words (American or British). The app also personalises the learning experience by allowing learners to filter the types of examples (e.g., video, music, quotes, and news) to learn from.

Traces of gamification are also embedded in WordUp. Currently, four-word games allow learners to practice vocabulary items entertainingly. In *Smart Eyes* (Figure 5), learners are shown an image representing a word and asked to select the correct word which corresponds to the image as quickly as possible from among the choices provided. *Said What* (Figure 6) presents learners with short video clips accompanied by captions with a gap. While watching the video, learners are asked to select the correct word to fill the gap from among the choices provided. *Confuse Me* (Figure 7) requires learners to choose

the correct word which corresponds to the definition provided. *Spell It* (Figure 8), as the name suggests, asks learners to type in the proper spelling of a word, for which a picture and pronunciation are provided. All these games are time-constrained and interactive, allowing learners to challenge their friends and contribute to their competitive nature. The game ends by showing the level of success and correct answers, and by enabling learners to start again or quit.

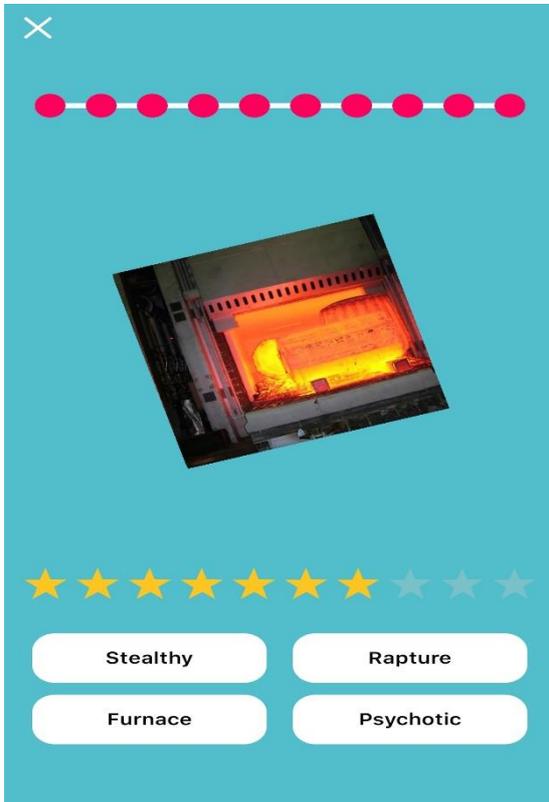


Figure 5. *Smart eyes*.

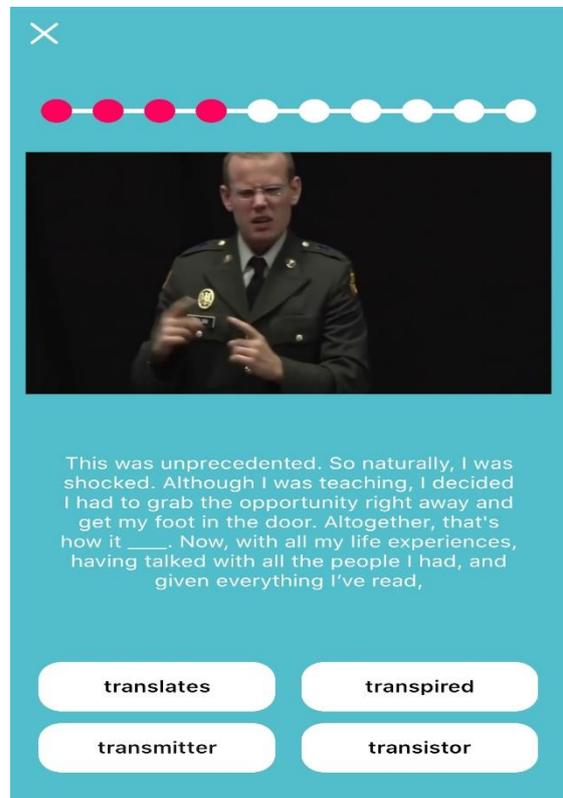


Figure 6. *Said what*.

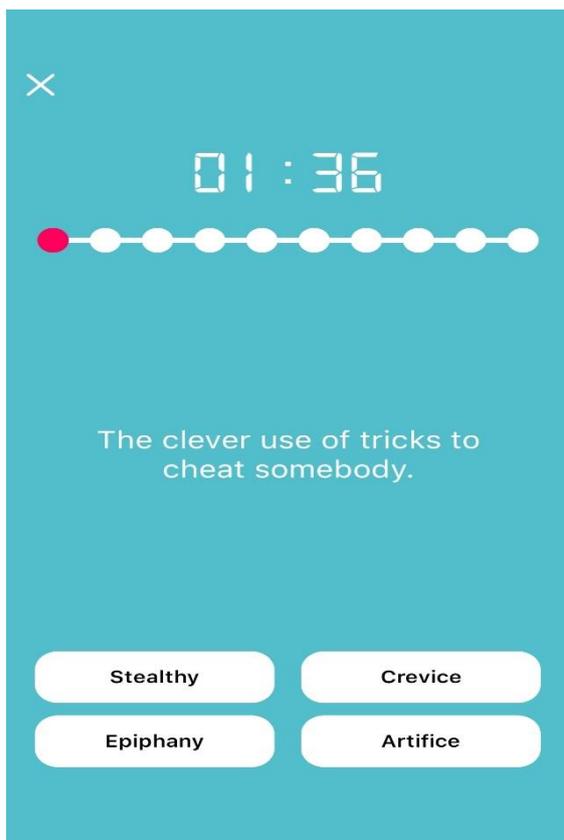


Figure 7. *Confuse me*



Figure 8. *Spell it*

Entertaining and enjoyable vocabulary learning is not comprised solely of games. WordUp also allows learners to learn words used in movies and TV shows by presenting them with words from a selected movie or TV show and asking them to self-assess whether they know the word (Figure 9). This feature also enables learners to learn words as they watch by simply tapping the synch button, after which the unfamiliar words are highlighted minutes before appearing in the selected movie or TV show. To address the specific needs of learners, WordUp also allows learners to study a total of 5858 words in 18 categories and themes (Figure 10): sport (504), family (120), fruits (46), furniture (70), cooking (154), clothes (147), animals (245), colours (99), arts (56), business (98), geography (56), Bible BBE (717), Bible ASV (2470), medical (400), math (89), computers (117), money (102), and sex (368). 5900 Field-specific, high-utility words from well-known exams [IELTS (981), TOEFL (893), PTE (1073), GRE (1806), and SAT (1147)] are also presented to learners through the app (Figure 11).

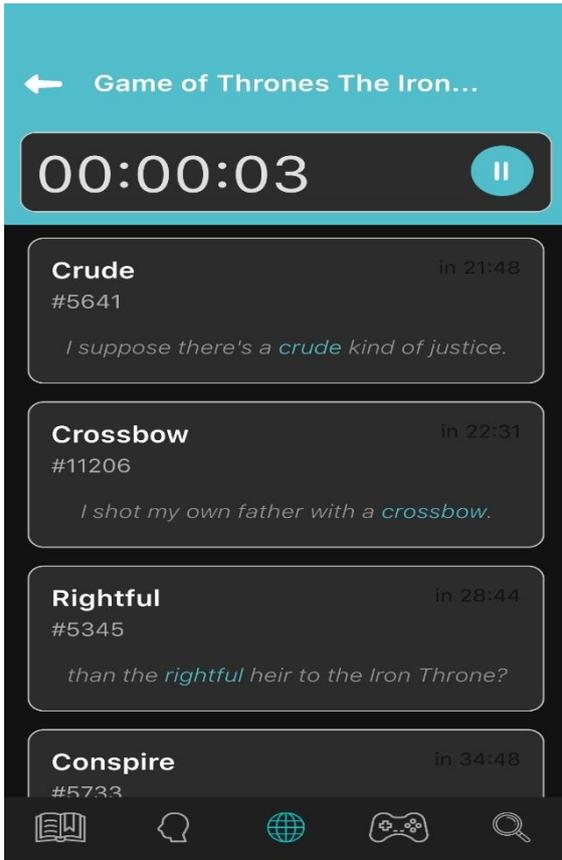


Figure 9. TV show.

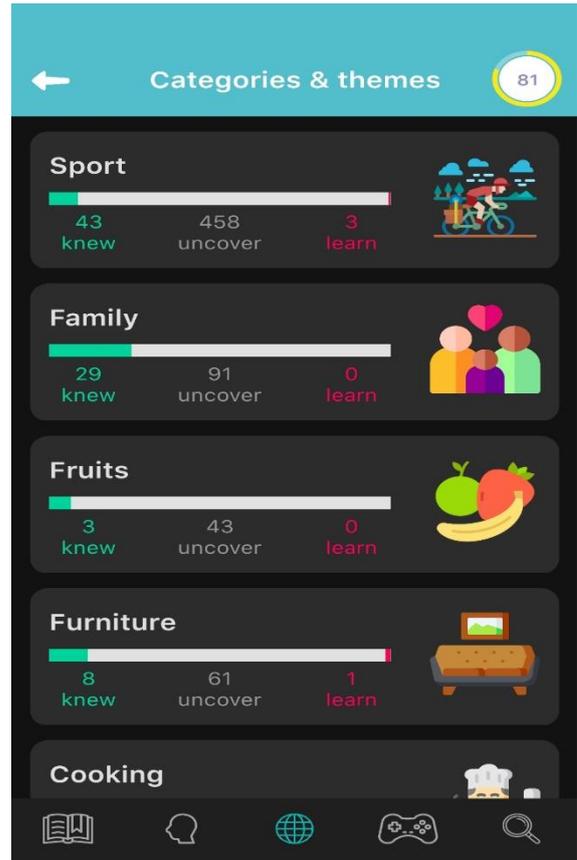


Figure 10. Categories and themes.



Figure 11. Exam preparation.

On the whole, WordUp is an innovative app that aims to identify learners' knowledge gaps through self-assessment and create a personalised learning plan accordingly. Personalised learning offers contextualised vocabulary practice in various contexts, such as quotes by famous people, video clips from diverse genres, varied music video clips, and news stories. Additionally, this study plan involves different review alternatives using spaced repetition, "a learning technique that distributes word learning and practice into multiple sessions over a period of time to optimize learning outcome" (Zhang et al., 2022, p. 2595). It also allows learners to test their lexical knowledge via multiple-choice, gap-fill, and spelling activities. The learning plan provides learners with additional sources like word pronunciation, parts of speech, model sentences, and native language translations. The app optimally reaps the benefits of MALL and gamification through various vocabulary games, thereby promoting a competitive learning environment. The user-friendly design of the app also facilitates navigation through its features. The app is accessible to Android, iOS, and Windows users.

### **3. Pedagogical analysis**

The underlying language teaching methodology of WordUp is the Lexical Approach (Lewis, 1993), which views lexis (i.e., words, especially multi-word combinations) as "the building block of language learning and communication" (Richards & Rodgers, 2014, p.215). This centrality of lexis in language learning has been voiced by other scholars as well (Nation, 2013; Schmitt, 2008). Since the app focuses on vocabulary learning and practice, it provides learners with abundant opportunities to learn the target items in engaging and entertaining contexts. In line with the Lexical Approach, the app presents lexical items to be discovered using spaced repetition, thereby leveraging long-term retention (Tabibian et al., 2019). Another characteristic of the Lexical Approach might be observed in the app's presentation of high-frequency and high-utility words, provided in sets of one thousand in learners' knowledge maps. However, the app fails to fulfil perhaps the most significant component of the Lexical Approach: multi-word combinations. All the words in the app are single lexical items, not collocations, phrasal verbs, or multi-word combinations, which are given substantial importance in the Lexical Approach.

The app also contains instances of the Audio-Lingual Method, in that it offers audiovisual materials in pictures, videos, and word pronunciation to contextualise vocabulary learning/practice. A partial correlation might be established between the Direct Method and the app since authentic target language inputs (e.g., audio, video, quotes, and news) are employed to teach vocabulary (Richards & Rodgers, 2014). The app's audiovisual content, including real-life situations, quotes, news, and videos, provides users with authentic language input, thereby correlating the app's pedagogy with the Direct Method.

The app considers specific characteristics and specifications of MALL and micro-learning, five of which are worth mentioning. First, the target language structure (i.e., vocabulary) is presented in granular form as micro-contents (Pajarito & Feria, 2017). In other words, learners are not overwhelmed by numerous tasks. A second feature is the provision of authentic and contextualised materials to promote comprehensible input through self-study (Kim, 2013). Accordingly, the app fosters autonomy as learners design their own learning plans. Third, the app assists learners in creating personalised learning (Karakaya & Bozkurt, 2022) plans by allowing them to determine what words to learn (e.g., high-frequency words or words in movies and TV shows), at what intervals to review (e.g., next day, 3 days, later, 7 days later, etc.), and which pronunciation variety they would like to hear (e.g., American or British). The pronunciation feature poses a dilemma, i.e. it might rivet learners interested in mainstream accents, as research has shown (Misir & Gürbüz, 2022). This might contradict the ultimate goal of speech intelligibility given the prevalence of English among non-native speakers (Colmenero & Lasagabaster, 2024) and English's position as a global lingua franca (Ishikawa, 2021). Fourth, games with audio and visual aids create a gamified, competitive, and interactive environment (Kapp, 2012) where learners can challenge their friends to an interactive competition. Last but not least, the app's ubiquitous nature enables learners to access it anywhere, anytime (Jung, 2014). The Chrome extension also allows learners to synchronise the app with their computers. This way, they might add the words they encounter on the web to their learning goals and practice them on both the phone and computer.

Regarding feedback, the app displays the daily, weekly, and monthly progress of learners according to their predetermined learning goals (i.e., how often they would like to practice in a day), helping sustained motivational learning (Dörnyei & Henry, 2022). In addition, it provides the correct answers at the end of games, with no further explanation. On the profile page, learners are also presented with visuals about their estimated total knowledge, with the total number of words that they know, that they are learning, and that they should learn displayed. However, the extent and quality of feedback may require reconsideration.

In relation to assessment, the app utilises self-assessment (Paul, 2021) to determine the target words to be practiced. Learners are also provided with a diagnostic assessment through a multiple-choice test, wherein they are asked to select the accurate definition of a displayed target word. Written and formative assessment types might also be observed in the games section, whereby learners are provided with pictorial spelling and audiovisual gap-fill practice.

Apart from these, the app allows for incidental learning (Lee, 2023) despite focusing mainly on the target vocabulary items. Throughout the vocabulary practice, words are presented in various contexts, such as videos and news stories. As learners learn to use target items in context (Finlayson & Marsden, 2023), they are likely to experience incidental learning.

On the other hand, specific concerns should be voiced regarding the app. First, learners who use this app must be autonomous so that they might distinguish, for instance, between the verb and noun forms of a given search item. Put differently, learners are provided with word definitions that might not belong to the displayed lexical item. An ordinary or low-level learner might not have the knowledge and competence to differentiate between these. A second concern might be when a word has multiple meanings, which might confuse incompetent learners, mainly when such a case is supported with irrelevant visuals. A vital app drawback is its failure to include multi-word combinations, such as collocations and phrasal verbs. Neither the app nor the Chrome extension allows learners to select multiple lexical items to add to their knowledge maps. This might be problematic when learners select only one item of a multi-word combination and thus fail to receive accurate and relevant definitions and examples. However, it must be remembered that the app has announced that a section about idioms and phrases (over 4000) ranked by their utility will soon be available to Pro users. The app prioritises all aspects of word knowledge (i.e., form, meaning, and use); however, more emphasis must be placed on collocations and use constraints (Nation, 2020). Another concern might be raised about the lack of pronunciation assessment, given that pronunciation is part of vocabulary learning as well (Richards, 2015). A final issue to be considered could be the competitive nature of the games included in the app. The app allows learners to challenge their friends to the games; however, they cannot compete on the app. This might thus create a less competitive learning environment (Trinh et al., 2022).

#### **4. Technical analysis**

WordUp has clear menus and icons that might help learners easily navigate the app. It also allows them to customise dark/light modes, text size, word casing, and auto-pronouncing settings. The hidden menu on the left lets learners access and change their account settings. It also has tabs for feedback, support, and Chrome extensions. Learners can rate the app on the Google Play store or App Store, send an encouraging message to the WordUp team, volunteer to pick images and videos, provide translations, and promote the app. They can also propose ideas and suggestions and report bugs and issues. The app also has a practical support feature by which learners can access frequently asked questions or receive help through contact. The Chrome extension offers auto-highlighting of new words, instant view of definitions, and completion of a knowledge map as learners browse the web. Thanks to the interface's smartly designed and user-friendly nature, along with self-explanatory icons, learners can know where they are on the app.

Despite the app's ease of use, interactive design, and overall efficiency, a few technical hiccups need consideration. In the movies and TV shows section, the system can fail to

parse the subtitle files for the selected item. In the same section, movies can sometimes malfunction and not play. These problems might, however, be overcome through updates. In the learning section, some links to news stories may not work. However, the app provides many news stories, thus enabling learners to resort to others in case of a malfunction.

The same section poses other issues, such as the lack of translations for some words in learners' native language. In such cases, however, it presents learners with several possible available translations or asks them to add one themselves. In the games section, some captions provided under the videos in *Said What* might not have gaps for the target words, i.e. the answer is already available to learners. Another concern in the same game might be related to the quality of questions as learners are likely to find the correct answer without watching the videos. Usability, communication, and interactivity are the common design issues in mobile learning (Ali et al., 2012), and they partly persist, as evident in this review. The lack of native language translations in the learning section might slightly impact low-proficiency learners who might need native translations as scaffolds.

The game section has another hiccup to overcome, i.e. the potential irrelevance of pictures presented alongside multiple-choice items for describing the target word. In other words, the images provided to facilitate understanding of target items might not be as clear and descriptive as possible for all learners. As stated previously, mobile learning "design that abides by cognitive load theory will place images, spoken language, and printed words in appropriate combinations to maximize the instructional effectiveness" (Wang & Shen, 2012, p. 563). In this sense, the app must revise its images and adjust appropriately in line with cognitive load theory as mobile learning objectives are made clear to learners through audio and images (Stanton & Ophoff, 2013).

## 5. Summary of the analysis

WordUp can be considered an efficient and innovative mobile app in a MALL environment, with its rich audiovisual content, pedagogical coherence, usability, and customisation. The learning materials can satisfy self-study requirements in an authentic and contextualised learning environment in the target language. It is safe to say that the app has a solid pedagogical standpoint, albeit a few issues to reconsider, such as the inclusion of multi-word combinations. Given their need for vocabulary practice (Hernandez, 2016; Milton & Hopwood, 2022), the app also caters to people from different linguistic and occupational backgrounds since it provides as many as 98 languages for word translations, and English is a global language essential to many people from all sectors. The granular learning environment or bit-by-bit learning materials provided by the app do not overwhelm learners and thus perfectly fit the qualities of micro-learning. The personalised learning plan the app provides to learners differentiates it from similar apps. According to this plan, learners might opt for high-frequency words in English, practice the words in movies, TV shows, exams, or 18 categories and themes, and add words from the web to their knowledge maps by simply synching the app and Chrome extension. The ubiquitous and gamified nature of the app also makes it an accessible and desirable app with a competitive element. The competitiveness, however, might need some reconsideration. WordUp may be considered a good alternative for relatively autonomous learners who aim to practice and enhance their English vocabulary in a contextually rich, engaging, and entertaining learning environment.

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### Appendix: Product at a glance

Characteristic	Definition
Product type & title	WordUp   AI Vocabulary Builder
Producer detail	Geeks Ltd, Email: hello@wordupapp.co Address: 6 Sutton Park Road, Sutton, London, UK, SM1 2GD
Language(s)	English, with 98 languages of interface (from Albanian to Zulu)
Level	Beginner (A0-A1) to Fluent (C1-C2)
Activities	Vocabulary, pronunciation, reading, speaking, and writing
Media format	Downloadable mobile (Android and iOS) & web application ( <a href="https://portal.wordupapp.co/">https://portal.wordupapp.co/</a> )
Operating system(s)	Android 5.0 and up, iOS 9.0 or later, iPadOS 9.0 or later, macOS 11.0 or later and a Mac with Apple M1 chip or later, visionOS 1.0 or later.
Hardware requirements	Suitable for most smartphones and tablets
Documentation	Certificate of achievement/commitment
Price	from \$1.99 (charitable plan) to \$ 49.00 (Pro yearly)