

short-term learning activities. *Improve English: Word Games* is developed to “help people improve their English leveraging AI [Artificial Intelligence] and gamification.” The idea of having one’s learning process chunked into several more achievable steps seems to be more appealing to Learners. It also facilitates what educators need to have their students accomplish in terms of pace, time, convenience, and achievability. It is geared to low-intermediate, intermediate, and high-intermediate learners of English, and considering its fun, interactive

Although it seems to be a great app for improving some aspects of vocabulary, it still needs some additions and modifications to enhance the quality and experience of vocabulary learning. As suggested above, adding other classifications of vocabulary as well as a broader range of games which can meet the needs of learners with different learning styles would boost its effectiveness. The app could also benefit from streamlining its user interface and, in turn, appeal to a wider user demographic.

With a high 4.7 score on Google Play and thousands of five-star reviews, *Improve English: Word Games* offers a fun, interactive way to its users to excel in English. Through its notification based micro-learning platform, this app helps the busy, distracted learner of today’s world to keep treading the path to proficiency in English. With this app, its users are all a nudge away from mastering English vocabulary.

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interface, could be of great help for the younger demographic, especially high school students. The concept of gamification-based learning along with the scientific approach this app has adopted could ensure a highly facilitative medium for such learners to learn English. Moreover, the bite-sized lessons are convenient and time-saving for busy learners of English.

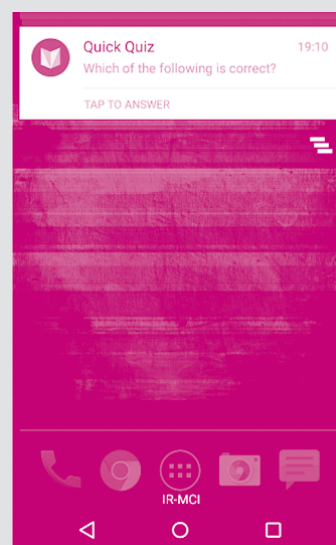


**Current courses incorporated in this app are designed to improve vocabulary, English idioms, phrasal verbs, homonyms/homophones, and common confusing English words, all of which play a vital role in language learning**

another great feature of this application that accelerates linguistic reflexes over time. It also makes use of the spacing effect, through which learning is greater when studying is spread out over time. Users are tested on the same lexical item multiple times over a long period until the item in question is considered “mastered by you”. What is more, it presents vocabulary in context and provides audio files to check the correct pronunciation. In the spelling section, words are pronounced in both the British and American accents, which is another educational benefit and could also help with the listening skill.

The rather hard task of effectively revising vocabulary is made easier through handy flashcards. Needless to say, the on-the-go lessons are very convenient for those with hectic lifestyles who want to make use of every minute possible anywhere and anytime. That this application utilizes adaptive intelligence (the intersection of human judgment and machine automation) is quite practical in that by the provision of tailored, personalized learning, it helps the users advance towards their language learning goals. This, combined with the spacing effect, enhances and boosts vocabulary retention. The app sends the user appropriate content, sometimes through push notifications, with words

categorized as Mastered, In Progress, or Pending. There are also quizzes which, over a long time span, contribute to the consolidation of lexical knowledge and, in turn, its better retention (Figure 12).



**Figure 12. Push Notification**

Despite the merits this application has, there are some weaknesses that hinder it from being the app for vocabulary learning. First and foremost, it would be even more educational and inclusive had it included other classes of lexical items, namely collocations, prepositions, and discourse markers. The app, moreover, is slightly difficult to navigate through, specifically for those learners who are not tech-savvy. The absence of a wider variety of games that can cater for different learning styles is another shortage this application has. It would also benefit from the possibility of user-curated content as teachers and educators could use this feature to increase learners' engagement and motivation.

#### **4. Conclusion**

Applying microlearning to language acquisition through mobile applications enables users to segment their mastering a language into small learning units and

**Echo:** This is a fancy dictation game for the modern age. Learners have to listen carefully and type the correct spelling of a word. They have 3 lives to get through and only get 2 hints. They should answer as fast as possible to score higher. This game helps improve both writing and listening skills (Figure 10).

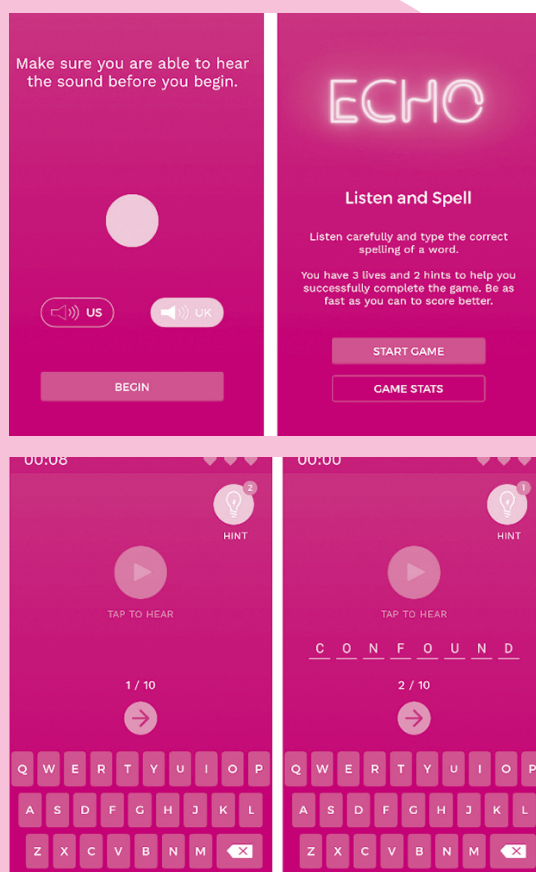


Figure 10. Different Stages of Echo

After finishing each game you'll get a report card which provides you with the correct responses and the justification (Figure 11).

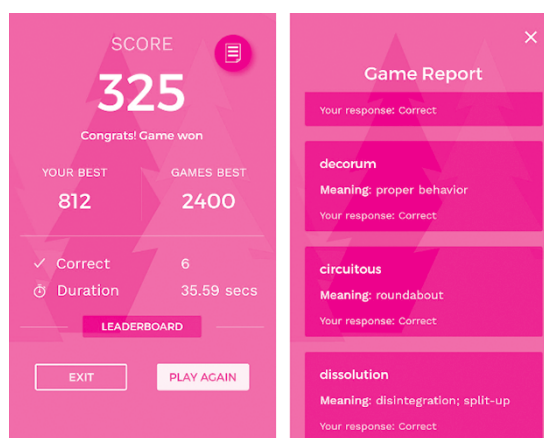


Figure 11. Score Card & Game Report

### 3. Evaluation

This app is a science-based learning platform that helps vocabulary retention and builds long-term memory. It is a quite innovative app, with an appealing interface that employs colorful layouts, which makes learning a new language for the learners in this modern era a more enjoyable task. The use of eye-catching infographics not only simplifies complex content but engages distracted learners to a greater extent.

The incorporation of timed games is



**Jelly Fizz:** Playing this game helps improve speaking skills through learning phrasal verbs in an innovative way. It is available for pro users.

**Mix and match:** A fun vocabulary game that helps improve reading skills in a new way. Like the previous game, it is only available for pro users.

### Writing

**Fly High:** You have to fly a hot air balloon and the only way to keep it up in the sky is by choosing the correct matching word. The higher the balloon, the higher your score (Figure 8).

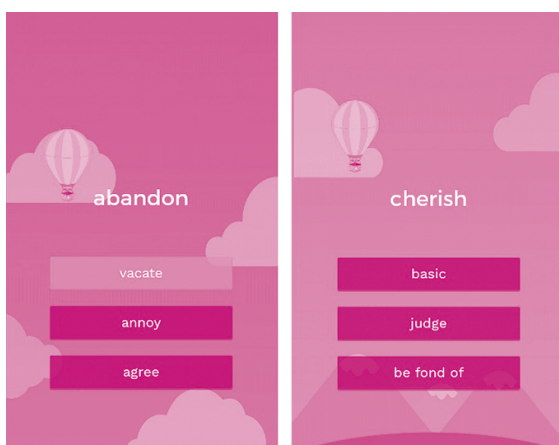


Figure 8. Different Stages of Fly High

Improve English: Word Games is developed to “help people improve their English leveraging AI [Artificial Intelligence] and gamification.” The idea of having one’s learning process chunked into several more achievable steps seems to be more appealing to Learners

**Space Pursuit:** There are sentences to complete by selecting the right choice with only three lives to get through. You have to answer as fast as possible to achieve a higher score (Figure 9).

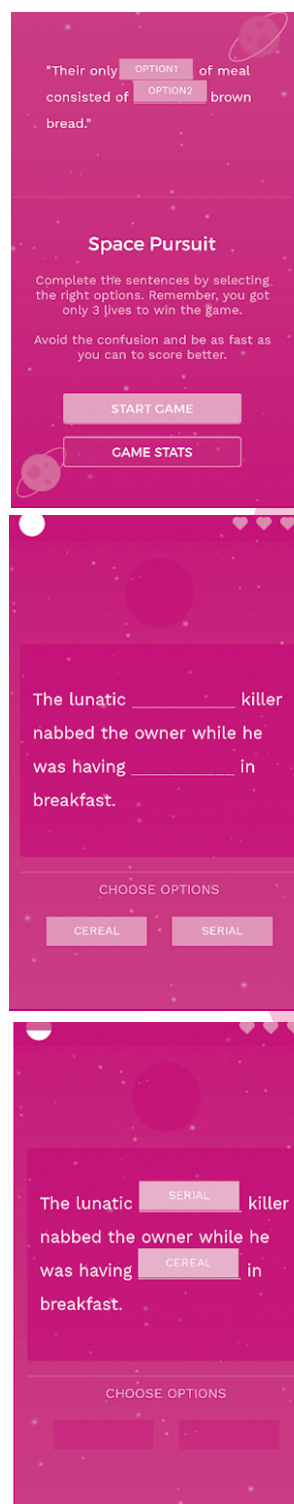


Figure 9. Different Stages of Space Pursuit

up. Furthermore, you can see the success rate both Today's and Overall. The settings can be adjusted at the bottom of the page anytime. The third tab welcomes you to fun vocabulary games for improving reading and writing skills (Figures 4 and 5).

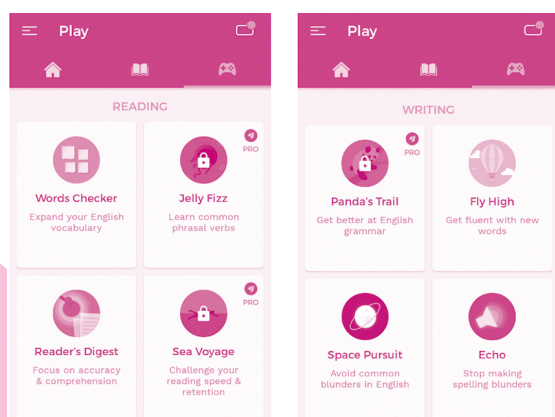


Figure 4. Games Available for Reading

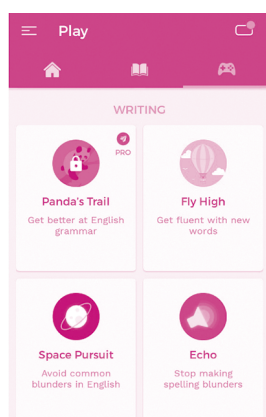


Figure 5. Games Available for Writing

Prensky (2007) notes, there are twelve characteristics that make games engaging for a large number of people. Games are a form of “fun” and play, which bring us enjoyment and intense involvement. They also have rules and goals, which give us structure and motivation. What seems to be another salient feature of games is that they have outcomes and feedback, which, in turn, facilitate learning

### Reading

**Words Checker:** You have only 40 seconds to match the words with their meaning and each wrong match costs you

1 second. In order to win the game, you have the learner has to match all the words with their appropriate definitions. The goal of this game is to expand your English vocabulary (Figure 6).

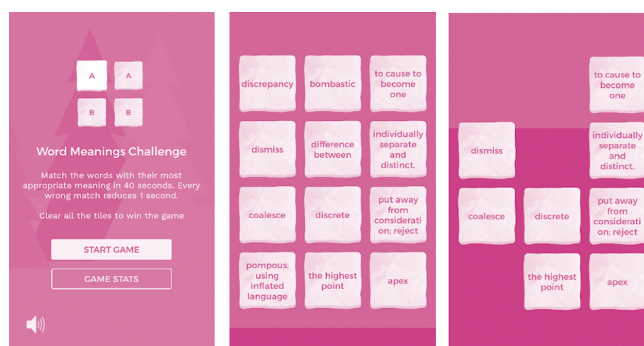


Figure 6. Different Stages of Words Checker

**Reader's Digest:** You have to read the passage as fast as possible and answer the questions that follow. You only have 2 lives to win the game. This type of game promotes fast reading (Figure 7).

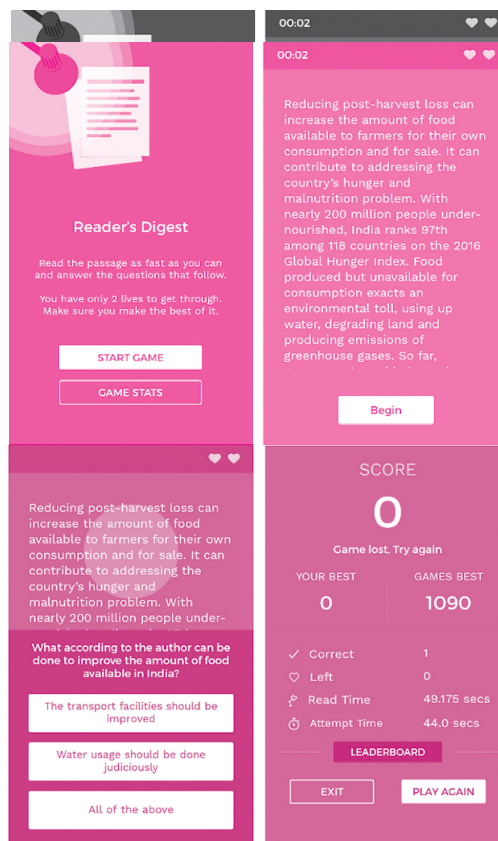


Figure 7. Different Stages of Reader's Digest

F) **Common confusing words:** This course helps you avoid common mistakes by familiarizing you with more than 200 confusing words, homophones and homonyms.



Figure 1. List of Courses Available to Choose From

Upon selecting a course, you will enter the setting and in the notification frequency you will be asked “how many bite-sized cards you want to receive per day?” for which you can choose up to 12 cards (Figure 2). Afterwards, upon clicking on START, this message will most probably pop up “We have unlocked some cards to get you started”, in which case clicking on UNLOCKED CARDS is the next step.

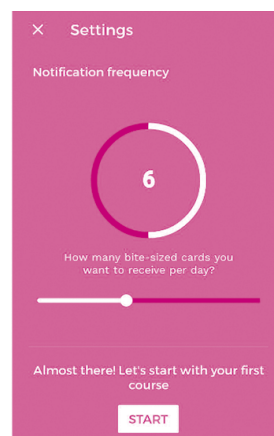


Figure 2. Setting the Notification Frequency

By clicking on Home on the bar at the top of the screen, you can see the credits and unread notifications. There is a short tour in the Unread Notifications section which guides users through the app. Also, there is a timer that counts down to the next card to be unlocked and at the bottom, there is a game training section (Figure 3).

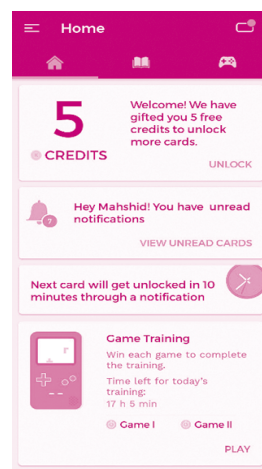


Figure 3. Home Tab

By clicking on the second tab on the bar, you can access My Course through which you can track your progress, have a personalized revision test which helps earn more knowledge credits, and assess what has been learned so far. Each correct response awards you 1 credit point. Another feature is that you can refer your friends and earn 25 credits when they sign

English in an easy and interesting way. Current courses incorporated in this app are designed to improve vocabulary, English idioms, phrasal verbs, homonyms/homophones, and common confusing English words, all of which play a vital role in language learning. What is more, the inclusion of a range of games like Words Checker, Reader's Digest, Jelly Fizz, Sea Voyage, Mix and Match contribute to the improvement of users' reading skills, while other games such as Panda's Trail, Fly High, Space Pursuit, and Echo aim at improving users' writing skills. These innovative games are designed to further assist learning in a fun and interesting way. The approach adopted by *Improve English: Word Games* supports research findings by advocating the fact that short, intensive sessions lead to more effective learning as opposed to long, overwhelming ones which put a heavy burden on learners' memory.

**Zhou, Yu, Liao and Shi, (2017) note that “the increasing spread of mobile technologies provides educators and developers with more opportunities for creating a wider range of education tools” (p.266)**

This app is designed based on how the human brain works. Studies have suggested that micro-learning, that is, short sessions of learning distributed over a lengthy period, is more likely to result in learning, retention, and application of a given item than a focused day-long session. Research findings also assert that learning is more effective when studying is spread over multiple sessions rather than one

single session with the same amount of time. This phenomenon, known as spacing effect, minimizes the chances of forgetting a word with the help of repetitions at regular breaks. Moreover, the methods and the speed of instruction in this app cater for users with different abilities and learning styles and that is how this app guarantees quite satisfying academic outcomes.

## 2. Description

This app can be installed on Android devices. There are different sign-in options to choose from, such as using Gmail or Facebook accounts. The following is the list of the different courses encompassed in the app (Figures 1):

- A) **Vocabulary builder- Easy:** This section allows you access to a wordlist selected by experts. You will be exposed to words used in a single sentence context and their definitions.
- B) **Vocabulary builder-Intermediate:** This wordlist includes over 200 words with their definitions, synonyms/antonyms, memory tips, and infographics which facilitate vocabulary learning.
- C) **Vocabulary builder-Advanced:** Definitions, example sentences, synonyms/antonyms in this wordlist will help you to further increase your command of English vocabulary and prepare you for high stakes exams like TOEFL and IELTS.
- D) **English Idioms:** Aiming to improve performance in conversation, this course helps you learn around 250 idioms common in everyday speech.
- E) **Phrasal verbs:** This course helps you improve English by learning to comprehend and produce more than 200 phrasal verbs.

## Application details

<b>Publisher</b>	Knudge.me	<b>Operating Systems</b>	Android
<b>Product Type</b>	Smartphone Application	<b>Hardware Requirements</b>	Smartphone Internet Connection
<b>Language(s)</b>	English – Monolingual	<b>Additional Requirements</b>	Requires Android 4.0 and above
<b>Level</b>	Any	<b>Supplementary Software</b>	None
<b>Media Format</b>	APK	<b>Price</b>	Free In-app Products \$5.00- \$4.00 per item

## 1. Introduction

In an era where technology has influenced almost all aspects of human life, it would be hard to imagine that education is the one aspect that can remain unaffected. Digital tools have a promising role in education, especially language education (Motteram, 2013). With the invention of new generations of ubiquitous digital tools, namely laptops, tablets, smart phones, access to a range of technologies has become possible in the blink of an eye and, therefore, learning seems to no longer be limited to often insufficient class time. Zhou, Yu, Liao and Shi, (2017) note that “the increasing spread of mobile technologies provides educators and developers with more opportunities for creating a wider range of education tools” (p.266). Since electronic devices seem to be omnipresent in all settings, a smart teacher will never deny the value of dedicating some class time to these technologies. According to Jones (2011), mobile-learning (often referred to as “m-learning”) is not a new

phenomenon but the incredible capabilities of new smart phones have raised language educators’ interest dramatically. Among the plethora of iPhone and Android mobile applications, there are ones that assist language learning.

With the emergence of portable digital devices, playing games on such platforms has also gained immense popularity. As Prensky (2007) notes, there are twelve characteristics that make games engaging for a large number of people. Games are a form of “fun” and play, which bring us enjoyment and intense involvement. They also have rules and goals, which give us structure and motivation. What seems to be another salient feature of games is that they have outcomes and feedback, which, in turn, facilitate learning.

A recent innovation in the field is *Improve English: Word Games* created by a company under the name Knudge.me. This app is created based on scientific algorithms and it assists users in improving

# Improve English: Word Games



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## چکیده

به دنبال بهره‌گیری فراگیر و رو به رشد از ابزارهای دیجیتالی و بر خط، در راستای تسهیل یادگیری، به خصوص یادگیری زبان‌های خارجی، تعداد انبوهی از برنامه‌های موبایل مناسب با نیازهای گوناگون زبان‌آموزان، در سطوح مختلف، طراحی شده است. همان‌طور که در این مقاله مرور خواهیم کرد، برنامه «پیشرفت در زبان انگلیسی»: که توسط knudge.me با هدف افزایش واژگان و نیم‌نگاهی بر مهارت‌های خواندن و نوشتن طراحی شده در میان پرطرفدارترین برنامه‌هاست. این برنامه براساس الگوریتم‌های علمی و بازی‌سازی خلق شده و با استفاده از قدرت یادگیری در سطح خرد و تأثیر فضا سازی و هوش تطبیقی می‌کوشد تا نیازهای زبان‌آموزان عصر نوین را تأمین کند. مقاله پیش رو به تفصیل به شرح و بررسی نقاط قوت و ضعف این برنامه می‌پردازد و در پایان چند راهکار برای بهبود کیفیت آموزشی این برنامه ارائه می‌دهد.

**کلیدواژه‌ها:** فناوری، زبان دوم، برنامه‌های کاربردی تلفن همراه، بازی‌های واژگانی

## Abstract

With the widespread and increased use of digital and online tools to facilitate learning, specifically language learning, there are mobile applications suitable for all needs and levels of proficiency. As reviewed in this paper, Improve English: Word Games developed by knudge.me is among the top-rated apps that is oriented towards vocabulary building with an eye to the reading and writing skills. This application is essentially based on scientific algorithms and gamification, incorporating micro-learning, spacing effect, and adaptive intelligence to satisfy the needs of modern-day learners. This review paper offers a descriptive account of the app, along with critical evaluation including its strong points and limitations. The review concludes with several suggestions to improve the educational quality of the app.

**Key Words:** technology, second language, mobile applications, word games



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## Media Review Template

### Title plus author's full name and affiliation

#### Abstract (not more than 200)

The abstract is a crucial element of any academic article; it not only summarizes your paper but also helps it reach the right audience. Your abstract should be written in both English and Persian; it should appear in block format, single spaced and justified. The abstract should include: 1) a brief (one or two sentence) introduction; 2) the media selected for the review and the significance/ purpose of the review/ selection; 3) major findings and; 4) recommendations.

#### Media/Application details

The authors should list the product details including:  
Publisher:  
Product type:  
Language(s):

Level:

Media format:

Operating systems:

Hardware requirements:

Supplementary software:

Price:

#### Introduction (approximately 450 words)

The introduction should give a broad view of the field of educational technology with a focus on the role of technology in second/ foreign language education. It then narrows the focus on the media selected for the review and how and why the review can contribute to second/ foreign language learning and teaching.

#### Description (approximately 550 words)

The authors need to describe the media tool as accurately as possible, preferably using photos and graphics that make the description engaging and interesting to read. The description should tell the readers about where they can find/download the media, what its different sections are and what the features and purposes/functions of each section are, etc.

#### Evaluation (approximately 350 words)

In this part the overall value of the media review and its contribution to second/ foreign language is given, followed by its strengths and/or possible weaknesses. The authors can offer their own and research-supported suggestions on how those shortcomings can be removed or taken care of.

#### Conclusion (Approximately 250 words)

The review ends with a conclusion that summarizes the main points and make specific recommendations on the use of the media for second/ foreign language learning and teaching.

#### References

References should be up to date and written in APA style. The number of references should not exceed 10.