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Review Article

Second language vocabulary learning in the digital era: Ten reasons it should be on the go!

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ABSTRACT

Word learning is a key component in second language learning and one that L2 learners often find laborious. With the advent of mobile technology in recent years, research on mobile-assisted vocabulary learning has uncovered the immense potential mobile devices (namely smartphones and tablets) have for providing L2 learners with opportunities for effortless learning of L2 lexis. To this end, we pinpoint ten reasons why L2 learners should abandon traditional pen-and-paper-based methods of word learning and shift instead to a digital mobile word learning environment that fully utilizes the virtues of mobile learning. The role of mobile applications (apps) dedicated to word learning is hence stressed as such apps represent the core basis of mobile-assisted vocabulary learning. For EFL learners to entertain a more manageable and less time-consuming word learning experience, we emphasize the role of EFL teachers in calling their learners' attention to the ten reasons we underscore in this article to help encourage those who are still into conventional word learning and have not yet explored learning words via mobile gadgets to make the digital shift at once.

Keywords: mobile learning, mobile-assisted vocabulary learning, mobile application (app), smartphone, tablet

INTRODUCTION

Acquisition of adequate lexis is paramount to good performance in a second language across the four skills (i.e., listening, speaking, reading, and writing). Thus, for L2 learners to succeed in everyday communication tasks, lexical knowledge is a prerequisite (Nation, 2001). Moreover, in terms of academic success, Folse (2010, p. 140) asserts that it "depends on reading ability, and reading ability is in turn strongly linked to vocabulary". In this regard, it is estimated that EFL learners should possess knowledge of 5,000 words as a minimum threshold for achieving English text comprehension (Nation, 2006). However, word learning is a daunting task for most L2 learners, and word retrieval, i.e., learners' ability to call back to use words they have been taught, is a recurring obstacle when using L2 lexis (Wallace, 1982).

Hockly (2013, p. 83) rightly notes that "the future is increasingly mobile, and it behooves us to reflect this in our teaching practice." Indeed, it is now acknowledged that the emerging, consecutive developments in mobile technologies have considerably altered our teaching and learning practices across different subject matters resulting in a dramatic shift in such practices (Pavlik, 2015). With the emergence of the iPad in 2010, a proliferation of mobile gadgets with enabled internet connectivity has found its way into educational settings (Deng & Trainin, 2015). In the realm of language education, with the emergence of computer-assisted language learning (CALL), Healey (2018) draws attention to the observation that digital technologies are now being utilized by almost all language teachers and learners alike. This is due to the numerous features inherent in these modern technologies. Such technologies with their embedded features enable language teachers to present original, effective instruction that could increase learners' motivation (Kessler, 2018).

From the various forms of digital technology (i.e., computer desktops, laptops, tablets, smartphones), the latter two had proved most promising for language learning and teaching due to their extreme mobility. In particular, mobile applications (apps henceforth), which can be downloaded onto smartphones or tablets offer L2 learners the convenience of studying anywhere and at any time (Godwin-Jones, 2017). In second language education, one area, where mobile apps can provide immense assistance to language learners and teachers is vocabulary development (Nisbet & Austin, 2013).

The ubiquity of mobile devices has led to a rapid increase in L2 learners' use of vocabulary learning apps to aid their word learning tasks (Zou et al., 2018). Research exploring L2 word learning via mobile apps revealed positive effects for this digital mode of vocabulary learning compared to the traditional pen-and-paper method used by L2 learners (Basal et al., 2016; Khaoula, 2016). These positive effects took the form of gains in learners' word knowledge (Guaqueta & Castro-Garces, 2018; Kohnke et al., 2019; Redd, 2011; Walter-Laager et al., 2017; Wu, 2015) as well as increases in their learning motivation (Wang, 2017; Wang et al., 2015).

Northrop and Andrei (2019) acknowledge the role mobile technology can play in enhancing EFL learners' word knowledge noting, in particular, the high accessibility of smartphones and tablets, as the two major mobile devices, to various types of vocabulary apps. Along with this major line of exploratory research into the effects of mobile word apps use on L2 vocabulary learning, five other issues are dealt with. These include how mobile word apps can assist learners' lexical perception (e.g., Duman et al., 2015), how word apps can best be developed (Godwin-Jones, 2017), setting up evaluation criteria of existing word apps (Northrop & Andrei, 2019), exploring learners' perceptions on using word apps (Kohnke, 2020), designing and testing new word apps (Makoe & Shandu, 2018).

This body of research on mobile word apps and vocabulary learning proved quite promising in terms of the outcomes it yielded. Hence, in an attempt to encourage EFL learners into this mode of digital mobile learning for the acquisition of L2 lexis, this article discerns ten reasons why learners should now abandon their 'pen and paper' and shift instead to this mode of word learning. The ten reasons we provide here to promote this digital shift into mobile word learning are elicited in essence by the various advantages inherent in mobile devices (namely smartphones and tablets) and mobile learning itself.

PROCESSES OF L2 WORD LEARNING AND USE OF MOBILE APPLICATIONS AS A LEARNING MEDIUM

Acquiring lexis in a second language is a complex process. An L2 learner's lexical capacity can be measured in terms of two layers, namely breadth, and depth of word knowledge. Whereas breadth refers to the number of words one has some lexical knowledge of, depth is related to the extent of that knowledge about each word (Qian, 1999). It is strongly held that, as word learning develops, repeated encounters with a word in varying contexts ultimately lead to an increase in the depth of word knowledge (Laufer, 1998). As such, L2 learners should give more priority to expanding their vocabulary size (i.e., quantity) since their lexical depth of word knowledge (i.e., quality) is amenable to development and expansion over time (Al Yafei & Osman, 2016). Close scrutiny of word acquisition by native speakers of their L1 reveals that this is similarly the case: children learning their mother tongue pick up plenty of new words (i.e., breadth) in their childhood and their knowledge of these words (i.e., depth) only keeps developing as they grow up leading up to mastery of L1 lexicon at a certain point of their lives.

In terms of consciousness to learning, there are two routes for learners through which they learn new words in a second language, namely incidental and intentional. Hulstijn (2001) makes the distinction noting that whereas incidental word learning occurs unintentionally as an unintended result for other language learning tasks such as listening and reading, intentional word learning occurs as an outcome for dedicated lexical-oriented tasks that directly aim to foster word retention of specific target words. Research on L2 word learning has shown that a mixture of both incidental and intentional vocabulary learning is vital for academic success (Deng & Trainin, 2015).

However, as to which mode should be prioritized by learners, many scholars (Laufer, 1998; Nation, 2001; Schmitt, 2000) stress that, compared to incidental learning, learning L2 words in a deliberate mode leads to better learning outcomes and higher retention. This is due to the higher attention paid to lexical knowledge

in the intentional word learning mode compared to the incidental one (Schmitt, 2000). Nevertheless, due to the time-consuming nature of intentional word learning, some scholars (Schmitt, 2000) call upon learners to also engage in incidental word learning whenever possible. As such, whereas intentional word learning is seen as a requirement to foster word retention, incidental word learning is supplemental to it (Laufer, 2005).

In relevance to mobile app use for L2 word learning, as we noted earlier, research has proven the positive effects of such digital form of vocabulary learning on L2 learners' word learning in terms of both breadth and depth of lexical knowledge (Guaqueta & Castro-Garces, 2018; Kohnke et al., 2019; Walter-Laager et al., 2017). In terms of the two routes of word learning (i.e., intentional and incidental), using mobile word apps for learning vocabulary similarly suits both routes of word learning. That is EFL learners can use such apps for learning new words they encounter incidentally while engaged in non-lexical tasks and activities (e.g., listening or reading). By the same token, these apps can be utilized for direct, intentional learning of target lexical items within their English courses and syllabuses.

WORD LEARNING APPS AS AN AID TO OVERCOMING THE WORD RETRIEVAL DILEMMA

In essence, similar to the L1 situation, word learning in a second language is an incremental process that develops over time. However, one major and recurring problem L2 learners face whilst acquiring new words is the retrieval of learned words for productive use in speech or writing. This problem recurs when learners are previously taught a vocabulary item, but they are not able to recall it whenever they need to use it (Al Yafei & Osman, 2016). For Wallace (1982), learners' incapacity to word retrieval is one of the indications of both inadequate word instruction and learning. To overcome this dilemma, many researchers have sought ways to reinforce learners' retention and acquisition of the new lexical items they encounter (Al Yafei & Osman, 2016). In this relevance, it should be stressed that frequency of exposure is the key to word retention and hence offering learners frequent repetition and exposure to the target items should render them within the learners' productive lexicons (Wallace, 1982). Henriksen (1999) also asserts the role of repetition and frequent exposure in word learning noting that if new items are not repetitively encountered within a certain period of time, learners will most likely forget them.

However, most EFL learners are lacking in terms of target language exposure and repetition since this only occurs within the classroom and for a limited amount of time per week (Al Yafei & Osman, 2016). As such, mobile word learning apps, we believe, can play a significant role in making up for this shortage of word exposure and lack of frequency of word repetition since such apps can provide learners opportunities for unlimited repetition and exposure to target L2 vocabulary in and outside the EFL classroom. Hence, the use of such apps can ultimately help learners overcome the word retrieval conundrum we explained earlier.

DEFINING MOBILE LEARNING AND MOBILE TECHNOLOGIES

Chanprasert and Han (2014) duly note that youngsters nowadays live in a digital era and their lifestyles have consequently changed. As such, in the domain of second language education, many researchers advocate the use of modern technology by ESL teachers and learners alike (Ball, 2011; Larsen-Freeman & Anderson, 2011; Warschauer & Meskill, 2000). It is therefore necessary for ESL learners to learn how to utilize the new technologies they are surrounded by so that they can easily engage in today's universal tech community (Fox & Fleischer, 2002). Recently, one form of these modern technologies, i.e., mobile technology, has shown its potential for providing useful teaching and learning features, particularly for vocabulary learning (Chai et al., 2016; Liu, 2016). Research examining the use of mobile learning in language education has revealed overall acceptance from ESL learners (Castañeda & Cho, 2016; Dashtestani, 2016; Kim et al., 2013).

Mobile technologies exist in various forms and those used for pedagogical purposes include mobile phones (simple phones and/or smartphones), tablets, laptops, personal digital assistants (PDAs), pocket electronic dictionaries, and MP3 players (Suwantarathip & Orawiwatnakul, 2015). When any form of mobile technology is incorporated into education, the resulting learning model is called mobile learning. A mobile learning environment is one in which learners can "use mobile devices to obtain learning materials and to

support their learning activities anytime and anywhere" (Lan & Sie, 2010, p. 724). Kinash et al. (2012, p. 639) similarly define mobile learning as "the use of portable devices with internet connection capability in education contexts".

As such, in terms of spatial and temporal dimensions, mobile learning is one "that happens anywhere, anytime" (Franklin, 2011, p. 261). In terms of devices' form factor, mobile learning employs devices in which "the sole or dominant technologies are handheld or palmtop devices" (Park et al., 2012, p. 592). In terms of users, it works for both individual as well as group situations (Chen et al., 2008). Finally, in terms of teacher-learner roles, mobile learning adopts a learner-centered education model, where learners are mostly responsible for finding out knowledge respective to their field of study. Consequently, an eminent virtue of mobile learning is that it enables learners to track learning materials anywhere and anytime thus overcoming regular temporal and spatial barriers learners often face (Romero et al., 2010).

TEN REASONS L2 WORD LEARNERS SHOULD GO MOBILE

Compared to traditional pen-and-paper learning, mobile gadgets such as smartphones and tablets are quite assistive and entertaining learning tools. All in all, this is particularly due to the distinct features of these gadgets including "accessibility, personalizability, and portability" (Saran & Seferoglu, 2010, p.253) as well as "the physical characteristics (e.g., size and weight), input capabilities (e.g., keypad or touchpad), output capabilities (e.g., screen size and audio functions), file storage and retrieval, processor speed, and the low-error rates" (Alzu'bi & Sabha, 2013, p. 179).

Among the various forms of mobile technology used in education nowadays, smartphones entertain a high rate of ubiquity among learners. This is partly due to their higher portability, compared to say laptops and tablets, which makes them ideally suited for learning on the go. Moreover, more importantly, smartphones contain embedded platforms (e.g., AppGallery, App Store, Google Play) that house mobile applications (apps) of various types that can tremendously aid learning. These applications are computerized software built to work exclusively on mobile devices (namely smartphones and tablets). As such, a smartphone is now seen as a sophisticated tool that can perform numerous functions other than its original telephoning function (Godwin-Jones, 2011).

It is no wonder then that research on mobile phone usage for learning purposes shows an enormous level of acceptance from learners (Cavus & Ibrahim, 2009; Lu, 2008; Stockwell, 2010). In the realm of language learning, the existence of mobile application platforms within the smartphone has converted it into a mobile language laboratory, where a language learner can practice anywhere and anytime (Kukulska-Hulme, 2009). Designed by the British Council, mobile apps dedicated to language learning first appeared in 2009 hence contributing to the emergence of mobile-assisted language learning (MALL) (Al Yafei & Osman, 2016).

A closer look into the nature of mobile learning shows that it entertains several distinct and very handy features, which are at the disposal of L2 learners should they opt to utilize their mobile gadgets (smartphone and/or tablet) instead of 'pen and paper' for word learning endeavors. These features are now pinpointed with particular reference to L2 vocabulary learning.

Spatial and Temporal Freedom of Learning

Thanks to the built-in wireless (Wi-Fi) technology in mobile devices as well as their extreme portability, learning via mobile devices can occur on the go and thus can never be impeded by space and time constraints. Indeed, mobile learning enables learners to learn virtually anywhere and at any time (e.g., at school or at home). Therefore, smartphone ownership nowadays highly exceeds that of laptops (Traxler, 2010) and this freedom from space and time restrictions inherent in mobile devices is seemingly the reason. Thus, in terms of word learning, using mobile devices allows learners to deal with new words instantly as soon as they encounter them whether it be inside or outside the classroom, at school or anywhere else, whilst studying or in their leisure time.

Accommodation of Different Learning Styles

Learning styles can be defined as the differences among learners in utilizing the various senses to perceive, sort out, and maintain experience (Reid, 1987). Similarly, Oxford et al. (1991) view learning styles as the

approaches learners use whilst going through new experiences or for managing newly encountered problematic situations. Reid (1987) classified learners based on their learning style preferences into six distinct categories: auditory learners (prefer to use their ears for learning by listening to people and/or audio content), visual learners (prefer to use their eyes for learning by reading and watching visual materials), kinesthetic learners (prefer to learn by engaging in physical activities), tactile learners (prefer to use their sense of touch for learning), group learners (prefer to learn with other individuals within a group), and individual learners (prefer to learn on an individual basis on their own).

As such, mobile learning can accommodate all of these different learning styles: mobile devices can be used to listen to audio materials (auditory learner), read or watch visual content (visual learner), prompt physical engagement of users (kinesthetic learner), navigate through learning applications using devices' touchscreens (tactile learner), learn in groups (group learner) as well as learn on one's own (individual learner). In a nutshell, due to the incorporation of texts, graphics, audio, and video in mobile devices, mobile learning can cater to learners' different learning styles (Boyes, 2011).

Extreme Learner Autonomy

Compared to traditional methods of learning characterized by teacher overdependence, the use of mobile devices for learning and acquiring knowledge encourages learners to work independently of their teachers thus allowing for and encouraging more autonomous and self-learning. This is largely because learners perform their exercises and training using their own personal gadgets and are thus more susceptible to getting engaged with the learning (Al Yafei & Osman, 2016). Hence, mobile learning occupies learners' attention leading them into a voluntary learning environment since learners get to decide when and where they should learn (Attewell, 2005).

Indeed, learners' use of their own devices in a mobile learning environment helps to develop a sense of self-representation in any learning endeavor carried out using such mobile devices hence encouraging learners to take more responsibility for their learning. Consequently, in terms of word learning, using mobile devices enables learners to take control of as well as direct their word learning tasks and endeavors (e.g., choosing when and where to learn, selecting words to learn in the first place as well as ones that need further attention and follow up, evaluating and assessing their lexical knowledge of words).

Bridging School-Home Learning Environments

Shuler (2009) rightly draws attention to this feature of mobile learning noting that the use of mobile devices enables learners to access, collect as well as sort out information outside as much as inside the school premises, which in turn helps establish a link between both home and school learning environments. Thus, in relevance to word learning, the use of mobile devices enables learners to revisit at home the words they had some difficulty with whilst at school thus allowing them to make up for any missed learning opportunities of relevant lexical knowledge (e.g., word spelling, word audio pronunciation, word collocations, etc.). By the same token, learners can use their mobile gadgets to learn the words in their coursebooks that they could not attend to at school in the first place as they can use their devices to instantly look for relevant word knowledge.

Enhancement of Collaboration and Communication

Pachler (2009) stresses the role of mobile learning in increasing opportunities for communication and collaboration. Mobile learning environments encourage learners to communicate and collaborate with both their peer students as well as their teachers. In terms of student-student collaboration, mobile devices enable learners to seek instant help as well as share course-related information and content with their fellow students using popular mobile instant messaging as well as communication services (e.g., Snapchat, WhatsApp). As to student-teacher collaboration, mobile devices provide great channels for obtaining instant, thorough and tailored feedback from their teachers. In the context of word learning, this feedback could range from a link to a short YouTube video that explains one coursebook lexical item students had difficulty with to a link to a long reading material that contains the key target words of a whole unit in the coursebook with their glossary.

Needless to say, mobile collaboration in mobile learning environments whether it be student-student or student-teacher is not bound to school premises and can thus extend to places and times beyond those relevant to school. As such, compared to traditional learning in which student-student, as well as student-teacher collaboration, is only tied to school premises and times, mobile learning can immensely boost learners' collaboration and communication both with their peer learners as well as their teachers.

Minimizing Cognitive Overload

Unlike traditional learning environments often characterized by an uncontrolled flux of information at each teaching or learning occasion, learning via mobile devices allows for adjustment of the volume of knowledge and information to be shown at any point in time. Since mobile devices come in portable small-sized screens, the bulk of information that is presented to learners at any learning instance is minimized, which helps learners avoid any cognitive overload (Boyes, 2011). As such, in language learning settings, mobile gadgets provide L2 learners with knowledge that is easy to digest since their small screens offer the learning material in small portions allowing learners to adjust learning to their own desirable speed as well as tailor content difficulty to match their own language proficiency (Liu, 2016; Rosell-Aguilar, 2018).

As per vocabulary learning, learners using mobile devices can for instance adjust the number of words from their daily class coursebook vocabulary to look up and review via a dictionary app or an online dictionary website at each learning instance. Similarly, many mobile word learning applications provide learners with various adjustable settings through which they can adjust and control their vocabulary learning (e.g., the number of words to show per learning task, the type of word knowledge components to display, the number of example sentences to be shown, etc.).

Drilling and Corrective Feedback

Mobile applications (apps) are the core of mobile devices (namely smartphones and tablets). In mobile learning environments, these mobile apps provide learners with drills, quizzes, answer keys, and corrective feedback (Tso, 2020). The built-in feedback within such mobile apps is characterized by being both instant and accurate (Ball, 2011). In relevance to language learning via mobile devices (i.e., MALL), independent drilling, as well as immediate corrective feedback, are two common activities within language learning applications (Keskin & Metcalf, 2011; Lan et al., 2007). Vocabulary learning apps provide opportunities for different types of drills depending on the type of word knowledge at focus.

Common drills include word spelling drills in which learners are required to fill in missing letters of target words. Some word apps are dedicated to word pronunciation drills in which learners listen to modeled audio pronunciations of target words embedded within the app and then they are called on to use their device's mic to imitate these pronunciations. Other apps focus on word formation and hence learners are asked to provide the derived words from given target words (e.g., management vs. manage). Some word learning apps also provide users with the opportunity to test themselves via built-in quizzes, which test learners' comprehension of respective lexical knowledge. At any rate, a common feature of most word learning apps is the provision of model answer keys along with the drills, which ensure learners do not fall short of corrective feedback necessary for adequate learning.

Trackability of Learning Progress

A useful feature of mobile learning is the ability to track learners' performance and progress (Ball, 2011; Wang, 2017). With the applications inside them, mobile devices allow for easy, smooth, and accurate data tracking. Similar to language learning applications, word learning apps enable users to keep a record of their word learning so that they can track their learning progress. This tracking feature in mobile learning apps allows for tracing learners' performance via their in-app responses (correct vs. incorrect answers). Data trackability as such can be useful for teachers as well as learners themselves. For learners, it can help them identify possible weaknesses and adjust their app use accordingly. For teachers, obtaining a periodic record of their learners' use of a pre-designated word learning application can immensely help with evaluating and assessing their learners' progress and hence helps towards informing as well as adjusting their vocabulary instruction accordingly.

Downloading Capability

One powerful and indispensable feature for which mobile devices are obtained is their internet download capability. In a mobile learning environment, the downloading feature in a mobile device enables learners to access various multimedia content (i.e., audio, video, and images) as well as applications relevant to their courses right from their own gadgets as these are installed directly on their devices. Unlike desktop computers (i.e., PCs and laptops), application download capability in mobile devices (i.e., smartphones and tablets) and the extremely growing number of mobile apps available for download has resulted in an enormous shift towards mobile computing over desktop devices (Godwin-Jones, 2011).

As to word learning, useful downloadable content in mobile devices includes word pronunciations in audio format rather than troublesome written phonetic symbols, images containing concrete L2 words with their visual realizations (e.g., an image of an apple with the word typed in it), short video clips explaining target words. Similarly, word learning applications of various types (e.g., dictionary apps, pronunciation apps, idiom apps) can be downloaded to learners' mobile gadgets and thus incorporated into curricular classroom learning and teaching tasks, extracurricular learning activities, as well as learners' self-learning endeavors.

Information Sharing Functionality

The information sharing feature in mobile devices can be a very useful asset to mobile learning. Two sharing means exist in a mobile learning setting: app and non-app sharing. App sharing is carried out via mobile apps themselves as some provide within-app sharing functionality, where learners can share content, progress, etc. relevant to the app use itself. Non-app sharing is relevant to content that is either available on the internal storage of the device itself or accessible through it via an internet connection. Non-app sharing enables sending and receiving content such as text files (e.g., HTML, PDF, WORD) or multimedia content (i.e., audio, video, and image files). In a mobile device, sharing can be made through the device's cellular SMS service (Internet connection is not required), although this is nowadays almost an obsolete sharing channel in smartphone and tablet devices, or else via the various social networking services (e.g., Facebook, Snapchat, Twitter, WhatsApp) (Internet connection is required).

The sharing capability in mobile gadgets can be made use of by both learners as well as teachers. As for learners, they can share learning content with their colleagues as well as share their learning progress with their teachers by regularly sending records of their activities and responses so that teachers can identify and remedy any possible problems and issues instantly. Likewise, teachers can share instructional materials as well as general comments and feedback with their students. Moreover, teachers can utilize mobile sharing functionality to share their feedback on learners' progress both on an individual as well as group levels with their fellow teachers. In terms of mobile vocabulary learning, shared content may include links to useful word learning apps or materials on the internet that could either be tailored to the specific lexical knowledge in learners' coursebooks or else provide learners with general lexical knowledge unrelated to their coursebooks.

CONCLUDING REMARKS

This article attempted to lure L2 learners into the world of mobile learning so that they could entertain a more convenient and manageable word learning experience. For this purpose, ten distinct features of mobile learning via mobile devices (namely smartphones and tablets) were highlighted. Since mobile applications (apps) unarguably represent the core components of a mobile device (i.e., smartphones and tablets) in a mobile learning environment, word learning apps are one entity within a mobile device, where these ten features are best noticeable and hence utilized.

As such, in terms of spatial and temporal freedom of learning (1), a mobile device housing word learning apps (e.g., a dictionary app) provides users with the ability to explore and look up new words anytime and anywhere thus freeing learners from time and space constraints. Also, in terms of accommodation of different learning styles (2), mobile gadgets can accommodate different types of learners: visual learners can watch graphics (i.e., photo and video) content describing target words either via the device's internet browser itself or via the word learning apps installed in it; auditory learners can listen to audio pronunciations of words; tactile learners will appreciate mobile devices' complete reliance on the virtual touchscreen for interaction

with the device or app content; learners who have a preference for working in groups will similarly appreciate how mobile gadgets enable their users to easily work with each other whether whilst physically together in class or using mobile sharing features when outside class; learners who like to study on their own will also appreciate how word learning apps provide built-in quick tutorials on how to use them, which enable even the novice learner to use any word app on their own quite seamlessly.

In relevance to learner autonomy (3), with minimum one-off teacher guidance if needed, and thanks to the tutorials built in them, word learning apps enable users to handle new target words independently on their own. As to bridging of school and home learning environments (4), word learning apps enable learners to make up at home for missed learning opportunities while at school as they can sort out those lexical items, which they either could not deal with at school or only partly dealt with. Thus, word learning apps can be an invaluable tool that could be utilized by L2 learners to help overcome their incomplete word learning endeavors while in class. Also, in relevance to the enhancement of collaboration and communication (5), mobile devices provide a convenient platform for seamless communication and collaboration either between learners themselves or between learners and their teachers.

In terms of minimizing cognitive overload (6), the small screens of mobile gadgets allow for only a limited amount of information in each word learning situation. As to drilling and corrective feedback (7), word learning apps provide numerous opportunities for different types of vocabulary learning drills often accompanied by relevant corrective in-app feedback. In terms of tracking learning progress (8), similar to other types of educational apps, a word learning app enables users to easily track their vocabulary learning progress since their responses and overall performance are recorded whilst the app is being used. As to downloading capability (9), this powerful feature of mobile gadgets enables learners to access and obtain on their devices useful course and non-course related vocabulary learning content from the internet as well as various kinds of word learning applications downloadable via internet connectivity. Finally, as to information sharing functionality (10), L2 learners as well as teachers can use their mobile devices to share useful vocabulary learning materials either directly from the internet or those already stored in their devices.

As a final remark, it should be noted that the proper selection of word learning applications is key to the success of mobile-based vocabulary learning. As such, despite the high significance given to the ten features of mobile learning pinpointed in this article, we believe that careful consideration as to the selection of word learning apps to be used by EFL learners either for personal self-learning or, more importantly, as an aid to curricular coursebook activities is a factor that could immensely contribute to the success of the incorporation of such apps within the EFL classroom environment. This is because word learning apps are not all designed equally well. Hence, we encourage EFL teachers who are willing to take their students to the lexical 'digital mobile learning arena' promoted in this article not to overlook this factor. Rather, teachers are urged to provide their students whenever needed with ample guidance as to word learning app selection. To alleviate learners' foreseen quandary in this area, coursebook designers are recommended to accompany each of their EFL books with a well-designed word learning app tailored to the coursebook content.

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