How EBA (Educational Informatics Network) platform and Memrise may help EFL learners: A review for state school EFL learners in Turkey

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Abstract: The current pandemic situation in the world necessitated that all of the classes including English classes have been moved online. We know that the number of instruction of English in primary schools is only 30 minutes for each week, the lessened number of English in Turkey are generally supported by EBA which it also functions as a model. In an investigation to an application which may be of help for state school learners, the researchers searched for applications that will assist our learners in learning and the topic-based design of Memrise urged us to research. We suggest that despite the limited hour instruction, extra task and activities should be assigned by Memrise for extra practice or using the application could foster their learner autonomy and self-regulation skills.

Keywords: Online teaching, online learning, web 2.0 tools, teaching in the pandemic.

Introduction

In the process of technological transformation, the main aim of education is to educate individuals so that they can become free, creative, scientifically minded, and self-reliant by technology-integrated teaching but not by rote learning. Based on this fact, the foundation of the technology integration in Turkish education has been laid by the "Project e-Transformation Turkey" and "Vision 2023 Certificate of Strategy."

(Akıncı et al., 2012). As a part of these strategies, Turkey launched the FATIH Project and EBA which are macro-level technology integration projects in education (Kızılet & Özmen, 2017). The project was introduced in 2011 and is currently managed by the Ministry of National Education (MoNE) in cooperation with the Ministry of Transport, Maritime Affairs, and Communications. The project includes 5 main pillars, and these components are as follows (FATIH Project, 2019):

(1) Providing Hardware and Software Infrastructure,

(2) Providing and Managing the Educational e-Content,

(3) Efficient Internet Technology (IT) Use in Curriculum,

(4) In-service Training for Teachers,

(5) Ensuring the Conscious, Safe, Manageable, and Measurable Use of Its function.

The Context

In this context, under the second component of the FATIH Project, which is "Providing and Managing the Educational e-Content," EBA (EIN – Educational Informatics Network) as a social educational platform was developed by the General Directorate of Innovation and Educational Technologies to meet the needs of e-content to be used along with the technologies integrated with learning-teaching environments (EBA,2019a). Main applications and modules on EBA involve EBA Market, EBA Search, EBA Course, EBA Library, EBA Exam Center, and Content Development Tools (FATIH Project,2019). Recently, there have been new additions to the platform within the framework of "Justice of Opportunity in Education," some of which are EBA e-Portfolio, EBA Academic Support, and EBA Career Development for teachers (MoNE, 2019a). These innovations aim to provide personalized study through learning beyond the school wall, collaborative social learning, offering alternative solutions to diverse needs, and academic support for artificial intelligence.

There are hundreds of documents, exam papers, photos, lecture videos, articles, visuals, journals, contests, and e-content published on EBA. On the EBA platform, course e-contents are designed and shared either by ministry officials or teachers

who voluntarily design their e-contents and send for approval of the EBA moderation. According to the Activity Report of the MoNE in 2016, e-content materials for all levels of English courses are in the production and development process, and it is planned to be completed and published on EBA in the following years (MoNE, 2016). Besides, the National Education Statistics of the 2018-2019 academic year indicate that there are 54.036 state schools in Turkey. It is reported that the total number of schools with the Internet network infrastructure in the classrooms is 14.154, only 6.904 of which were completed in 2016 (MoNE, 2018). Although the project was started in 2011, these figures reflect that the number of schools and classrooms with internet access is rather limited. Additionally, using EBA during the classes is encouraged and suggested by MoNE to increase learner autonomy and technology integration into courses. However, as the statistics show that only around 26% of all state schools in Turkey have a reliable internet connection in the classroom within the scope of the FATIH Project (MoNE, 2018), this is an issue that needs to be addressed and makes the process more challenging for teachers especially in Emergency Remote teaching (ERT).

How does EBA ease the life of teachers?

In March 2020, we as the teachers were looking around online platforms to be used, we began using free platforms such as Zoom, Teams, Google Meet, and so on. In the second half of April, some news appeared on the media accusing Zoom of embezzling money from the users' accounts without notice (Sözcü, 2020). Thus, schools have to commence using EBA as it is also the official platform of the MoNE. The transition to online teaching is not without issues but somehow teachers managed it. Additionally, easy access to online teaching platforms gains crucial importance during the times of crisis to avoid educational gaps. Online teaching platforms including EBA and many others close the learning gap by offering enhanced connectivity, monitoring opportunities and multiple communication means. Strengthening of communication between teachers and the students lies at the heart of providing educational support to learners during difficult times. EBA ensures the uninterruptedness of education as it offers a variety of educational

benefits that involve the provision of instant feedback, closely monitoring of the performance and enhanced availability of the teachers.

In the EBA portal, distance courses are structured based on school levels. In primary and middle schools, all courses are presented to students between 09.00 and 14.00, and replays of courses are demonstrated between 14.30 and 19.30 with the same order. For the students in secondary schools, distance courses are presented between 09.00 and 16.00, and replays of courses are demonstrated between 16.30 and 23.30 with the same order (Özer, 2020). The pandemic necessitated some improvements on the platform. Now, for every single topic in the MONE syllabus, there are many exercises that you can assign to your students. To achieve a reliable platform for distance education, EBA Infrastructure is improved MoNE has invested in the growth and creation of EBA infrastructure. The EBA access frequency has increased to a large extent during this distance education era, and EBA has become one of the world's most-used websites. EBA has clicked more than 1 trillion times between the beginning of March and the 12th of April and has exceeded 900 million EBA access numbers. The teachers could assign their tasks and online classes with ease.

Educational equity and Memrise

Effective implementation of distance education necessitates overcoming learning deficits that can arise out of educational inequities. Educational equity can be ensured through online learning platforms that feature as state-support online softwares or private enterprises. MoNE supported the students who were preparing for the high stakes test (high school and university entrance exams in Turkey with additional assistance besides providing 8GB free internet to be used by students and teachers. "Online courses" through the EBA platform are available now for those who take the 8th-grade high school entrance examination (LGS) and those who take the 12th-grade university entrance exam (YKS). Students may then take immersive courses and gain their teachers' input. Besides, MoNE launched a new TRT radio channel to support students over the weekend for these high-stake exams. Many students in the disadvantaged areas of Turkey did not have access to devices to

access the Internet or in some cases, they could not watch the EBA TV as there are many siblings at home and their lessons are broadcasted at the same time. Starting in 2020 August, some EBA stations are started in some libraries or schools where the students without a connection could join and view the online lessons (Anadolu Agency,2020). Unlike the EBA platform, Memrise is a private enterprise that serves as both a mobile educational application and online software. Memrise is online software that was designed by a computational neuroscientist to provide an individualized learning opportunity to language learning enthusiasts.

Learning Benefits of Memrise

 Inherent features of Memrise including "spaced-repetition, progress reports, rewards, growing tree metaphor have become the major source of learning benefits for language learners. Memrise features "space-repetition" as the primary teaching tool that triggers "test-potentiating effect". Arnold and McDermott (2013) claimed that spaced repetition enabled learners to discover their weaknesses and strengths. It notably raised their awareness of their learning potentials. Memrise tests the vocabulary with the use of a specific algorithm that made it possible to discover the knowledge gap and work on insufficient knowledge (Zhang, 2015). Thus, learners gained the chance to revise the particular vocabulary items that need diligent work to facilitate retention.

The study by Walker (2015) indicated that Memrise promotes meta-learning opportunities, provides intrinsic motivation, and easiness of use. These learning benefits are what makes Memrise a suitable learning tool for expanding area-specific vocabulary that is not amenable to an interactive teaching method. Meta-learning provides concern with the progress reports, daily practice alerts, regular practice opportunities, and revision of input through constant testing of the vocabulary. An important point to be made is that instant feedback and regular progress reports provide learners with a personalized learning experience. It made it easier for students to set more realistic learning goals and pursue their learning goals at their own pace (Walker, 2015).

In addition to the individualized learning opportunities, intrinsic motivation provided by the gamification elements available in Memrise lead educators to use it as a supplemental tool to direct language instruction (Villalobos-Zúñiga & Cherubini, 2020). Memrise utilizes the "competition" as an effective gamification tool to motivate students and fuel their willingness to be on top of the leaderboard. The Leaderboard created by teachers to indicate the rankings of the students in terms of vocabulary learning progress. Students reported that Leaderboard have become the primary source of motivation for them to set learning goals and track their progress to rise in the rankings. What is more, other gamification elements such as the rewards, notifications and growing tree metaphor made the learning more fun to enhance the motivation to revise the vocabulary items and carry out the activities regularly (Łuczak, 2017).

The functionality of sections in EBA and a Sample Task for language learners

EBA Main page This is the first page encountered after logging into the EBA website as a teacher with credentials. On this page, the latest posts, discussions, and assignments of teachers and students are listed in the order of newest to oldest. The main page is designed in a similar way to other social media networking sites. This section, which serves as a homepage, contains a large search bar, stream, calendar, assigned studies, active students, current discussions, and profile information. The page includes the personal information of the teacher, relevant categories for the course, the latest sharing of the users, and an academic calendar.

EBA Test Center section includes screening tests, exercises, central exam sample questions, written and exercise questions, personal mock exams, worksheets, course objective comprehension tests, and skill-based tests. All of the e-contents in this section can be sent to the students as an assignment by the teachers. Besides, students are provided with the additional material support in preparation for exams such as the High School Entrance Exam (LGS) and University Entrance Exam (YKS). Providing equality is a concern for Turkish MONE so that part is even enlarged with artificial intelligence to provide many learning opportunities.

For the participation of students in special education to distance education, specific materials have been added to the EBA portal. The number of learning materials with sign language support has been increased, and new materials have been added. Besides, teachers were given online courses about various topics and they were assigned the certificate of completion on successful termination. As you may investigate in detail, as the figure 1 exhibits, teachers can tailor their materials and upload on EBA as an assignment, students can do the relevant exercises and submit it back to teachers on the Learning Management System of EBA.

EBA has grown to be an ideal platform for state school English teachers and learners00062 in Turkey with its ever-improving features. The faculty members may encourage teacher candidates to deliver their classes online on the platform and know its functionalities. It is compulsory to use now and makes the teachers' and parents' teaching burden easier as everything is in one tool. The current age we experience now are and will be affected by pandemics and the donations of publishing companies made the national platform such a rich environment for learning.
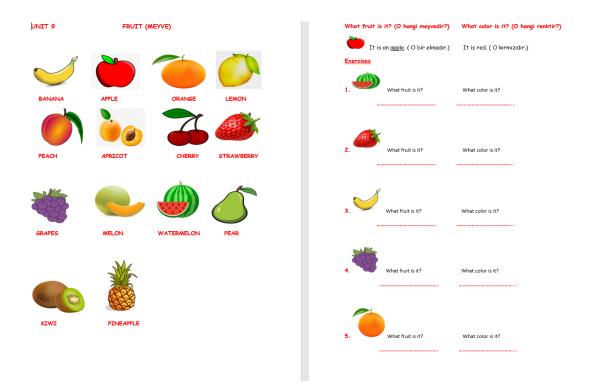

Figure 1: Sample activity for 2nd graders from EBA

6.Using "Memrise" As A Vocabulary Learning Tool

As the exposure is limited to language instruction in pandemic time, as teachers we are investigating the tools that will be useful for students. Research in Computer Assisted Language Learning gained momentum with the increasing popularity of online learning tools. Advancements in the use of web-based and online learning tools paved the way for designation of Mobile Applications, thereby promoting the studies conducted on Mobile Assisted Language Learning. MALL has become an independent field of study with the invention of smartphones. 9.95 % of mobile applications available in the iTunes app store and Google Play are reported to be language learning apps (Bowles, 2017; Lotherington, 2018). Major affordances of the mobile applications including multimodality, authenticity, portability, easiness of use, no time and space constraints captivated the attention of the researchers (Lotherington, 2018). The availability of audio files, video and chat-messaging in smartphones paved the way for the designation of language teaching mobile applications. MALL research has recently gained popularity due to the widespread use of mobile applications and the significant increase in the market demand. Major difference between the mobile technology and other portable technologies is that mobile devices provide "context-free" use and unlimited connectedness whereas computers and other devices are usually for "static use" (Lotherington, 2018). What makes Memrise appealing for software designers is its dynamic and enhanced connectedness.

Mobile software are utilized in different ways either as a supplement to the direct classroom instruction or as a language learning tutor (Łuczak, 2017; Walker, 2015). Based on the features of the application including the interactivity, multimedia sources, audio, progress checking reports, aims of using the tool differ significantly. Mobile apps with less interactive features are mainly used for vocabulary learning and promoting the retention of vocabulary (Librenjak et al, 2016). Based on the pedagogies adopted, language learning apps offer various courses that feature a grammar instruction tool (Duolingo), vocabulary teaching tool with the use of flashcards and spaced repetition (Memrise), interactive chat programs (HelloTalks,

Replica). Memrise is an example of a vocabulary learning app that was designed by Ed Cooke and Greg Detre in 2010 (Lotherington, 2018). Greg Detre is a computational neuroscientist and is specifically interested in memory (Lotherington, 2018). Not surprisingly, Memrise is created specifically to transfer the vocabulary items from short-term memory to long-term memory with the use of "mems".

Use of Memrise as Vocabulary Learning Tool

Memrise is online software that is available as a mobile application on Apple Store and Google Play and is downloadable to computers. It uses digital flashcards, photos, and videos as "mems" to strengthen the connection between the words and their meanings (Zhang, 2019). Memrise offers courses in 20 different languages. The users of the app can create these courses through crowdsourcing (Łuczak, 2017). Thus, it would be possible to provide courses on various field-specific terminologies. Designers of the course can create a "Leaderboard" that course members can check their progress and rankings based on the regular test results (Scholz, 2018; Zhang, 2019).

Each unit introduces context-specific vocabulary on a particular topic. Additionally, learners are offered various opportunities for connecting with other learners including joining new courses, inviting friends, getting daily reminders and competing in the Leaderboard (Scholz, 2018; Zhang, 2019). Daily progress reports and goal reminders are available on the user homepage so that learners can track their progress. When the learners are introduced to a set of new words, they carry out some follow-up activities. They do audio, spelling and definition-matching activities. As the last step, they spell the word that they hear. If they made a mistake in any of the stages, digital flashcards of that particular word will appear again in the user homepage. Upon the successful completion of these tests, they would achieve to grow a tree.

Upon visiting the application, you may realize memrise application use growing tree metaphor as a strategy to motivate students. Learners see the picture of a seed at the

beginning of the activities. This seed represents the words in their short -term memory. Upon the completion of all the tests, they will realize that the seed has grown into a tree. This tree indicates that vocabulary items were transferred to long-term memory.

Memrise is based on an algorithmic review system that aims to test the target vocabulary regularly to facilitate retention. This review system is called spaced repetition that allows learners to practice the target words on a regular basis. Based on the various features cited so far, basic principles of Memrise can be listed as the use of mems, spaced repetition and individualized learning tools of Leaderboard. These principles indicate that Memrise has some gamification elements to maintain the motivation to learn. Theoretical underpinnings of these principles will be explained in the next section.

Previous studies on Memrise

Several studies were conducted to explore the impact of Memrise on improving the attitude towards learning and improving area-specific knowledge. These studies mainly focused on the effective use of area-specific terminology that class time will be insufficient for a follow-up practice and revision of target vocabulary. The study by Abargouhi & Taki (2018) utilized Memrise as a supplement to direct classroom teaching. Participants of the study were 36 high school students in Iran. The study adopted an experimental design that entailed students in the experimental group to study Memrise after class. Students in the control group used the textbook as the only source of information. Results of the Student Perception Survey indicated that students become more motivated and engaged thanks to the visual aids used in Memrise. Additionally, learners stated that they preferred to have an online mode of instruction rather than textbook-based instruction.

The study Walker (2015) on the use of Memrise to teach vocabulary yielded similarly positive results. The study by Walker (2015) aimed to practice Latin words with the use of Memrise. Results of the study indicated that learners gain an intrinsic

motivation, they improved their meta-learning skills and improved their test scores. Similar to the study by Walker (2015), the study by Luczak (2017) also aimed to improve low-frequency vocabulary knowledge with the use of Memrise. Luczak (2017) focused on helping learners learn and revise the Legal English on a regular basis. Test results of the students indicated that regular use of Memrise helps learners get higher scores with the use of Memrise. The study by (Librenjak et al, 2016) focused on providing a sustainable vocabulary acquisition opportunity for students with the use of Memrise as a supplement to direct instruction. Participants of the study were 27 students enrolled in a Japanese class at a university in Croatia. Some vocabulary courses were designed by the researchers with a specific focus on the items in textbooks. End-of-term scores of the students indicated that regular users of Memrise had higher scores compared with the other students. Similarly, the study by Wu (2019) indicated that the use of Memrise as an out-of-class activity proved to achieve effective results in expanding the vocabulary of the subjects. Although some personal variables were found to impact the test result, the time spent on the revision of target words were found to be the most influential factor in achieving better results.

Theoretical Understanding of Memrise as a Learning Tool

Lotherignton (2018) claims that revision tests practised through spaced repetition is based on behaviorism as the major learning theory and adopted Audiolingualism as its teaching method. Designers of Memrise were assumed to parse language skills into categories and view them as structures to be practiced rather than combining these skills to provide an interactive teaching opportunity. Memrise is criticized for not considering the importance of context and the use of authentic communication in structuring the activities. Language was perceived as a "static" entity to be acquired and not much attention was paid to the dynamic nature of the language.

Although Memrise may some criticism for not specializing in interactive elements in the designation of the activities, it has some gamification elements that enhance the motivation to learn. Memrise has autonomy-supportive features that promote the

intrinsic motivation to set learning goals and gain self-study habits (Walker, 2015). Goal reminders, progress reports, rankings on the Leaderboard represent the efforts to gamify the learning process to ensure the sustainability of interest, motivation and willingness to learn (Walker, 2015).

Memrise was specifically designed to provide a deliberate learning opportunity. Target vocabulary items are usually specific terminology and collocations that lend themselves to conscious learning and memorizing (Wu, 2019). Low-frequency words that are rare in daily use are more amenable to deliberate instruction than interactive teaching methodologies. With this in mind, creators of Memrise aimed to design an online learning tool that will supplement classroom instruction to teach low-frequency words along with high-frequency words. Thus, it would be possible to allocate more time for classroom activities (Wu, 2019).

Use of Memrise as a Task Builder

To illustrate its use in teaching vocabulary an exemplary task will be explained below that may be assigned to state school students as extra homework:

Context: Memrise will be used as a supplement to direct language instruction in an English for Specific Courses. The participants will be political science students who are required to acquire the vocabulary on Media and Politics to follow international news media and analyze the events to write reflective papers. 30 students who are enrolled in the Media and Politics course are required to take a writing-intensive English course to meet the language requirements of Media and Politics course. In this intensive writing course, learners were given some tasks that are broken down to some steps that will lead them to write a comprehensive opinion article to be submitted to a national newspaper that is broadcasted in English. The teachers will create courses on Memrise about related terminology. These courses will be created around some themes that are relevant to the course discussions conducted each week.

Learning Objective: Students will be able to use the terminology in media and politics a high school context.

Activities: 1. Students will be asked to read news regarding police violence around the World to write a reflective paper on media coverage of "Black Rights". (Students will revise the words on human rights unit in Memrise)

2. Students will be asked to read the news on gender discrimination news around the World. They will write a reflective paper on gender equality based on the topic they chose. (They will revise the words on unit 2 in human rights.

3. Students will be asked to read the news on coloured people (all people who are not White Christian Americans) living in the USA. They are going to write an opinion paper that focuses on certain labels given to these people coverage of news in mass media. (they will revise the words on unit three news and media on Memrise).

4. Students will be required to write an opinion paper about the topic they choose from the available options of 21-century media, political movements and media, media and discrimination. (They will revise the words on Unit four on media and discrimination).

5. At the end of four-week periods teaching units, learners will check their progress reports on Memrise and discuss its effects on learning political terminology in class.

Discussion

EBA has grown to be an ideal platform for state school teachers in Turkey with its ever-improving features. The faculty members may encourage teacher candidates to deliver their classes online on the platform and know its functionalities. It is compulsory to use now and makes the teachers' and parents' teaching burden easier as everything is in one tool. The current age we experience now are and will be affected by pandemics and the donations of publishing companies made the national platform such a rich environment for learning. Critics claim that Memrise leans more towards behavioristic approaches to teach the language and lacks interactive aspects of teaching (Bowles, 2017). Although Memrise is regarded as promoting an outdated teaching approach, several kinds of research have indicated that Memrise turned out

to be an effective language-teaching tool (Walker, 2015; Łuczak, 2017). Moreover, people have an increasing screen-time which makes them more dependent on their phones. Memrise as a mobile application serves as a fruitful medium for learning English. Learning objectives should be in congruence with the teaching approaches adopted by the online tools. In this regard, Memrise offers drill-based activities to practice words that might meet the needs of students in state schools. Use of drill-based activities might prove to be useful for practising low-frequency words. Additionally, highly motivated students will benefit effectively from the spaced repetition that is provided by Memrise. It would be easier for students to keep track of their learning progress. Despite the lack of interactive features and multimodality of content, highly motivated students will not lose their interest and willingness to achieve learning goals. Progress reports and daily goal notifications would help learners monitor and evaluate their learning process. All in all, we suggest that Memrise might help state school students and even the private school students' to extend the language learning outside the classroom as the hour of instruction is even more limited in state schools now.

Conclusion

The current study scrutinies language teaching in Turkey in pandemic times. In instructed second language instruction, the scarcity of input and interaction with the target language is an obstacle for English language learning. Although the Ministry of Education has published communicative activities booklet for K-12 learners http://tegmmateryal.eba.gov.tr/ in January 2021, students still need practice outside the classroom in a virtual learning environment. We may assume that the screen time for children and teenagers have raised significantly due to lockdowns and increased time spent at home. The screen time should be spent more meaningfully using Memrise, which present engaging activities for learners and the tasks are very similar to the ones in the local English curriculum. We suggest that teachers can assign some tasks from Memrise as well to have more engaged English learners along with using EBA platform which is improving day by day.

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