Sustainable Development of the Future Learning Standart: The Use of the Mobile Application in the Learning Process

Milyausha N. Kemalova[a], Farida H. Sakhapova[b] and Olga G. Evgrafova[c]

Naberezhnye Chelny Institute, Kazan (Volga region) Federal University, Mira prospect, Naberezhnye Chelny, Russia

Abstract: The given article is devoted to the study of the mobile application Duolingo as a sustainable method of teaching and learning foreign languages. In the light of the recent lockdown and rapid move to online learning, the problem of introducing effective and engaging teaching methods of the future is becoming more and more relevant. As we live in a modern IT world we are given innumerous applications to choose to learn something new and develop definite skills. However, not all of them could be used as a supplementary part of the online lesson or session. As far as the mobile application Duolingo is concerned, the bite-size lessons seem to contribute to fruitful work and further great feedback from students. Adding to the lesson plan few minutes of learning in the form of a funny game due to this mobile application is likely to help your students to manage pandemic anxiety symptoms, i.e. depression and tiredness and get ready for further studying. Having done the peer review asking 60 students we analyzed the application Duolingo underlining its strongest sides. Also some disadvantages are mentioned for those who are going to download and use the considered application.

1 INTRODUCTION

Mobile learning or M-learning is learning across multiple contexts, through social and content interactions, using personal electronic devices (Crompton, 2013). It`s also a form of distance education, m-learners use mobile device educational technology at their convenient time (Crescente, 2011). The use of alternative relevant methods of teaching and learning are being studied by foreign researchers (Trentin and Repetto, 2013; Saylor, 2012, etc.).

M-learning suggesting different special applications (e.g. Drops, Simpler, LinguaLeo, etc.) for learning foreign languages, popular and less taught ones (as Irish), could definitely catch the attention of students and at the same time containing educational value be useful. Just by watching and listening to students` talks in a group it becomes clear that they prefer this modern approach to be added to the learning process (Keegan, 1996). Moreover, in the light of the recent lockdown the most of the students

had to move to online studying and it took hours and great efforts to get used to it for students as well as teachers. In the classroom we could control many aspects of the environment; we do our best to provide a safe, inclusive environment conducive to both learning and teaching. Once this is taken away, we are to support students in their own learning spaces, which are linked to physical learning environments, tools and devices, connectivity, personal support. Unfortunately, it is impossible to keep in mind all the given aspects in order to minimize students` anxiety level and encourage them for better learning. Not saying about the great pressure, teachers work under, when they need to teach balancing online and offline. It becomes clear that something relaxing and engaging should be added to our lesson plans to help both teachers and students to feel at ease and continue working further with a greater motivation and win time if you have technical problems ranging from the slow connection speed, bandwidth to stability, etc. Here we are to come up with the following decision – to analyze the educationally valuable application for

[a] https://orcid.org/0000-0002-3711-2511

[b] https://orcid.org/0000-0002-4272-4977

[c] https://orcid.org/0000-0001-9682-7747

633

learning a foreign language in order to see whether this method could be introduced and used as the sustainable method in future education.

However, it is necessary to highlight that we should be careful while choosing the applications we would like to use on the online sessions as a powerful source and tool for studying. To avoid inappropriate ones we are to try them ourselves first. It would be wise to add that while choosing the mobile application for the better learning process you as a teacher or tutor should take into account that free or no fee applications are more preferable to suggest your students on lessons. Hence, in order to enrich your lessons with engaging activities to keep your students motivated and simultaneously relaxed during both synchronous and asynchronous online sessions you need to choose better one established application than several typical ones which have not been tested yet.

In the given article we are focused on examining the educational value of the popular among students (and adults too) mobile application Duolingo. Giving the brief history of this free educational platform suggesting different languages to learn, underlining its strong sides, evaluating the progress of the learners in a graph, as a next step we are to draw conclusions.

The relevance of the topic is provided by the fact that the recent lockdown has changed our lives dramatically and in order to adapt to the new unfamiliar and sometimes depressing conditions is our main goal. To achieve it we need to think about the modern equally useful for teachers and students ways of future learning in the given life circumstances we were not ready for.

2 METHODS

The methodological framework of the study is based on the comparative method, i. e. the survey containing learners` answers covering numerous aspects of the mobile learning that allow to investigate whether so popular and beloved application Duolingo could be useful and effective way of teaching and learning a foreign language or languages. It would be wise to mention that 60 students of the Naberezhnye Chelny Institute/the brunch of KFU, Kazan Federal University (from the freshmen to graduates) were surveyed.

Also the analytical technique is used while assessing the contents of the mobile application Duolingo, its educational value, also taking into account the data of the surveys which led to further statistics.

The experimental data provided in the paper belong to the authors of the article. Being teachers of English we have tested this application ourselves choosing English, Turkish and Arabic languages to learn. The choice was made deliberately in order to scrutinize the application from the point of view of a new learner and advanced one, respectively.

The following works laid fundaments of our study:

- Keegan, D. (2005). The incorporation of mobile learning into mainstream education and training. Retrieved from https://ru.scribd.com/document/245786939/Ke egan-the-Incorporation-of-M-Learning-in-the-Mainstream-Education-Training.
- Keegan, D. (1996). Foundations of Distance Education. Routledge.

3 RESULTS

The application under consideration is Duolingo that is an American language-learning website and mobile application, as well as a digital language-proficiency assessment exam. The company uses the so-called freemium model. Freemium is a blending of the following words free and premium, in more common sense is a pricing strategy by which a basic product or service is provided free of charge, but money (a premium) is charged for additional features, services, or virtual (online) or physical (offline) goods that expand the functionality of the free version of the software (Guliani, 2017). This business model has been used in the software industry since the 1980s. A subset of this model used by the video game industry is called free-to-play. The analyzed application and the website are accessible without charge, although Duolingo also offers a premium service for a fee. As of 10 February 2021, the language-learning website and application offered 106 different language courses in 38 languages. The application has over 300 million registered users across the world (Settles, 2013). Hence, this mobile application is definitely worth analyzing and underlining advantages and disadvantages, respectively. While scrutinizing its relevance and educational value the screenshots would be added to support statements that were formulated during our experimental use of the given application. Three languages, English, Turkish and Arabic, were chosen to learn by means of Duolingo. Having used this application for nearly six months we could outline some of its main working principles. They are the following.

Doubtless, Duolingo is bright (mostly in green color) well-developed application that is to engage the students` attention providing them bite-size lessons. The full core of the application is well-organised that is one of the advantages. The appsymbol friendly owl Duo and a range of other different heroes, i. e. a kind energetic sportsman, teenage rebellious girl with dyed hair, wise elderly professor, a cheerful Muslim girl, a bald baby boy with only front teeth - people of different age, culture, occupation and even character) accompany you on your studying and motivate to go on even if you make mistakes. Each hero could remind you yourself, they are realistic and sincere in their self-expression. The choice of them is optimal because they are all different and unique. Despite heroes` attractive images and true-to-life human like mimics the learner is not distracted while doing exercises. For your progress on learning a language per day you are given an award, several gems (the amount varies depending on the level of exercises, goals, etc). For those who are likely to go on learning via Duolingo these gems could be spent or invested, so that you keep or up-grade your progress that is counted in numbers and shown in the leaderboard. The gems also could freeze your permanent score, if you want to skip lessons and save your progress.

In your profile you could also study the statistics per day and observe whether your language skills developed or not during the definite period of time. According to the graph, which is automatically produced, each user is able to study the statistics in detail. Then, the total amount of days is counted in order to send your personal progress statistics on your email. The user could follow others or could be followed too.

Hence, the atmosphere of the friendly competition is created deliberately so that users are not going to feel the dissatisfaction with their level of foreign language or marks and be jealous with other users. As you use Duolingo you are gradually moving from one league to another. We have started from the lowest and achieved the highest, i. e. Diamond League. If you continue working hard you are likely to be promoted, otherwise you are going to be sent back. As it can be observed in both cases the bite-size lessons are not aiming at comparing learners or dividing them according to the scores or marks. That is the strong side, doubtless. Under the given life circumstances we should remember that students suffer from post pandemic anxiety, stress, etc. Deliberate competiveness based on feeling jealousy towards other learners` marks will not contribute to better feedback at all. Future sustainable teaching methods prove it outlining that teachers ought to compensate the stress not intensify.

Moving further, we are to add that if you have registered you are likely to get a notification every day motivating you to find some time to learn the language. Once we stopped using Duolingo after six months and observed that no notifications were sent to us. Hence, it is up to each learner to decide when to stop, which is also wise taking into account the level of students` stress. Compulsory use of the application would do more harm than good. While our students were using Duolingo as an additional part of synchronous or asynchronous sessions we asked them to create a common chat group, so that they could share their experience, ask or give some advice. The great feedback accompanied with sincere emotions released the students who were feeling stiff some time ago. As a result, we may underline one more brilliant advantage of Duolingo. This application could be treated as an alternative remedy. There is the table below depicting students` comments on using Duolingo.

Table 1: Students` comments on using Duolingo.

Surveyed people (Naberezhnye Chelny Institute/the brunch of KFU, Kazan Federal University)	Time spent on using Duolingo in the online lesson (in minutes)	Time spent on using Duolingo on the own pace (in minutes)/at home	Comments
Students A (1th year/freshmen)/15 p.	15	15	«difficult because of the language barrier»
Students B (2nd year)/15 p.	15	15	«quiet interesting but a little bit difficult»
Students C(3rd year)/15 p.	15	30	«cool and motivating, our teacher really get us on the same wavelength»
Students D (4th year)/15 p.	15	30	«something new that I`ll definitely use further»

Concerning the peer preview and positive feedback we have conducted one more experiment. The students were given tests on defining the level. Similar tests were given to them in the beginning of the term. Comparing their previous answers and the new ones we could suggest that Duolingo with its repetitions of sentence structure has contributed to better understanding lexis, grammar and syntax as a whole. The vocabulary, spelling, word order were enriched due to the repetitions while doing Duolingo exercises. We have strongly recommended our students to wear headphones in order to listen to the sounds (vowels, diphthongs, consonants) carefully, then pronounce thrice in order to revise new vocabulary from the unit. As for the contents, Duolingo offers innumerous units starting with the easiest ones and finishing with the most difficult, as politics, law, etc. Each theme is accompanied by colorful flashcards that contributes to better memorizing via visual materials. At the same time the suggested flashcards are unlikely to distract the learner. While doing exercises the user is gradually promoted to the higher level within the studied theme. The highest is 5, lowest is 1, respectively.

Table 2: Students` average bandscore before and after using Duolingo.

Surveyed people (Naberezhnye Chelny Institute/the brunch of KFU, Kazan Federal University)	Previous marks (average)	New ones (average)	Comments
Students A (1th year/freshmen)/15 p.	3,5	4,1	better spelling and pronunciation
Students B (2nd year)/15 p.	4,2	4,6	better spelling and pronunciation, more complex sentences
Students C(3rd year)/15 p.	4,6	4,9	enriched vocabulary and grammar range
Students D (4th year)/15 p.	4,7	5	enriched vocabulary and grammar range

In addition to both experiments we are to outline some disadvantages of the considered application. The first is relevant for Russian students for whom the English language is not native. The application is in English so if you do not speak this language the application is likely to be hard for you. It means that you are to have at least the basic level. Freshmen do not always have it as the level of school preparation differs extremely as in other countries too. The limited number of classrooms with necessary technical equipment and WI-FI also seem to be a barrier for Russian students to use the application or platform properly. As for the application itself, while studying you could find some mistakes in the tasks that should be paraphrased. Yours answers sometimes could be counted as wrong ones. What should be done to improve the considered application is for sure adding some tasks on listening and speaking. Taking into account the future procedures for development we are likely to conclude that these types of tasks will be added.

4 DISCUSSION

The first table above depicts the answers of the survey (60 students took part), centered around the acute question whether Duolingo application could help learners in studying foreign languages or not. The second table deals with students` progress in six months using the analyzed application. Students were asked to answer honestly how much time (in minutes) they spent each day in front of the laptops or mobiles, their predictions on possibility of introducing this mobile application to everyday online sessions. According to the responds of students we could add that the style of life they lead nowadays is obviously linked to the virtual universe, so the future standards of educations have already settled down, and mobile application is only one of the numerous other effective methods of teaching and learning. Our goal is to to find and introduce the most appropriate ones in order to eliminate side effects. We are, teachers, to try them first, respectively.

Unfortunately, we do not have privilege to eliminate the use of inappropriate applications at all and choose only the ones that are aimed at exercising mental and physical features, training especial required skills for a number of jobs, educating users in general. The most adequate here is to work with the learners` passion for playing the right way, both motivating and educating, respectively (Malone, 1981). Thus, the role of a teacher still remains important. Sorting out the applications with high educational value needs your concentration, patience and enthusiasm.

5 CONCLUSION

Having considered both the advantages and disadvantages of the given method, which consists in applying the mobile application to the online sessions we have observed in practice that this modern approach is effective, of course, with the proper organization of work (schedule, lesson plan, etc). Thus, the use of any applications should be only supplementary (Lawrence, 1986). Despite the weak sides this relevant method can be effectively used in many schools, colleges, universities across our country on the base of sustainable learning standart. It`s also proved to be the best alternative for the teacher who is thinking about giving the useful and simultaneously relaxing tasks for students whilst summer holidays.

It`s necessary to underline here that nowadays the market of m-learning has become much wider and diverse, as the demand for educational applications has grown significantly. Via mobile stores you could choose and buy the most appropriate one among a wide range of applications, specializing in certain disciplines (e.g., English, chemistry, physics, biology, history, etc.). Companies that provide them take into account as many factors as they could in the light of the recant pandemic lockdown in order to ease and comfort the audience who has been through difficulties and limitations for a long time. Doubtless, the sustainable development of this relevant way of teaching via mobile applications worth further analyzing.

ACKNOWLEDGEMENTS

REFERENCES

Crompton, H. (2013). *A historical overview of mobile learning: Toward learner-centered education.* Florence, KY: Routledge.

Crescente, M. L. and Lee, D (2011). Critical issues of m-learning: design models, adoption processes, and future trends. *Journal of the Chinese Institute of Industrial Engineers*, 28 (2).

Guliani, P. (2017). *Duolingo looks to dominate the mobile education market with new flascard app TinyCards.* https://www.forbes.com/sites/parulguliani/2016/07/22/ duolingo-looks-to-dominate-the-mobile-education-market-with-new-flashcard-app/?sh=2722ede11c1d.

Keegan, D. (2005). *The incorporation of mobile learning into mainstream education and training.* https://ru.scribd.com/document/245786939/Keegan-the-Incorporation-of-M-Learning-in-the-Mainstream-Education-Training.

Keegan, D. (1996). *Foundations of Distance Education.* Routledge.

Lawrence, G.H. (1986). Using computers for the treatment of psycho of psychological problems. Computers in Human Behavior, Vol. 2.

Malone, T.W. (1981). Toward a theory of intrinsically motivated instruction. *Cognitive Science*, 4.

Saylor, M. (2012). *The Mobile Wave: How Mobile Intelligence Will Change Everything.* Perseus Books, Vanguard Press.

Settles, Burr (2013). *Duolingo's Data-Driven Approach to Education Official Duolingo Blog.* Retrieved from http://blog.duolingo.com/post/41960192602/duolingos-data-driven-approach-to-education.

Trentin G. and Repetto M. (2013). *Using Network and Mobile Technology to Bridge Formal and Informal Learning*, Woodhead/Chandos Publishing Limited. Cambridge, UK.