Efficiency of mobile applications for engineering language learners

N V Ivleva
Business Foreign Languages Department
Reshetnev Siberian State Aerospace University,
31, Krasnoyarsky Rabochy Av., Krasnoyarsk, 660037, Russian Federation
E-mail: natalie_ivleva@mail.ru

Abstract. Nowadays in the world of globalization and integration to survive in it and be able to prove your competences and professionalism all educators are obliged to update their professional skills and knowledge. A big role of this update is to use cutting edge and innovative technologies. However, it is important to be rather careful and following certain recommendations to get the benefit from it.

Key words. Mobile applications, operating system, language learning, engineering language learners, mobile deliver.

1. Introduction
Nowadays not only is English language learning a crucial element of getting a career promotion and getting opportunities to work in international companies but also a great way to broaden your mind and be open to resources written in English which gives a specialist a competitive advantage among other workers in their business sector. Thanks to cutting edge technologies in almost all spheres of our life it became more flexible and adaptive to learn a foreign language through those technologies as well. There is a wide range of technologies for foreign language learning, particularly English. In this range we can include educational websites, social networks tailored to language practicing, massive open online courses (MOOCs) and, as a new element in language teaching, mobile applications.

Due to mass distribution of gadgets such as smartphones, tablets, netbooks, etc. the society reorientates to a new way of life that could be focused on modern technologies and many processes are implemented through gadgets they have to simplify their life. People pay online, participate in virtual events and workshops, arrange online meetings and conferences, play games in the virtual reality etc. As a result the IT market is forced to meet the society’s needs and create all opportunities to computerize life processes not only through just a personal computer but also through mobile delivery. Consequently, more and more IT developers and designers are working in this area working on new projects and offering an extremely big amount of applications as this is demanded by the society and brings financial benefits for this business.

Mobile applications for foreign language learning are also developed by companies focused on the educational sector. It is an attractive area for the IT sphere as it brings good incomes due to popularity of foreign language learning in general. In our article we will stress on the English language as it is the global language and most popular among learners due to abovementioned reasons.

2. Categories of language learning mobile applications
Claire Bradin Siskin, an expert in English language teaching and linguistics, author of language teaching materials, categorized language learning mobile applications according to the following list which was specified by the author of this article:

- Built-in Applications – applications which are built in operating systems and can easily be used in the educational context for free without additional plugins and adaptation.
Within all those categories it is possible to highlight programs which are widely spread on the territory of the Russian Federation among language learners. For example, Google Translate for Android which uses a voice mode and belongs to repurposed applications. Using this application learners can translate spoken words and phrases if a device has a microphone. In some languages it is possible to hear the translation spoken aloud. It allows learners to get the translation of a phrase or separate words and also gives them an opportunity to practise their pronunciation and language fluency. Another widely spread mobile application in the educational context is LinguaLeo. This resource is tailored to both mobile and desktop computer modes. Focusing on application feature it is crucial to highlight that this application allows to identify learners’ language goals, boost the language competence through videos, doing a wide range of exercises. This platform also has inbuilt parameters to assess the study progress, provide awards and demonstrates effectiveness to learners which is essential from the pedagogical point of view. This mobile application can be referred to instructional applications according to its characteristics. As social networking is getting more and more popular in the Russian community it was the right way to introduce social networking applications into the educational process as they can improve learners’ skills in a more engaging way. One of the most famous social networks in the Russian Federation and, as it was analyzed, in the Commonwealth of Independent States is VKontakte. Most population dealing with social networking creates accounts on this website and constantly communicates with their friends and followers through it. Users create communities depending upon their interests and invite others to join them. It became obvious for users to create communities for people who are into language learning and mastering other cultures. In such VKontakte communities people post inspiring quotations, lists of materials to help learn in a fun and more efficient way. As an example of task generators which are attractive for language educators to put them into practice as well as for learners themselves is Voice Memos for iOS. This utility can be used for creating a dictionary with pictures and audio annotations. One more application from this category is Quizlet. It keeps learners engaged and motivated and gives them materials to help learn in a fun and more efficient way.

3. Engineering language learners.

It was covered in many researches that engineering students dramatically differ from other categories of students due to special characteristics typical only for them. Based on experiments implemented at the premises of the Reshetnev Siberian State Aerospace University, as a technical university, engineering students have analytical and cooperation professional skills. Moreover, intrinsically they are extremely curious that leads them to mastering everything new and undiscovered. This knowledge about engineering learners must be applied in all subjects taught to them as it must be considered to be a direct way to their efficiency as specialists in the future. Regarding the language learning process we must also apply it in the teaching practice. It means that all new methods and innovative technologies introduced in the area of teaching foreign languages should be immediately used for working with engineering students. It will motivate and involve them into a language study process, furthermore, it will help them meet their curiosity. At the same time it will all keep them engaged and inspired what is vital for successful education globally.

Mobile applications are one of the ways to support engineering students. It could be a good idea to use abovementioned categories of applications and at the same time always analyze which of them are more appropriate for engineering language learners. Depending on an engineering area it is possible to use Memrise as an additional resource on a regular base. Memrise is a language learning program that extends beyond vocabulary and language to things like history and science, but at its core it is a flashcard-style program that is augmented with memory tricks, images, and other useful tools to make learning a new language easier. Its
focus is largely on memorization, but it is also designed to help you have fun learning the language you are trying to pick up. Memrise gamifies the process a bit, awarding you points and reputation as you learn, and the opportunity to compete against other users while you learn and complete activities. Memrise is free, web-based, and has iOS and Android applications so it gives a chance to take lessons on the go. It allows engineering students to choose the subject area they study in their program and be trained in those areas.

4. Developing for mobile delivery
According to Robert Godwin-Jones, professor of Virginia Commonwealth University, in order to take full advantages of the operating system capabilities of a mobile device, developers need to create an application using an approach consistent with that device’s programming environment. For Apple iOS devices, such as iPhone, iPad, that means using Objective-C and Apple’s XCode developers’ tool. However, those applications do not run on Android devices, for which applications are written in Java running on a version of Linux. iOS applications are available exclusively from the Apple App Store, while Android applications are more widely available, from the official Android Market, Amazon’s Appstore for Android, Handango, and other repositories. As is the case with iOS applications Android applications are free or affordable. Most applications are usually available in English only, few are localized for other languages. Other smartphone environments (Blackberry, Windows Phone 7, etc.) use different programming environments, all mutually incompatible. All of the different smartphone software companies make development tools available, which typically include a desktop phone simulator. Most are free, or available for a modest cost. Except for iOS development, which is Mac OS only, app development can be done on Windows or Macintosh machines, and, in some instances, on Linux.

Taking all abovementioned risks and problems which can occur in the process of usage, it is necessary to realize which device and software to use in the study process and recommend learners for self-study. Russian IT market is also developing at a quick pace. It tries not to lag behind other IT markets. Due to that for Russian learners there are no critical issues which could prevent from prompt usage of devices and, consequently, their applications. However, as educators, we should keep the following criteria for devices and applications used on the territory of the Russian Federation in mind:

1. Devices and operating systems learners use in their routine life.
2. Learners’ possibilities to download applications on a paid basis.
3. If learners are a target audience of this developer or not.

5. Conclusion
As personal devices, smartphones are ideal for individualized formal and informal learning. The user determines which applications to acquire and how to use them. As language educators, we should encourage and assist the learner autonomy this enables and provide means for learners to combine formal and informal learning.

Learner autonomy is when students take control and responsibility for their own learning, both in terms of what they learn and how they learn it. It takes as its starting point the idea that students are capable of self-direction and are able to develop an independent, proactive approach to their studies.

In the field of higher education, learner autonomy is particularly important. Students may have limited classroom contact time for learning English but they may need to rapidly increase their knowledge and skills. It is therefore important for them to become self-reliant language learners who can continue learning efficiently outside the classroom.

References
[1] [EdVista], (In Eng.). Available at: http://www.edvista.com/claire/pres/smartphones (accessed 29.09.2016)
[2] [Language Learning and Technology]. (In Eng.) Available at: http://llt.msu.edu/issues/june2011/emerging.pdf (accessed 29.09.2016)