



**Methods for the formation of foreign language lexical competence of
software development students by means of mobile technologies**

Tomsk Polytechnic University

Vladislav Sidorov ^a

^a School of Basic Engineering, Tomsk Polytechnic University

Abstract

This paper presents a review and analysis of the possible use of mobile technologies needed for the formation of lexical competence on the discipline “Professional English Language”. The choice of the topic of this work is determined by the factor of globalization and the widespread distribution of English as an international language, as well as the availability and functionality of modern mobile devices. The purpose of this study is to show different sides of using mobile technologies in the formation of foreign language lexical competence. The second objective is to show that mobile technologies in education have not only positive but also negative sides. We must be careful when using them in education. Research methods will include the study, analysis, synthesis, comparison of scientific literature on the topic of the paper.

Keywords: Foreign language, lexical competence, mobile technologies, informatization;

1. Introduction

The current stage of the society development has led the global informatization of the society, and the field of education is no exception. Many studies have been undertaken on the use of information technology in the educational process. At the moment, higher education institutions in Russia, such as TPU (Tomsk Polytechnic University), TSU (Tomsk State University) use the MOODLE platform.

Nowadays, almost every person has a mobile device connected to the Internet and capable of using mobile applications. This situation allows us to use mobile devices for education in general and for studying foreign languages in particular. These devices allow students to access educational and reference materials anytime and anywhere in order to form various language competencies, in particular, lexical competence.

Thus, the objective of this study at the initial stage is to assess the possibility of lexical competence development with the help of mobile technologies, to prove the relevance and necessity of this study and to determine the didactic properties and methodological functions of mobile technologies in foreign language teaching.

2. Discussion

The relevance of this study is determined by the following: throughout the world, there is a tendency towards globalization and the use of English as a language of international

communication. In this connection, a demand has arisen in the modern society for specialists who are able to use the conceptual and categorical framework and terminology that is relevant to a specific professional field and to use a foreign language in their professional activities. This demand is especially relevant in the IT field, especially for the software developers and IT students. This is due to the fact that English-speaking countries are leaders in the development of information technology that is why special literature is mostly in English. One more reason for this is the lack of a theoretical basis for the development of lexical competence in a foreign language for IT professionals.

It should be mentioned that at Tomsk Polytechnic University mobile technologies and mobile applications are rarely used, they are either obsolete, like the above mentioned Moodle technology, or not used for education (for example, the TPU Applicant app). Moreover, the methods and means of teaching a foreign language, in particular vocabulary, vary depending on school or department. At the same time, replacement of teachers from semester to semester may take place; therefore students have to learn different vocabularies, because professional and scientific interests of their teachers may vary. This results in the abrupt and not holistic knowledge of the vocabulary. This fact, of course, is a huge drawback not only for students, but also for prospective specialists. After all, as we mentioned above, a large amount of technical documentation is still in a foreign language.

A number of fundamental studies on the use of new information and communication technologies in the educational process are presented both by foreign and Russian colleagues. Back in 2005, Timothy G. Collins has authored a paper titled “English Class on the Air: Mobile Language Learning with Cell Phones” where he considered the possibility of using mobile phones for “mobile learning” a foreign language. He considered opportunities provided by a mobile phone for learning a foreign language, for the curricula compiling, as well as pedagogical opportunities [1]. In 2009, Agnes Kukulska-Hulme in her publication “Will mobile learning change language learning?” presented data how mobile technologies would change language learning [3]. And as early as in 2011, Robert Godwin-Jones in his paper titled “Mobile apps for language learning” considered mobile applications as means for language learning [2]. The publication dated 2019, “Mobile Learning – Trends and Practice” by Maria Uther, addresses the issues about the impact of mobile technologies on learning in general [5]. Despite the fact that today there are a large number of different mobile apps for learning a foreign language; applications for the development of lexical competence of software development students are practically absent. You can find good applications for learning a foreign language, but either the functionalities provided free of charge are too limited, or the application lacks the necessary lexical specifics. Thus, there is a need to create an app with the specific necessary functionality and vocabulary.

Drawing a conclusion on all of the aforementioned, we can highlight the following problem of the study – the lack of unified means and methods of teaching professional vocabulary to software development students.

For the successful development of the methods, and consequently the application itself, it is necessary to analyze the existing methods and means of teaching professional vocabulary, highlight their advantages and disadvantages. Besides, an important stage is the analysis of psychological, pedagogical and methodological literature on the problem of the study, as well as the definition of the conceptual framework and study program.

In order to develop the application, it is necessary to draw up a technical specification based on the developed methods, to determine its design and layout, as well as a platform for the development. An important decision is the choice of the application type – it can be an application for a mobile phone or a pad, which is to be downloaded to the device. On the other hand, it can be a browser application, also known as a “site”, “website”, or “web application”.

A website on the Internet intended for being viewed and used on a mobile device can be considered a mobile website. A mobile app is an application designed to operate on a specific mobile platform (iOS, Android, Windows Phone) [4].

After the application is created, the primary and most important task is to fill it with content. Since the application will be developed for software development students, the assistance of teachers from relevant schools who have professional knowledge and are competent in a foreign language will be required to fill it. Another moment is technical documentation in a foreign language in the specified professional field. The assistance of language teachers will be highly-demanded as well – since the application will be aimed at teaching vocabulary, we cannot allow problems with the interpretation of terms into the native language.

The final stage of the study should be an experimental test of the application, involving students who will become programmers in the future.

3. Conclusion

Despite all the difficulties that face the creation of application development, the result will worth it. The use of an application for the extracurricular activities will increase students' involvement in learning, improve the quality of knowledge gained and increase the informatization level of the educational process at the university.

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