

Mobile Learning Technologies for Learning English

Nataliya Osipova, Olga Gnedkova, Denis Ushakov

Kherson State University, 27, 40 rokiv Zhovtnya St., 73000, Kherson, Ukraine

{Natalie, Gnedkova}@ksu.ks.ua, Coldcloudu@yandex.ua

Abstract. The priority of education development is the introduction of modern information and communication technologies (ICT), in particular - technologies of mobile learning, providing improvement of teaching and educational process, accessibility and effectiveness of education for personal development according to individual inclinations, abilities, based on lifelong learning. Due to rapid expansion, proliferation and increasing of functionality of mobile technologies we should use their potential to improve and facilitate learning, ensuring accessibility, equity, individualization and flexibility. The analysis of the basic features and benefits of mobile technologies for lifelong learning was conducted. The model using mobile learning technologies for learning English phonetics is proposed in the article. The mobile application allows organizing the learning process of English practical phonetics. This article describes the methodical implementation of the proposed model for learning of English phonetics. Modern education in many countries, including Ukraine, foresees the necessity of learning of foreign languages. The proposed mobile learning technologies help to achieve the main aim of learning foreign languages – forming the general and professional communicative competence of specialists in the globalized society.

Keywords. Mobile learning, environment, mobile learning environment; ICT, ICT Tool, mobile application

Key Terms. Mobile learning, ICT Tool, Technology

1 Introduction

This article describes the processes of developing and implementing the model of using mobile learning technologies for English learning using the mobile app, which is designed to teach practical English phonetics. Its main purpose is to increase English communicative competence and professional competence of specialists in a globalized society based on lifelong learning. As stated in the Project of the National Strategy of the Development of Education in Ukraine for 2012-2021 years, the aims of the National Strategy of Education are: increasing access to quality, competitive education for citizens of Ukraine in accordance with the requirements of innovative development of society, economy of the citizen; providing personal development according to the individual inclinations, abilities, needs-based on lifelong learning [5].

2 Related Work

Analysis of recent researches has shown that the priority of education development is the introduction of modern information and communication technologies (ICT), in particular - mobile learning technologies that ensure the improvement of the educational process, accessibility and effectiveness of education, young generation training in the information society. It should be noted, mobile learning is a new educational paradigm, where a new learning environment is created. Students can access to learning materials at anytime and anywhere, making the learning process comprehensive and motivation for continuing education and lifelong learning [4].

According to UNESCO, today there are more than six billion mobile phone subscribers worldwide. Thus, each person who accesses the Internet from a computer accounts two people, making it from the mobile device. Due to the widespread and rapid expansion of functionality of mobile technologies, UNESCO enthusiastically uses its potential to improve and facilitate learning, accessibility, justice, individualization and flexibility for students. The European Commission is funding a number of successful R & D projects focused on mobile learning. Over the years, these projects have been gradually evolved from the development of hardware and software that is targeting primarily at processes, to approach focused on the individual, in which mobile technology plays an important role, along with a fixed technologies to support learning in any anytime and anywhere [9].

In the definition of «mobile learning» given by S. Geddes [2] it is also mentioned the possibility of mobile learning influences on students' behavior and intellectual.

Theory and practice of usage of mobile devices and mobile educational resources in education is actively discussed at various scientific events. Since 2002, the International Conference «MLearnCon» is held, which focuses on applying mobile technologies in the context of learning and performance support, the strategies for integrating these technologies into the training mix, and the best practices for designing, developing, and delivering mobile content [10]. The International Conference of Mobile Learning, which was held since 2005 года, sought for providing a forum for the presentation and discussion of mobile learning research which illustrate developments in the field[6]. There are interesting results of the project «Mobile Technologies in Lifelong Learning: best practices» (MOTILL). The key concepts in MOTILL are Lifelong Learning and Mobile Technologies. The MOTILL project investigates how these technologies may impact on the diffusion of a social model where learning and knowledge are accessible to all, regardless of social and economic background, age, gender, religion, ethnicity or disability [6].

3 Problem Setting

Mobile learning is a part of a new pattern of education, created by technology that supports flexible, affordable, individual training. Daily use of students of mobile phones and other devices (tablets, digital assistants, MP3 players, flash drives, electronic-book readers and smartphones), which can be used in education, is now the main incentive of mass distribution of mobile learning. It is important to note that mobile technologies can help in the provision of quality education in the development

of children, youth and adults around the world, that is stated in the aims of the UNESCO program «Education for All») [9].

The purpose of the article is the design and implementation of the model of usage mobile learning technologies as a means for formation of foreign language communicative competence.

Tasks:

- Analyze of main features and benefits of mobile technologies for lifelong learning
- Find the attitudes of students to use mobile learning technologies
- Design of the model of usage mobile learning in English learning
- Mobile Application of Development for English articulation phonetics
- Description of methodical implementation of the mobile learning model

4 Main Features and Benefits of Mobile Technologies for Lifelong Learning

It is widely recognized that the idea of mobile learning is based on the training opportunities offered by mobile technologies. This method is most relevant when the student is not in the predefined place. Student uses the situational approach and available resources. Mobile learning also allows students to easily change places and conditions and combine training in several schools. Mobile education implies the emergence of a range of new methods of teaching and learning based on the belief that cooperation in terms of the traditional classes are often not as effective as it hoped [7].

Mobile education is closely connected life with training and this type of activity is not associated exclusively with the school or university [9].

Mobile learning is applied best as students' queries support, communities and social networks for training at the working place and etc. Mobile technologies allow fixing students achievement, promoting social inclusion and supporting lifelong learning (MOTILL) [6].

Advantages of Mobile learning for lifelong learning:

- Improving of access to learning resources regardless of time or location;
- Using of inexpensive everyday technologies (hardware and software);
- Choose the own learning rhythm;
- Supporting for popular ways of interaction (social networks, e-mail, phone calls, SMS, forums, chat rooms);
- Fast and quality assessment and diagnosis of possible learning problems.

The adaptation of education to the changing needs of students, encouraging of education continuing to renew and expand the received knowledge, creating a culture of continuous learning, when students do not receive formal education, but also they get to use the technologies of personal use for getting information and extension of the scope of their knowledge are the powerful mobile learning tools to support continuing education [8].

5 Analysis of the Technical and Psychological Readiness of Students for Mobile Learning

We conducted the questionnaire of students of the Kherson State University to determine their technical and psychological readiness for use of mobile learning technologies. 160 students of the Department of Physics, Mathematics and Computer Science were questioned. The questionnaire showed that 99,4% of students have mobile telephones, 82% of which have smartphones, 33,1% have tablets, and 72,5% of students – notebooks.

Figure 1 shows the percentage of students' phones that are equipped with the following technical features: 1. Internet access; 2. 3G Internet access; 3. Play of MP3-files; 4. Recorder; 5. Calculator; 6. Access to Java-applications (games, e-books, etc.); 7. Camera.

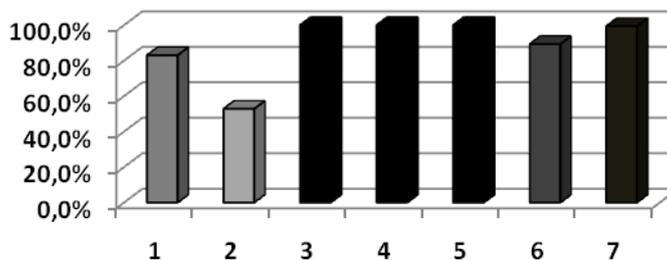


Fig. 1. The technical equipment of students' mobile phones

The technical equipment of mobile phones allows students more than 80% of them go online, use e-books, dictionaries and reference books, play audio files.

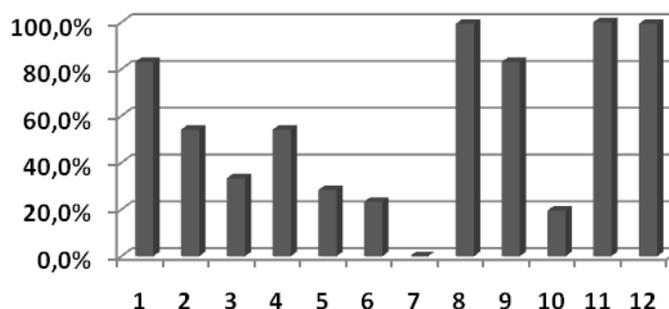


Fig. 2. Use of mobile phone applications by the students

Fig.2 shows which applications of mobile phones used by students, the numbers indicated by the following features: 1. standard browser to view web pages; 2. programs

for viewing of e-mail; 3. ICQ / QIP / Jimm; 4. programs for reading e-books; 5. electronic dictionaries; 6. office software (Word analogs, Excel, etc.); 7. training programs; 8. music player; 9. video; 10. voice recorder; 11. calculator; 12. games.

Analyzing the answers, we can conclude that the most commonly used functions such students are mobile phones, the use of browsers for browsing the web, calculator, audio and video players, receiving and sending e-mail, instant messaging. All other technical phone features are used is significantly lower. Low uses a voice recorder, office software for mobile phones.

Thus, students are not using their own mobile phones learning opportunities, despite the rather high level of technical equipment. But whether they are prepared psychologically to the use of mobile phones in the training? To answer this question, we have offered the students to answer the questions: «Would you like to download on your mobile phone all the necessary books and manuals for learning?»; «Would you like to use Internet resources for learning?»; "Would you like to use mobile applications at preparing for classes to form the necessary skills?».

Analysis of the responses showed that 82% of students would like to upload to mobile phone all the necessary books and manuals for learning, and 18% of the students answered this question in the negative. In answering the second question, opinions were divided as follows: 96% of students wanted to use Internet resources for learning, others answered in negative. Only 58% of students would like to use mobile applications at preparing for classes to form the necessary skills, others do not consider it necessary. At the same time the need for the use of mobile technologies is increasing among students, depending on the year of study. Students were asked to choose the discipline that would be convenient to study with the help of mobile technologies. More than 80% of students have chosen the foreign language. This choice is defined by the need to form foreign language skills for future career, and for this purpose mobile technologies offered: dictionaries, electronic reference books, listening to audio files, watching videos, communicating with native speakers, etc. Thus, the students have sufficient technical capabilities and high level of preparedness for the use of mobile technologies in education.

Obviously, for the use of the new possibilities of mobile learning in the educational process it requires organizational, research and methodological work on the implementation of modern policies, forms and methods of mobile learning in the educational process.

6 Mobile Learning Model of English during the Life

Mobile learning model of foreign languages, based on the basic functions of teaching and ICT opportunities; it includes a set of purposeful and orderly, and the sequence of actions of the teacher and the student through joint and individual study of structured training resources [3]. Thus mobile learning in vocational education should be based on the principle of interactive self-managed learning that will reduce their destructive impact of information and communication technologies on the social and cognitive learning activities [4].

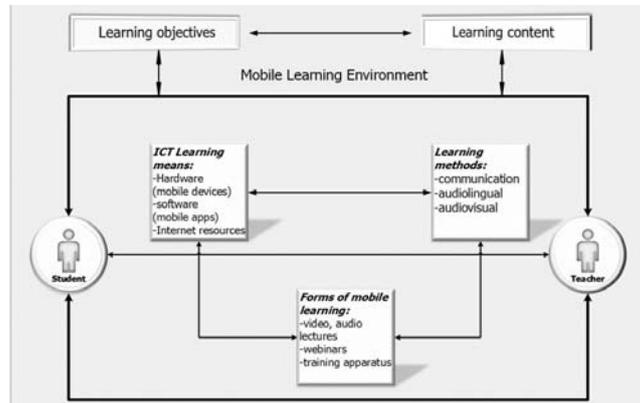


Fig. 3. Mobile Learning Model of English during the Life

7 Development of Mobile Application for English Articulation Phonetics

Mobile Assisted Language Learning (MALL) is technology of language learning using handheld mobile devices such as mobile phones (cell phones), MP3- and MP4-players, PDA, iPhone or iPad, and more. MALL is a subset of mobile learning (m-learning) and Computer Assisted Language Learning (CALL). Taking the results of the analysis of existing developments, it has been designed the mobile app English Sounds to study English phonetics. The application has a simple and user-friendly design and intuitive interface. The mobile app English Sounds can be used by pupils, students, teachers, university professors and for self-study. The main aim of the mobile application is open the opportunity for the students quickly and easily learn the material in the articulation phonetics. It gets teachers the new pedagogical opportunity in education. The program includes systematic data in the pronunciation of English sounds. It will not only improve existing skills of pronunciation, but also improve the communicative and professional competence of future specialists. Home page (Fig.4) consists of a matrix of elements - sounds. Information is presented structurally, so the division is made not only at vowels and consonants, but there is division on the subcategory (short/long, sonorous/ voiceless sound, etc.). It makes the navigation easier and search the sound faster.

The number of icons horizontally and their size was determined based on the maximum convenience, easy and accurately pressing the buttons on the devices of different screen resolutions. The matrix is organized in such way that all its elements (vertical) fit on the two screens.

After clicking on the sound icon at the main page, there is a redirect at the page with information about it (Fig. 4).

YouTube tab has view of the embedded video, which is already included the word examples and comments about the correct formulation of the lips and tongue in the pronunciation. There is need the Internet connection to view it (Wi-Fi, etc.).

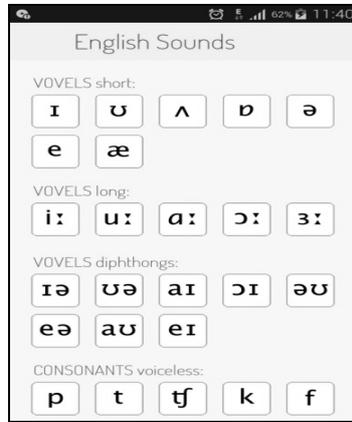


Fig. 4. Home page



Fig. 5. Sound Page



Fig. 6. View of the video

The application is implemented with mobile devices of OS Android version 4, 5, 6. In addition to Java-programming, there are tools for software development: system of automatically assembly Gradle, built on Apache Ant principles and Apache Maven; IDE Android Studio; Custom TextBox with Typeface of fonts ofDosis; YouTube API; component for playback SoundPool.

In particular, the mobile application was developed according to technical requirements that apply to educational software. Thus, according to the international standard ISO / IEC 9126 there is list of basic requirements:• Functionality;• Reliability;• Usability;• Efficiency;• Maintainability;• Portability.

Compliance with requirements at designing software allows creating a really high quality product. Its usage in the educational process will allow implementing an effective learning.

8 Conclusions and Outlook

Most of today's pupils and students are technically and psychologically prepared for the use of mobile technology in education. Mobile learning technologies can be a good addition to the traditional ones thanks to its advantages: availability, efficiency, individualization, flexibility [1]. The result of our research is design and implementation of the model using mobile learning technologies for learning English using the mobile application designed to learn practical English phonetics. The main purpose of it is to improve general communication and professional communication competence of specialists in the globalized society based on lifelong learning.

For effective use of the potential of mobile learning the mutual efforts on the part of educational leaders, software developers, trainers and teachers are required.

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