New Trends and Issues Proceedings on Humanities and Social Sciences

Mobile technologies in educational process Chinese universities

Marina Y. Antropova*, Russian New University, Russian Federation, Sun Yat-sen University, Guangzhou, China

Andrei A. Vlasov, Wuhan Textile University, Wuhan, China

Elena F. Kasyanenko, Russian Academy of Natural Sciences, Russian Federation, Wuhan Textile University, Wuhan, China

Abstract

Mobile training facilitates communication and information exchange without reference to stationary equipment. The purpose of the study is to find effective resources and mobile programs for use by Chinese undergraduate students in the study of Russian and English as foreign languages. The study was conducted in the Chinese universities of Guangzhou, Zhuhai and Wuhan. Observation, survey, survey and problem-oriented search showed that 95% of respondents prefer to use the mobile communication system WeChat (Weixin). Mobile programs and applications based on it—Xiumi, dictionaries Youdao and Qianyi, mini-program Ruclub, 'Russian centre'—are widely used in the classroom and outside the classroom, in various forms of student and teaching activities. The results of the study showed that WeChat (Weixin) is the leading mobile platform for learning foreign languages in China. It is important to create a methodological classification of mobile applications used for teaching purposes on the WeChat platform.

Keywords: Mobile learning, mobile programs, mobile app, WeChat, Chinese students.

---

* ADDRESS FOR CORRESPONDENCE: **Marina Y. Antropova,** Russian New University, Russian Federation, Sun Yat-sen University, Guangzhou, China. *E-mail address*: marina-antropova@bk.ru

1. Introduction

The use of mobile technologies based on mobile devices has confidently entered all spheres of our life, including education. Mobile devices—smartphones, iPhones, etc.,—begin to play the role of the 'third screen' of information after television and computers. The massive use of mobile devices in advanced countries, such as China, makes them an excellent technical and learning tool for organisation and provision of the educational process.

Mobile technologies used in mobile learning—MobileLearning, or mLeaming—as a new direction in the methodology, involving training with the use of mobile ICT technologies, is considered by us as a group of devices and technologies that allow communication and information exchange without reference to stationary equipment (Ilyushkina, 2017). Currently, there is a continuous and rapid development of mobile devices. The number of people using mobile devices is growing. There is growing interest in their use in education (Fojtik, 2017). Mobile technologies are becoming more fruitful and are actively used in many areas, including education (Topaloglu & Ozkisi, 2017). The improvement of teachers' skills and knowledge in the field of ICT and the successful integration of ICT in education is of great importance (Yusri & Goodwin, 2013). Mobile technologies and mobile ICT technologies 'include' mobile phones, smartphones and communicators, pocket computers (PDA), GPS devices, MP3 players, wireless Internet access (Wi-Fi), mobile phone cameras, tablet computers, portable audio and multimedia guides, portable consoles for games, etc., (Abramov, 2006). For example, a smartphone is a compact storage of an electronic version of a textbook and a workbook for a foreign language textbook, audio and video support to them, a portable player of audio and video files and a minicomputer with access to information on the Internet via Wi-Fi or mobile communication (Novoseltseva, 2017). Mobile phones are particularly widely used. They provide low-cost service, allow you to contact anyone anywhere, can solve the problem of saving time and cost (Yusri & Goodwin, 2013). Mobile technologies in education are a necessary tool for the formation of the information culture of the individual. On the one hand, they open the possibility of creating a specific personalised professionally oriented mobile space, which corresponds to the modern competence-oriented concept of education. At the same time, the emphasis is on teaching the ability to independently find the necessary information, identify problems and find ways to solve them, critically analyse the knowledge and apply it in practice. On the other hand, mobile technologies allow the teacher to take into account the individual characteristics of the student, to diagnose problems in time, to build an individual pace of learning, etc. The student can have instant and permanent access to authentic resources, educational materials and programmes, perform tasks, communicate with the participants of the educational process at any time and in any place. Yildiz. (2017) gave an absolutely accurate characterisation of them. 'Today's students are digital natives (Y and Z generation) who grow up in the multimedia world and inside the technology, it is a reality that augmented reality applications which have rich content in the learning-teaching environments can have a role that increase the motivations of the students instead of a classic course book'.

On the topic of the use of mobile devices in the educational process recently appeared a sufficient number of scientific studies based on the practical use of mobile technologies in teaching foreign languages (Kukulska-Hulme et al., 2011; Skorikova, 2016). They argue the idea that the use of mobile (smart) devices does not reject traditional methods and does not reduce their value. Rather, it supports and completes the entire learning process, offers alternative forms of knowledge dissemination and implementation (Kasyanenko & Rubtsova, 2018). Moreover, 'traditional methods of learning are slowly shifted to those that offer active interaction between participants in the learning process. Some of these are interactive methods based on advanced technologies offering a variety of activities, such as information exchange, sharing of reasoning and impressions' (Ivanova, Doncheva & Georgieva, 2018). Naturally, ICT information and communication technologies are traditionally used in teaching foreign languages, where such tools as videos, podcasts, banks, electronic platforms, applications and websites accessible via computers or smartphones and other devices have become an integral part. The creation of a full-fledged interactive environment for teaching foreign languages

using mobile devices can be called a professionally oriented mobile space (Titova, 2016). Thus, teaching foreign languages, including Russian and English as a foreign language, based on mobile technologies and Internet capabilities, where we use lightweight, compact, portable devices, can be even more successful and gives you the opportunity to use new ways of developing educational content, it can also be a good supporting tool for teaching people with special needs; suitable for mixed forms of foreign language learning and distance learning (Titova & Avramenko, 2014). Mobile learning based on the Internet is a reliable distance learning tool for students who want to continue their education outside educational institutions (Topaloglu & Ozkisi, 2017). Internet and digital media helps to improve cooperation between educational institutions, provides assistance in finding suitable partners, like-minded people for work. Educational institutions are free to choose the type of cooperation from short-term projects lasting several weeks to long-term programs (Ivanova & Doncheva, 2018).

2. Purpose of research

The purpose of the study conducted at the universities of Guangzhou, Zhuhai and Wuhan, China, is to identify mobile programs and resources specific to the Chinese audience and to show the possibility and effectiveness of their application in practical classes with bachelor students studying Russian and English as the main and additional specialty.

3. Methods

Studies were conducted at the universities of Zhuhai, Guangzhou and Wuhan of China in the process of teaching. Using methods of observation, questioning and problem-oriented search, it was suggested that the use of Chinese resources for mobile devices, such as the WeChat program, qualitatively affects the effectiveness of the educational process. This was the impetus for more in-depth research. WeChat is a mobile communication system for the transmission of text and voice messages, developed by the Chinese company Tencent, the first release of which was in January 2011. The application is available on iPhone, as well as on phones running Android, BlackBerry, WindowsPhone, Symbian and J2ME/S40, there is also a web interface and a client for PC (Windows and OS X, which, however, requires a smartphone to be installed for authentication, are only available to Android, iOS and WindowsPhone Users). As of 2013, according to Wikipedia, WeChat had 300 million registered users; of these, 70 million were outside of China. At first, the program was called Weixin, but then in April 2012, it was renamed WeChat for the international market. To date, this program is the number one in the world for downloads and the number of users. In fact, it is a text and voice messenger with advanced features, including: support for 18 languages, including Russian and English; availability of social network elements; selection of funny stickers and games. To download the program, you can go to the official website www.wechat.com.

4. Obtained result and discussion

During the survey of the focus group, students of the 1, 2 and 4 courses of the faculty of Russian language of Sun Yat-sen University (Guangzhou) and students of the 1 course of the faculty of English language of Wuhan Textile University were offered a number of questions. When answering the question 'Which mobile applications do you use the most?, 95% of respondents put WeChat in the first place for communication. The second and third places were taken by applications of electronic dictionaries—You dao, Qian Yi, Zhi hu. To study the Russian language, the students used the dictionary Qian Yi Qi Ba. QQ (dictionary, video, news, entertainment, music) was mentioned by 50% of respondents, putting this resource in the second and third places. Popular applications are Bilibili and Kinsoft (watching movies, listening to music), Taobao and Jing Dong (shopping), Weibo (video, news) and Microblog (blogs). They were put by respondents on the fourth and fifth places in equal shares.

Only one of the respondents mentioned Vkontakte and Google. And this is understandable: in China, these Internet resources are officially banned.

In General, students ranked mobile programs and resources according to the purposes of use in descending order from 1 to 5 places: for link and communication, to use electronic dictionaries, for shopping, for ordering food, for traveling. 95 % of Chinese students named WeChat. 100% said that they use WeChat in mobile devices (mobile phone). For what purpose: 100% for communication (first place in the survey rating); 60% for study (second place in the survey ranking); 60% for personal use— entertainment, photo (the third place in the ranking of the survey); 80% for purchase (the fourth place in the ranking of the survey); 60% for different purposes (the fifth place in the survey ranking).

In the course of research, it was found out that the Internet resource WeChat for Chinese students is the most popular at the moment, as well as for most Chinese consumers. Considering the possibility of using WeChat in the work of a foreign teacher, we came to the conclusion that the use of ICT and mobile technologies in the educational process has many advantages over traditional ones, namely: involvement of appropriate forms and methods in educational and extracurricular activities; increase of students motivation due to the possibility of active participation in creative work; enhancement of the share of independent work of the student; saving study time; access to various authentic materials; significant degree of illustrative; reducing the voice load of the teacher, etc. Therefore, the methodical task of a foreign teacher is to master the capabilities of this resource and its use in the application of mobile technologies in the educational process of teaching foreign languages. At the same time, mobile technologies, as opposed to just ICT technologies, allow to process information in a foreign language with the involvement of various channels of perception and reproduction. They are a kind of comprehensive learning tool that a student can use for self-study of a foreign language for purposes to motivate and perfection. Today, there are a large number of mobile applications designed specifically for learning foreign languages, which is one of the advantages of mobile technologies. These applications themselves may act as a means of education and control. They allow the student to quickly, anywhere and at any time, to find the necessary information, including in a foreign language on any subject, including professional knowledge. According to the results of the analysis of WeChat resources, Internet sources and the survey of focus group students, the most popular mobile applications and mini-programs for self-study of Russian as a foreign language were identified: Qian Yi (Russian-Chinese dictionary), Russian lesson begins (training resource), Ruclub (training resource), RussianCenter (news of the Russian center and video tutorials), Sinocom (news about China), Russian Club (news about Russia) and Xiumi (designed to create mobile presentations using the popular app Baidu).

Research has indicated that WeChat is used in the educational process:

- in the classroom: as a visual learning tool for transferring to the group a certain file (text, voice, music) or image (pictures, diagrams, tables, photos, videos); as a control material (file with the task for control, including tests); as training material if you need to access the training resource available in WeChat; as a result of the project work of students, when performing a mobile group or individual presentation;

- in extracurricular activities: as a means of communication with social network/group members; obtaining visual and other information for project activities; to check and correct the performance of homework by type of speech activity, in particular, reading and listening;

- for individual work: as a motivation for project work and submission of its results through mobile presentations; as a source of information and other materials for the preparation of homework; to access learning resources for obtaining training and other materials;

- as a carrier of mobile technology, for example, using QR-codes.

QR-code (eng. quick response)—matrix code (two-dimensional barcode), developed and presented by the Japanese company 'Denso-Wave' in l994. There are many ways to use QR codes in the

educational process: from playing games to creating a resume. The easiest way is to place QR codes on information sheets or posters for more information about planned events, competitions, educational sites, etc.

4.1. Recommendations

In addition to existing academic projects (MoLeNET (UK), Mobile Learning Environment Project (USA), MOTILL (European Union), MLearning Consortium (Canada)), publishing houses and mobile application developers themselves in Alliance with teachers create narrow-profile ICT training resources. For example, the Russian educational website 'School of mobile learning' offers modules-tests for students in the main subjects, created on the basis of the software Learning Mobile Author. Students can download it on the website http://download. cnet.com/Learning-Mobile-Author/3000-2064_4-10862598.html) and create tasks and podcasts themselves. In our opinion, given the positive experience of development in this area, it is promising to create a data Bank, educational sites available in mobile applications for learning foreign languages. Modern resources for communicators such as Smartphones, IPhones, Blackberries and others can provide access to training material, the opportunity to repeat the past material, get advice from a teacher, communicate with classmates about project development, mobile presentations and brainstorming. Teachers can use mobile applications to organise students' offline work outside the classroom, creating tests and search tasks, podcasts and video files of lectures. Creation of methodological classification of mobile applications on various platforms, such as Google Play or WeChat, remains relevant. Such studies are already underway, and, as their authors emphasise 'that there is no exact classification of published applications and no set of methodological criteria in the publication process of applications, resulting in the emergence of a learning environment that lacks methodological background' (Yavuz & Celik, 2018). They offer a methodological classification of dictionary applications in Google Play.

For effective learning of a foreign language by Chinese students, it is possible to suggest a classification of not only vocabulary but also other educational mobile applications in WeChat. This will give a great help to the teacher in the organisation of independent work of the student, without which modern education is unthinkable.

Taking advantage of all the possibilities of mobile technologies, we must not forget that mobile devices are a tool, not a way to take time, so their use should stimulate communication in a foreign language during practical training, and not replace them. Most of the work with technical means is better to use in self-study, and class time is better to spend on the organisation of proper communication and instructions-comments on extracurricular activities. Thus, by creating new forms of knowledge and mentality through mobile learning, learning becomes modern, sufficient and personalised.

5. Conclusion

Summarising the ideas of using mobile technologies in teaching foreign languages to Chinese students using WeChat, we can note their effectiveness in the organisation and provision of the educational process for the formation of the so-called professionally oriented mobile space. Mobile technologies have interactivity, relative accessibility, adequacy, ability to motivate, flexibility and, of course, mobility. They are actively used in the educational process in Chinese universities in various forms of teacher and student activities, which can be represented in the form of a small table.

Table 1. Tasks of using mobile technologies in teaching foreign languages by WeChat

Classroom work			Project work			Individual work
visualisation	control	correction	visualisation	reflection	QR-code	self-reflection

Without a doubt, the rapid spread of mobile Internet and devices has brought huge opportunities to the educational process. Studies have shown that the proposed technology and forms of learning using mobile devices develop Chinese students not only speech but also General competence in the field of foreign languages. They provide differentiation of educational material by levels and subjects, establish interdisciplinary connections and guarantee feedback in the organisation of independent work. At the heart of this process is the interest of Millennials in the use of modern gadgets, in particular, outside the audience.

The developing educational trend of MobileLearning—mobile learning using mobile technologies— has great prospects to become an educational mainstream.

References

Abramov, R. N. (2006). *Mobilnye communikatsionnye tekhnologii i povsednevnost* [Mobile communication technologies and everyday life]. *old.jourssa.ru/2006/4/9bAbramov.pdf*. Retrieved from http://www.old .jourssa.ru/2006/4/9bAbramov.pdf [in Russian]

Fojtik, R. (2017). The use of mobile devices in education. *New Trends and Issues Proceedings on Humanities and Social Sciences, 3*(3), 41–47. Retrieved from https://doi.org/10.18844/gjhss.v3i3.1521

Ilyushkina, M. Yu. (2017). *Mobilelearning ili informatsionno-communikatsionnye tekhnologii v rabote prepodavatelia inostrannogo yazyka* [Mobilelearning or information and communication technologies in the work of a foreign language teacher]. *Zhurnal "Pedagogicheskoe obrazovanie v Rossii"—Journal "Pedagogical education in Russia".* Retrieved from https://cyberleninka.ru//n/mobile-learning-ili- informatsionno-kommunikatsionnye-tehnologii-v-rabote-prepodavatelya-inostrannogo-yazyka [in Russian].

Ivanova, E. & Doncheva, J. (2018). The efficiency in training and knowledge development to students by integrating the information and communication technologies in the lesson of 'Around the world'. *New Trends and Issues Proceedings on Humanities and Social Sciences* [Online]*, 5*(5), 85–90. Retrieved from www.prosoc.eu

Ivanova, E., Doncheva, J. & Georgieva, C. (2018). Teaching roles and competences in the century of high technologies. *New Trends and Issues Proceedings on Humanities and Social Sciences,* 5(5), 91–99. Retrieved from https://doi.org/10.18844/prosoc.v5i5.3682

Kasyanenko, E. F. & Rubtsova, L. N. (2018). Puti razvitiia nauchno-yissledovatelskoi raboty studentov v Sankt- Peterburgskom khimiko-farmatevticheskom universitete [Ways of development of research work of students in St. Petersburg chemical and pharmaceutical University]. *Mezhdunarodnyi zhurnal experimentalnogo obrazovaniia [International Journal of Experimental Education, 9*, 5–11. Retrieved from https://doi.org/10.17513/mjeo.11830 [in Russian]

Kukulska-Hulme, A., Pettit, J., Bradley, L., Car-valho, A., Herrington, A., Kennedy, D. & Walker, A. (2011). Mature students using mobile devices in life and learning. *International Journal of Mobile and Blended Learning, 3*(1), 18–52.

Novoseltseva, N. In. (2017). Mobilnye tekhnologii v organizatsii samostoiatelnoi raboty po yinostrannomu yaziku v ne yazikovom vuze [Mobile technologies in the organization of independent work in a foreign language in a non-linguistic University]. *Vestnik Buriatskogo gosudarstvennogo universiteta. Pedagogika. Filologiia. Filosofiia - Bulletin of the Buryat state University. Pedagogy. Philology. Philosophy*. Retrieved from https://cyberleninka.ru/article/n/mobilnye-tehnologii-v-organizatsii-samostoyatelnoy-raboty-po-inostrannomu-yazyku-v-neyazykovom-vuze [in Russian].

Skorikova, T. M. (2016). Smart-tekhnologii kak effektivnoe sredstvo obucheniia mezhkulturnoi kommunikatsii [Smart technologies as an effective means of teaching intercultural communication]. *Kross-kulturnye yissledovaniia: obrazovanie i nauka (CCS&EC) [Cross-Cultural Studies: Education and Science (CCS&EC), 1*, 69–74 [in Russian].

Titova, S. V. (2016). Didakticheskie problemy yintegratsii mobilnykh prilozhenii v uchebnyi protsess [Didactic problems of integration of mobile applications in the educational process]. *Vestnik Tambovskogo universiteta. Seriya: Gumanitarnye nauki [Bulletin of Tambov University. Series: Humanities*]. Retrieved from https://cyberleninka.ru/article/n/didakticheskie-problemy-integratsii-mobilnyh-prilozheniy-v-uchebnyy- protsess [in Russian].

Titova, S. V. & Avramenko, A. P. (2014). *Mobilnoe obuchenie yinostrannym yazyram [Mobile foreign language training]*. Moscow, Russia: Icarus [in Russian].

Topaloglu, M. & Ozkisi, H. (2017). Identifying the collage student's perception level of mobile learning. *New Trends and Issues Proceedings on Humanities and Social Sciences, 2*(5). Retrieved from https://doi.org/10.18844/prosoc.v2i5.1100

Yıldız, E. (2017). Augmented reality research and applications in education. *New Trends and Issues Proceedings on Humanities and Social Sciences, 2*(11), 238–243. Retrieved from https://doi.org/10.18844/prosoc.v2i11.1927

Yavuz, F. & Celik, O. (2018). Teaching vocabulary through mobile applications: a methodological classification of vocabulary applications on Google Play. *New Trends and Issues Proceedings on Humanities and Social Sciences, 5*(1), 107–114. Retrieved from https://doi.org/10.18844/prosoc.v5i1.3391

Yusri, I. K. & Goodwin, R. (2013). Mobile learning for ICT training: enhancing ICT skill of teachers in Indonesia. *International Journal of e-Education, e-Business, e-Management and e-Learning, 3*(4), 293–296. doi:10.7763/IJEEEE.2013.V3.243.