International Journal of Research in E-learning

Vol. 5 (2), 2019

Wydawnictwo Uniwersytetu Śląskiego • Katowice 2019

Indexed in
ICI Journals Master List – Index Copernicus (82.36 pts), ICI Journals Master List – Index Copernicus (ICV = 97.08 (2017)), ERIH PLUS, Central and Eastern European Online Library CEEOL (https://www.ceeol.com), Academic Resource Index ResearchBib (https://www.researchbib.com/), Polska Bibliografia Naukowa (https://pbn.nauka.gov.pl), Google Scholar, The Journals Impact Factor (http://jifactor.org/), CEJSH, BazHum, Journal Factor, CEON

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International Journal of Research in E-learning
Vol. 5 (2), 2019, pp. 5–19

DOI 10.31261/IJREL.2019.5.2.01

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Distance Technologies in Teaching Professional Foreign Languages for Medical Purposes

Abstract

The article presents the analysis of distant technologies that are utilised by the world methodological society: a set of distance technologies (desktop videoconferencing, e-mail, voicemail, online chat, web-based resources, e-learning platforms), synchronous/asynchronous technologies, m-learning/e-learning technologies. These technologies were analysed from scientific positions concerning their typology, essential characteristics, and linguistic and methodological potential.

The authors of the article also provide distance technologies that can be used when teaching Russian language as foreign for medical purposes: synchronous technologies, professional websites, e-learning platforms, e-mails, mobile applications.

The verification of distant technologies' usage is conducted experimentally. The obtained results show that distance learning is useful and should be used in teaching foreign languages for other levels and professional purposes.

Not only does the success of distance educational courses depend on the distance technologies that are provided by a teacher, but also we should rely on the consistent and integrated efforts of students, faculty, facilitators, support staff, and administrators.

K e y w o r d s: distance learning, teaching professional foreign languages, distance technologies, medical Russian

Nowadays, the significant transformations are taking place in the higher education systems of many countries. It is connected with the digital technologies' rapid development. Many universities offer both the traditional learning mixed with the elements of distance learning, or just the distance learning or e-learning. The students have got an option of studying at the campus or at home, preparing for the classes and doing tests online.

In scientific and methodological literature, one can find a variety of definitions of distance learning or e-learning. Many scientists find out some characteristics that are different from the traditional learning. First of all, it is the separation of the teacher and the learner, and special relationship between each other, anticipation of the two-way communication, saving time for the learner and the institute (Unwin & Mc Aleese, 1988; Liu & Ginther, 1999; Schlosser et al., 2002, 2009; Arafeh, 2004; Chongwony, 2008).

Informatisation and digitalisation can be recognised as the leading trends of the modern stage of development of the world educational systems. The introduction of distant digital technologies can significantly optimise the process of educational training and gives the opportunities for the use of innovative resources that provide high-quality, intensive, personality-oriented learning interaction. Teachers of foreign languages (including teaching foreign languages for professional purposes) are actively involved into the development of technologies of distance language education: in recent years, a large number of effective electronic language educational tools of various genres and formats have been created, allowing to solve both complex and aspect problems of formation and development of professional and communicative competence of foreign specialists. For cultural and language training of foreign medical specialists, specialised sites, electronic textbooks, and manuals are developed. The teachers of Peoples' Friendship University of Russia are creating a network professionally-oriented module "Test of Russian as a foreign language (levels B1–B2)."

Distance professionally-oriented training in a foreign language is in a great demand for two categories of students. The first category includes foreigners who plan to study in foreign countries. If the foreigner is going to enter the medical university in another country and he or she does not have an opportunity to come and study at the preparatory faculty or local language courses to be able to become a student the following year, the distance education will be the only appropriate way of language learning for future studying.

Another referent group that in most cases would choose the distance learning may be represented by a professional group of post-graduate students (doctors, provisors, etc.) that finished the basic education in foreign medical university but need to improve the skills of professional communication on this or that purpose.

In recent years, this direction has been significantly updated in Russia. Currently, medical tourism is extremely popular among Russian patients; its geography includes both European and Asian destinations. In addition, the active

development of telecommunication medical technologies in Russian Federation has led to the emergence of dozens of foreign medical organisations offering online consulting, international medical web-co-meetings, network conferences, etc.

As a rule, the practitioners have no time to study in extensive mode. Or the reason to study in the individual educational route may be that the foreign language is learnt outside the language environment. It happens in case the person studies in a foreign country for some years and then he or she returns back home, and it is necessary for him or her to continue improving the skills of Russian grammar and learn new terms, for example.

While teaching professional language for medical purposes, distance learning undoubtedly plays an important role. In order for this training to be effective and efficient, when creating distance learning courses, teachers need to use a variety of distance technologies that allow interactive online communication of students and teachers in the learning process. They give the learner autonomy in the process of studying. Let us take a closer look at distance technologies and electronic resources offered by the modern methodological community. We will analyse scientific positions concerning their typology, essential characteristics, and linguistic and methodological potential.

Literature Review

The researchers present the following classifications of distant technologies that are often used in the process of learning: desktop videoconferencing, e-mail, voicemail, online chat, web-based resources, e-learning platforms (Smyrnova-Trybulska, 2016; Towhidi, 2010; Prigozhina & Trostina, 2016; Brenton, 2009; "Distance Education Models and Best Practices…," 2011).

Desktop videoconferencing allows for "real time" visual contact between students and the instructor or among students at different sites. Sometimes it is necessary to have an eye contact with students for them to see something from the teacher. Videoconferencing may include behaviour modeling, demonstration, and instruction of abstract concepts. It is possible to arrange videoconferencing through Skype.

E-mail or electronic mail may be used to exchange messages and distribute files as attachment or other information between students and teachers through a computer network to a computer address.

Online chat, or instant messaging, is usually shared between a teacher and a student or a group of students in virtual chat room. The teacher can establish virtual class hours to answer the students' questions or engage subjects in an online course discussion.

Voicemail is often used in distant learning. The teachers and students can leave messages regardless of the time. This technology can substitute for e-mail and reduce the time for typing the message if it is not necessary to check the written form of it. We can send the messages with the help of WhatsApp or Viber or any other application that gives us an opportunity to exchange instant messages.

Web-based resources are very popular among the teachers and their students. Students may find a lot of useful information at websites, weblogs, and podcasts, and in such a way improve learning outcomes. With the help of the web technologies teachers can make up a classroom website that covers, for example, the timetable, additional tasks and exercises, links to access the online library, dictionaries, and so on.

E-learning platforms present the virtual learning platform or learning management systems. It is an application that is menu-based or has got a point-and-click interface for making up a course without the help of an IT specialist. Any teacher without technical education may construct it. The platform usually includes special tools to make up the tasks for students (tests, quizzes, exercises), messaging tool, e-portfolio tool for students and teachers. It gives participants an opportunity to upload and download different files. These platforms may be either branded by the university or constructed with the help of free-of-charge environment, for example Moodle environment that has got the similar set of tools.

Moreover, it is necessary to add that IT specialists make up special *applications for mobile versions* for distant education because nowadays students are more driven towards using a mobile phone for every purpose, including education. It makes the learning process easier.

The analysis shows that all the abovementioned technologies may be mediated by virtual environment that can be used by a participant via either desktop computers or mobile devices. In this connection the researchers find e-learning and m-learning. The latter is an extension of e-learning which is performed using mobile devices such as tablet PCs, mobile phones, laptops on the one hand (Sad & Goktas, 2013; Motiwalla, 2007); on the other hand, m-learning has got its certain characteristics: portability through mobile devices, wireless Internet connection and ubiquity, personalisation, collaboration (Kearney, Schuck, Burden, & Aubusson, 2012). For higher education, m-learning devices allow learners to disseminate information and finish the course even if they are away from desktop PC and hard-wired Internet connections. The usage of mobile devices improves collaboration via real-time or instant interactivity that may lead to better decision-making.

Videoconferencing, e-mails, voicemails, web-based resources, and e-mail platforms may be used at both the desktop PC and the mobile device.

In distant education scientists find the two most common online learning technologies: synchronous and asynchronous ones (Hrastinski, 2008; Er et al., 2009; Simonson, Smaldino, Albright, & Zvacek, 2012).

Synchronous technologies include desktop videconferencing, online chats, and telephone conferences that provide the participants the multiple ways of mutual communication, sharing, and the ability to collaborate and ask questions in real time.

The analysis of scientific material shows that synchronous communication provides flexibility and offers students personalised learning opportunities. The students have got the opportunity to convey their thoughts online without judgment or interruption (Er et al., 2009). It is a good experience both for the student and for the teacher.

Asynchronous technologies provide unlimited education that is independent from time and place. The students have got the opportunity to study according to their own schedule. They have got the chance to create, synthesise, and apply the content or skills being taught (Harris, Mishra, & Koehler, 2009; Simonson et al., 2012). In asynchronous learning the student can contact the educator independently of time and place. E-mail, voicemail, web-based resources, and e-learning platforms give the participants the opportunity to arrange the asynchronous learning that provides education for all categories of people, including the people with limited access to educational facilities because of social, economic, geographic, or other reasons.

While creating a distant course, teachers should take into their consideration the fact that every technology that is used by them should be carefully planned and correspond to the requirements and students' needs.

In teaching foreign languages (Russian as a foreign language), the group of teachers of Russian Language Department of the Institute for Medicine (Peoples' Friendship University (RUDN University)) has developed several distant courses to arrange the education support for students that study Russian language as foreign for medical purposes at different levels. The authors may suggest the following distant technologies.

Distant Technologies in Practice

To describe the distant technologies for teaching Russian language for medical purposes, it is reasonable to take into consideration the classifications of distant technologies presented above. All of them can be successfully used in the process of education of a future doctor.

Such synchronous technologies as desktop videoconferencing or online chats are often used by students to connect with the teacher by WhatsApp, Viber, or Skype using their mobile devices. As the experience shows, students communicate mostly if they have got some problems in understanding grammar material or if

they do not know how to pronounce this or that word or expression. Sometimes they leave the voicemail if they cannot find the teacher online.

Asynchronous technologies that let the participants study from any point of the world are the following: special websites, e-learning platforms, e-mails, and mobile applications.

Specialised Websites on Teaching Russian as a Foreign Language

Specialised websites that contain tasks for studying and various methodological materials may be effective means of teaching professional communication to foreign specialists.

As a rule, specialised educational websites, the purpose of which is the formation and development of professional and communicative competence, contain a variety of educational materials on Russian as a foreign language. Their main function is informative.

However, specialised websites on teaching Russian language as foreign can have varying orientations and structures. Depending on these, one can distinguish the following groups of specialised websites:

- *websites – electronic versions of paper textbooks*, which can be found on the websites of most universities; for example, on the website of the Moscow Road Institute in the electronic library one can download electronic versions of paper textbooks on Russian language as foreign for future doctors and engineers (http://www.madi.ru/1211-elektronnaya-biblioteka-podgotovitelnogo-fakulteta-dlya-ino.html);
- *websites – multimedia textbooks on Russian language as foreign*, which are the means of basic training on Russian language as foreign in a certain professional sphere; this type of site usually involves various forms of combination of full-time and distance learning. An example is the multimedia interactive complex "Business Russian," developed at the at Peoples' Friendship University of Russia under the guidance of doctor of pedagogical sciences, Professor T. M. Balykhina; the specificity of the textbook is that there are materials not only to train the vocabulary and grammar, or types of speech activity, but there is also a large block of materials on the culture of business communication. The structure of the textbook is modular, so the course is flexible and adaptive: one can choose the skills that students need in a specific learning environment. The textbook is interactive, so one can work in a group both under the guidance of a teacher and independently: there are tips, methodological comments, answers to control tasks, which are given in the test form (http://www.rusist24.ru/index.php/obuchenie/katalog-uchebnykh-programm/343-russkij-yazyk-v-sfere-biznesa.html);
- *websites for testing, assessment of knowledge*, which contain test tasks designed to determine and assess the level of professional ownership of the RCT; so, on the website of the Pushkin State Russian Language Institute, one can take a test

in Russian language for special purposes on the profile "Russian language in the international tourism business" (http://www.pushkin.institute/Certificates/CCT/tests-online.php);

- *websites – libraries of electronic visual aids and databases*, for instance, on the site "Library.Medica" students studying Russian as a foreign language can get acquainted with various manuals in Russian, which will allow them to get the necessary information in the learning process (http://meduniver.com/Medical/Book/);
- *websites – platforms* that contain different resources for different learning profiles; one of the examples is the website "Learn Russian," where students and teachers of the Russian language as foreign can find lessons for medical students that receive their education in Russian. It includes sections: biology, pharmacy, various presentations, terms and terminological combinations, additional materials. One can learn Russian in different languages except Russian: English, German, French, Italian, Serbian, Chinese. There is a view mode with accents. The website also contains educational texts with exercises, educational dialogues: "at the doctor's," "at the pharmacy," "how to call the doctor," "at the doctor's. Sore throat," dictionaries and educational dictionaries, including dictionaries in pictures, thematic, lexical, and grammatical ones, etc. (http://rus.lang-study.com/).

Having analysed the different types of specialised websites on teaching Russian as a foreign language which are represented on the Internet, we can conclude that the above classification is quite heterogeneous. At the moment, there is a tendency to create learning platforms that can be large in terms of educational information and include all of the above types of specialised websites for Russian as a foreign language.

At the Russian Language Department of the Institute for Medicine (RUDN University), a specialised website was developed – a platform for medical students studying Russian as a foreign language and teachers that can apply to the training course and develop the particular material independently or with the help of the teacher.

Specialised Website "Let's Speak about Medicine in Russian. Medical Russian"

The main task of the website "Let's speak about medicine in Russian. Medical Russian" is to give the information and methodological support for both foreign doctors and teachers of Russian as a foreign language.

The site contains materials for foreign students studying medicine, pharmacy, and dentistry. The site has the following structure: each of the five main sections – "Russian language as foreign for students," "Russian language as foreign for residents," "Russian language as foreign for graduate students," "Russian language as foreign for applicants" (the Department trains a certain number of foreign

students that study medical Russian at B1 level of Russian as foreign language), "Methodical bank" – has several subsections.

Sections addressed to students have a similar structure. There are exercises aimed at the formation of terminological competence of the students ("Learning Russian medical terminology"), at practising grammar skills ("Learning the grammar of the Russian medical discourse"), at the development of skills to create a monological utterance ("Learning to talk about organs and the human body," etc.), at dialogue speech ("Learning to discuss medical problems"), and at skills and abilities of reading ("Reading the texts on medicine").

In the section that is addressed to foreign students, there is an audio support of the main course: students can independently practise pronouncing the main terms of the topic, work on intonation, etc. (audio application includes recorded vocabulary and texts of lessons of textbooks).

Electronic courses of professional and communicative training of foreign medical students, of course, have "paper" text that is developed for all specialties which students study: "Let's talk about medicine in Russian," "Let's talk about pharmacology in Russian," "Let's talk about dentistry in Russian." The content of the textbook follows the logic of change priority areas of communication: teaching science → educational skills → scientific and professional. In this regard, in the first part of each textbook we train educational and scientific communication (leading text genre-educational and scientific), in the second – educational and professional communication (leading genre-questioning the patient), in the third – scientific and professional communication (leading genre-scientific article).

The section "Methodical bank" contains methodological resources that allow teachers of Russian as a foreign language to carry out professional activities most effectively. For example, the teacher can find guidelines how to teach foreign students strategies of questioning patients, how to work with grammatical models, and much more.

E-learning Platform

As it was mentioned above, e-learning platforms are usually made up on the basis of the university or any other virtual environment or cloud. The teachers of Russian Language Department of the Institute for Medicine at RUDN University use both the possibilities of the University and the private Moodle cloud.

Many courses are developed for the students that study Russian language at Medical Institute. For example, there is a course that is devoted to the participants that are going to study Russian language as foreign at the medical faculty. They may study it distantly to be able to come to Russia with B1 level (professional level) and to study at the Medical Faculty. The goal of the course is to form the communication skills at the level mentioned above. Selection, systematisation, methodical interpretation of language and speech material, which should be achieved by foreign students, are based on the principles of functional

and communicative linguistics and communicative activity methods. The course includes different tools: lesson, URL, file, quiz, forum.

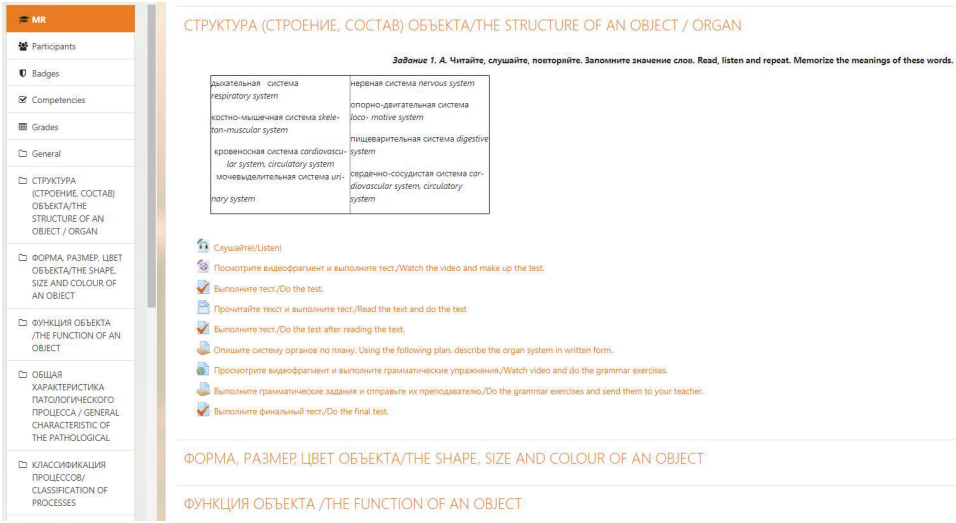

Figure 1. The example of e-learning platform "Medical Russian" in teaching Russian language as foreign for medical purposes.

The *lesson activity* gives the teacher an opportunity to introduce the material to the students in an interesting and flexible way. New terms and grammar rules are given with the help of this tool. Additional information may be inserted into the lesson activity with the help of the *file activity* that enables the teacher to provide a file as a course resource that is downloaded by the students. The students need to have the necessary software on the computers or smartphones to open the files.

The *URL activity* is also used as a course resource by the teacher. Any freely available online material can be linked, for example, video, documents, pictures, or websites.

After the introduction of the necessary material, its understanding may be checked with the help of the test that can be made up with the help of the quiz activity.

The *quiz activity* lets the teacher of Russian language as foreign create tasks for testing the material including multiple choice matching or short answers. This kind of tasks is often used by the teachers because tests are usually the most convenient way of checking any piece of knowledge: mini tests for reading to check the text comprehension, the grammar competence formation, and so on. The questions are usually shuffled or randomly selected from the question bank by the teacher, which limits the time as well. If the test's goal is training, the teacher can allow the quiz to be attempted several times. If it is the final knowledge check, the quiz is done only once.

In this course the forum activity is incorporated. It enables the participants to have the asynchronous discussion. It may be used as a social place for the students to get acquainted, as a course announcement, as a space for discussion of a course content or reading materials, and as a one-on-one support area for private communication between a teacher and a student. Any student can start the discussion with any question he or she has. Files are allowed to be attached to posts. The participants subscribe to forum to get the information about new posts. These posts can be evaluated by teachers or students.

E-mails

E-mails are often used in the practice of online teaching Russian language as foreign for medical purposes. Usually, if one does not work with the students through e-learning platform, it is a good means of sending the teacher the compositions in the written form to be checked.

Mobile Applications

In teaching Russian language as foreign, mobile applications are becoming more and more popular among the students. At the moment, there are a lot of mobile applications that are made not only for the formation of grammatical skills, but also to check if they are formed or not. Moreover, not so long ago the mobile application TORFL GO for Android and IOS users was downloaded. It was created to prepare and check the proficiency level of Russian as a foreign language.

To check the level of proficiency in medical Russian as a foreign language, no mobile applications have been created so far. However, for the formation of skills of professional knowledge of the Russian language as a foreign language for medical purposes, teachers of Medical Institute of RUDN University actively use already created professional mobile applications that can be used by modern doctors in their professional activities. These applications contain a large number of terms and grammatical structures that can cause difficulties for future foreign doctors, whose activities are now impossible without them.

For example, modern doctors often use the special mobile application to see the consultations online, appointments, and so on. This application has its own structure and the way of operating with this mobile application. So, the teachers give special tasks to teach the students use this application.

Methodology

The pilot training course based on distance learning was conducted on the basis of the Peoples' Friendship University of Russia.

The purpose was to verify the role of distance technologies and the distance learning in teaching the Russian language for medical purposes. 2 groups of postgraduate students from Arabic countries (Syria, Egypt, Libya) took part in the study. Initially, the postgraduates were offered either to study in a traditional way or to register and study the course online. Each group included 5 students. The starting level of language was homogeneous: B2 level of Russian as a foreign language proficiency. During the experiment, the students were suggested to take a test to check their knowledge, skills, and abilities. The test included five subtests: vocabulary and grammar, writing, listening, reading, and speaking. The materials for distant learning were presented as online tests for the participants. Speaking was examined online by Skype application.

Results and Discussion

As can be seen in Figure 2, Group 1 – studying online – showed the higher results in all aspects of language proficiency suggested in the sub-tests, whereas Group 2 – training in a traditional way of learning – showed the lower results.

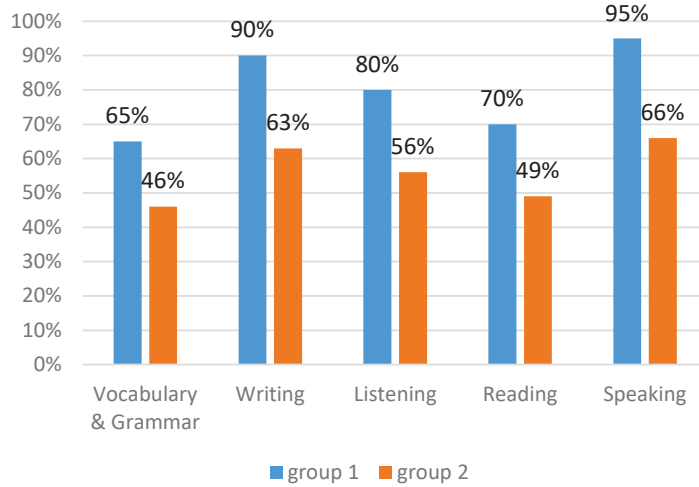

Figure 2. Examination results in the "Russian as a foreign language" module.

The scores of both groups are shown in Figure 2. Based on these data, the comparison of the results shows that the testees trained by means of distance learning have the results in all the sub-tests higher by 25–30% than those of language learners trained in a traditional way. In addition, not only quantitative but also qualitative changes should be noted in the language proficiency of the

experimental group trainees: within the framework of the speaking sub-test, they began to use the language means more fluently and confidently, combine the adopted speech patterns, and choose the ways to express their thoughts. Thus, the experimental data showed the consistency of the proposed distance learning.

Conclusions

Distance language learning plays an important role in students' education. It is appropriate both for medical students that are going to begin studying at the university and for those who have finished their education but need to continue learning foreign languages for medical purposes. For this type of learning to be effective, while making up the distance course, the teachers have to use varied distance technologies that provide interactive online communication of students and teachers in the learning process and that give the learner the autonomy in the process of studying.

If we analyse the types of distance technologies that are provided by world methodological society, three basic classifications may be found: a set of distance technologies (desktop videoconferencing, e-mail, voicemail, online chat, web-based resources, e-learning platforms); synchronous/asynchronous technologies; m-learning/e-learning technologies.

In teaching foreign languages (Russian as a foreign language), the group of teachers of Russian Language Department of the Institute for Medicine (Peoples' Friendship University (RUDN University)) has developed several distant courses to arrange the education support for students that study Russian language as foreign for medical purposes at different levels. The authors suggest using the following distant technologies: synchronous technologies, professional websites, e-learning platforms, e-mails, mobile applications.

The verification of distant technologies' usage is conducted experimentally. The obtained results show that distance learning is useful and should be used in teaching Russian language as foreign for other levels and professional purposes.

In conclusion, it is necessary to add that the success of distance educational courses does not depend only on the distance technologies that are provided by a teacher; we should but also rely on the consistent and integrated efforts of students, faculty, facilitators, support staff, and administrators.

References

Arafeh, S. (Ed.) (2004). The implications of information & communications technologies for distance education: Looking toward the future (Final Report). Retrieved from http://www.sri.com/policy/csted/reports/sandt/it/Distance_Ed_Lit_Review_FINAL_6-9-04.pdf.

Brenton, S. (2009). E-learning – an introduction. *A handbook for teaching and learning in higher education*. Taylor&Francis. Retrieved from: https://www.sun.ac.za/english/learning-teaching/ctl/Documents/A%20Handbook%20for%20Teaching%20and%20Learning%20in%20Higher%20Education%20Enhancing%20academic%20and%20Practice.pdf (reference date: 06.02.2019).

Chongwony, L. K. E. (2008). An investigation of social presence in postsecondary learners enrolled in online learning environment. (Doctoral Dissertation). The College of Education of Ohio University. Retrieved from https://etd.ohiolink.edu/!etd.send_file?accession=ohioul199472454&disposition=inline (reference date: 01.02.2019).

Distance Education Models and Best Practices. (2011). Retrieved from https://www.imperial.edu/ivc/files/Distance_Education_Models_and_Best_Practices.pdf (reference date: 06.02.2019).

Er, E., Özden, M., & Arifoglu, A. (2009). A blended e-learning environment: A model proposition for integration of asynchronous and synchronous e-learning. *International Journal Of Learning*, *16*(2), 449–460.

Harris, J., Mishra, P., & Koehler, M. (2009). Teachers' technological pedagogical content knowledge and learning activity types: Curriculum-based technology integration reframed. *Journal of Research on Technology in Education*, *41*(4), 393–416. Retrieved from http://learnonline.canberra.edu.au/file.php/5963/TPACK_UC/pdf/harris_mishra_koehler_jrte.pdf (reference date: 03.01.2019).

Hrastinski, S. (2008). Asynchronous & synchronous e-learning. *EDUCAUSE Quarterly, 31*(4), 51–55. Retrieved from http://net.educause.edu/ir/library/pdf/eqm0848.pdf (reference date: 15.02.2019).

Kearney, M, Schuck, S., Burden, K., & Aubusson, P. (2012) Viewing mobile learning from a pedagogical perspective. *Research in learning technology*, *20*. Retrieved from https://journal.alt.ac.uk/index.php/rlt/article/view/1225/pdf (reference date: 25.01.2019).

Liu, Y. & Ginther, D. (1999). Cognitive styles & distance education. *Online Journal of Distance Learning Administration*, *2*(3). Retrieved from http://www.westga.edu/~distance/liu23.html (reference date: 25.01.2019).

Motiwalla, L. F. (2007). Mobile learning: A framework and evaluation. *Computers & Education*, *49*(3), 581–596.

Prigozhina, K. & Trostina, K. (2016). Modern distant and electronic technologies as triggers of enhanced professional language training opportunities in the system of higher education. *Informatization of higher education: current situation and development prospects :materials of the II international scientific conference on October 12–13*, 2016. Prague: Vědecko vydavatelské centrum «Sociosféra-CZ»

Sad, S. N. & Goktas, O. (2013). Preservice teachers' perceptions about using mobile phones and laptops in education as mobile learning tools. *British Journal of Educational Technology*, *45*(4), 606–618.

Schlosser, L. A., Ashland, O., & Simonson, M. (Eds.). (2002) *Distance education: Definition & glossary of terms*. Bloomington, IN: Association for Educational Communications & Technology (AECT). Retrieved from http://www.nova.edu/~simsmich/pdf/jan%2024.pdf (reference date: 30.01.2019).

Simonson, M., Smaldino, S., Albright, M., & Zvacek, S. (2012). *Teaching and learning at a distance: Foundations of distance education*. (5th ed.). Boston: Pearson.

Smyrnova-Trybulska, E. (2016). Some aspects of increasing the effectiveness and comfort of the scientific and educational process in university electronic environment. *A research report. New Educational Review*, *45*(3), 259–270.

Towhidi, A. (2010). Distance education technologies and media utilization in higher education. *International journal of instructional technology and distance learning, 7, 8*, 3–30.

Unwin, D. & Mc Aleese, R. (1988). *The encyclopedia of educational media communications technology*. New York: Greenwood Press.

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Nowe technologie w nauczaniu języków obcych dla potrzeb profesji medycznych

S t r e s z c z e n i e

Artykuł przedstawia analizę nowych technologii: zestaw technologii wykorzystywanych w nauczaniu na odległość (wideo-konferencje, e-mail, poczta wiadomości głosowych, rozmowy online, zasoby w sieci, platformy e-learningowe); technologie synchroniczne/asynchroniczne; technologie m-learningu/e-learningu. Te technologie zostały poddane badaniu naukowemu pod względem ich typologii, głównych cech charakterystycznych, potencjału językowego oraz metodologicznego.

Autorzy artykułu przedstawiają także technologie, które mogą być używane w nauczaniu języka rosyjskiego jako języka obcego dla profesji medycznych: omówiono technologie synchroniczne, profesjonalne strony internetowe, platformy e-learningowe, e-maile oraz aplikacje mobilne.

Wykorzystanie technologii do nauczania na odległość zweryfikowano eksperymentalnie. Uzyskane rezultaty pokazały, że nauczanie na odległość jest przydatne i powinno być wykorzystywane na różnych poziomach w nauczaniu języków obcych dla specjalistycznych celów zawodowych.

Powodzenie kursów prowadzonych metodą nauczania na odległość zależy nie tylko od technologii, których wykorzystanie umożliwia nauczyciel, lecz także powinno polegać na konsekwentnych wysiłkach studentów, wydziałów, koordynatorów, obsługi technicznej oraz administracyjnej.

S ł o w a k l u c z o w e: nauczanie na odległość, nauczanie języków obcych dla potrzeb zawodowych, technologie nauczania na odległość, język rosyjski w profesjach medycznych

Dmitry Guzhelya, Victoria Kurilenko, Yulia Biryukova

Дистанционные технологии в обучении иностранному языку в профессиональных (медицинских) целях

А н н о т а ц и я

В статье представлен анализ дистанционных технологий, представленных мировым методологическим сообществом: совокупность дистанционных технологий (настольные видеоконференции, электронная почта, голосовая почта, онлайн-чат, веб-ресурсы, платформы электронного обучения); синхронные/асинхронные технологии, технологии мобильного дистанционного обучения/ дистанционного обучения. Эти технологии были проанализированы

с научных позиций с точки зрения типологии, сущностных характеристик, лингвистического и методологического потенциала.

Авторы статьи также приводят дистанционные технологии, которые могут быть использованы при обучении русскому языку как иностранному в медицинских целях: синхронные технологии, профессиональные сайты, платформы электронного обучения, электронная почта, мобильные приложения.

Экспериментально проведена проверка использования дистанционных технологий. Полученные результаты показывают, что дистанционное обучение полезно и должно использоваться в обучении иностранным языкам для других уровней и профессиональных целей.

Успех дистанционных образовательных курсов зависит не только от дистанционных технологий, предоставленных преподавателем, но и от последовательных и комплексных усилий студентов, преподавателей, вспомогательного персонала, администраторов.

К л ю ч е в ы е с л о в а: дистанционное обучение, обучение языку профессии, дистанционные технологии, медицинский русский

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Tecnologías a distancia en la enseñanza de lenguas extranjeras profesionales con fines médicos

R e s u m e n

El artículo presenta el análisis de tecnologías distantes descubiertas por la sociedad metodológica mundial: un conjunto de tecnologías a distancia (videoconferencia de escritorio, correo electrónico, correo de voz, chat en línea, recursos basados en la web, plataformas de aprendizaje electrónico); tecnologías síncronas / asíncronas, tecnologías m-learning / e-learning. Estas tecnologías fueron analizadas desde posiciones científicas en cuanto a su tipología, características esenciales, potencial lingüístico y metodológico.

Los autores del artículo también proporcionan tecnologías a distancia que se pueden utilizar cuando se enseña el idioma ruso como extranjero con fines médicos: tecnologías sincrónicas, sitios web profesionales, plataformas de aprendizaje electrónico, correos electrónicos, aplicaciones móviles.

La verificación del uso de tecnologías distantes se realiza experimentalmente. Los resultados obtenidos muestran que el aprendizaje a distancia es útil y debe usarse en la enseñanza de idiomas extranjeros para otros niveles y propósitos profesionales.

El éxito de los cursos educativos a distancia depende no solo de las tecnologías a distancia que proporciona un maestro, sino que también debemos confiar en los esfuerzos consistentes e integrados de los estudiantes, profesores, facilitadores, personal de apoyo y administradores.

P a l a b r a s c l a v e: aprendizaje a distancia, enseñanza de lenguas extranjeras profesionales, tecnologías a distancia, ruso médico

International Journal of Research in E-learning
Vol. 5 (2), 2019, pp. 21–32

DOI 10.31261/IJREL.2019.5.2.02

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The Technology of Development of Transversal Skills of Future Philologists in the Process of Distance Learning in the Online Course "Effective Communication"

Abstract

The article is devoted to an important problem in the higher educational system, namely, the presentation of the technology of development of transversal skills of future philologists in the process of distance learning in the online course "Effective Communication." This study presents experimental information that makes it possible to determine the effectiveness of the proposed technology for the development of such transversal skills in students as: critical thinking, interpersonal skills, organisational skills, and informational skills.

K e y w o r d s: higher education, transversal skills, online course "Effective Communication", future philologists, distance learning

Introduction

The world in which we live has changed a lot over the last time. What has affected the change in the world around us? First of all, the catalyst for the transformation of the world at the moment is modern digital technology. Such a conclusion was

made in 2017 at the World Economic Forum. A modern educational system must take into account all these processes of change and transformation of the world. And in this regard, in establishments of higher education, we must rebuild the educational system as much as possible in order to meet the needs of the individual, and to provide such knowledge and skills so that the modern student can be useful for the world and can fully live in the transforming world. What skills can help individuals to find themselves in the world of digital technology and globalisation processes? We believe that these may be transversal skills. In our opinion, all participants in the educational process, teachers and students of different specialties and different training programmes should have transversal competence. We are convinced that today's humanists who have transversal competences are able to make very interesting accents in the economy of the world as a whole, as well as in the development of human spiritual and cultural values.

In our research, we are focusing on a graduate student. At this stage, it is necessary to integrate the science and practice of learning as much as possible, to make it possible for modern students to master the technologies of professional activity. Graduates of master's programmes should have versatile professional competencies that are based on the principles of fundamental, systematic, scientific, perspective connection with life. Students must have qualities that will enable them to perform both individual and collective tasks; they must be ready for self-education. A competence-based approach, which is determined as a result not only of higher education, but also of life – long-term learning ("Council Recommendation on Key Competences for Lifelong Learning…," 2018) – ensures clarity and comparability of learning results, acquired competencies and qualifications, and creates a solid foundation for European and world integration. Work with the online course "Effective Communication" provides future philologists with transversal skills. In the first part of this article, we present the transversal skills that future philologists acquire in the process of learning from e-course materials and how distance learning can be used for their development. In the second part, we analyse the results of research conducted from September 2017 to January 2019, showing the use of the technology of work with the online course "Effective Communication." We have represented a set of activities and elements of analysis of surveys conducted with students who have completed this distance learning module in the online course at Bohdan Khmelnytsky National University at Cherkasy at the Institute of Social Communications. The purpose of this study is to present the technology of development of transversal skills of future philologists in the process of working with the online course that is aimed at increasing the professional competitive ability of the personality and facilitates transformation into a new role. This may be the role of a consultant, a mentor, a public figure, a successful manager, a customer service specialist, or an administrator.

Transversal Skills of a Specialist as a Guarantee of Success on the Job Market

What is at the heart of the design and implementation of the educational programme is the competence model of the expert (we are interested in the profile – philology).

Today, it is generally accepted that competence is divided into two groups: subject specific competences and key competences (generic competences, transferable skills, soft competences, transversal competencies) that are universal, not tied to the subject area, but must be balanced with special competences when developing educational programmes and their formation must necessarily be planned. It should be noted that scholars are ambiguous about terms, but we adhere to the term that UNESCO proposed for general use in 2015, namely transversal competencies. Transversal competences provide a "transfer of learning," that is, the transfer of acquired knowledge, skills, and meta-cognitive abilities of the individual to solve situations of real life.

The philology programme focuses on the formation of transversal competences as one of the key competences. The presence of transversal competence enables the individual to feel comfortable in a changing world, in an infinite stream of information and transformation of text content. Transversal competence as a group of skills is now a priority in many countries. In particular, the importance of its development is emphasised in training programmes in the USA. This group includes the following most important skills:

- interpersonal skills;
- critical and innovative thinking;
- intrapersonal skills;
- partnership, global citizenship.

Beginning in 2015, the foundation for the development of such skills was laid in the curricula of the training course of philology, namely:

- find and evaluate information,
- memorise information,
- manage time,
- use electronic tools for work,
- summarise.

In 2017, all these process skills were combined under the term "soft skills." At present, the development of such skills is aimed at the entire training system in various progressive countries: the USA, Belgium, Australia, Germany. In Ukraine, training programmes for the development of skills are also changing. But we are interested in not just "soft skills," we are interested in transversal skills.

What do we mean by the group of transversal skills in the process of implementing the technology of training of future philologists and – in particular – in the process of distance learning in the online course "Effective Communication"?

First of all, we need to clearly identify the foundation: what will we form and develop in students? We are interested in several vectors in this aspect:

- information competence,
- learning competence,
- partnership competence,
- communicative competence.

Distance Learning as an Effective Form of the Development of Students' Transversal Skills

In the philology curriculum there is a place where one can organise work and develop transversal skills. The traditional approach to organisation of education and using establishment of higher education audiences – and only these audiences – to master transversal skills is neither the only nor the best option. In fact, work on these skills requires a lot of time, individual and teamwork, personalisation, equipment, which is why a different structure is required for work: e-learning in combination with distance learning. Inside the learning management system, students are placed in a semi-managed environment where restrictions may be more free than in a university classroom. With the help of distance learning and working with the online course "Effective Communication," one can erase three restrictions on the audience: time, content, and the degree of personalisation. All these elements are completely interconnected. More time allows one to perform more complex tasks and perform larger or more complex content. For example, in order to develop techniques of a negotiation process, the future philologist must conduct systematisation, analysis, synthesis, which requires much more time than what is limited in terms of training a specific audience and is tied to study time. More time also gives more autonomy when dealing with complex content and choosing tools to solve problems. If we take the example of "using information," depending on the complexity, at the beginning it can take a lot of time if students lack information technology. The interest of the time is to keep them autonomous, one-on-one from the task, and allow them to experiment in various ways to search for information and use it constructively and effectively. In this case, distance learning significantly improves the quality of the product, since the student – the future philologist – is not afraid to cope with the task for a certain time. The student does not feel the time limit of his/her search. Having more time also allows

students to confront more difficult problems and make them more interesting. The use of distance learning in the process of working with the online course "Effective Communication" forces students to make the most of information and communication technologies. But here we need to take into account one important aspect. If we are talking about the autonomy of work, then we need to consider working together, because it is also very important: the student also has time management in distance learning, that is, the time for working with information and performing the task is limited. Deadlines require a certain result; in our case, it is a specific product, for example, the description of the experiment conducted on one of the topics related to public speaking and techniques of belief.

Experience in the Development of Transversal Skills of Future Philologists in Distance Learning Technology for the Online Course "Effective Communication"

In 2016, Bohdan Khmelnytsky National University at Cherkasy recruited students for the master's programme of philology. Accordingly, it was necessary to create a specific programme in order to develop both professional competencies of students and transversal skills. But within 1.5 years of the master's programme it is impossible to give students all the necessary elements, so independence in learning, the use of distance learning with specific professionally oriented courses, namely, the online course "Effective Communication" has a key impact on their studies and gives a corresponding quality result. Thus, the student – the future philologist – must form the skills to independently look for the needed elements. However, a student must be critical of what he/she finds, and then combine found information with one already known to solve the problem. That was the purpose of teaching students in the online course "Effective Communication." The distance online course training was packaged into a training module. It consisted of 7 activity groups for the first year of study and 5 blocks of tasks for the second year (the master's programme lasts 1.5 years in Ukraine).

As we wrote above, we developed an independent module for the first year of study for the master's programme focusing on such course content. The content was presented in the form of 7 groups. Each group, in turn, had tasks of different levels of complexity:

- art of persuasion,
- interpersonal communication techniques,
- effective oral speech,
- public performance,

- active listening,
- constructive feedback,
- conducting conversations and negotiations.

The experiment was attended by 58 students of the philology master's programme in the first year of study, and 39 students in the second year of study. The number of second year students was lower for certain subjective reasons: some students did not continue their studies in the programme, some switched to other programmes. In the first year of study, we identified two groups: experimental and control. We conducted the experiment in one university – Cherkasy National University named after B. Khmelnitsky with philology students (Ukrainian / English philology). Students were given about 10–14 days to complete each group of tasks. The content was with a progressive level of complexity, and it was not coordinated at all with the classes that they received during the classroom work: the module was completely independent. The observed activity period – for which we will present some results and comments here – was from September 2017 to January 2019. The main transversal skills that we focused on were:

- critical thinking skills;
- architecture of oral and written text (communicative skills);
- interpersonal skills (partnership), organisational skills (time management, resource management);
- skills of working with information.

Experimental Results

Researchers' Evaluation of the Use of Transversal Skills during the Training Module for the Online Course "Effective Communication"

Table 1 below presents our skills needs assessment for the first year of the master's programme. We gave tasks to students who were focused on the development of transversal skills; in particular, the priority was effective text as a product of activity. One of the transversal skills is the ability to speak effectively, so the technique was aimed at developing a rhetorical way of speaking, including speech literacy, effective oral speech. In the process of learning, we offered students tasks for editing text, that is, editing problematic grammatical constructions in the Ukrainian language. This contributed to the development of students's speech culture. We offered tasks for the formation of skills to find the right answer, to distinguish the correct options from incorrect ones. For example (further Ukrainian): приймати участь – брати участь; вірно говорити – правильно говорити; у повній мірі – повною мірою, слідуюча зупинка – наступна зупинка. There were also proposed tasks for the construction and edition of texts. At first, the texts were not

high enough, as the students were beginners. Of course, these numbers are quite subjective, but they must show the importance attached to each skill. In Table 1 it can be seen that in the process of distance learning we attached a lot of attention to the quality of the text, many tasks were focused on transfiguration, addition, reduction, editing, analysis of problematic communicative situations. At the beginning of the work – the first six months of the distance learning framework – we paid less attention to time management, since the proposed activities initially required less time to perform. In the first year, from 1 to 14 lessons were grouped around the topic of speaking and negotiating skills. Some of the exercises were with spaces that needed to be filled in with vocabulary, some required short written answers, and others – multiple-choice questions. Of course, there were tasks that required students' creativity. The types of documents on which the actions were based were varied: images, texts, Internet links to websites, videos. This was done in order to answer required different search methods. In order to develop critical judgment, provocation assignments with prescribed incorrect answers were added, specifically designed to mislead the student. For example, in the exercise on the formation of skills to negotiate provocations of a substantive nature were envisaged on the topic of teaching conflict resolution arising in connection with different opinions and interests. By the way, not all students who were involved in the experiment were critical of the text and were able to identify meaningful errors. Thus, there was no reaction to provocation. This gave us the opportunity to see gaps in knowledge and skills, and to improve the blocks of tasks in the process of experimental work.

Table 1.
Work on the development of transversal skills in the first year of master's programme (scale from 1 – "never" to 4 – "very often")

Basics of activities	Transversal skills				
	Organisational (time management)	Critical thinking	Interactivity (partnership)	Information skills	Text architecture
Art of persuasion	2	4	4	4	4
Interpersonal communication techniques	2	4	3	4	3
Effective oral speech	2	3	3	3	4
Public performance	2	4	2	4	3
Active listening	3	3	4	3	4
Constructive feedback	3	4	2	3	4
Conducting conversations and negotiations	3	4	3	4	3
Average	2.4	3.7	3	3.5	3.5

S o u r c e: Own work.

During the second year, students could give more complex written answers, so the requirements for the text architecture were increased. The work on critical judgment was considered already completed mainly during the first year, but sometimes provocative tasks were still used. We paid more attention to time management, as the complexity of the tasks increased; it was interesting to analyse what time management could be in terms of distance learning, whether the assigned tasks would be fulfilled and whether the majority of students would have problems with deadlines. Also, in the process of implementing the distance learning technology for the proposed independent module, certain groups of tasks on the experimental texts were effective in developing interactive skills and skills in working with information (Table 2).

Table 2.
Presentation of work on the development of transversal skills in the second year of master's programme (scale from 1 – "never" to 4 – "very often")

Task name: effective text analysis	Transversal skills				
	Organisational skills	Critical thinking	Interactivity (partnership)	Working with information	Text architecture
Text 1	4	2	4	4	4
Text 2	4	3	4	4	4
Text 3	4	2	4	4	4
Text 4	4	2	4	4	3
Text 5	4	4	3	4	4
Average	4.0	2.6	3.8	4	3.8

S o u r c e: Own work.

Students' Evaluation of the Technology of Transversal Skills Formation during the Work with the Distance Online Course "Effective Communication"

At the end of each year, an anonymous survey questionnaire was sent to students. Among the questions was a question on the Rensys Likert scale about their attitude to the level of transversal skills. Tables 3 and 4 below summarise the results for the covered period (the period of study of the master's programme from September 2017 to January 2019). This is based on certain opinions of students, and these results are subjective, but they reflect the relationships that students had. Therefore, since the factor of subjectivity is taken into account, it is correct to speak not of results, but of assumptions. During the first year (Table 3), we can see that how the "Effective Communication" module helped them in structuring the text; the students felt that it was enough for them to help them develop transversal skills. We did not hope to get such a result because the students were just beginners. But still, most of them felt the progress by working on tasks for such technology. Fewer students felt the outcome regarding the formation of critical thinking. This may be because they had not seen the provocations; they had not yet had enough

competence to perform this or that task. The table also shows the attitude to the two other positions: the information block and the organisational block of tasks that were focused on the formation of transversal skills. Fever students defined their interactive skills and partnership skills. We also asked the students which of the course assignments were interesting for them, which were difficult, which assignments might have been superfluous. Most students were very positive about the programme of this module. The most interesting tasks, in their opinion, were tasks for the development of a culture of speech (communicative and interactive competence), as well as tasks for the development of critical thinking.

Table 3.
The importance of the online course "Effective Communication" module in the development of transversal skills among students: 1st year of study (from 1 to 4) n = 58

Skills	1	2	3	4	Average
Text architecture	2	2	26	28	3.4
Working with information	2	4	13	39	3.5
Critical thinking	6	11	22	19	2.9
Organisational skills	13	20	17	8	2.3
Interactivity (partnership)	8	14	29	7	2.6

S o u r c e: Own work.

In the second year of study, students felt more progress in the formation of transversal skills thanks to the work with the architecture of texts. Also, the indicators changed with respect to critical thinking and organisational skills (time management). The second year of study on the proposed technology and the results of student surveys provide an opportunity to state the correctness of the selected methods and techniques of teaching, as well as the organisation of training.

Table 4.
The importance of the online course "Effective Communication" module in the development of transversal skills among students: 2nd year of study (from 1 to 4) n = 39

Skills	1	2	3	4	Average
Text architecture	2	4	7	26	3.4
Working with information	4	5	9	21	3.2
Critical thinking	3	5	6	24	3.2
Organisational skills	6	8	7	18	2.9
Interactivity (partnership)	2	5	4	28	3.4

S o u r c e: Own work.

Above in the text, we wrote that the experiment involved students in the amount of 58 (the first year of studies), and 39 the second year of study of the master's programme. It was allocated experimental and control group. The results of the study also showed that the students of the experimental group and their competence were better than the transversal skills of the students of the control group. In general, we stated that the level of transversal skills of students of the experimental group after passing the independent module "Effective Communication" in remote form increased by 16%. This is what gives us the confidence to think about the right course content, and its usefulness and effectiveness.

Conclusion

The above results encourage us to think that the online course "Effective Communication" module was useful and really helped students to develop transversal skills. Transversal skills of philology students will be used after graduating from the master's programme not only for studying linguistics, but also for the other fields of activity, if circumstances develop for the transformation of the professional sphere. We believe that transversal skills will enable students to be more confident in the changing and transforming world of digital technology, to be more in demand on the labour market, and thus to be more successful. We believe that to achieve these goals, the technology of distance learning is effective and constructive. And this is confirmed by the results of experimental work.

References

Digital competence (2017). Retrieved from http://europass.cedefop.europa.eu/resources/digital-competencies (accessed 20 July 2018).

Digital Transformation Initiative Telecommunications Industry World Economic Forum (2017). Retrieved from http://reports.weforum.org/digital-transformation/wpcontent/blogs.dir/94/mp/files/pages/files/dti-telecommunications-industry-white-paper.pdf (accessed 20 July 2018).

Europe 2020 strategy (2015). Retrieved from https://ec.europa.eu/digital-single-market/en/europe-2020-strategy (accessed 20 July 2018).

Education and Training 2020 Work programme Thematic Working Group "Assessment of Key Competences" Literature review, Glossary and examples (2012). European Commission, Directorate-General for Education and Culture, November, 52.

European e-Competence Frame work 3.0 (EN) (2014). Retrieved from http://www.ecompetences.eu/wp-content/uploads/2014/02/European-e-Competence-Framework-3.0_CEN_CWA_16234-1_2014.pdf (accessed 20 July 2018).

The International Society for Technology in Education (ISTE) (2016). Retrieved from http://www.iste.org/standards/standards (accessed 20 July 2018).

Saran, C. (2011). *IT and marketing: working together for business success*. Retrieved from https://www.computerweekly.com/feature/IT-and-marketing-working-together-for-business-success (accessed 9 August 2011).

Smyrnova-Trybulska, E., Morze, N., & Kuzminska, O. (2018). Academic information transparency: from teachers' e-portfolio to upgrading the rankings of universities. In: *DIVAI 2018: Štúrovo, Slovakia, May 2–4, 2018: Conference proceedings*. Prague: Wolters Kluwer: 347–356.

White, M. G. (2018). *How Is Information Technology Used in Marketing Careers?* Retrieved from https://jobs.lovetoknow.com/how-is-information-technology-used-marketing-careers (accessed 22 May 2018).

Tetiana Simonenko, Yulia Nikitska

Technologia w rozwijaniu kompetencji przekrojowych u przyszłych filologów w procesie uczenia się na odległość z wykorzystaniem kursu online „Efektywna komunikacja"

S t r e s z c z e n i e

Artykuł poświęcono istotnemu problemowi systemu szkolnictwa wyższego, jakim jest wykorzystanie technologii rozwoju kompetencji przekrojowych u przyszłych filologów w procesie uczenia się na odległość za pomocą kursu online „Efektywna komunikacja". Przedstawione badanie prezentuje informacje, które umożliwiają określenie efektywności zaproponowanej technologii w rozwijaniu u studentów takich kompetencji przekrojowych, jak: krytyczne myślenie, kompetencje interpersonalne oraz kompetencje w posługiwaniu się technologią informacyjną.

S ł o w a k l u c z o w e: kształcenie wyższe, kompetencje przekrojowe, kurs online „Efektywna komunikacja", przyszli filologowie, nauczanie na odległość

Tetiana Simonenko, Yulia Nikitska

Технология развития трансверсальных навыков будущих филологов в процессе дистанционного обучения в онлайн-курсе «Эффективная коммуникация»

А н н о т а ц и я

Статья посвящена актуальной проблеме в системе высшего образования, а именно презентации технологии развития трансверсальных навыков будущих филологов в процессе дистанционного обучения в онлайн-курсе «Эффективная коммуникация». В научном исследовании представлена экспериментальная информация, которая позволяет определить эффективность предлагаемой технологии для развития таких сквозных навыков учащихся, как критическое мышление, навыки межличностного общения, организационные навыки и информационные навыки.

Ключевые слова: высшее образование, трансверсальные навыки, онлайн-курс «Эффективная коммуникация», будущие филологи, дистанционное обучение

Tetiana Simonenko, Yulia Nikitska

La tecnología de desarrollo de habilidades transversales de futuros filólogos en el proceso de aprendizaje a distancia en el curso en línea „Comunicación efectiva“

Resumen

El artículo está dedicado al problema real en el sistema de educación superior, a saber, la presentación de la tecnología de desarrollo de habilidades transversales de futuros filólogos en el proceso de aprendizaje a distancia en el curso en línea “Comunicación efectiva”. El estudio científico presenta información experimental que permite determinar la efectividad de la tecnología propuesta para el desarrollo de las habilidades transversales de dichos estudiantes, tales como: pensamiento crítico, habilidades interpersonales, habilidades organizativas y habilidades informativas.

Palabras clave: educación superior, habilidades transversales, curso en línea “Comunicación efectiva”, futuros filólogos, educación a distancia

International Journal of Research in E-learning
Vol. 5 (2), 2019, pp. 33–48

DOI 10.31261/IJREL.2019.5.2.03

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Implementation of IT Tools as a Method of Improving Language and Communication Skills of Bi- and Trilingual Students

Abstract

This article gives some examples of students' systematic semi-autonomous work in the multimedia master's seminar, which enhances their language competencies as well as strictly technical skills. The theoretical background, based on the results of research carried out by the author in 2005–2019, demonstrates how knowledge of learners' first and second languages is advantageous during the acquisition of a third language. Seeing that this process is individual (every learner has his or her different "linguistic biography"), it is difficult take this fact into account in the coursebooks. E-learning courses, which allow students to work in semi-autonomy, become helpful in this situation. Accommodating the needs of bi- and trilingual students, prospective foreign-language teachers and translators create their own multimedia resources that fill gaps in the didactic offerings. Moreover, the unusual forms of learning by teaching (LdL – from the German phrase *Lernen durch Lehren*) improve the quality of the learning process, helping students achieve the desired language and communication skills.

K e y w o r d s: language and communication skills, learning by teaching, e-learning

Introduction

The paper describes the implementation of the results of research on language interference in bi- and trilingual students. The experiential cases show how IT technologies can be used in university language courses in order to reduce the number of interferential mistakes.

The author was actively involved in developing and implementing digital materials for distance learning, as well as developing the Distance Learning Platform at the University of Silesia in Katowice (as a supervisor of MA theses). During MA seminars, future foreign-language teachers or translators create their own multimedia resources, improving language and communication skills, which then fill gaps in the didactic offerings. The seminar prepares students to write master's theses covering the theoretical portions of their subjects – the problematic part focused on enhancing language skills – and the implementation portion, consisting of the preparation of materials using e-learning techniques and methods. The adopted solutions allow the students to become specialists in very narrow areas.

Theoretical Background

The theoretical approach of the seminar is based on the results of research conducted by the author between 2005 and 2019 (cf. Widła, 2007, 2009, 2011, 2012, 2014, 2016, 2017) analysing the phenomena that accompany trilingualism to Polish students with language competence in English at the B1/B2 levels and in French at the A1 level, learning French through the communicative method during regular classes. The student body compiled for this study consisted of works collected from 438 persons. The research materials illustrate the state after three comparable phases of learning (comprised of 100 hours each), concerning particular fields and competences. The research proved that it cannot be predicted if and when the interferential mistakes can be expected, so it is not possible to develop a general effective method of preventing them – an individualised correction becomes necessary, which greatly complicates the therapy of a mistake (cf. Debyser, 1970; Gabryś-Barker, 2005; Kucharczyk, 2018). From the point of view of linguistic analyses, at the very beginning of the learning process, it is possible to observe the following: code switching, various forms of transfer (of kind, direction, or intensity), differences between acquiring particular language, psycholinguistic phenomena such as motivation, or different learning strategies. These skills have not been taken into account in the available didactic materials. These studies show that

> the most interesting differences appear in the moment of stabilization, after about 300 hours of learning, when the students acquire proficiency, which enables them to communicate in the foreign language rather efficiently. Such progress is, of course, possible due to the competencies in the second language (especially the similarities in vocabulary, because all the gaps are compensated by the students' creativity on a larger scale). Moreover, the communicative approach, which has been dominating in teaching foreign languages for years, has weakened the language users' complexes. As a result, we experience specific hybrids, which can be properly decoded. Achieving the communicative goal is undoubtedly the most important success. However, it is hardly satisfactory for the teachers who encounter a flood of incorrect structures at every possible level. Individualized corrections become necessary. While in the case of bilingual speakers, some general tendencies could be identified, in the case of the group examined, the number of possible variables practically excluded the possibility of such identification and greatly complicated the probability of a mistake. It was also important to compare the effects of developing of some linguistic competences with the results of persons who learn second languages after their mother tongues. This was possible, thanks to the observations of experienced teachers and the materials gathered by the author in the previous years. The "trilingual" participants pass the tests better, are much more eloquent and, most importantly, much more creative, which is exceptionally visible in translations. Although statistically they make more mistakes, they always achieve the communicative goals. In this aspect, they are similar to uneducated, bilingual immigrants who fill the gaps with another known lexeme or structure and often modify them according to the rules of the language, thus making a specific neologism (Widła, 2007, p. 275).

The research participants who aspire to trilingualism turned out to be unique and different from the bilingual students. In particular comparisons of systems, the learners choose their mother tongues or their second languages (their first foreign languages) after deciding which of them, in their opinion, is more helpful in learning the new linguistic material. Even the most competent teachers, with groups of people at different levels of competence, could not possibly cope with this problem. It is a wonderful occasion to start a supplementary, yet individual learning path; this is supported by e-learning, which is a dedicated option for a wide group of people. Every form of learning that allows the students to work semi-autonomously appears to be a perfect solution. In the current situation, when most of the teachers use a foreign offer addressed to a wide range of customers, such an individualised approach is rather improbable (cf. Widła, 2007, p. 276).

That is why – after choosing the subject of the e-learning module included in their MA theses – the participants of seminars should decide which exercise can make the users aware of the danger of interferential mistakes. No type of interference should have been favoured or underestimated, either related to grammar or vocabulary. Moreover, phonetic exercises must be included, especially in the initial phases of the learning process. The chosen method of teaching was LdL – from the German phrase *Lernen durch Lehren*, which means "learning by teaching." LdL is a method of teaching in which a student adopts the role of the teacher. This method was described and implemented successfully by Jean-Pol Martin in the 1980s. LdL found imitators among teachers of various subjects. The question is whether and how well the method will work in language teaching. German linguist Joachim Grzega, a supporter of LdL as a didactic model, emphasises that in Martin's system,

> the students were enabled to train grammatical as well as communicative competence and to acquire "hard skills" as well as "soft skills" (i.e. the ability to work in a team, complex thinking, the competence to seek and find information, explorative behavior, project competence, internet competence, generating knowledge as well as disciplinary virtues like punctuality, reliability, patience, presentation skills, discussion skills). Actually, learning a foreign language means both acquiring a "hard skill" and a "soft skill," since you learn to speak about a language as well as in a language (about various topics). But LdL means even more: LdL encourages and demands creativity, independence, and self-confidence. LdL can be used for every subject and at any level (Grzega, 2006, pp. 1–2).

Fiorella and Mayer's findings point to the fact that "when students actually teach the content of a lesson, they develop a deeper and more persistent understanding of the material than from solely preparing to teach" (Fiorella & Mayer, 2013, p. 281).

The arguments adduced above, which align with the objectives of the syllabus of the seminar, determined the choice of LdL as a method of working with students.

Description of Activities

Work Plan during the First Semester

In the first semester, each student chooses the subject of interest in terms of completing the most acute gap in the area of knowledge of the studied language and through two years of work. This is done not only to overcome the gap, but also to become an expert on the previously undeveloped field. This semester is

also devoted to the selection of IT tools (websites, platforms, and so on), used to carry out the planned work and discussion of the principles of this operation. The number of disciplines indicated by the seminarians, within which projects are created, shows how different needs are revealed within the same specialty: from such typical issues as history, geography and tourism, law, work, the Internet, language teaching, sport, music, kitchen, and cosmetics, to very narrow issues, such as the car industry, energy, jewellery, pharmaceutics, natural disasters, comics, sublanguages, and many more.

Work Plan during the Second Semester

The second semester is dominated by work on theoretical chapters focused on teaching or learning methods. Students present not only the overview of language (English, French) for specific purposes but also analyse various linguistics approaches to the topic. The aim is to show why a chosen branch of language may be defined as a "language for specific purposes" in terms of teaching. Moreover, they propose different perspectives from which "language for specific purposes" may be analysed.

Work Plan in the Third Semester

In the third semester, students discuss the theoretical problems of interest to them in terms of the future use of the theory. On this basis, they prepare, under the supervision of a tutor, project(s) offering(s) for people using the network who, for various reasons, are interested in the proposed subject matter in a foreign language (employed in enterprises, cultural or educational institutions, students, autodidacts, and every person who is passionate about its specific subject or about learning languages).

Work Plan in the Fourth Semester: Master Thesis

Each master thesis is divided into three parts: the theoretical portion (divided into chapters concerned with different issues), the course itself, and the description of the module. The first part focuses on technical language and its characteristics. It also matches three main aims: content and language integrated learning, or CLIL (Coyle, Hood, & Marsh, 2010); language for specific purposes, or LSP (Kubiak, 2002; Sawicka, 2010; Trace, Hudson, & Brown, 2015); and learning by teaching, or LbT (Martin, 2004, Grzega, 2006).

Examples of Subjects

In order to approximate the content of the students' theses, I present a few characteristic examples below:

1. Idioms as a Linguistic Tool to Express Feelings: Idiomatic Expressions in English and French.
2. Teaching Vocabulary Concerned with the Automobile.
3. Learning of French for Specific Purposes: An Online Course Connected with Business Communication.
4. Content-based Instruction of Specialized Language. International Language of Tax Law.
5. Online Teaching and Learning of Phrasal Verbs: A Cognitive Approach.
6. Content and Language-integrated Learning: An Online Oriental Dance Course.
7. Problems Related to Audio-visual Translation in a Translator's Work.
8. Specialized Online Language Course: Sandomierz Town Guide as the Source of Knowledge of the Region.
9. Specialized Online Language Course for Engineers and Students of the Universities of Technology Based on the Machine Description – Numerically Controlled Tool.
10. Content and Language Integrated Learning: The Transverse Flute.

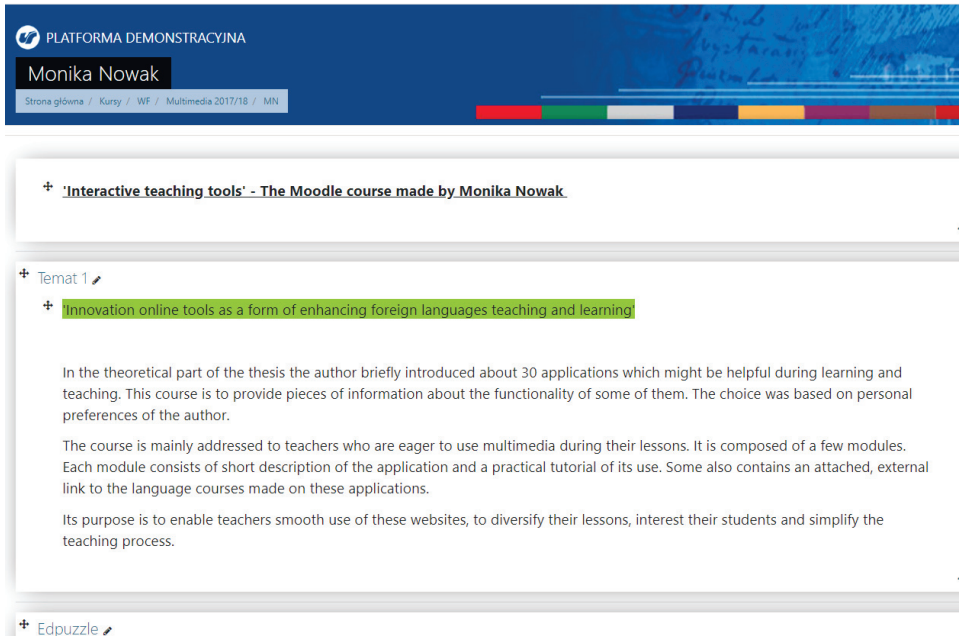

Figure 1. Innovation online tools as a form of enhancing foreign languages teaching and learning (created by Monika Nowak in 2019, supervised by Halina Widła).

11. The French Language and Its Pronunciation in Terms of Teaching Third Languages.
12. Multimedia Educational Tools for Teaching Information Technology in French for Primary and High Schools.
13. Specialized Language in Jewelry – a French Online Course for Translators.
14. Innovation Online Tools as a Form of Enhancing Foreign-language Teaching and learning.
15. Teaching Specialized Languages: An Example of an Online French Course for Professional Lorry Drivers.
16. Language as the Mirror Reflecting Culture – Cultural and Lexical Aspects in Teaching French and English on the Basis of an Online Course Concerning Contemporary Women's Fashion.
17. Content and Language Integrated Learning Based on the Description of Education Systems in the Chosen Anglophone and Francophone Countries and in Poland.

Structure of Courses

The theoretical framework described in the first parts of the theses constitutes a foundation that is necessary for the presentation of the practical side of the papers. The courses have a uniform internal structure, which makes them more transparent for students. The online course is divided into lessons, each of them presenting a different range of educational materials. It can be a source of new information for learners, but also a source of inspiration for teachers who wish to introduce something new to their teaching routines.

Example 1: Phonetic Courses

The exercises created by students are of various types and have different structures. They concern the spelling aspects but involve verbal repetition as well. In the case of phonetic courses of French language, their authors (the students) addressed two problems: avoiding having the same people recording fragments of the chosen exercises and avoiding interference from English. The recordings contain isolated words as well as entire sentences pronounced by different female and male French speakers of various ages who are not only from France but also from other French-speaking countries. The learner can find several recordings there. Thus, in the case of a pronunciation course, the variety of voices and accents better prepares the users for real-life situations; otherwise, it is highly probable that the learner will be only able to recognise the sounds produced by one specific person. Using recordings from different native speakers is also an advantage in the case of learners who have problems in pronouncing vowels that have no equivalents in the languages they know. An important point is that by creating courses, the authors are basing the content not only on knowledge derived from the literature of the subject but also on their own experiences as trilingual learners.

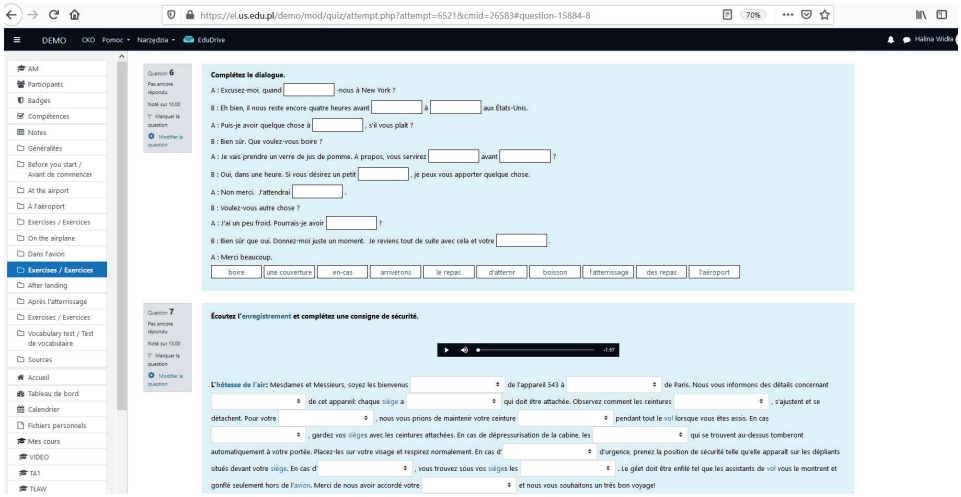

Figure 2. French vocabulary and expressions related to the aviation field (created by Aleksandra Magiera in 2019, supervised by Halina Widła).

Example 2: Vocabulary Courses

These courses, through the problems addressed, must allow for an effective linguistic immersion. Since, in principle, the subjects chosen by the students receive non-linguistic content, the majority of the courses are also part of CLIL practices (cf. Coyle, Hood, & Marsh, 2010). This solution is considered by future graduates as an additional preparation for the comparison of their skills with those required by their future professions.

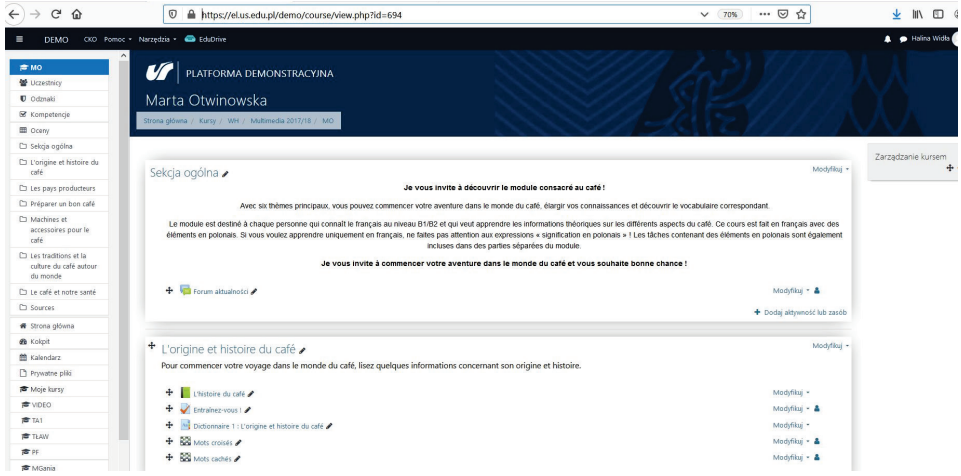

Figure 3. The online environment used to teach languages for specific purposes: a course for the lovers of coffee (created by Marta Otwinowska in 2019, supervised by Halina Widła).

The courses abound in propositions of various dictionary exercises. The authors consider the problems encountered by trilingual learners who face exactly the same language difficulties, trying to teach as they would have liked to have been taught when they themselves were beginners.

In total, over the last decade, 91 works related to the deepening of specialised vocabulary knowledge have been created.

Table 1.
The master's theses by issues, from 2009 to 2019

Topic / Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
literature	4	3		1	1	2		3		2		16
linguistics	3	3		1	2	1		1	2	2	2	17
didactics		2	1			4				1	1	9
sublanguage					1	1		1	1	1	3	8
culture	2	3	8	1	1						3	18
ecology				1	1				1			3
geography				1	1		1	1				4
industry					1	1		1	2	1		6
sport									2	1		3
music						1		1	1	1		4
technologies									1	1	1	3
Total	9	11	9	5	8	10	1	8	10	10	10	91

Example 3: Grammar Classes

In the theoretical portion concerning grammar, students' courses provide the learner with some cues concerning the comparison of English and French language systems, which may facilitate the learning process. Students choose the subjects of grammar exercises to show how these two languages can be similar, or vice versa – how they are different from each other. The problem is that it cannot be predicted whether and when the interferential mistakes can be expected, so it is impossible to develop an effective method of preventing them. Research has shown how much this process is individual, and every learner has a different "linguistic biography." Data from surveys completed by teachers and learners confirm that "intersystemic chaos" is weakening at the B1 level. This does not mean that the interferential errors disappear, but they decrease in a statistically insignificant number. On the other hand, those appearing are so spectacular that they give false impression of statistical importance (Widła, 2007, p. 153–154). Thus, MA students are guided in these cases by intuition, without realising how much their own experiences may differ from what the prospective users of their courses will experience. Possible interferences, especially between English and French, are often taken into account.

However, even if a possible interference error has not been properly diagnosed, it does not lessen the value of the exercise. The structure is presented and practised independently of the possible added value that is the avoidance of interference.

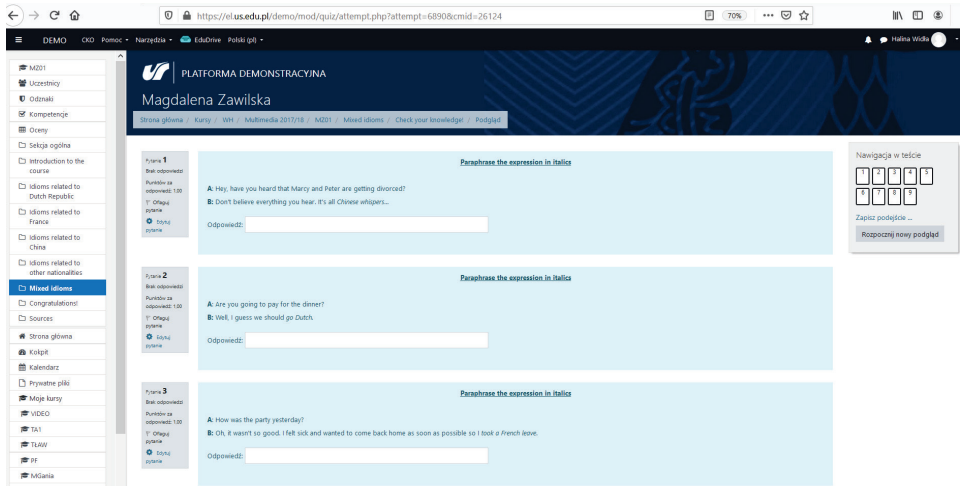

Figure 4. National stereotypes. Acquisition of English idioms related to nationalities and ethnicity: online course on the Moodle platform (created by Magdalena Zawilska in 2019, supervised by Halina Widła).

Example 4: Civilisation Courses

The culture and civilisation of French-speaking and/or English-speaking countries are often chosen topics. The need for a deeper knowledge of foreign cultures by philological students is apparent in the context of effective professional translations. The discovery of the gap in education at the first stages of job descriptions is an unpleasant surprise for many interpreters.

These tests reveal the lack of general cultural preparation (cf. Widła, Półtorak, & Krajka, 2014). A great deal of ignorance or lack of knowledge can be seen, especially in movie translations. Incorrect captions appear in them at every step. Future translators do not know Polish equivalents of city names or first names, not to mention the differences in the less widely known areas, such as positions in administration or police, legal systems, or military ranks. On the basic communication level, the interpretation of implicit content also leaves much to be desired.

Students' Favourite Tools

Students can use simple tools that require little IT preparation. What counts are their own ideas, creativity, choice of language content, and didactic strategies. A distance-education platform such as Moodle offers all the necessary tools, and the venture deserves to be attempted. It is not possible to use ready-made solutions available online, as the student creates a tailor-made course with a previously agreed-upon list of words and phrases, often compared to other languages. Students' favourite tools are as follows:

- Lesson module. This is a series of web pages upon which the teacher can present certain content to the students. There is also a possibility of adding a question page to the content within the lesson. The impact on the order of work is an especially valued property of this function. The implementation of a labyrinth activity consumes a significant amount of time, but, on the other hand, in terms of learning the language, the results meet expectations (cf. Rézeau, 2008). The relatively long time spent by the students in creating their labyrinths, the consultation of external resources, the consultation of the glossary, and, finally, the discussions during the seminar's think tanks lead to the assumed goal: they help the authors to fill language gaps.
- Prezi presentations. These are considered to be more transparent than the other types of presentation on the network that can be used. Having acquired the knowledge presented in either a Prezi presentation or a lesson module, the learners are presented with a certain number of activities that are designed to consolidate their knowledge and dispel any potential doubts.
- Quizzes. The functionality of "exercises" in Moodle offers various types of the quizzes; their choice depends on the conception and strategy adopted by the teacher. The purpose of the exercises is to evaluate the level of knowledge acquired by the learner (cf. Półtorak, 2015). The exercises are verified automatically by the system based on the answer key, which is prepared in advance by the author. The most commonly used ways to practice language skills are exercises such as these: matching with translations, matching words, multiple choice, "fill-in-the-blank" questions, and a packet of sudoku games, hangman games, or crossword puzzles.
- Glossary. By creating a normal local glossary, a student can generate automatic links throughout the entire course. Furthermore, students make much more use of glossary entries by using them in different kinds of quizzes.
- Audiovisual materials. The audiovisual aids created by students not only improve the attractiveness of the course, but, most of all, they illustrate the concepts or situations presented. Additionally, their own photos or videos testify to the authorship of the course and are proof that the author personally experienced the events described.

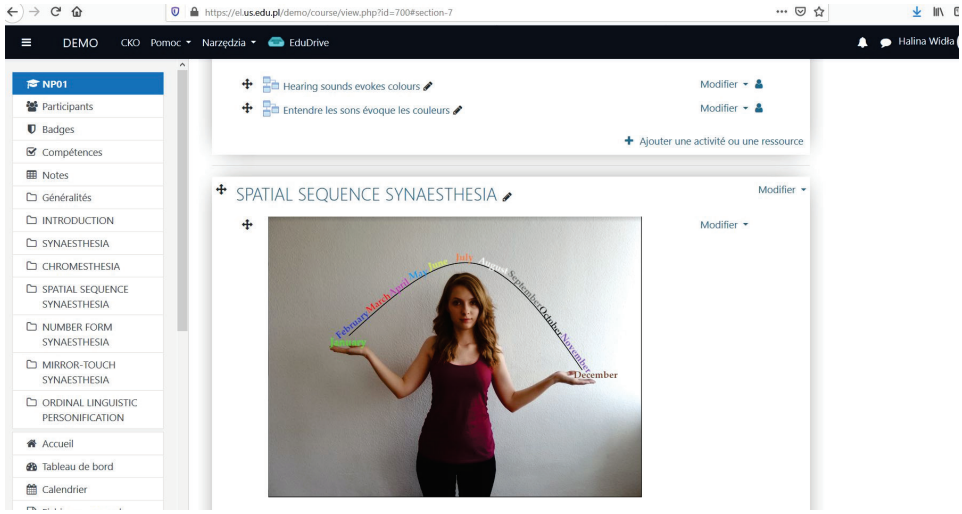

Figure 5. The online course of vocabulary related to the phenomenon of synesthesia (created by Natalia Przybylska in 2019, supervised by Halina Widła).

Final Remarks

The creation of a seminar such as the one described in this study must begin with a precise description of the different stages and interests of the formative evaluation:

- detailed knowledge of the programmes planned during the four semesters of work;
- indication of future stages of learning processes in consecutive semesters;
- clarification of the objectives of improving learning in a chosen field;
- elaboration of the criteria used to evaluate the work of the students, emphasising the progress toward the mastery of the linguistic competences rather than the validation of particular tasks.

Additionally, the climate of trust and mutual motivation established by the supervisor should encourage students to share the partial results of their projects and work even harder. This work obviously combines with the requirements of summative evaluations, which complement the purpose of the work as naturally predictable.

The platform's content is rich and extensive, so the completion of the whole course can vary in time. The objective here is not to finish the course as quickly as possible but to achieve the aims that the author intended. There are several goals; the most important of them is obviously mastering all skills covered by the course.

What is of vital importance is the adaptation of teaching methods to individual needs of a particular group of learners. Courses are directed mainly to the same types of learners as their creators: native Polish speakers who acquired English language, started learning French, and experienced certain difficulties concerning its grammar, vocabulary, or pronunciation and also experienced the overlapping of these three different systems.

A group of people described with these characteristics would be the main target audience of the course; however, the exercises can be executed by any person who would like to improve his or her French. The main language of the courses is French; however, there are some English portions as well. Consequently, it is required for the learner to understand English and also to have some basic knowledge of French in order to understand the instructions for the tasks and carry them out properly.

As measures of support, English and French glossaries are provided with the definitions and translations of more difficult words and terms. The courses give some theoretical knowledge; however, their main focus is practising exercises, familiarising the learner with the LSP chosen by the authors.

As there is growing demand for employees with knowledge of LSP (e.g., business French), students take it into account when they choose the topics of their courses. The seminar described in the paper takes into consideration the holistic nature of individual student learning and the most effective practices for helping them develop into autonomous and responsible learners.

With regard to the evaluation of master's students, evaluators focus on the quality of dissertations; each constitutes one-fourth of the final mark of the diploma. The second half – the average grade – is calculated by the Dean's office. Taking this fact into account, the student often assumes that the primary objective of his or her participation in the seminar is the final grade awarded by a defence panel. Consequently, the problem often encountered by the tutors is that of the regular completion of the successive parts of theses. The question therefore arises of how to convince students of the benefits of work in a formative context before submitting to a summative evaluation. A work system that takes into account the implementation of a project – whose added value is the enhancement of language skills – additionally convinces and motivates students. Students also see that, thanks to the implementation of the courses on the faculty's online platform, the prospective learners could improve their comprehension skills and widen their vocabularies. If they devote enough time to complete all the modules and they do it scrupulously and attentively, they are likely to achieve the aim that the student-authors diligently worked on themselves.

References

Coyle, D., Hood, P., & Marsh, D. (2010). *C.L.I.L. Content and Language Integrated Learning*. Cambridge: CUP

Debyser, F. (1970). La linguistique contrastive et les interférences. *Langue française*, *8* (1070), 31–61.

Gabryś-Barker, D. (2005). *Aspects of multilingual storage, processing and retrieval*. Katowice: Wydawnictwo Uniwersytetu Śląskiego.

Kubiak, B. (2002). Pojęcie języka specjalistycznego. *Języki Obce w Szkole*, *5*, 6–11

Fiorella, L. & Mayer, R. E. (2013). The relative benefits of learning by teaching and teaching expectancy. *Contemporary Educational Psychology, 38*(4), 281–288.

Grzega, J. (2006). Developing More than Just Linguistic Competence – The Model LdL for Teaching Foreign Languages with a Note on Basic Global English. *Humanising Langugage Teaching*, *8*(5).

Kucharczyk, R. (2018). *Nauczanie języków obcych a dydaktyka wielojęzyczności (na przykładzie francuskiego jako drugiego języka obcego)*. Lublin, Werset.

Martin, J-P. (1989). Quand les élèves font la classe. *Le Français dans le monde*, *224*, 51–55.

Martin, J-P. (2004). Lernen durch Lehren: quand les apprenants font la classe. *Les Cahiers de l'APLIUT, 33*(1), 45–56.

Moodle Platform of the University of Silesia used for online language courses supervised by the author, created by MA students. Retrieved from: http://el.us.edu.pl/wf/, http://el.us.edu.pl/demo/.

Półtorak, E. (2015). *Impact des nouvelles technologies sur les pratiques évaluatives en langues vivantes*. Katowice: Wydawnictwo Uniwersytetu Śląskiego.

Rézau, J. (2008). Un cas particulier du scénario dans l'apprentissage des langues: le labyrinthe (action maze). *Alsic*, *11*, 2. Retrieved from: http://journals.openedition.org/alsic/137.

Sawicka, A. (2009). Krótka charakterystyka języków specjalistycznych. In: *Komunikacja Specjalistyczna TOM II Specyfika języków specjalistycznych* (pp. 188–197). Warszawa: Uniwersytet Warszawski.

Trace, J., Hudson, T., & Brown, J. D. (2015). An overview of language for specific purposes. In: J. Trace, T. Hudson, & J. D. Brown, *Developing Courses in Languages for Specific Purposes* (pp. 1–23). (NetWork #69) [PDF document]. Honolulu: University of Hawai'i. Retrieved from http://nflrc.lll.hawaii.edu/media/docs/NW69-01.pdf.

Widła, H. (2007). *L'acquisition du français – langue troisième. Problèmes méthodologiques et implications pratiques*. Katowice: Wydawnictwo Uniwersytetu Śląskiego.

Widła, H. (2009). Ćwiczenia z języka francuskiego [eBook]. Dodatek do książki: *L'acquisition du français – langue troisième. Problèmes méthodologiques et implications pratiques*. Katowice: Wydawnictwo Uniwersytetu Śląskiego.

Widła, H. (2011). Skuteczność nauczania drugiego języka obcego – próba zastosowania wyników badań w praktyce. *Lingwistyka Stosowana*, *4*, 53–67.

Widła, H. (2012). L'acquisition du français – langue troisième par le biais d'un environnement d'apprentissage en ligne. In S. Berbinski, D. Dobre, A. Velicu (Eds.), *Langage(s) et traduction* (pp. 123–134). Editura Universitatii din Bucuresti.

Widła, H., Półtorak, E., & Krajka, J. (2014). E-learning in cultural studies instruction – designing, implementing and evaluating a study programme. In: E. Smyrnova-Trybulska (Ed.), *E-learning and intercultural competences development in different countries* (pp. 239–252). Katowice-Cieszyn, Studio NOA.

Widła, H. (2016). Znajomość języków a znajomość kultur. *Języki Obce w Szkole*, *1*, 86–91.

Widła, H. (2018). Le français: troisième langue parlée, troisième langue apprise. In: M. Piotrowska-Skrzypek, M. Deckert, N. Maslowski (Eds), *Formation et compétences plurilingues*. Lublin, Werset.

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Wprowadzanie narzędzi technologii informacyjnej jako metoda poprawy umiejętności językowych i komunikacyjnych studentów dwu- i trójjęzycznych

Streszczenie

Artykuł podaje przykłady systematycznej, semi-autonomicznej pracy studentów podczas seminarium magisterskiego na temat multimediów, która zwiększa zarówno ich kompetencje językowe, jak i umiejętności ściśle techniczne. Podstawa teoretyczna, oparta na wynikach badań przeprowadzonych przez Autorkę w latach 2005–2019, pokazuje, że opanowanie języka macierzystego oraz drugiego jest korzystne w uczeniu się języka trzeciego. Mimo że proces ten przebiega indywidualnie (każdy uczeń ma odmienną „biografię językową") trudno jest uwzględnić ten fakt w podręcznikach. W tym kontekście stają się pomocne kursy e-learningowe, które umożliwiają uczniowi pracę semi-autonomiczną. Przystosowując się do potrzeb studentów dwu- i trójjęzycznych, przyszli nauczyciele języków obcych oraz tłumacze tworzą swoje własne zasoby multimedialne, wypełniające lukę w ofercie edukacyjnej. Ponadto, niezwykłe metody uczenia się przez nauczanie (LdL, od frazy w języku niemieckim *Lernen durch Lehren*) poprawiają jakość procesu uczenia się, pomagając studentom osiągać upragniony poziom umiejętności językowych i komunikacyjnych.

Słowa kluczowe: umiejętności językowe i komunikacyjne, uczenie się przez nauczanie, e-learning

Halina Widła

Внедрение ИТ-инструментов как метод улучшения языковых и коммуникативных навыков у студентов, обучающихся на двух языках

Аннотация

В этой статье приводятся примеры систематической полуавтономной работы студентов на мастер-классе по мультимедиа, которая повышает их языковые навыки, а также навыки технического характера. Теоретическое обоснование, основанное на результатах исследований, проведенных автором в 2005–2019 годах, демонстрирует, насколько полезно знание первого и второго языков учащимися при изучении третьего языка. Этот процесс индивидуален (каждый учащийся имеет свою «лингвистическую биографию»), поэтому трудно учесть данный факт в учебниках. В этой ситуации полезны курсы электронного обучения, которые позволяют студентам работать в полуавтономном режиме. Удовлетворяя потребности студентов, обучающихся на двух и трех языках, будущие учителя и переводчики иностранных языков создают свои собственные мультимедийные ресурсы, которые заполняют пробелы в дидактических предложениях. Более того, необычные формы обучения с помощью преподавания (LdL – от немецкой фразы *Lernen durch Lehren*) улучшают качество учебного процесса, помогая студентам достичь желаемых языковых и коммуникативных навыков.

Ключевые слова: языковые и коммуникативные навыки, обучение с помощью преподавания, электронное обучение

Halina Widła

Implementación de herramientas informáticas como método para mejorar las habilidades de lenguaje y comunicación de estudiantes bilingües y trilingües

R e s u m e n

Este artículo ofrece algunos ejemplos del trabajo semiautónomo sistemático de los estudiantes en el seminario de maestría multimedia, que mejora sus competencias lingüísticas y sus habilidades estrictamente técnicas. Los antecedentes teóricos, basados en los resultados de la investigación realizada por el autor en 2005–2019, demuestran cómo el conocimiento del primer y segundo idioma de los alumnos es ventajoso durante la adquisición de un tercer idioma. Al ver que este proceso es individual (cada alumno tiene su "biografía lingüística" diferente), es difícil tener esto en cuenta en los libros de texto. Los cursos de aprendizaje electrónico, que permiten a los estudiantes trabajar en semi-autonomía, se vuelven útiles en esta situación. Para satisfacer las necesidades de los estudiantes bilingües y trilingües, los futuros profesores y traductores de idiomas extranjeros crean sus propios recursos multimedia que llenan los vacíos en las ofertas didácticas. Además, las formas inusuales de aprendizaje mediante la enseñanza (LdL – de la frase alemana *Lernen durch Lehren*) mejoran la calidad del proceso de aprendizaje, ayudando a los estudiantes a alcanzar las habilidades deseadas de lenguaje y comunicación.

P a l a b r a s c l a v e: habilidades de lenguaje y comunicación, aprendizaje por enseñanza, e-learning

International Journal of Research in E-learning
Vol. 5 (2), 2019, pp. 49–65

DOI 10.31261/IJREL.2019.5.2.04

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Procrastination in Blended Learning The Role of General Self-efficacy, and Active and Passive Procrastination

Abstract

Despite the growing empirical interest in academic procrastination in the distance learning, there are only limited studies on the determinants of this phenomenon in the blended learning programmes. The present study investigates the relationships between general self-efficacy, two types of procrastination (active and passive procrastination), and the behavioural tendency to postpone learning activities in a blended learning university course using Moodle platform. Results indicate that passive procrastination is strongly positively associated with procrastination in blended learning, while perceived self-efficacy and active procrastination are unrelated to the self-reported task delays during the blended learning course. In addition, the negative link between the reported number of previous completed blended-learning courses and procrastination in blended learning is observed. Practical and theoretical implications of these findings for a blended learning environment are discussed.

K e y w o r d s: procrastination, blended learning, self-efficacy, active procrastination, passive procrastination

Introduction

The rapid growth of web-based technologies in the last years has radically changed learning environments, contributing to the increased popularity of blended learning systems in the work and educational settings (Graham, 2006). In general, such systems integrate traditional (synchronous) classroom face-to-face learning activities with (asynchronous) online learning experiences (Garrison & Kanuka, 2004). The results of meta-analysis by Means et al. (2013) proved the effectiveness of blended learning in the education context. However, successful participation in a blended learning course requires the learner to possess self-regulation attributes, including perceived self-efficacy, which plays a key role in motivation to participate in distance learning programmes (Lynch & Dembo, 2004). Thus, due to the self-directed character of learning in the technology-mediated environments, many researchers explore academic procrastination in web-based education from the self-regulatory perspective (Cerezo et al., 2017; Shea & Bidjerano, 2010).

In line with this approach, the present study aimed to investigate the relationships between general self-efficacy, active and passive procrastination, and self-reported procrastination in the blended learning course via Moodle platform among Polish students. Although previous findings show that academic procrastination is a cross-cultural phenomenon, it has been mainly explored in the individualistic countries (Ferrari, O'Callaghan, & Newbegin, 2005; Klassen, Krawchuk, & Rajani, 2008). Moreover, several past studies on procrastination in the academic sphere among Polish students concentrated only on the learning activities during traditional, face-to-face courses (e.g., Jaworska-Gruszczyńska, 2016; Markiewicz & Dziewulska, 2018; Stępień & Topolewska, 2014). Therefore, this study focused on investigating procrastination in blended learning on the sample from the Polish student population.

Theoretical Background of the Research

In general, procrastination is usually identified with a dispositional tendency to engage in a task delay, stemming from self-regulatory deficits (van Eerde, 2003; Steel, 2007). Although some research indicates its prevalence among adults from the general population, who often procrastinate chronically (Ferrari et al., 2005), to date most studies have concentrated on investigating procrastination among university students (Klingsieck, 2013b). Academic procrastination has been found as not only a common, but also costly and problematic phenomenon, negatively affecting students' achievements and performance at various levels of university

education (van Eerde, 2003; Kim & Seo, 2015). Moreover, its negative long-term consequences were also observed in reference to students' health and well-being (Sirois & Pychyl, 2013). Given the problematic nature of the dysfunctional form of procrastination, according to Steel and Klingsieck (2016) the analysis of its antecedents is of particular significance for projecting the evidence-based interventions in academic settings. The current study alludes to this research framework by investigating potential individual differences determinants of academic procrastination in the online learning context, including general self-efficacy along with active and passive procrastination.

The tendency to voluntarily delay different activities needed to complete the scholastic tasks was noted during both traditional and online courses conducted by universities (see: Dunn, 2014; Gafni & Geri, 2010). Additionally, the negative consequences of procrastination were also observed in online learning (Goda et al., 2015), as procrastinators were reported to achieve worse learning outcomes than non-procrastinators in the blended learning classes on the Moodle learning platform (Cerezo et al., 2017). The detrimental effects of procrastination during web-based programmes may be even more severe in comparison to the traditional classes because of increased intensity of task delays, which is typical of this form of education. As several authors indicated, the online learning environments seem to foster the tendency to procrastinate due to the increased autonomy of the participants, who have to organise their learning activities individually (Artino & Stephens, 2009; You, 2015). Moreover, Romano et al. (2005) found that students enrolled in the blended learning courses procrastinated even more than more independent learners, who preferred less structured online courses with greater transitional distance. These results are in line with the notion that self-regulatory processes are critical in distance learning (Cho & Schen, 2013). Thus, as previous findings demonstrated, the successful participation in the online programmes involving self-regulatory learning mainly depends on the motivational factors, metacognition, critical thinking, self-control, and time-management skills (Broadbent, & Poon, 2015; Michinov et al., 2011, Yamada et al., 2015). For example, Rakes and Dunn (2010) showed that intrinsic motivation and effort regulation among online graduate students resulted in decreased tendency to procrastinate in the academic context, which, in turn, might lead to poorer outcomes during the online course.

Given the importance of the self-regulatory processes in online learning (Michinov et al., 2011), the key role in the blended learning environment seems to be played by another motivational variable – general self-efficacy. According to Bandura (1994), perceived self-efficacy refers to people's beliefs that they are able to influence important life events and constitutes a major factor in the self-regulation. Consequently, in line with the self-efficacy theory, the character of individuals' self-beliefs affects the motivational processes, especially by influencing the personal goals and standards, determination to succeed, perseverance, and

ability to cope with difficulties. Academic procrastination – on the motivational level described as a self-regulatory failure (Steel, 2007) and widely analysed from a self-regulated learning perspective (Wolters, 2003) – is treated as a result of a poor self-regulation and motivational deficits, accompanying students' less favourable judgements about own capabilities, mostly noticeable in the academic sphere (Klassen et al., 2008). A large body of research indicates that general self-efficacy along with the domain-specific, academic self-efficacy are negatively related to procrastination in academic settings during traditional, face-to-face classes (e.g., Ferrari, Parker, & Ware, 1992; Haycock, McCarthy, & Skay, 1998; Klassen et al., 2008). The negative relation between both constructs was confirmed in previous metanalyses on procrastination (Steel, 2007; van Eerde, 2003). More recently, Wäschle et al. (2014) found that the interplay between self-efficacy and procrastination is dynamic in nature, and people with low self-efficacy who did not possess the record of previous goal achievement were prone to repeatedly engage in task delays. However, the effects of perceived self-efficacy on procrastination in blended learning have been much less studied. To date, most studies have concentrated on the role of self-efficacy in self-regulation learning with the exclusive usage of online platforms (Broadbent & Poon, 2015). For instance, Cho and Shen (2013) showed that academic self-efficacy played an important role in academic achievement during e-learning courses. Thus, although the motivational factors affecting self-regulation processes during blended learning courses are widely analysed in the pedagogical and psychological literature, only several pieces of quantitative research have focused on students' self-beliefs, including their academic self-concept (e.g., Broadbent, 2017; Van Laer & Elen, 2019; Yamada et al., 2016).

Additionally, the observable differences in the behavioural tendency to procrastinate in blended learning may stem from the individual differences in general propensity to procrastinate. A useful conceptual framework for investigating academic procrastination in the web-based programmes my provide the distinction between active and passive procrastination proposed by Chu and Choi (2005). According to this concept, active procrastination represents a potentially adaptive side of a deliberate task delay, connected with proper time management, effective self-regulation, high self-efficacy, and positive consequences. Passive procrastination, in turn, embodies a dysfunctional type of procrastination, characterised in terms of self-regulatory deficits, difficulties in coping with time pressure, negative self-efficacy beliefs, and poor personal outcomes (Choi & Moran, 2009; Chu & Choi, 2005). Because procrastination in online learning context in large part derives from deficits in self-regulatory processes (Dunn, 2014; Rakes & Dunn, 2010), it was expected that learning patterns during blended learning courses would be positively associated with a more general concept of passive procrastination, in which procrastination is treated as a self-regulatory failure (Steel, 2007). The existing empirical data indicate that traditional, passive procrastination may

manifest in the form of putting off important learning activities in blended learning courses, which involve self-regulated learning, and are largely based on motivation to work remotely (Broadbent, 2017; Cho & Shen, 2013; Michinov et al., 2011). In contrast, active procrastination may be unrelated to the behavioural tendency to procrastinate in online learning, resulting from motivational deficits.

Research Methodology

Aims and Hypotheses

The current study was a preliminary attempt to identify the individual differences predictors of the behavioural tendency to procrastinate in the blended learning environment among university students from Poland. Given previous findings on the nature of education with the use of e-learning platforms, two categories of potential determinants of procrastination in blended learning were proposed. Firstly, general self-efficacy was tested as a predictor of procrastination in blended learning. Additionally, two kinds of procrastination differentiated by Choi and Moran (2005) within the individual differences framework – active and passive procrastination (c.f. Klingsieck, 2013a) – were analysed in relation to behavioural indicators of procrastination during the face-to-face university courses involving the usage of the Moodle e-learning platform. Thus, the main aim of the present study was to investigate the associations between general self-efficacy, active and passive procrastination, and procrastination in blended learning.

Since self-regulatory deficits may manifest in the form of ineffective time management during the e-learning university course (e.g., Broadbent & Poon, 2015; Cho & Shen, 2013; Yamada et al., 2016), it was hypothesised that general self-efficacy would be negatively related to procrastination in the blended learning environment. In addition, to better understand which factors determine the individual behavioural tendency to engage in putting off learning activities during the blended learning courses, the associations between active and passive procrastination, and self-reported procrastination in blended learning were examined. Because postponing different activities during the online courses in higher education is regarded as an ineffective learning behavioural strategy (Goda et al., 2015), procrastination in e-learning and blended learning was identified with a socially undesirable form of task delay in the academic context. Given the dysfunctional nature of passive procrastination, the significant positive link was expected between passive procrastination and the behavioural tendency to procrastinate in blended learning. Active procrastination was not expected to be significantly correlated with procrastination during the blended learning courses based on the usage of the Moodle platform and face-to-face classes, since this

form of procrastination embodies more adaptive, deliberate task delays leading to positive outcomes rather than impulsive acts of dysfunctional procrastination resulting from poor self-regulation (Corkin, Yu, & Lindt, 2011).

Participants and Procedure

The present study relies on a convenience sample, comprising 108 undergraduate students (90 female, 18 male) from the University of Silesia in Katowice, participating in human resource management programme. The age of participants ranged from 17 to 47 years (M = 21.33, SD = .38). Of this group, 40.7% were in the first year of studies, while the remaining 41.7% and 17.6% were in their second and third years of studies, respectively. The number of Moodle courses into which respondents were enrolled during their studies varied between 1 and 11 (M = 5.21, SD = 2.51). Throughout the study, 82 participants (75.9%) were taking part in at least one blended learning course via Moodle platform at the university, combining traditional, face-to-face, and online classes. The present study was anonymous and voluntary. All students provided informed consent and obtained no financial compensation for participating in the study. During the management classes they received general written information about the nature of the study, provided sociodemographic data, and completed four self-report measures grouped in the standardised order.

Measures

The scales applied in the present study assess university students' general self-efficacy, active and passive procrastination along with the behavioural tendency to procrastinate in blended learning. The scales used to measure different types of procrastination were back-translated.

General self-efficacy. General self-efficacy was measured with the General Self-Efficacy Scale (GSES; Schwarzer & Jerusalem, 1995) in Polish adaptation by Schwarzer, Jerusalem, and Juczyński (2001). The 10-item scale makes it possible to assess the perceived overall ability to effectively cope with different life stressors and challenges by the individual (Luszczynska, Scholz, & Schwarzer, 2005). Participants responded to each statement (e.g., "I can always manage to solve difficult problems if I try hard enough") on the 4-point scale, ranging from 1 ("no") to 4 ("yes"). Higher scores in the GSES indicate higher levels of general self-efficacy. In the present study the internal consistency of the scale was satisfactory (α = .84).

Active procrastination. Active procrastination was assessed using the Active Procrastination Scale (APS) developed by Choi and Moran (2009) as a measure of intentional delay in completing the task activities. The APS consists of 16 statements (e.g., "In order to make better use of my time, I intentionally put off some tasks") rated on a 7-point scale (1 – "not at all true"; 7 – "very true") with

higher scores reflective of greater active procrastination. In this study the APS demonstrated good reliability (α = .83).

Passive procrastination. The passive, dysfunctional type of procrastination in the academic context was measured using the Tuckman Procrastination Scale (TPS; Tuckman, 1991). This instrument comprises 16 items with a 7-point, Likert-type response scale (1 – "That's not me for sure"; 4 – "That's me for sure"). The scale includes such exemplary statements as "I am an incurable time waster" or "I needlessly delay finishing jobs, even when they're important". Higher scores in the TPS indicate grater passive procrastination. The reliability of the scale was good (α = .85).

Procrastination in blended learning. To assess the university students' behavioural tendency to procrastinate in a blended learning environment, the 5-item scale by Artino and Stephens (2009) was used. The measure is a modified version of the scales earlier applied by Wolters (2003; 2004) in the research concerning academic procrastination during traditional, face-to-face courses. Respondents were asked to rate each statement on the 7-point response scale, ranging from 1 ("Completely disagree") to 7 ("Completely agree"). Sample items are: "I often find excuses for not starting the work for this course" and "I frequently put off getting started on the readings and assignments for this course." Reliability for this scale in the present study was satisfactory (α =.89).

Data Analysis

In the present study SPSS version 25.0 was used to perform all statistical analyses. In the first step, means, standard deviations, and intercorrelations among the study variables were calculated. Secondly, to test the hypotheses concerning the relations between general self-efficacy, active and passive procrastination, and procrastination in the blended learning environment, the multiple hierarchical regression analysis was conducted.

Research Results

Table 1 contains descriptive statistics and zero-order correlations among the study variables. As hypothesised, passive procrastination was positively correlated with the tendency to engage in task delays during the blended learning course (r = .61, p < .001). On the other hand, active procrastination was not significantly correlated with behavioural procrastination during the university programme using Moodle learning platform (r = –.08, p > .05). Contrary to the expectations, general self-efficacy was unrelated to procrastination in blended learning (r = –.15, p > .05). Additionally, two sociodemographic characteristics of the undergraduates

(i.e., year of study and past experience in blended learning) were negatively linked to behavioural procrastination in blended learning. Students from higher years ($r = –.26$, $p < .01$) and those who previously participated in larger numbers of online learning courses ($r = –.24$, $p < .01$) reported lower levels of behavioural procrastination in blended learning. Other sample characteristics, including age, gender, and present participation in a blended learning course, revealed no significant associations with procrastination in blended learning.

Table 1.
Descriptive statistics and zero-order correlations among study variables

Variable	1.	2.	3.	4.	5.	6.	7.	8.	9.
1. Age	–								
2. Gender (male = 0, female = 1)	–.13	–							
3. Year of study	.28**	.20	–						
4. Present participation in a blended learning course (no = 0, yes = 1)	–.37***	–.19*	–.69***	–					
5. Number of previous online learning courses	.13	.08	.71***	–.29**	–				
6. Self-efficacy	.16	–.22*	.01	–.04	.10	–			
7. Active procrastination	.05	–.13	.17	–.04	.16	.40***	–		
8. Passive procrastination	–.17	–.01	–.12	.01	–.20*	–.17	–.26*	–	
9. Procrastination in blended learning	–.12	.02	–.26**	.15	–.24*	–.15	–.08	.61***	–
M	21.33	.83	1.77	.76	5.17	30.72	63.23	41.12	21.04
SD	3.39	.37	.73	.43	2.51	4.55	14.34	8.18	7.36

Note: $N = 108$, * $p < .05$, ** $p < .01$, *** $p < .001$.

To determine if general self-efficacy along with active and passive procrastination significantly predicted the behavioural tendency to procrastinate in blended learning, hierarchical multiple regression analysis was conducted. The results of this analysis are presented in Table 2. In the first step, two control variables were entered into the model, such as year of study and past experience in web-based educational programmes measured by the number of previous online learning courses in which the students had participated. Those variables were significantly linked to procrastination in the previous correlation analysis. Although the first

model, including control variables, was statistically significant ($F(2, 105) = 4.18$, $p < .05$, $R^2 = .07$), year of study and past experience connected with blended learning in higher education were insignificant in predicting procrastination in blended learning. In the second step of the regression analysis, the three hypothesised variables (i.e., self-efficacy, active and passive procrastination), were entered simultaneously into the model. The final model remained statistically significant ($F(5, 102) = 15.05$, $p < .001$, $R^2 = .40$). In this model, year of study was a significant negative predictor ($\beta = –.24$, $p < .05$), whereas passive procrastination was a significant positive predictor ($\beta = .60$, $p < .001$).

Table 2.
Hierarchical regression analysis predicting behavioural procrastination in blended learning

Predictors	Procrastination in blended learning		
	B (SE)	*β*	*ΔR²*
Step 1			.07*
Year of study	–1.84 (1.35)	–.18	
Number of previous online learning courses	–.32 (.39)	–.11	
Step 2			.35***
Year of study	–2.41 (1.09)	–.24*	
Number of previous online learning courses	.12 (.32)	.04	
Self-efficacy	–.18 (.13)	–.11	
Active procrastination	.08 (.04)	.15	
Passive procrastination	.54 (.07)	.60***	

Note: $N = 108$, * $p < .05$, ** $p < .01$, *** $p < .001$.

Discussion

The phenomenon of academic procrastination both in traditional and web-based courses is widely studied from the individual differences perspective (Steel & Klingsieck, 2016). Additionally, as the online learning environment is described in terms of high autonomy, many studies concerning e-learning or/and blended learning include analyses of self-regulatory strategies accompanying the process of learning (Broadbent, 2017). The current study adopts this approach by examining relationships between general self-efficacy, active and passive procrastination, and the behavioural tendency to procrastinate in the blended learning course delivered via the Moodle online learning platform.

As hypothesised, passive procrastination positively predicted postponing learning activities in the blended learning programme via the Moodle online platform. This result suggests that those students who procrastinate online exhibit more dysfunctional learning habits, which derive from more general individual differences in passive procrastination (cf. Choi & Moran, 2009; Chu & Choi, 2005; Romano et al., 2005). In line with this view, passive procrastination – defined as a dispositional variable (van Eerde, 2003) – manifests in the academic context, among others, in putting off learning activities in the blended learning environment. Moreover, the strong positive linkage between passive procrastination and the behavioural tendency to postpone important tasks during the blended learning course suggest that both constructs are conceptually similar, or even redundant, and may reflect individual deficits in self-regulation (Steel, 2007). However, the problem of potential conceptual overlap of both variables needs further studies.

In contrast to passive procrastination, active procrastination did not serve as a significant predictor of procrastination in blended learning. From the motivational perspective, this finding seems to reflect behavioural differences among passive and active procrastinators, stemming from characteristic for each group's self-regulatory processes (Choi & Moran, 2009; Chu & Choi, 2005). In accordance with the existing empirical evidence, the adaptive qualities of active procrastination in the educational context were not noted with regard to behavioural procrastination (Hensley, 2014). Consequently, due to the grater self-control, individuals high in active procrastination may use relatively more effective time management strategies and exhibit less detrimental behavioural patterns during the blended learning courses in comparison to passive procrastinators. Nevertheless, the tendency to engage in active procrastination in the web-based courses still may lead to worse personal outcomes than forming a regulated learning habit in the online learning environment (Goda et al., 2015, Corkin et al., 2011).

Contrary to the expectations, general self-efficacy was not associated with procrastination in blended learning. Such a result is inconsistent with the existing literature on self-regulated learning in academic settings (Dunn, 2014; Cho & Shen, 2013) and may derive from using a short, 5-item scale to assess procrastination in blended learning, which could not capture all important aspects of this phenomenon, especially connected with the characteristics of self-regulated learning. Alternatively, the insignificant correlation between both variables may indicate that different factors (e.g., personality, contextual, cognitive) play a key role in this form of academic procrastination (Steel & Klingsieck, 2016). For instance, the construct of academic self-efficacy might be better for estimating individual self-beliefs in the academic domain than the concept of general self-efficacy. Prior results proved that academic self-efficacy played important role in predicting academic achievement in e-learning (Cho & Shen, 2013), and academic procrastination largely depended on self-variables different than general self-efficacy (Klassen et al.,

2008). Thus, further studies on procrastination in blended learning analysed from the self-regulatory perspective should also involve these motivational variables.

An additional negative correlation was found between the number of previous e-learning courses in which the respondent participated and behavioural procrastination in blended learning. These findings suggest that other dispositional factors affect the preference for self-regulated learning during studies. For example, as previous empirical evidence indicates, conscientiousness may affect the individual willingness to engage in procrastination (Steel, 2007). Thus, as Romano et al. (2005) noted, self-selection may be an important factor influencing preference for e-learning programmes, and, in turn, more independent and diligent students tend to choose distant learning university courses that not require strict supervision. However, future research should test the role of conscientiousness and other personality traits as predictors of procrastination in the blended learning environment. Furthermore, the negative linkage between year of study and procrastination in blended learning suggests that students over time acquire better learning habits and new learning skills useful in the blended learning environment.

Although the present study emphasised the important and largely understudied in Polish culture problem of procrastination in blended learning, it had several significant limitations. First of all, this investigation was correlational in nature and relied exclusively on the self-reported data, including a single, 5-item, comprehensive scale used to measure procrastination in blended learning. Meanwhile, prior findings indicate that further experimental studies on procrastination in blended learning based on observable data are needed, especially as the basis of determining implications of learning styles for online instructors and students (Artino & Stephens, 2009). The further limitation is connected with the relatively small size and convenience character of the research sample. Taking into account the preliminary nature of the present study, it is worth to replicate it on a larger, more diverse community sample, comprising students form different faculties. Despite the worldwide popularity of Moodle as an open source online management learning system in higher education, future research on procrastination in blended learning should also involve other web-based course platforms (Brandl, 2005). Adopting a broader perspective in studies concerning distance learning is all the more important as past findings indicate that various learning solutions differ significantly in terms of usability (Martin et al., 2008) and adaptivity (Reyes et al., 2009). An additional problem with this study was that it included only general self-efficacy along with active and passive procrastination as possible predictors of the behavioural tendency to procrastinate in blended learning. However, as the psychological antecedents of academic procrastination may be examined from different perspectives (Steel & Klingsieck, 2016), the approach involving solely individual differences variables, which was adopted in this study, should be extended in the next studies. Especially, as previous research shows, interesting findings could emerge by testing potential personality, cognitive, affective, and

situational predictors of procrastination during the web-based programmes dedicated to universities (Fernie et al., 2017; Steel & Klingsieck, 2016; You & Kang, 2014). For example, Krause, Stark, and Mandl (2009) found that such contextual variable as the teacher's feedback interventions had beneficial effects on the student's objective learning outcomes by reducing knowledge deficits. Accordingly, taking such a broad approach in studies on determinants of blended learning might lead to establishing new methods of intervention in online education aimed at minimalising academic procrastination.

The present study has several important theoretical and practical implications in the context of online learning. Firstly, it contributes to the existing literature on academic procrastination in asynchronous, online classes by examining the associations between individual differences variables and the behavioural tendency to procrastinate during online learning courses in higher education. As mentioned earlier, in line with past findings (Steel, & Klingsieck, 2016), the obtained results highlight the importance of analysing academic procrastination from different theoretical perspectives, not only from the perspective concentrating on the self-regulatory mechanisms in learning and teaching processes. However, given the preliminary and cross-sectional character of the current study, further research in the field of educational psychology is needed. Moreover, the obtained results may be useful in planning online teaching strategies (cf. Cho & Shen, 2013). The strong positive linkage between passive procrastination and its behavioural manifestations in the online learning environment demonstrates that the strategies for intervention and prevention of procrastination in higher education should focus on the more general tendency to delay scholastic tasks. This notion is consistent with the recommendation by Kachgal, Hansen, and Nutter (2001), who postulate increasing students' self-awareness of own tendency to procrastinate as a primary intervention in the online learning environment.

Conclusions

To summarise, this study aimed to investigate relationships between general self-efficacy, active and passive procrastination, and the behavioural tendency to procrastinate in blended learning. As hypothesised, passive procrastination was positively linked to procrastination in blended learning, indicating that both constructs might share the same conceptual core, connected with self-regulatory deficits. In contrast, active procrastination revealed statistically insignificant correlation with behavioural procrastination in blended learning. These results highlight the conceptual differences between active and passive task delays. Moreover, contrary to expectations, perceived self-efficacy displayed nonsignificant

relationship with procrastination in blended learning. Such findings suggest that future research on procrastination in blended learning should involve other dispositional and situational factors, which might better predict the tendency to putt off learning activities in web-based programmes. The additional analysis of relationships between the sociodemographic characteristics of the sample and the hypothesised variables revealed that students' previous experience in the blended learning environment (measured by the number of successfully completed blended learning courses in the past) was negatively associated with procrastination in blended learning. This relation might be explained in light of the hypothesis of self-selection in distance learning courses (Romano et al., 2005). Probably more conscientious and independent individuals are prone to choose classes involving online learning activities that require and promote such dispositions. However, future research, based on a larger and more diverse sample from the general population, is needed in order to test this assumption.

References

Artino, A. R. & Stephens, J. M. (2009). Academic motivation and self-regulation: A comparative analysis of undergraduate and graduate students learning online. *The Internet and Higher Education*, *12*(3–4), 146–151.

Bandura, A. (1994). Self-efficacy. In V. S. Ramachaudran (Ed.), *Encyclopedia of human behavior* (Vol. 4, pp. 71–81). New York: Academic Press. (Reprinted in H. Friedman [Ed.], Encyclopedia of mental health. San Diego: Academic Press, 1998).

Brandl, K. (2005). Review of Are You Ready to "Moodle"? *Language Learning & Technology*, *9*(2), 16–23.

Broadbent, J. (2017). Comparing online and blended learner's self-regulated learning strategies and academic performance. *Internet and Higher Education*, *33*, 24–32.

Broadbent, J. & Poon, W. L. (2015). Self-regulated learning strategies & academic achievement in online higher education learning environments: A systematic review. *The Internet and Higher Education*, *27*, 1–13.

Cerezo, R., Esteban, M., Sánchez-Santillán, M., & Núñez, J. C. (2017). Procrastinating behavior in computer-based learning environments to predict performance: A case study in Moodle. *Frontiers in Psychology*, *8*, 1403. https://doi.org/10.3389/fpsyg.2017.01403.

Cho, M. H. & Shen, D. (2013). Self-regulation in online learning. *Distance Education*, *34*(3), 290–301.

Choi, J. N. & Moran, S. V. (2009). Why not procrastinate? Development and validation of a new active procrastination scale. *The Journal of Social Psychology*, *149*(2), 195–212.

Chu, A. H. C. & Choi, J. N. (2005). Rethinking procrastination: Positive effects of" active" procrastination behavior on attitudes and performance. *The Journal of Social Psychology*, *145*(3), 245–264.

Corkin, D. M., Yu, S. L., & Lindt, S. F. (2011). Comparing active delay and procrastination from a self-regulated learning perspective. *Learning and Individual Differences*, *21*(5), 602–606.

Dunn, K. (2014). Why wait? The influence of academic self-regulation, intrinsic motivation, and statistics anxiety on procrastination in online statistics. *Innovative Higher Education*, *39*(1), 33–44.

Fernie, B. A., Bharucha, Z., Nikčević, A. V., Marino, C., & Spada, M. M. (2017). A Metacognitive model of procrastination. *Journal of Affective Disorders*, *210*, 196–203.

Ferrari, J. R., O'Callaghan, J., & Newbegin, I. (2005). Prevalence of procrastination in the United States, United Kingdom, and Australia: arousal and avoidance delays among adults. *North American Journal of Psychology*, *7*(1), 1–6.

Ferrari, J. R., Parker, J. T., & Ware, C. B. (1992). Academic procrastination: Personality correlates with Myers-Briggs types, self-efficacy, and academic locus of control. *Journal of Social Behavior and Personality*, *7*, 495–502.

Gafni, R. & Geri, N. (2010). Time management: Procrastination tendency in individual and collaborative tasks. *Interdisciplinary Journal of Information, Knowledge, and Management*, *5*(1), 15–125.

Garrison, D. R. & Kanuka, H. (2004). Blended learning: Uncovering its transformative potential in higher education. *The Internet and Higher Education*, *7*(2), 95–105.

Goda, Y., Yamada, M., Kato, H., Matsuda, T., Saito, Y., & Miyagawa, H. (2015). Procrastination and other learning behavioral types in e-learning and their relationship with learning outcomes. *Learning and Individual Differences*, *37*, 72–80.

Graham, C. R. (2006). Blended learning systems: Definition, current trends, and future directions. In C. J. Bonk & C. R. Graham (Eds.), *The handbook of blended learning* (pp. 3–21). San Francisco, CA: Preiffer.

Haycock, L. A., McCarthy, P., & Skay, C. L. (1998). Procrastination in college students: The role of self-efficacy and anxiety. *Journal of Counseling & Development*, *76*(3), 317–324.

Hensley, L. C. (2014). Reconsidering active procrastination: Relations to motivation and achievement in college anatomy. *Learning and Individual Differences*, *36*, 157–164.

Jaworska-Gruszczyńska, I. (2016). Prokrastynacja – struktura konstruktu a stosowane skale pomiarowe [Procrastination – the structure of the construct and the measuring scales]. *Testy Psychologiczne w Praktyce i Badaniach*, *2*(1), 36–59.

Kachgal, M. M., Hansen, L. S., & Nutter, K. J. (2001). Academic procrastination prevention/intervention: Strategies and recommendations. *Journal of Developmental Education*, *25*(1), 14–24.

Kim, K. R. & Seo, E. H. (2015). The relationship between procrastination and academic performance: A meta-analysis. *Personality and Individual Differences*, *82*, 26–33.

Klassen, R. M., Krawchuk, L. L., & Rajani, S. (2008). Academic procrastination of undergraduates: Low self-efficacy to self-regulate predicts higher levels of procrastination. *Contemporary Educational Psychology*, *33*(4), 915–931.

Klingsieck, K. B. (2013a). Procrastination: When good things don't come to those who wait. *European Psychologist*, *18*, 24–34.

Klingsieck, K. B. (2013b). Procrastination in different life-domains: Is procrastination domain specific?. *Current Psychology*, *32*(2), 175–185.

Krause, U. M., Stark, R., & Mandl, H. (2009). The effects of cooperative learning and feedback on e-learning in statistics. *Learning and Instruction*, *19*(2), 158–170.

Luszczynska, A., Scholz, U., & Schwarzer, R. (2005). The general self-efficacy scale: multicultural validation studies. *The Journal of Psychology*, *139*(5), 439–457.

Lynch, R., & Dembo, M. (2004). The relationship between self-regulation and online learning in a blended learning context. *The International Review of Research in Open and Distributed Learning*, *5*(2), 1–16. https://doi.org/10.19173/irrodl.v5i2.189.

Markiewicz, K. & Dziewulska, P. (2018). Procrastination predictors and moderating effect of personality traits, *Polskie Forum Psychologiczne*, *23*(3), 593–609.

Martin, L., Martínez, D. R., Revilla, O., Aguilar, M. J., Santos, O. C., & Boticario, J. G. (2008, February). Usability in e-Learning Platforms: heuristics comparison between Moodle, Sakai and dotLRN. In *Sixth International Conference on Community based environments. Guatemala* (pp. 12–16).

Means, B., Toyama, Y., Murphy, R., & Baki, M. (2013). The effectiveness of online and blended learning: A meta-analysis of the empirical literature. *Teachers College Record*, *115*(3), 1–47.

Michinov, N., Brunot, S., Le Bohec, O., Juhel, J., & Delaval, M. (2011). Procrastination, participation, and performance in online learning environments. *Computers & Education*, *56*(1), 243–252.

Rakes, G. C. & Dunn, K. E. (2010). The Impact of Online Graduate Students' Motivation and Self-Regulation on Academic Procrastination. *Journal of Interactive Online Learning*, *9*(1), 78–93.

Reyes, N. R., Candeas, P. V., Galan, S. G., Viciana, R., Canadas, F., & Reche, P. J. (2009, June). Comparing open-source e-learning platforms from adaptivity point of view. In *2009 EAEEIE Annual Conference* (pp. 1–6). IEEE.

Romano, J., Wallace, T. L., Helmick, I. J., Carey, L. M., & Adkins, L. (2005). Study procrastination, achievement, and academic motivation in web-based and blended distance learning. *The Internet and Higher Education*, *8*(4), 299–305.

Schwarzer, R. & Jerusalem, M. (1995). Generalized self-efficacy scale. *Measures in health psychology: A user's portfolio. Causal and control beliefs*, *1*(1), 35–37.

Schwarzer, R., Jerusalem, M., & Juczyński, Z. (2001). Skala Uogólnionej Własnej Skuteczności – GSES [Generalized Self-Efficacy Scale – GSES]. In Z. Juczyński (Ed.), *Narzędzia pomiaru w promocji zdrowia i psychologii zdrowia* (pp. 93–97). Warszawa: Pracownia Testów Psychologicznych PTP.

Shea, P. & Bidjerano, T. (2010). Learning presence: Towards a theory of self-efficacy, self-regulation, and the development of a communities of inquiry in online and blended learning environments. *Computers & Education*, *55*(4), 1721–1731.

Sirois, F. & Pychyl, T. (2013). Procrastination and the priority of short-term mood regulation: Consequences for future self. *Social and Personality Psychology Compass*, *7*(2), 115–127.

Steel, P. (2007). The nature of procrastination: A meta-analytic and theoretical review of quintessential self-regulatory failure. *Psychological Bulletin*, *133*(1), 65–94.

Steel, P. & Klingsieck, K. B. (2016). Academic procrastination: Psychological antecedents revisited. *Australian Psychologist*, *51*(1), 36–46.

Stępień, M. & Topolewska, E. (2014). Style tożsamości w ujęciu Berzonsky'ego a prokrastynacja [Identity Styles in Bierzonsky's Approach and Procrastination]. In E. Topolewska, E. Skimina, S. Skrzek (Eds.), *Młoda psychologia* (Vol. 2, pp. 145–160). Warszawa: Wydawnictwo Stowarzyszenia Filomatów.

Tuckman, B. W. (1991). The development and concurrent validity of the procrastination scale. *Educational and Psychological Measurement*, *51*(2), 473–480.

Van Eerde, W. (2003). A meta-analytically derived nomological network of procrastination. *Personality and Individual Differences*, *35*(6), 1401–1418.

Van Laer, S. & Elen, J. (2019). The effect of cues for calibration on learners' self-regulated learning through changes in learners' learning behaviour and outcomes. *Computers & Education*, *135*, 30–48.

Wäschle, K., Allgaier, A., Lachner, A., Fink, S., & Nückles, M. (2014). Procrastination and self-efficacy: Tracing vicious and virtuous circles in self-regulated learning. *Learning and Instruction*, *29*, 103–114.

Wolters, C. A. (2003). Understanding procrastination from a self-regulated learning perspective. *Journal of Educational Psychology*, *95*(1), 179–187.

Wolters, C. A. (2004). Advancing achievement goal theory: Using goal structures and goal orientations to predict students' motivation, cognition, and achievement. *Journal of Educational Psychology*, *96*, 236–250.

Yamada, M., Goda, Y., Matsuda, T., Kato, H., & Miyagawa, H. (2015). The Relationship Among Self-Regulated Learning, Procrastination, And Learning Behaviors In Blended Learning Environment. *12th International Conference on Cognition and Exploratory Learning in Digital Age 2015*, 67–74. Greater Dublin, Ireland. http://eric.ed.gov/?id=ED562147.

Yamada, M., Goda, Y., Matsuda, T., Saito, Y., Kato, H., & Miyagawa, H. (2016). How does self-regulated learning relate to active procrastination and other learning behaviors? *Journal of Computing in Higher Education*, *28*(3), 326–343.

You, J. W. (2015). Examining the Effect of Academic Procrastination on Achievement Using LMS Data in E-learning. *Educational Technology & Society*, *18*(3), 64–74.

You, J. W., & Kang, M. (2014). The role of academic emotions in the relationship between perceived academic control and self-regulated learning in online learning. *Computers & Education*, *77*, 125–133.

Elżbieta Sanecka

Prokrastynacja w blended learningu: rola poczucia własnej skuteczności oraz aktywnej i pasywnej prokrastynacji

S t r e s z c z e n i e

Pomimo wzrastającego zainteresowania empirycznego prokrastynacją akademicką w kontekście kształcenia na odległość, istnieje niewiele badań poświęconych temu zjawisku w odniesieniu do programów blended learning. W przeprowadzonym badaniu analizowano zależności między uogólnionym poczuciem własnej skuteczności, dwoma rodzajami prokrastynacji (aktywną i pasywną prokrastynacją) oraz behawioralną tendencją do odkładania w czasie aktywności związanych z nauką w trakcie uniwersyteckiego kursu z wykorzystaniem platformy Moodle. Uzyskane wyniki pokazały, że pasywna prokrastynacja wykazuje silny negatywny związek z prokrastynacją w blended learningu, podczas gdy spostrzegane poczucie własnej skuteczności oraz aktywna prokrastynacja są niepowiązane z deklarowanym odkładaniem w czasie zadań podczas kursu blended learning. Dodatkowo wykazano istnienie negatywnego związku między zgłaszaną liczbą ukończonych wcześniej kursów blended learning a prokrastynacją w blended learningu. Praktyczne i teoretyczne implikacje otrzymanych wyników w odniesieniu do nauczania z wykorzystaniem metody blended learning zostały omówione w podsumowaniu.

S ł o w a k l u c z o w e: prokrastynacja, blended learning, poczucie własnej skuteczności, aktywna prokrastynacja, pasywna prokrastynacja

Elżbieta Sanecka

Прокрастинация в комбинированном обучении: роль чувства собственной продуктивности и активной или пассивной прокрастинации

Аннотация

Несмотря на растущий эмпирический интерес к академической прокрастинации в контексте дистанционного образования, существует недостаточное количество исследований, посвященных этому феномену в обучении с использованием комбинированных образовательных программ. В ходе проведенного исследования была проанализирована зависимость между обобщенным чувством собственной продуктивности, двумя видами прокрастинации (т. е., активной и пассивной) и поведенческой тенденцией к откладыванию действий, связанных с приобретением знаний по системе дистанционного обучения через платформу Moodle. Полученные результаты показали, что пассивная прокрастинация демонстрирует сильную отрицательную связь с прокрастинацией в смешанном обучении, в то время как воспринимаемое чувство собственной продуктивности и активная прокрастинация не связаны с откладыванием «на потом» выполнения заданий при смешанном образовании, когда темп и интенсивность обучения определяются самим учащимся. Кроме того, подтверждено существование отрицательной связи между зарегистрированным числом образовательных курсов, завершенных в более короткий период времени и прокрастинацией, связанной с комбинированным обучением. Практические и теоретические импликации полученных результатов, касающихся обучения по методу комбинированного образования, рассмотрены в выводах.

Ключевые слова: прокрастинация, комбинированное (смешанное) обучение, самоэффективность, активная прокрастинация, пассивная прокрастинация

Elżbieta Sanecka

Procrastinación en el blended learning: el papel de la autoeficacia y la procrastinación activa y pasiva

Resumen

A pesar del creciente interés empírico en la procrastinación académica en el contexto del aprendizaje a distancia, hay pocos estudios dedicados a este fenómeno en relación con los programas del blended learning (aprendizaje combinado). El estudio realizado analizó la relación entre la autoeficacia generalizada, dos tipos de procrastinación (es decir, la procrastinación activa y pasiva) y una tendencia conductual a posponer las actividades relacionadas con el aprendizaje durante el curso académico utilizando la plataforma Moodle. Los resultados obtenidos mostraron que la procrastinación pasiva muestra una fuerte relación negativa con la procrastinación en el blended learning, mientras que la autoeficacia y la procrastinación activa no están relacionadas con el aplazamiento declarado de tareas durante el curso del blended learning. Además, se mostró una relación negativa entre la cantidad de cursos del blended learning completados previamente y la procrastinación en el blanded learning. Las implicaciones prácticas y teóricas de los resultados obtenidos en relación con la enseñanza utilizando el método del blended learning se describen en las conclusiones.

Palabras clave: procrastinación, blended learning, autoeficacia, procrastinación activa, procrastinación pasiva

International Journal of Research in E-learning
Vol. 5 (2), 2019, p. 67

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International Journal of Research in E-learning
Vol. 5 (1), 2019, pp. 69–70

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Monograph

1. Smyrnova-Trybulska, E.: *Technologie informacyjno-komunikacyjne i e-learning we współczesnej edukacji*. Katowice: Wydawnictwo Uniwersytetu Śląskiego, 2018. ISBN 978-83-226-3070-9.

Coursebooks on e-learning

1. *Wykorzystanie LCMS Moodle jako systemu wspomagania nauczania na odległość*. Podręcznik akademicki. Ed. E. Smyrnova-Trybulska, S. Stach. Authors: E. Smyrnova-Trybulska, A. Burnus, A. Szczurek. Katowice: Wydawnictwo Uniwersytetu Śląskiego, Studio Noa, 2012, 560p. ISBN 978-83-60071-56-4 (http://www.wydawnictwo.us.edu.pl/node/3721).
2. *Zastosowanie systemów CMS w tworzeniu przestrzeni informacyjno-edukacyjnej w Internecie*. Podręcznik akademicki. Ed. E. Smyrnova-Trybulska, S. Stach. Authors: E. Smyrnova-Trybulska, S. Stach, B. Fuklin, D. Staniek. Katowice: Wydawnictwo Uniwersytetu Śląskiego, Studio Noa, 2012, 194p. ISBN 978-83-60071-55-7 (http://www.wydawnictwo.us.edu.pl/node/3731).

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Proofreading
Anna Kisiel

Cover design
Emilia Dajnowicz

Typesetting
Hanna Olsza

Electronic version is the original one.
The journal was previously published in printed form with the **ISSN 2451-2583**

The journal is distributed free of charge **ISSN 2543-6155**

Published by
Wydawnictwo Uniwersytetu Śląskiego
ul. Bankowa 12B, 40-007 Katowice
www.wydawnictwo.us.edu.pl
e-mail: wydawus@us.edu.pl

Printed sheets: 4.5.
Publishing sheets: 4.5.