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REVISTA INCLUSIONES M.R.
REVISTA DE HUMANIDADES
Y CIENCIAS SOCIALES

CUADERNOS DE SOFÍA EDITORIAL

ORGANIZATION OF TEACHER-STUDENT PEDAGOGICAL INTERACTION IN BLENDED LEARNING THROUGH MOBILE MESSENGERS

Ph. D. (c) Liudmila Petrovna Varenina
Plekhanov Russian University of Economics, Russia
ORCID: 0000-0002-5984-7711
liudmila.varenina@mail.ru
Ph. D. (c) Vitaly V. Goncharov
Kuban State Agrarian University named after I.T. Trubilin, Russia
ORCID: 0000-0003-3029-4727
niipgergo2009@mail.ru
Dr. Kh. A. Tonoyan
Moscow State University of Technology and Management named after K.G. Razumovsky
(First Cossack University), Russia
ORCID: 0000-0002-8976-858X
professor-tonoyan@mail.ru
Lic. Grigoriy Mikhailovich Bazhin
Moscow State University of Civil Engineering, Russia
ORCID: 0000-0002-7960-6421
gbajin@stc-c.ru
Lic. Kholisakhon Eshmatovna Ismailova
Tchaikovsky Moscow State Conservatory, Russia
ORCID: 0000-0002-7983-6948
holisa1967@mail.ru

Abstract

It is possible to ensure the high quality of educational services that would meet global standards only by informatizing education and implementing innovative information and communication technologies and creative organizational forms of learning into the educational process. The success of organizing blended learning at a higher education institution with the use of the most modern information and communication technologies is determined, first, by informatization as a primary trend in education and, second, by features of modern students as members of "Generation Z" or "digital generation" for whom the existence in a virtual digital environment is completely natural. The article deals with the organization of teacher-student pedagogical interaction through mobile messengers in the context of blended learning. Based on the results of an expert survey, the authors identify the benefits of organizing pedagogical interaction of the subjects of education through mobile devices, compare messengers and show the sequence of organizing pedagogical interaction between subjects of education through messengers.

Keywords

Blended learning – Pedagogical interaction – Mobile technologies – Messengers

Para Citar este Artículo:

Varenina, Liudmila Petrovna; Goncharov, Vitaly V.; Tonoyan, Kh. A.; Bazhin, Grigoriy Mikhailovich y Ismailova, Kholisakhon Eshmatovna. Organization of teacher-student pedagogical interaction in blended learning through mobile messengers. Revista Inclusiones Vol: 7 num Especial (2020): 357-368.

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Introduction

The implementation of blended learning into the educational process at higher education institutions determines the significance of information and communication technologies (ICT) in this process that serve as a tool for providing not only high-quality instructional content but also the development of future specialists' professional competences[1].

Researchers define blended learning as formal curricula that involve at least partial digital online learning and certain aspects of control over deadlines, routes and pace of learning. This type of learning entails various modalities to ensure an integrated learning experience[2]. Researchers also describe blended learning as a type of learning that combines different resources, in particular, elements of in-person lessons and e-learning[3].

The following features of blended learning stem from these definitions: during the study of an academic discipline, ICT and technical teaching aids (TTA) (personal computers (PC), mobile phones, tablets, projectors, etc.) are used[4]; ICT are used not only for storing and delivering educational material but also for control checks and educational interactions (consultations, discussions)[5]; the student controls their own time, place, routes and pace of learning[6].

N. Vaughan[7] believes that the blended learning format is various options for combining e-learning and in-person learning methods.

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[1] M. M. Milovanova; T. S. Markova; V. A. Mushrub; M. E. Ordynskaya y J. V. Plaksa, "Business education: training in the use of blockchain technology for business development", Revista Inclusiones Vol: 7 num Especial (2020): 408-420; S. V. Kondratiev; N. G. Pavlova; N. Rodionova; V. Ostroukhov y V. S. Bereznyakovskiy, "Personalized Learning as A Method of Moral and Intellectual Development in The Humanitarization of the Post-Industrial Society", Propósitos y Representaciones Vol: 8 num SPE2 (2020) y A. Jefferies y R. Hyde, "Building the future students' blended learning experiences from current research findings", Electronic Journal of e-Learning Vol: 8 num 2 (2010): 133-140.

[2] J. Wivell y S. Day, "Blended learning and teaching: Synergy in action", Advances in Social Work and Welfare Education Vol: 17 num 2 (2015): 86–99; G. Motteram, "Blended education and the transformation of teachers: A long-term case study in postgraduate UK higher education", British Journal of Educational Technology Vol: 37 num 1 (2006): 17-30 y A. B. Adcock; M. Dugan; E. Nelson y C. Nickel, "Teaching effective helping skills at a distance: The development of project CATHIE", Quarterly Review of Distance Education Vol: 7 num 4 (2006): 349-360.

[3] H. K. Yuen; L. Deng y R. Fox, "Use of WebCT in online and blended modes", Interactive Technology and Smart Education Vol: 6 num 4 (2009): 254-260; C. C. Chen y K. T. Jones, "Blended learning vs. traditional classroom settings: Assessing effectiveness and student perceptions in an MBA accounting course", The Journal of Educators Online Vol: 4 num 1 (2007): 1-15 y R. Donnelly, "Harmonizing technology with interaction in blended problem-based learning", Computers & Education Vol: 54 num 2 (2010): 350-359.

[4] N. Selwyn, "The use of computer technology in university teaching and learning: A critical perspective", Journal of Computer Assisted Learning Vol: 23 num 2 (2007): 83-94.

[5] C.-M. Ma; C.-M. Chao y B.-W. Cheng, "Integrating Technology Acceptance Model and Task-technology Fit into Blended E-learning System", Journal of Applied Sciences Vol: 13 num 5 (2013): 736–742.

[6] L. De George-Walker y M. Keeffe, "Self-determined blended learning: A case study of blended learning design", Higher Education Research & Development Vol: 2010 num 1 (2010): 1-13.

[7] N. Vaughan, "Perspectives on blended learning in higher education", International Journal of E-Learning Vol: 6 num 1 (2007): 81-94.

Blended learning curricula can include a wide variety of teaching techniques and approaches, such as digital courses, practical learning, project work, service rotation, e-books, mobile learning, coaching, in-person courses, on-site learning, educational games and simulations, formal training with certifications and many others.[8]

The category "blended learning" can be viewed in a narrow and broad sense. In a narrow sense, according to researchers[9], one should understand blended learning as a targeted educational process carried out by educational institutions of various types within the framework of formal education. Part of this process is implemented remotely using ICT and TTA that are used for storage and delivery of educational material and control checks, interactions between the subjects of the educational process (consultation, discussion), during which the student controls the time, place, routes and pace of learning. In a broad sense, blended learning means various options for combining forms and methods of organizing formal, non-formal, informal learning, as well as self-learning, carried out to achieve a person's predetermined educational goals while maintaining the mechanism of control over time, place, routes and pace of learning[10].

As for the broad sense, one should understand that online and offline formats can be present in formal, non-formal and informal learning. This may involve self-learning in the workplace with a combination of coaching, mentoring and peer counseling or formal education in an institution, etc. In this case, one can speak about a certain aspect of the "personalization of education" for a particular person[11]. An important aspect and an integral part of blended learning, like any methodological training system, is the pedagogical interaction between participants in the educational process. Education is communication between a teacher and students, in the process of which new knowledge is reproduced and acquired and scientific theories, concepts and judgments are comprehended and understood. Learning can be organized in different forms: pair (communication between two participants in the educational process where one speaks and the other listens), group (each member can communicate certain information to other members of the group), collective (communication in alternating dynamic pairs of different participants, mainly in pairs) and individual (mediated communication due to the possibility of communication without indirect contact)[12].

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[8] M. N. Shutova; T. V. Nesterova y E. O. Naumova, "Intonation of Russian Declarative Sentence: Methodology for Teaching Foreign Students", Propósitos y Representaciones Vol: 8 num SPE2 (2020); A. P. Efremenko; D. A. Berezhnoy; A. P. Tsilinko; T. A. Lomakina y A. I. Solovey, "Case Method in Vocational Training for Future Specialists of Culture and Art", Universal Journal of Educational Research Vol: 8 num 9 (2020): 3793 – 3798 y A. L. Krivova; S. N. Kurbakova; V. V. Afanasyev y R. G. Rezakov, "Capabilities of Cloud Services and Webinars Effectiveness of Teaching Humanities Students", Utopía Y Praxis Latinoamericana Vol: 25 num EXTRA 5 (2020): 135-146.

[9] A. G. Picciano, "Blending with purpose: The multimodal model", Journal of Asynchronous Learning Networks Vol: 13 num 1 (2009): 7–18 y R. Woods; J. D. Baker y D. Hopper, "Hybrid structures: Faculty use and perception of web-based courseware as a supplement to face-to-face instruction", Internet and Higher Education Vol: 7 (2004): 281-297.

[10] R. T. Osguthorpe y C. R. Graham, "Blended learning environments: Definitions and directions", The Quarterly Review of Distance Education Vol: 43 num 3 (2003): 227-233 y B. R. Stockwell; M. S. Stockwell; M. Cennamo y E. Jiang, "Blended Learning Improves Science Education", Cell Vol: 162 num 5 (2015): 933–936

[11] J. C. Sherblom, "The computer-mediated communication (CMC) classroom: A challenge of medium, presence, interaction, identity, and relationship", Communication Education Vol: 59 (2010): 497-523.

[12] H. Hen y S. D. Johnson, "Relationship between Students' emotional intelligence, social bond, and interactions in online learning", Educational Technology & Society Vol: 15 num 1 (2012): 78–89.

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Blended learning makes it possible to implement pedagogical interaction not only within the classroom with the teacher's direct participation but also remotely using indirect means of communication[13]. Such means of communication are provisionally divided into synchronous and asynchronous.

Synchronous means of communication enable real-time data exchange. This type of communication includes webinars, video and text conferences (chats) and video communication tools for organizing other forms of pedagogical communication. Asynchronous means of communication make it possible to transmit and receive data at a time convenient for each participant, independently of each other. This type of communication includes forums, email, Wiki websites, messengers, social media tools, etc[14].

We should note that the use of asynchronous communication tools can be organized for synchronous learning but the main purpose of such tools is asynchrony, i.e. interaction at a time and place convenient for the user.

At the beginning of the development of Internet technologies and their introduction into the educational process, asynchronous means of communication were actively used since the Internet connection speed was low and it was too difficult to organize work in real time. Today, the Internet connection speed is not a problem since it is sufficient for organizing remote work through synchronous communication.

Having a wide range of software tools, mobile devices are actively used for various types of communication among students – audio and video communication, text chats, webinars, etc. Communication in the form of text messages or text chats that can be carried through mobile applications of the "messenger" type is most common among students.

The term "messenger" refers to a system for exchanging short text messages using special software, a mobile application or a web service. Modern instant messengers can contain not only text messages but also graphic and animated images, sound and video files and other multimedia data. Among the popular messengers, we will name cross-platform applications for smartphones WhatsApp, Viber, Facebook Messenger, Telegram, Skype, etc.

According to the analytical company SimilarWeb[15] that conducted a survey in February 2018 among 194 countries, the WhatsApp mobile application, which is used in 107 countries, is in the first place by a large margin. Facebook Messenger is in second place as it is popular in 58 countries. Finally, Viber, which was in third place in 2016 and was used in 15 countries of the world, lost several positions. We should note that in Russia, Viber remains one of the most popular applications and has not lost ground.

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[13] Y. J. Park y C. J. Bonk, "Synchronous learning experiences: Distance and residential learners' perspectives in a blended graduate course", Journal of Interactive Online Learning Vol: 6 num 3 (2007): 245-264.
[14] S. Hrastinski, "Asynchronous and synchronous e-Learning", Educause Quarterly Vol: 31 num 4 (2008): 51-55.
[15] The Most Popular Messaging Apps by Country. Retrieved from: https://www.similarweb.com/corp/blog/popular-messaging-apps-by-country/

According to the German company MessengerPeople[16], WhatsApp, with 2 billion active users, ranks first among all messaging applications, followed by Facebook Messenger with 1.3 billion users and the Chinese messaging app WeChat with 1.1 billion users. They are followed by Instagram with 1 billion users, Chinese QQ with over 800 million active users and Viber with 260 million users.

The purpose of the article is to study the possibilities of organizing teacher-student pedagogical interaction in a blended learning environment through mobile messengers.

The hypothesis of the study: In a blended learning environment, using mobile messengers, one can organize different types of educational activities that allow them to form not only communicative but also professional competence in a future specialist.

Based on the results of the study, we can conclude that the goal of the study has been achieved.

Methods

To solve the tasks set in the study, the following general scientific methods were used:

a) theoretical: the analysis of peer-reviewed academic sources on the research problem to identify the features of the teacher-student pedagogical interaction through mobile messengers in the context of blended learning;

b) empirical:

- a survey of experts in this area of research. The experts had the following main tasks: to determine the main advantages of organizing the pedagogical interaction of the subjects of education using mobile devices, carry out a comparative analysis of messengers and determine the sequence of organizing the pedagogical interaction of the subjects of education using a messenger. The survey involved experts (28 people), employees of higher education institutions whose professional activities included, among other things, the organization of blended learning, as well as students (70 people).

- a survey of students. The students were asked about their preferred messenger. The survey involved students in Years 2-3 (65 people).

All participants were warned about the purpose of the surveys and that the organizers of the study planned to publish the summarized research results.

Results

According to the experts, the organization of pedagogical interaction between the subjects of education through mobile devices offers a number of benefits (Table 1).

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[16] WhatsApp, WeChat and Facebook Messenger Apps – Global Messenger Usage, Penetration and Statistics. Retrieved from: https://www.messengerpeople.com/global-messenger-usage-statistics/.

№	Benefits	%
1	pedagogical interaction does not depend on location	82.1%
2	important events, announcements and news can be sent out instantly	78.6%
3	the subjects of the educational process can interact with each other during classroom work, since mobile devices are small and allow free movement, unlike computer-based learning when each subject of the educational process must be in a certain place – at the computer	71.4%
4	one can contact a teacher at any time, regardless of availability, presence/absence of a teacher within the educational institution, etc.	71.4%
5	both individual and group communication can be organized	67.9%
6	the material is presented in a multimedia format	64.3%
7	students' psychological barrier is reduced due to indirect communication using mobile technologies	64.3%
8	students' motivation is increased and cognitive interest is activated	57.1%

Note: compiled based on the expert survey; *percentage of references by the experts

Table 1

The benefits of organizing the pedagogical interaction between the subjects of education through mobile devices

Based on the expert survey, we provided a comparison of messengers and analyze their functional features (Table 2).

Indicator	WhatsApp	Facebook Messenger	Viber	Telegram	Skype
Hardware compatibility	+	+	+	+	+
Identifier	Phone number	Login	Phone number	Phone number	Login
Web-version	+	+	-	-	-
PC version	-	+	+	+	+
Creation of groups	+	+	+	+	+
Video calls	+	+	+	-	+
Audio calls	+	+	+	+	+
File transfer	+	+	+	+	+

Note: compiled based on the expert survey

Table 2

Comparative analysis of messengers

Each messenger has its own features and can be used to organize both synchronous and asynchronous communication. According to the experts, the use of a messenger during the lesson requires the teacher to solve the following organizational issues (Table 3).

№	Sequence of organizing pedagogical interaction
1	preliminary collect information on the student's email address and phone number
2	select a messenger
3	create a topical group in the messenger
4	set rights for group members based on norms of ethical behavior
5	help students with settings of mobile versions of messengers on their phones (installation, synchronization, automatic downloads of received materials, etc.)

Note: compiled based on the expert survey

Table 3

The sequence of organizing pedagogical interaction between the subjects of education through messengers

PH. D. (C) LIUDMILA PETROVNA VARENINA / PH. D. (C) VITALY V. GONCHAROV / DR. KH. A. TONOYAN
LIC. GRIGORIY MIKHAILOVICH BAZHIN / LIC. KHOLISAKHON ESHMATOVNA ISMAILOVA

When choosing a messenger for organizing the interaction between participants in the educational process, one must consider not only functional features but also, as shown in a number of studies, how common the technology is among students[17].

For this purpose, we conducted a student survey on using messenger applications. The results of the survey are presented in Fig. 1.
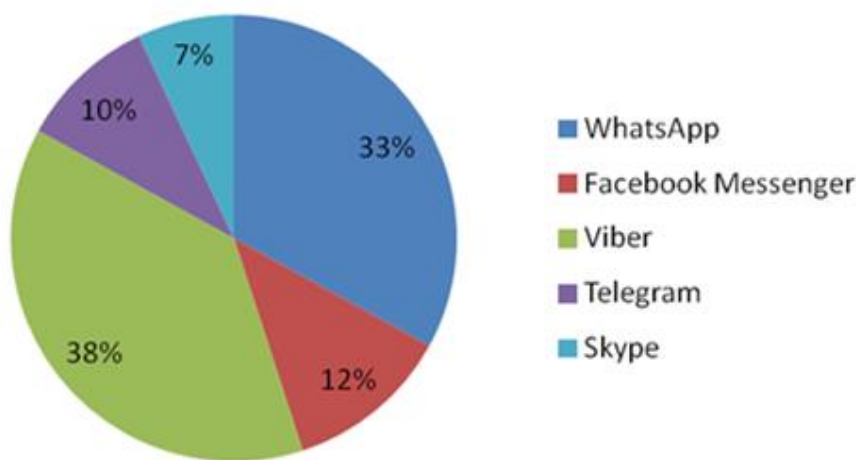
Figure 1
The students' use of messenger applications, %

The results of the survey showed the priority of using the Viber application (38%), however, the level of use of WhatsApp (33%) was equally high.

The survey results also showed that the Viber application has a number of advantages, which is a prerequisite for using the application in the educational process. Viber is free and affordable; easy to use; offers individual communication with individual students; one can organize group pedagogical interaction; 24/7 contact with participants in the educational process is possible; one can hold votes and discussions, exchange of multimedia data, etc.

Discussion

The experts believed that mobile messengers can be used both for synchronous and asynchronous interaction between participants in the educational process. It all depends on the methods and ways of organizing students' educational activities. According to the experts, these applications can be used to organize teacher-student pedagogical interaction in the form of group discussions, individual consultations, polls, questionnaires, news, announcements, etc., i.e. different types of educational activities can be organized through mobile messengers.

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[17] M. V. Pereverzeva; M. L. Kats; V. A. Ovsyannikova; S. S. Aksenova y N. S. Yushchenko, "Technology and Innovation in Schoolchildren Training: Development of Musical and Acting Skills", Universal Journal of Educational Research Vol: 8 num 7 (2020): 2766 – 2771; E. A. Semenova, "Hospital clowning in the resocialization of adolescent girls and youth with health restrictions", Revista Inclusiones Vol: 7 num Especial (2020): 465-480 y V. N. Dolzhenkov; I. D. Maltzagov; A. I. Makarova; N. S. Kamarova y P. V. Kukhtin, "Software Tools for Ontology Development", International Journal of Advanced Trends in Computer Science and Engineering Vol: 9 num 2 (2020): 935-941.

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However, since mobile messengers are mainly intended for text messaging, the most common type of educational communication, according to the majority of the respondents (80%), is the discussion of various theoretical issues within the academic discipline, which can be organized both in synchronous and asynchronous modes. Such activity undoubtedly helps students form the universal communicative competences necessary for further professional activity.

A mobile messenger can be used synchronously, in particular, during in-class work to activate mental activity or motivation to learn and stimulate or test knowledge. For example, according to one of the respondents, during a lecture, it is advisable to apply problem-based teaching methods aimed at understanding educational material rather than memorizing it. Within the framework of the studied disciplines, the method of problem-based learning, which is generally confirmed by a number of studies[18,19], makes it possible to form and revise a conceptual apparatus that includes professional terms, concepts, phenomena and processes that need to be described.

Thus, after presenting a new topic, the teacher forms (writes to the messenger group) a certain statement based on preliminary theoretical provisions and suggests voting in the mobile messenger for the correctness/incorrectness of this statement (like the comment with the statement in the group). If the statement is false, individual students who voted for its correctness are advised to analyze it and give all students a chance to speak. While a student speaks, the rest can write comments in the messenger. The latter aspect allows one to express one's current opinion without interrupting the student's answer and thus save classroom time and prevent very long discussions. For voting, the psychometric Likert scale can be used which provides for five gradations of answers: 1. completely disagree; 2. disagree; 3. difficult to answer; 4. agree; 5. completely agree.

Such educational communication fosters an active understanding of the educational content with the involvement of all possible mechanisms of mental activity. In the mode of dialogical interaction and communication, a future specialist's professionally significant qualities are formed that involve the formation of not only communicative but also specialized competence. The conceptual apparatus and skills of operating professional terms and content are formed and expanded and professional thinking is developed.

With the development of mobile technologies among educational resources for blended learning, mobile-oriented learning tools are becoming increasingly important. The use of mobile technologies allows one to hold innovative classes using new forms of organizing educational activities. Modern mobile devices make it possible to communicate with subjects of educational activity using various tools, both software and hardware. Each tool has its own characteristics and its efficiency depends on the purpose of its use.

Today, almost all students are psychologically ready for pedagogical interaction through mobile technologies since mobile devices are currently an integral part of a modern person that helps to solve everyday tasks. The new generation is different from the past generation that was focused on learning through handouts, lecture notes, books and

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[18] I. A. Skripak; S. N. Aynazarova; E. V. Ukhanova; A. E. Tkachenko y L. S. Erina, "Digital Virtualization Technologies in Distance Learning", International Journal of Advanced Trends in Computer Science and Engineering Vol: 9 num 2 (2020): 1808-1813.
[19] I. Shirshova; Y. S. Sizova; T. S. Gabazov y T. V. Salynskaya, "English language learning software", Revista Inclusiones Vol: 7 num Especial (2020): 237-248.

learning aids in the library that could only be accessed in a specific place. The modern generation of students strives to learn on the spot – "here and now" using familiar and intuitive means – mobile devices.

Conclusion

The results of the study confirmed the hypothesis that, in the context of blended learning, through the use of mobile messengers, it is possible to organize various types of educational activities that allow one to form not only communicative but also professional competences of a future specialist.

An important aspect of using mobile messengers in the educational process is that messengers are available, free, easy to use and offer instant messaging at any time and in any place. For a specialist, the model of teacher-student pedagogical interaction becomes the prototype of the relationships that will occur during future professional activity.

References

Adcock, A. B.; Dugan, M.; Nelson, E. y Nickel, C. "Teaching effective helping skills at a distance: The development of project CATHIE. Quarterly Review of Distance Education Vol: 7 num 4 (2006): 349-360.

Chen, C. C. y Jones, K. T. "Blended learning vs. traditional classroom settings: Assessing effectiveness and student perceptions in an MBA accounting course". The Journal of Educators Online Vol: 4 num 1 (2007): 1-15.

De George-Walker, L. y Keeffe, M. "Self-determined blended learning: A case study of blended learning design". Higher Education Research & Development Vol: 2010 num 1 (2010): 1-13.

Dolzhenkov, V. N.; Maltzagov, I. D.; Makarova, A. I.; Kamarova, N. S. y Kukhtin, P. V. "Software Tools for Ontology Development". International Journal of Advanced Trends in Computer Science and Engineering Vol: 9 num 2 (2020): 935-941.

Donnelly, R. "Harmonizing technology with interaction in blended problem-based learning". Computers & Education Vol: 54 num 2 (2010): 350-359.

Efremenko, A. P.; Berezhnoy, D. A.; Tsilinko, A. P.; Lomakina, T. A. y Solovey, A. I. "Case Method in Vocational Training for Future Specialists of Culture and Art". Universal Journal of Educational Research Vol: 8 num 9 (2020): 3793 – 3798.

Hen, H. y Johnson, S. D. "Relationship between Students' emotional intelligence, social bond, and interactions in online learning". Educational Technology & Society Vol: 15 num 1 (2012): 78–89.

Hrastinski, S. "Asynchronous and synchronous e-Learning". Educause Quarterly Vol: 31 num 4 (2008): 51-55.

Jefferies, A. y Hyde, R. "Building the future students' blended learning experiences from current research findings". Electronic Journal of e-Learning Vol: 8 num 2 (2010): 133-140.

Kondratiev, S. V.; Pavlova, N. G.; Rodionova, N.; Ostroukhov, V. y Bereznyakovskiy, V. S. Personalized Learning as A Method of Moral and Intellectual Development in The Humanitarization of the Post-Industrial Society. Propósitos y Representaciones Vol: 8 num SPE2 (2020).

Krivova, A. L.; Kurbakova, S. N.; Afanasyev, V. V. y Rezakov, R. G. "Capabilities of Cloud Services and Webinars Effectiveness of Teaching Humanities Students". Utopía Y Praxis Latinoamericana Vol: 25 num EXTRA 5 (2020): 135-146.

Ma, C.-M.; Chao, C.-M. y Cheng, B.-W. "Integrating Technology Acceptance Model and Task-technology Fit into Blended E-learning System". Journal of Applied Sciences Vol: 13 num 5 (2013): 736–742.

Milovanova, M. M.; Markova, T. S.; Mushrub, V. A.; Ordynskaya, M. E. y Plaksa, J. V. "Business education: training in the use of blockchain technology for business development". Revista Inclusiones Vol: 7 num Especial (2020): 408-420.

Motteram, G. "Blended education and the transformation of teachers: A long-term case study in postgraduate UK higher education". British Journal of Educational Technology Vol: 37 num 1 (2006): 17-30.

Osguthorpe, R. T. y Graham, C. R. "Blended learning environments: Definitions and directions". The Quarterly Review of Distance Education Vol: 43 num 3 (2003): 227-233.

Park, Y. J. y Bonk, C. J. "Synchronous learning experiences: Distance and residential learners' perspectives in a blended graduate course". Journal of Interactive Online Learning Vol: 6 num 3 (2007): 245-264.

Pereverzeva, M. V.; Kats, M. L.; Ovsyannikova, V. A.; Aksenova, S. S. y Yushchenko, N. S. "Technology and Innovation in Schoolchildren Training: Development of Musical and Acting Skills". Universal Journal of Educational Research Vol: 8 num 7 (2020): 2766 – 2771.

Picciano, A. G. "Blending with purpose: The multimodal model". Journal of Asynchronous Learning Networks Vol: 13 num 1 (2009): 7–18.

Selwyn, N. "The use of computer technology in university teaching and learning: A critical perspective". Journal of Computer Assisted Learning Vol: 23 num 2 (2007): 83-94.

Semenova, E. A. "Hospital clowning in the resocialization of adolescent girls and youth with health restrictions". Revista Inclusiones Vol: 7 num Especial (2020): 465-480.

Sherblom, J. C. "The computer-mediated communication (CMC) classroom: A challenge of medium, presence, interaction, identity, and relationship". Communication Education Vol: 59 (2010): 497-523.

Shirshova, I.; Sizova, Y. S.; Gabazov, T. S. y Salynskaya, T. V. "English language learning software". Revista Inclusiones Vol: 7 num Especial (2020): 237-248.

Shutova, M. N.; Nesterova, T. V. y Naumova, E. O. "Intonation of Russian Declarative Sentence: Methodology for Teaching Foreign Students". Propósitos y Representaciones Vol: 8 num SPE2 (2020).

Skripak, I. A.; Aynazarova, S. N.; Ukhanova, E. V.; Tkachenko, A. E., Erina, L.S. "Digital Virtualization Technologies in Distance Learning". International Journal of Advanced Trends in Computer Science and Engineering Vol: 9 num 2 (2020): 1808-1813.

Stockwell, B. R.; Stockwell, M. S.; Cennamo, M. y Jiang, E. "Blended Learning Improves Science Education". Cell Vol: 162 num 5 (2015): 933–936.

The Most Popular Messaging Apps by Country. Retrieved from: https://www.similarweb.com/corp/blog/popular-messaging-apps-by-country/

Vaughan, N. "Perspectives on blended learning in higher education". International Journal of E-Learning Vol: 6 num 1 (2007): 81-94.

WhatsApp, WeChat and Facebook Messenger Apps – Global Messenger Usage, Penetration and Statistics. Retrieved from: https://www.messengerpeople.com/global-messenger-usage-statistics/

Wivell, J. y Day, S. "Blended learning and teaching: Synergy in action". Advances in Social Work and Welfare Education Vol: 17 num 2 (2015): 86–99.

Woods, R., Baker, J.D., Hopper, D. Hybrid structures: Faculty use and perception of web-based courseware as a supplement to face-to-face instruction. Internet and Higher Education Vol: 7 (2004): 281-297.

Yuen, H. K.; Deng, L. y Fox, R. "Use of WebCT in online and blended modes". Interactive Technology and Smart Education Vol: 6 num 4 (2009): 254-260.

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