HYBRID LEARNING AND THE BEST DIGITAL TOOLS FOR TEACHING ENGLISH AT UNIVERSITIES

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Abstract

Hybrid learning is a modern trend in the organization of the educational process, the importance of which can hardly be overestimated in the constantly changing socio-economic and political situation in the world. This type of learning removes barriers and makes education accessible to anyone with the Internet connection. The opportunities that modern technologies provide to teachers and students are really important. Students can be involved into studying no matter where they are and what device they use. Hybrid classes and blended learning not only expand learning opportunities, but also help with certification of knowledge and skills. Educational partnership with business becomes available. The online accessibility of different courses from any device in any place is increasing, and proctoring is easier. Hybrid learning also enables the simultaneous work of online participants and in-person students in a joint educational environment.

The aim of our study is to determine a set of tools for hybrid learning, which helps to increase the attractiveness and quality of education.

The research methods – various approaches to the organization of hybrid learning analysis; introduction of selected tools into the learning process; a survey to collect feedback from teachers and students after they have worked together in a hybrid format; statistical methods for processing the obtained data. The study took place in the period February-June 2022 in groups of students of Kazan Federal University.

The results – the authors overviewed different tools suitable for Hybrid learning and suggested using MicrosoftTeams to organize remote connection of students to classes held in in-person format; the Moodle platform for posting assignments, tests and proctoring; sites and applications such as Learning App, Miro and Quizlet for group work and projects.

Keywords: hybrid learning, educational platform, application, learning flexibility

1. INTRODUCTION

Hybrid learning is a modern trend in the organization of the educational process, the importance of which can hardly be overestimated in the constantly changing socio-economic and political situation in the world. This type of learning removes barriers and makes education accessible to anyone with the Internet connection. The opportunities that modern technologies provide to teachers and students are really important. Students can be involved into studying no matter where they are and what device they use. Hybrid classes and blended learning not only expand learning opportunities, but also help with certification of knowledge and skills. Educational partnership with business becomes available. The online accessibility of different courses from any device in any place is increasing, and proctoring is easier. Hybrid learning also

enables the simultaneous work of online participants and in-person students in a joint educational environment.

Hybrid learning became renowned in the early 2000's and many researchers conducted studies to measure its effectiveness (Elearnspace 2005). Some researchers define hybrid or blended learning as the integration of face-to-face classroom instruction learning with distance/e-learning (Koohang A and Durante A, 2003). Koohang A. and Durante A. added that hybrid learning is a blended or mix of conventional face-to-face instruction and web-based distance learning. Hybrid learning refers to the addition of online learning as a supplement to the brick and mortar face-to-face instructional method (Harding A, Kaczynski D and Wood L 2012), (Garrison D and Vaughan N 2008). In a hybrid learning setting, part of the learning activities and assignments are transferred from the face-to-face classroom to the distance learning environment [6]. Innovative development of education implies its transformation to socially active forms, the implementation of the principles of cooperation of all participants in the educational process, the involvement of students in self-work as well as collaborative studying of disciplines. At the same time, the digitalization of the economy has led to the expansion of digital resources in education, not so much in traditional classroom training, as in the organization of distance training of students, primarily to unite geographically distributed participants of the educational process (Bukina T.V., Malakhova L.A., Novgorodova E.E., Nelyubina E.N., 2021).

2. FEATURES OF HYBRID LEARNING

There are plenty of features of hybrid learning, which is why it's become such a popular model of education. (https://trueconf.ru/blog/reviews/hybrid-education.html) These features include:
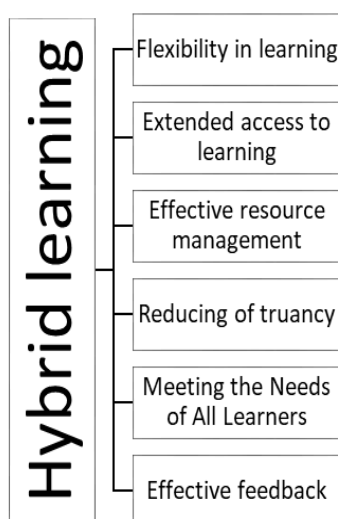

Fig. 1. The main features of Hybrid Learning

1. Flexibility in learning

The flexibility of the schedule and training regime, as well as the facilitated interaction of group-mates with each other and with teachers, encourage many educational institutions to switch to this model. For students who cannot attend classes physically, hybrid learning allows studying on-line. Due to the COVID-19 pandemic, hundreds of thousands of schools and universities have been forced to switch to distance learning, and the need for educational flexibility has become even more obvious. Therefore, even when COVID-19 turns into a terrible distant memory, such flexibility in the education system can remain extremely useful. How will students or teachers with cold symptoms feel in the classroom? Educational institutions will probably need new sanitary regulations to reduce the rate of bacterial spread. However, if the classes are equipped with hybrid learning tools, if necessary, it will not be difficult for students and teachers to connect to classes remotely.

2.Extended access to training

Since not everyone who wants to get education has such a financial or physical opportunity, especially during a pandemic, more expanded access to education can solve this problem and attract more students. As schools, colleges and universities develop their educational programs, more people can choose to study

online. Being in different geographical locations, students take part in classes online as productively as from the classroom. The hybrid learning model also allows you to open educational courses for international students without having to move them. At the same time, students who want to study in-person, such a system does not interfere at all. In addition, hybrid learning is likely to provide greater access to education for people with disabilities. For example, thanks to integration with EdTech technologies, the text-to-speech function becomes available and vice versa.

3. Effective resource management

Another significant advantage of hybrid learning is its ability to expand learning resources. Teachers can divide students into classroom and distant-learning, which allows for better space management, using small classes for more listeners. In addition, the use of hybrid learning helps teachers cope with overwork, as useful EdTech (Educational technology) technologies facilitate the creation of educational course materials. Since hybrid training makes it possible to combine classroom and distance learning methods, the same educational course can be suitable for two educational models at once.

4. Reducing of truancy

Hybrid learning can also be especially useful in the case of long absences from classes, for example, with chronic diseases of students. Since classes are usually recorded and then uploaded to the Internet, students who have missed a lesson for good reasons can easily catch up on the missed material. It's no secret that absenteeism negatively affects students' academic performance. Moreover, this problem creates a cycle that is difficult to break: a decrease in grades becomes a harbinger of future omissions.

5. Meeting the Needs of All Learners

The technology of blended learning easily adapts to any type of students: to those who like to study in-person in groups and by the traditional method, to those who, on the contrary, prefer to receive knowledge online and individually, and to those who strive to combine one with the other.

6.Effective feedback

Thanks to the integrated use of online and offline technologies, teachers can quickly introduce the latest trends and teaching methods into the curriculum. For example, the built-in LMS analytics functions can be used for deeper analysis of student progress and success. Students of a mixed learning format study, model and apply new skills in practice in the most comfortable environment. Thus, the learned material is not forgotten immediately after an classroom or online lesson, which makes the educational process more effective.

7. Better students' engagement

During blended learning, students gain an interactive experience, as they can independently decide what type of content they want to interact with and how to complete tasks. Students constantly keep in touch with each other and with the teacher, share their ideas, discuss interesting issues, learn new information and gain practical skills. Blended learning supports students' involvement in the educational process, improves their cognitive abilities, and also helps teachers to learn in a timely manner about areas where students have difficulties in mastering the material.

3. DIGITAL TOOLS FOR TEACHING ENGLISH AT UNIVERSITIES REVIEW

Based on the features discussed is becomes obvious that hybrid learning is going to play a crucial role in modern education. However, experts warn that the hybrid format is impossible without training the teachers and building the tech infrastructure where it is absent (e.g. in villages). A video lecture cannot be considered hybrid learning. One needs to be able to manage the attention of students and build a lesson in a new way. This insight confirms the importance of correct didactics for the 'hybrid'. There are more than 800 distance learning systems in the world. The overall global eLearning market is expected to hit $350 billion by 2025. This is the data of the largest consulting agency in the field of online education (Research and Markets, 2022). The development of technology applications, increase in wired or wireless bandwidth, expanded optical fibre and mobile networks, and the cost reduction in hardware and connectivity services have all significantly improved the possibilities of synchronous and asynchronous communication and learning by providing opportunities for increased interactivity and collaboration. Access to a vast quantity of resources on the web and to direct contact with others without geographical boundaries offers many individuals and institutions new opportunities for education that better accommodate students' personal, professional and work agendas (Kukulska-Hulme, A., Bossu, C., Charitonos, K., Coughlan, T., Ferguson, R., FitzGerald, E., Gaved, M., Guitert, M., Herodotou, C., Maina, M., Prieto-Blázquez, J., Rienties, B., Sangrà, A., Sargent, J.,

Scanlon, E., Whitelock, D. (2022). They can be divided into 3 main groups: LMS Learning Management System, Communication platforms, Online Boards, Gamified Quizzes and Multi-functional Learning Apps. The examples of each of them are presented below.

3.1 Learning Management System

Modern Learning Management System is divided into two types: Cloud LMS and "Boxed" LMS. Cloud LMS is an online platform that is used on a subscription basis. This is a popular option among e-learning companies because it is very cost-effective. Benefits include reduced IT department costs, fewer resources. The LMS Learning Management system is designed to simplify management and improve the learning process and student achievement. Having competently built a Learning Management System through an electronic learning system, companies solve the following tasks:

- Employee training,

- Training and certification in educational institutions,

- Attracting new customers,

- Training existing customers.

There are just some of them which are supposed to be the most prospective ones.

Table 1. Distance learning system: Learning Management System

LMS	Main features
GetCourse	The most popular platform among information businessmen. Webinars, integration with many payment systems, protection against theft of rates. https://getcourse.io/?utm_source=mainpage&utm_medium=menu&utm_campaign=header
Ilias	Free platform with the ability to create forums and personal blogs. Installed on the server. Ilias has an open source code, which allows you to modify the platform for your tasks if you have programming skills. https://www.ilias-solutions.com/platform
iSpring Learn	The platform is ready to work immediately after registration. Support for all types of training materials, webinars, detailed statistics and a course editor that allows you to quickly create courses and simulators from office documents and videos. https://www.ispring.ru/elearning-insights/new-lms-ispring-learn
Moodle	Free platform with extensive customization options. Installed only on your server. There are many plugins to extend functionality. Requires web development skills for administration. https://moodle.com/about/
Teach base	Cloud learning platform. There is a built-in course editor - the page with the course is assembled on Tilda, like a regular landing page. It is possible to sell courses. https://teachbase.ru/

3.2 Communication Platforms

Confluence, Slack, Teams, Trello, Zoom are some of powerhouse tools which provide the opportunity for seamless collaboration, increased productivity, and streamlined communication to help your team flourish—no matter the work environment. Communication platforms and software can be indispensable in facilitating better collaboration and connection within the concept of Hybrid learning.

Table 2. Distance learning system: Communication platforms

Communication platforms	Main features
Confluence	Confluence is a team workspace where knowledge and collaboration meet. Dynamic pages give your team a place to create, capture, and collaborate on any

	project or idea. https://www.atlassian.com/
Slack	Slack is a messaging app for business that connects people to the information they need. By bringing people together to work as one unified team, Slack transforms the way organizations communicate. https://slack.com/
Teams	Microsoft Teams is the ultimate messaging app for your organization—a workspace for real-time collaboration and communication, meetings, file and app sharing, and even the occasional emoji! All in one place, all in the open, all accessible to everyone. https://www.microsoft.com/ru-ru/microsoft-teams/group-chat-software
Trello	Trello is the visual tool that empowers your team to manage any type of project, workflow, or task tracking. Add files, checklists, or even automation: Customize it all for how your team works best. https://trello.com/
Zoom	Zoom is a communications platform that allows users to connect with video, audio, phone, and chat. Using Zoom requires an internet connection and a supported device. Most new users will want to start by creating an account and downloading the Zoom Client for Meetings. Others can review the variety of solutions offered by the Zoom platform and determine which one best fits their needs. https://zoom.us/

3.3 Online Boards

The idea of an online whiteboard is to provide teams with a whiteboard on which they can work digital, from everywhere when they are online. The purpose of a whiteboard is to visualize thoughts, concepts, write down ideas, explain and teach, plan and create in the group and many other things. Online whiteboards can be used for the same purpose as a real whiteboard, but without the limitations of a real whiteboard. The latter is limited by space, the number of things which you can add (have you ever tried to put a video on a real whiteboard?) and is only available to the people who are in the same room. Online whiteboards are software solutions that come along as apps or browser-based tools. They support teams to collaborate visually over distance in real-time.

Table 3. Distance learning system: Online Boards

Online Boards	Main features
Conceptboard	Interactive online whiteboard for teamwork. With the help of the service, you can conduct brainstorming and training, collaborate on projects, and much more. Peculiarities: Live cursors. You can follow each user in real time - all cursors have member names. Also, the board remembers all changes, if you wish, you can restore the original version; Endless canvas. The working area is not limited by anything, you can zoom in or out as you wish; Loading content. On the board, you can post images, videos, files and other objects, as well as comment on them; Rich functionality. You can use drawing tools, leave notes, text fields; Integrations. The service can be synchronized with Microsoft Teams, Google Drive, Dropbox and other solutions. Conceptboard is free to use and you are not limited in the number of boards you can create. However, only 100 objects can be placed on the board. The maximum size of uploaded files is 10 MB, the total storage size is 500 MB. Also, on the free plan, you are limited in the number of participants (50) and team members (1). To remove the restrictions, you need to issue a podisk. https://conceptboard.com/

Mindomo	Online platform for creating mind maps. With it, you can display your ideas, plans and interests through mind maps, as well as work with them in a collaborative mode. The service allows you to create mind maps, concept maps, diagrams and Gantt charts. Peculiarities: Simple control. You can drag and edit blocks, change their appearance, font and text size; Adding files - images, audio, video, links; Planning, organizing and filtering information through a hashtag system; Export in various formats - XLS, PDF, DOC, HTML and 8 more formats. Import maps in 10 formats. https://www.mindomo.com/ru/
MindMeister	An online service for creating mind maps, planning projects and creating notes. Allows you to visualize ideas and work on them in a collaborative mode with other users. Peculiarities: Design customization. The service allows you to work with color images and emoticons, change the fill and stroke, stylize themes; Rich functionality. You can view maps in different modes, add attachments to them, use focus and other features. Distribution of access rights, commenting on maps, viewing version history. MindMeister is free to use. You can create up to 3 mind maps and work on them cooperatively. To remove restrictions and use all the features of the service, you need to subscribe. https://www.mindmeister.com/
Miro	Ready templates. Diagrams, mind maps, business models and other templates will allow you to launch projects even faster; Integrations. You can synchronize the service with Jira, Slack, Zoom, Trello and other tools; Digitization of handwritten notes. A special function allows you to convert an ordinary physical board into a digital analogue; Miro is free to use. You will have access to the creation of 3 boards, ready-made templates and basic integrations. To fully use the product, you need to connect a paid plan. https://miro.com/ru/
Padlet	A platform for creating interactive whiteboards that can be used for briefings, brainstorming or educational events, product presentations and more. Padlet is extremely simple - you can add any objects with a mouse click, then copy or drag them. The service is available in 29 languages. Peculiarities: Convenient collaboration. You can invite an unlimited number of participants and distribute access rights (for example, read, edit or moderate); Support for a huge number of files. Padlet supports everything from spreadsheets to music and videos. You can embed content from YouTube, Instagram, Photoshop and 400+ other services; Design settings. You can choose wallpapers, themes, fonts. Padlet is free to use with restrictions. For example, only 3 boards will be available to you, and the maximum size of uploaded files will be limited to 20 MB. If you want to use all the features of the service, you need to subscribe. https://ru.padlet.com/

3.4 Gamified Quizzes

These add a bit of competition and engagement to review periods and retrieval practice activities. They help space out information so that it is revisited and recalled frequently in the semester. Gamified and competitive quizzes can renew interest and curiosity in course content. This is likely because games affect us right in the endorphins, giving us a positive boost to our confidence and refreshing our enjoyment of the content (Yee, 2006). In a wide literature review on game based learning in higher education, Subhash and Cudney (2018) found that that engagement and interest were the key benefits to competitive quizzes, spurring learners to study more. Sanchez, Langer and Kaur (2019) found that competitive quizzes bring novelty to the classroom, temporarily improving student performance on assessments.

Table 4. Distance learning system: Gamified Quizzes

Gamified Quizzes	Main features
Anki	Anki is a program that makes it easier to remember things. Since it is much more efficient than traditional teaching methods, you can either greatly reduce the time spent on learning or greatly improve the quality of learning. AnkiApp is a simple, effective flashcard app that lets you study at your own pace whenever you have time. Lessons take 1 minute or less. The app works on phones, tablets and computers and automatically syncs across all your devices. https://apps.ankiweb.net/
Classmint	Classmint, formerly Qlazzy, helps you score well in exams and in life with proven learning methods like Cornell Notes, Flashcards, Active Recall, and timely review of study notes. https://www.classmint.org/
Memrise	Have fun learning a foreign language with Memrise. The more you enjoy learning, the better and faster your skills will develop. That's why entertainment combined with real, relevant content is the foundation of language learning at Memrise. https://www.memrise.com/ru/
Quizalize	Quizalize lets you engage in class and get instant assessments for personalized learning on any computer, tablet or smartphone. This will help you quickly identify the strengths, weaknesses and learning gaps of individual students and intervene in real time to provide individual assistance in the classroom. https://www.quizalize.com/
Quizlet	Quizlet is a free service that makes it easy to memorize any information that can be presented in the form of study cards. All that is required is to find in the database or create interactive material - your own cards, adding pictures and audio files to them, and then doing exercises and playing games to remember this material. To enter the service, you must register or log in through Google or Facebook. In Quizlet, you can send students a link to a module/course, or they can search for it by their instructor's name. https://quizlet.com/

3.5 Multi-Functional Learning Apps

Multi-functional Learning Apps can help teachers to create different types of tasks. They support a lot of files.

Teachers can create exercises themselves using a template, or choose one from the catalog and add it to your course. All tasks are usually divided into disciplines.

Table 5. Distance learning system: Multi-functional Learning Apps

MFL Apps	Main features
Learning Apps	This is a constructor of interactive tasks that will help consolidate knowledge in a playful way. The service allows you to create different types of exercises: "Chronological ruler", "Classification", "Crossword", "Fill in the gaps", "Quiz with

	the choice of the correct answer" and others. You can create an exercise yourself using a template, or choose one from the catalog and add it to your course. All tasks are divided into disciplines. https://learningapps.org/
Word Wall	Up to 33 interactive templates and up to 21 printable templates are available to the user - their number depends on the selected tariff plan. To make your own game, you need to choose a format, fill the template with educational content and add it to an online lesson. Or print materials if the lesson is offline. The service offers to create not only simple interactive tasks like "Find a Pair", but also multiple-choice quizzes with limited time, several "lives" and a bonus round. https://wordwall.net/ru
ThingLink	Infographics, presentations, virtual tours, videos, and images - ThingLink has over 70 content formats that you can use to design your online course. The service supports 360-degree videos and VR/AR. A simple interface allows you to create interactive content in a few steps and share the link with students. https://www.thinglink.com/
Madtest	Madtest is an interactive quiz maker. The service is perfect if you plan to post tests on your website or social networks. You can leave comments that will be shown when the user answers correctly or incorrectly. Suitable not only for education, but also for information sites, media and corporate blogs.
Kahoot	One of the most famous services for educators is Kahoot. It allows you to create interactive content to engage students, use it both in the classroom and for independent work of students. Advantages and possibilities of the service: clear interface, modern design of created activities, 4 options for interactivity for educational institutions: a quiz (quiz), a game with mixed answers (jumble), a discussion (discussion), a survey (survey), there are response statistics. https://kahoot.com

4. METHODOLOGY AND RESULTS

4.1 Methodology

The research was conducted at the Kazan Federal University (KFU, Kazan), Kazan Branch of the Russian State University of Justice and Kazan State Institute of Culture in September 2022. The study concerned analysis of hybrid learning (as one of global trends in education) and its main features, and review of digital tools for teaching at universities. To study the value and relevance of digital tools in education in teachers' and students' minds, a survey was conducted using a written interview method. In total, 300 people (180 final year students and 120 teachers of three significant educational institutions in Tatarstan) took part in the survey.

Teachers and students were asked to study 5 different groups of digital education tools (5 variants in each group) given above in Section 3 and to choose the most convenient, prospective and useful one in each group of tools which can be used at universities of the Republic of Tatarstan. They were also asked to give feedback and explain their choice.

4.2 Results

The results – the participants of the survey determined Learning Apps, Miro, Moodle, Quizlet and Teams as the most prospective tools for Hybrid learning.

Table 6.

The best tools	Teachers %	Students %
Learning Apps	76,36	47,6
Miro	70,55	44,8
Moodle	83,0	61,6
Quizlet	78,85	56,0
Teams	91,3	89,6

The survey shows that 83%(100p.) of the teachers and 61,6%(110p.) of the students named Moodle as the best variant of Learning Management Systems. Teachers say that Moodle offers a range of online teaching and training solutions that can be tailored to any educational institution or organization. Moodle can be extended or modified into a solution that is perfectly adapted to our needs. The students admit that despite being quite "boring" Moodle make the studying process easier and more comfortable. From the second group "Communication platforms" Teams was chosen by 91,3%(110p.) of the teachers and 89,6%(160p.) of the students. This platform is being used at universities of the Republic of Tatarstan and both teachers and students agree that this variant provides a lot of opportunities in collaboration within the frame of Hybrid learning. Microsoft Teams is a digital center that combines chats, instructive content, assignments and applications in one place and allows teachers to cope with a new challenge - to organize the learning process in such a way that students outside the classroom are fully involved in the learning process and have the opportunity to communicate with classmates and teachers (T.V. Bukina, 2022). 70,55% of the teachers and 44,8% of the students named Miro the best Online Whiteboard because Miro gives teams a dynamic and visual way to collaborate, connect, and create. To their mind Miro is more accustomed to the universities of the Republic of Tatarstan. As for Gamified Quizzes, our interviewees (78,85% of the teachers and 56,0% of the students) gave their choice to Quizlet because teachers emphasize such options as opportunity to organize teaching materials by creating folders for different subjects; organize modules by creating courses and sharing them with other users. Students appreciate they can have fun with studying by using the game formats that Quizlet offers. 76,36% of the teachers and 47,6 pointed to Learning Apps as the best Multi-functional Learning App because the service is Russified (+5 other languages), allows to create, more than 20 types of game exercises and online games, using templates, intuitive interface and simple creation of exercises, completely free.

4. CONCLUSION

The overall global eLearning market is expected to hit $350 billion by 2025. This is the data of the largest consulting agency in the field of online education (Research and Markets, 2022). Hybrid education is included in the 10 main trends in world education (Kukulska-Hulme, A., Bossu, C., Charitonos, K., Coughlan, T., Ferguson, R., FitzGerald, E., Gaved, M., Guitert,M., Herodotou, C., Maina, M., Prieto-Blázquez, J., Rienties, B., Sangrà, A., Sargent, J., Scanlon, E., Whitelock, D., 2022). The effective implementation of this model requires modern teaching tools that will help organize the learning process in such a way that students studying in the classroom and those who study remotely can effectively interact with each other and with the teacher. There are more than 800 distance learning tools in the world. These tools are divided into 5 main groups: LMS Learning Management System, Communication platforms, Online Boards, Gamified Quizzes and Multi-functional Learning Apps. Teachers should integrate these tools into educational process to make it up-to-date and attractive to Generation-Z students.

5. AKNOWLEDGEMENTS

REFERENCE LIST

Bukina T.V., Malakhova L.A., Novgorodova E.E., Nelyubina E.N. (2021) Content of Digital Educational

Resources and Student Involvement In The Process Of Distance Learning INTED2021 Proceedings: The 15th annual International Technology, Education and Development Conference (8-9. March, 2021), Valencia, Spain: pp. 2815-2821. ISBN: 978-84-09-27666-0; ISSN: 2340-1079; doi: 10.21125/inted.2022.1049

Elearnspace 2005 Blended. http://www.elearnspace.org/doing/blended.htm

Garrison D and Vaughan N 2008 Blended Learning in Higher Education-Framework, Principles, and Guidelines (John Wiley & Sons)

Harding A, Kaczynski D and Wood L 2012 Evaluation of blended learning: analysis of qualitative data Proc. of the Australian Conf. on Science and Mathematics Education vol 11

Koohang A and Durante A 2003 Learners' perceptions toward the web-based distance learning activities/assignments portion of an undergraduate hybrid instructional model J. Information Technol. Educ. 2 pp 105-13

Kukulska-Hulme, A., Bossu, C., Charitonos, K., Coughlan, T., Ferguson, R., FitzGerald, E., Gaved, M., Guitert,M., Herodotou, C., Maina, M., Prieto-Blázquez, J., Rienties, B., Sangrà, A., Sargent, J., Scanlon, E., Whitelock, D.(2022). Innovating Pedagogy 2022: Open University Innovation Report 10. Milton Keynes: The Open University

Raes, A., Detienne, L., Windey, I., & Depaepe, F. (2020). A systematic literature review on synchronous hybrid learning: Gaps identified. Learning Environments Research, 23(3), 269-290. Available at: https://doi.org/10.1007/s10984-019-09303-z (Accessed 14/05/22)

Sanchez, D. R., Langer, M., & Kaur, R. (2019). Gamification in the classroom: Examining the impact of gamified quizzes on student learning. *Computers & Education*, *144*. Retrieved from https://doi.org/10.1016/j.compedu.2019.103666.

Subhash, S. and Cudney, E. (2018). Gamified learning in higher education: A systematic review of the literature. *Computers in Human Behaviour* v. 87. 192-206. Retrieved from https://doi.org/10.1016/j.chb.2018.05.028.

Yee, N. (2006). The psychology of MMORPGs: Emotional investment, motivations, relationship formation, and problematic usage. Avatars at work and play: Collaboration and interaction in shared virtual environments, Vol. 34 (2006), pp. 187-20.

RESOURCES

https://trueconf.ru/blog/reviews/hybrid-education.html

https://www.jisc.ac.uk/guides/digitalpedagogy-toolkit/scenario-four-effective-hybridlearning (Accessed: 26/02/22)