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BLENDED LEARNING IN MODERN EDUCATIONAL PROCESS: NECESSITY AND OPPORTUNITIES

The article analyzes the potential and capabilities of the blended learning method as didactic means of transition implementation from the traditional learning model to the integrated one using electronic media and resources. Identify existing blended learning models discuss ways to adapt them to the conditions of the Kazakhstan university system. Problems impeding the effective and rapid integration of e-learning environments are indentified, and some strategic initiatives to address them are suggested. Tech-based learning has been proven to increase the retention of students in classrooms or in online education. Blended learning methods involve tools that allow creativity in lessons and subjects. This keeps learners engaged and the use of online resources creatively recreates what they are learning.

This method of learning is not monotonous but it is always evolving to improve training. Lessons become interactive sessions that teachers and students look forward to and enjoy. Blended learning enables students to stay focused for longer which brings them academic success. Digital learning mechanisms can sustain the interest of students through graphics, videos and other methods. Teachers have the freedom to create instructional videos and give real-time feedback that promotes engagement with students.

Key words: blended learning, information technology, e-learning, informatization of education.

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Заманауи оқу үдерісінде аралас оқыту: қажеттілік пен мүмкіндіктер

Мақала аралас оқыту әдісінің әлеуеті мен мүмкіндігін дәстүрлі білім беру моделінен интеграцияланған бағдарламаға көшуді дидактикалық тәсіл ретінде пайдалану сияқты электрондық құралдар мен ресурстарды пайдалану арқылы талдайды. Бар аралас оқыту модельдері оларды қазақстандық университеттік жүйенің шарттарына бейімдеу жолдары талқыланды. Электрондық оқыту ортасының тиімді және жылдам интеграциялануына кедергі келтіретін проблемаларды анықтаңыз және оларды шешудің кейбір стратегиялық бастамаларын ұсынамыз. Техникалық оқыту оқушылардың сыныпта немесе онлайн-оқытуда ұстап қалуын дәлелдеді. Аралас оқыту әдістері сабақтарда және пәндерде шығармашылыққа мүмкіндік беретін құралдарды қамтиды. Бұл оқушылармен айналысады және онлайн қорларды пайдалану оларды үйреніп жатқан нәрсені шығармашылық түрде қайта жасайды.

Бұл әдіс біртұтас емес, бірақ ол әрдайым оқытуды жақсарту үшін дамып келеді. Сабақтар мұғалімдер мен оқушылар асыға күтетін және ләззат алатын интерактивті сеанстарға айналады. Аралас оқитын оқушылардың оқуда жетістікке жетуіне көп уақыт жұмсауға мүмкіндік береді. Сандық оқыту тетіктері оқушылардың қызығушылығын графика, бейне және басқа әдістер арқылы қолдана алады. Мұғалімдер оқу видеожазбаларын жасауға және нақты уақыт тәртібінде пікір алмасуға мүмкіндік береді, бұл студенттермен қарым-қатынас жасауға көмектеседі.

Түйін сөздер: аралас оқыту, ақпараттық технологиялар, электрондық оқыту, білім беруді ақпараттандыру.

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Смешанное обучение в современном образовательном процессе: необходимость и возможности

В статье анализируются потенциал и возможности метода смешанного обучения как дидактического средства перехода от традиционной модели обучения к интегрированной с использованием электронных средств и ресурсов. В существующих моделях смешанного обучения обсуждаются способы их адаптации к условиям казахстанской университетской системы. Определяются проблемы, препятствующие эффективной и быстрой интеграции сред электронного обучения, и предлагаются некоторые стратегические инициативы для их решения. Доказано, что основанное на технологиях обучение увеличивает удержание студентов в классах или в онлайн-образовании. Смешанные методы обучения включают в себя инструменты, которые позволяют использовать творчество на уроках и предметах. Это позволяет учащимся быть вовлеченными, а использование онлайн-ресурсов творчески воссоздает то, что они изучают.

Этот метод обучения не является однообразным, но он постоянно развивается, чтобы улучшить обучение. Уроки превращаются в интерактивные занятия, которые учителя и ученики с нетерпением ждут. Смешанное обучение позволяет студентам дольше оставаться сосредоточенными, что приносит им академический успех. Механизмы цифрового обучения могут поддерживать интерес студентов с помощью графики, видео и других методов. Преподаватели имеют свободу создавать обучающие видеоролики и предоставлять обратную связь в режиме реального времени, что способствует взаимодействию со студентами.

Ключевые слова: смешанное обучение, информационные технологии, электронное обучение, информатизация образования.

Introduction

Blended learning is one of the trends in modern education and, according to predictors, will remain so in the coming decade. Blended learning is an educational technology that combines and interpenetrates full-time and e-learning with the student's ability to independently choose the time, place, pace and learning path.

The current stage of development of educational activities is determined by the dominance of information and communication technologies that allow to intensify the forms and methods of traditional approaches to learning. A growing number of people seeks to get an education with minimal time losses, since the pace life leaves less time for traditional full-time study. The state educational standard of the new generation focuses on the transition from learning, where the learner is the object of influence of the learner, to learning activities, the subject of which is the learner, and the trainer acts as an organizer, employee, and assistant. The principles of the organization of the educational process are gradually changing. Conditions are created for the realization of a dynamic personalized learning (Oreshkina, 2014) [1].

The object of our study is the use of e-learning technologies helps to improve the students knowledge in different language area. They may increase their knowledge in English with the help of different type of e-learning method. To focus on investigating the effects of computer-based study methods on students skills of studying and their perceived learning experience without the necessity of controlling a lot of variables such as socio-economic status, language competence, and so on.

The aim of our study is to justify e-learning technologies as the most efficient and optimal way in teaching English language. The main goal of the article is to ensure equal access of all participants of the educational process to the best educational resources and technologies.

One of the modern educational technologies is blended learning, which is based on the concept of combining "classroom system" technologies, e-learning, distance learning technologies.

Among the main advantages of blended learning include following:

– each student has the opportunity to master the necessary knowledge and skills in a convenient format;

– planning and understanding what training needs satisfy and what results to bring;

– providing effective learning management tools;

– reducing the time and cost of training, without losing this advantage of the traditional approach;

– technology and teaching enrich and mutually complement each other;
– active social interaction of trainees, both among themselves and with teachers;
– availability of the teacher almost constantly;
– learning is possible regardless of time and place;
– a variety of didactic approaches;
– improving the quality of training (including through the use of more effective learning tools);
– individual control over training;
– students' natural development of modern means of work organization, communications;
– the priority of the student's independent activity;
– organization of individual support for learning activities of each trainee;
– use of the organization of group learning activities;
– flexibility of educational trajectory;
– integration of online and offline reusable teaching and learning content.

Literature review

Here are the basic definitions of blended learning:

1. Blended learning is a formal training program, within which students at least partially study in an electronic, online format, and at the same time there are some elements of control over the terms, course and pace of training; partially, the training takes place internally, outside the students' home. In this kind of training different modalities to ultimately provide an integrated learning experience (Staker / Horn, 2012).

2. Blended learning is the integration of e-learning and traditional learning, which is characterized by planning and pedagogical value (Sloan Consortium).

3. Blended learning is a learning method that combines various resources, in particular, elements of face-to-face training sessions and e-learning (MacMillan Dictionary) (Bielawski, 2003; Means, 2010; Mijares, 2014; Griff, 2014) [2, 3, 4, 5].

The use of methods and technologies of full-time and e-learning allows you to simultaneously use the advantages of these forms of education. Full-time elements are used to motivate students.

Traditional forms of education are based on the direct personal communication of the student and the teacher.

E-learning technologies provide multimedia content is timeless and space for learners with different capabilities and queries. The combination of online and offline elements allows make learning effective, economical and convenient, and the learning process interactive, student-centered and adaptive for all interested in learning parties.

Of course, there are a number of reasons for inefficient use of e-learning technologies:
– lack of effective education management tools;
– lack of funds for the development of educational content;
– lack of teaching staff in the field of remote technology learning;
– specific training;
– lack of modern teaching aids;
– poor technical and software equipment of students;
– lag of educational programs from real life, etc.

It should be taken into account that education using the Internet technology is a new phenomenon. The culture of communication and work via the Internet has not yet been formed. Today, some cons of the use of new technologies in education are already visible:
– Most teaching materials created for traditional learning are not suitable for use in online or blended learning.
– a remote student, studying only with the help of information technology means, does not have the opportunity to accumulate those necessary skills that he could develop in lectures and seminars;
– lack of professionalism in the development of online teaching materials and the need for special training of teachers for work with new technologies;
– the need to equip the school with computer equipment and software that requires constant updates;
– developed courses do not meet various standards for interface, graphics, etc., can be taught only by one educational institution or only by one teacher;
– lack of a reward system for participating in improving the quality of the education process, in mastering new teaching principles using distance learning technologies;
– problems of developing skills in working with information systems for all participants in the educational process.

Materials and methods

Against the background of implementation problems, a blended learning model looks very advantageous – technology can be combined.

Teachers and students have more time and opportunities to learn new ones, the number of online activities is increasing gradually. At blended

learning model there is an opportunity for gradual course design, since this model does not require fully interactive and multimedia courses. At the initial stage of the introduction of innovative technologies sufficiently decorated text materials, chat, testing systems and file sharing systems.

Introduction to the educational process of blended learning allows solve a number of tasks:

1) for students:

– expanding the educational opportunities of students by increasing the availability and flexibility of education, taking into account their individual educational needs, as well as the pace and rhythm of development of educational material;

– implementation of individual curricula with unlimited choice of subjects, the level of their development and ways of organizing educational activities;

– personalization of the educational process: the student independently determines his learning goals, ways of achieving them, taking into account his educational needs, interests and abilities;

– maximum objectification of the procedure and assessment results;

– stimulation of the formation of the learner's subjective position: increasing independence, social activity, motivation of cognitive activity;

– obtaining individual advice from a teacher to overcome difficulties in the development of educational material and the elimination of gaps in knowledge;

2) for teachers:

– professional development of teaching staff;

– acquisition of qualification competencies:

– improving the effectiveness of teaching activities in order to achieve new educational results;

– use of new types of control and communication in pedagogical process;

– the ability to organize high-quality work with highly motivated students;

– transform the teacher's style: move from knowledge translation to interactive interaction with the student, which contributes to the design of the student's own knowledge;

3) for the organization of the educational process:

– the possibility of saving money by increasing the level of pedagogical activity.

– attracting an additional contingent of students through the organization of multidisciplinary training;

– solving the problem of shortage of teaching staff;

– intensification of educational activities in order to save time for realizing other educational and cultural needs;

Examples of blended learning organizations are electronic courses, practical training, work on specific projects, service rotation, e-books, mobile training, coaching, podcasts, face-to-face courses, field training, educational games and simulations, formal training with certifications and much more.

There are typical blended learning models that can choose as basis:

1. Model "Face-to-Face Driver": a significant part of the curriculum is studied at school with direct interaction with the teacher; e-learning is used as a supplement to the main program.

2. Rotational model: alternating ways of working with educational materials during the educational program; study time is distributed between individual e-learning and classroom training along with a tutor who also provides remote support for electronic learning.

3. Cool rotation: the alternation of ways to study the material on established schedule (schedule) or at the discretion of the teacher, use of e-learning, involvement in group activities trainees or individually.

4. Laboratory rotation: one of the ways to work with educational materials is online laboratory work, the availability of approved schedules, movement of trainees inside the school.

5. Portion training (Flipped Classroom – "Inverted Class"): the presence of an approved schedule of full-time educational activity, including work on projects; predominant use of electronic learning with a certain control over learning; possibility of choice places for e-learning, use for the organization of independent learning activities.

6. Individual rotation: the presence of an individual schedule of the study of the subject, the mandatory online stage of training.

7. Flex model (Flexible model): preferential use e-learning; providing online, offline and full-time student support; availability of an individual schedule; small group work; organization of group projects; individual training.

8. Self-blend model ("training menu" model): study of one or several e-learning courses completely online; simultaneous training in various institutions is possible.

9. Model of enriched virtual learning (Virtually enriched model): the model of the work of the whole educational institution; optional daily school

attendance; combination full-time and distance classes.

Each model is characterized by the predominance of one of the three components of blended learning technologies:

1. Direct personal interaction of educational participants process.

2. Interaction mediated by computer telecommunication technologies and electronic information and educational resources.

3. Self-education.

Students become listeners, teachers become tutors, staff of dean's offices – organizers of the educational process.

The activity of the teacher is to coordinate the activities students both internally and remotely in high-tech educational environment, building individual educational trajectories; organizations of various activities using information and educational resources; selection electronic educational content.

In the context of blended learning, the teacher provides the reverse communication by commenting on progress and speed educational material, the success of its implementation due to the functional and information educational environment: video conferencing, forums, chats, etc. In addition, the teacher continuously monitors the educational process and comprehensively analyzes the intermediate results of each student's activities by checking information about activity of the network, the quality of the test tasks performed in the test form, the number of attempts to perform a particular task, access to additional educational resources [1].

Results and findings

In foreign studies, the traditional approach is called teachercentered (focused on the teacher). With this approach, the teacher is the acting and managing person of the educational process.

With a blended learning model, the approach is changed to student-centered (focused on the student). With traditional learning, students are taught with a mixed student help to learn.

The student's independent work consists in mastering online training materials, working in chat rooms and forums, communicating via e-mail, passing online testing, etc. E-mail, chat, forum are the main elements of communication and work using information and communication tools. The main differences of these elements from personal communication are: asynchrony, anonymity effect, lack of "live" communication, availability of a larger audience. Let's name the main elements of a mixed learning model:

1. Lectures: lecture materials are designed in the form of presentations and / or online course.

2. Seminars (face-to-face sessions): classes can be combined with lectures. Discussion of the most important topics of the discipline, as well as practical skills.

3. Educational materials of disciplines (textbooks and methodical manuals): materials are presented in print and in electronic form, using various multimedia applications.

4. Online-communication with teachers and students.

5. Individual and group online projects (collaboration): developing Internet skills, analyzing information from various sources, working with a group, sharing responsibilities and responsibility for doing work.

6. Virtual classroom: communication of students with a teacher through various means of Internet communication.

7. Audio and video lectures, animations and simulations.

Table 1 – Internet Users in the world

Country	Number of internet users	% population
Hong Kong	3,460,000	48%
Singapore	1,850,000	44%
South Korea	16,000,000	34%
Japan	38,000,000	30%
Taiwan	6,400,000	29%
Malaysia	1,500,000	7%
Thailand	1,000,000	1,6%

With blended learning classes in the classroom becomes less – part classes is transferred to the online mode. For online activities you need to self-mastering a certain material or performing tasks.

Online classes can take place according to the "question-answer" scheme, or the teacher can set the topics for discussion, can offer the students to set the topic. Deadlines for performing tasks in blended learning are fixed.

Regarding this topic, we conducted an online survey. The survey results show how teachers conduct their lessons, what modern techniques and methods they use. 75 people passed the online survey, 46 of them teachers and 29 students and schoolchildren.

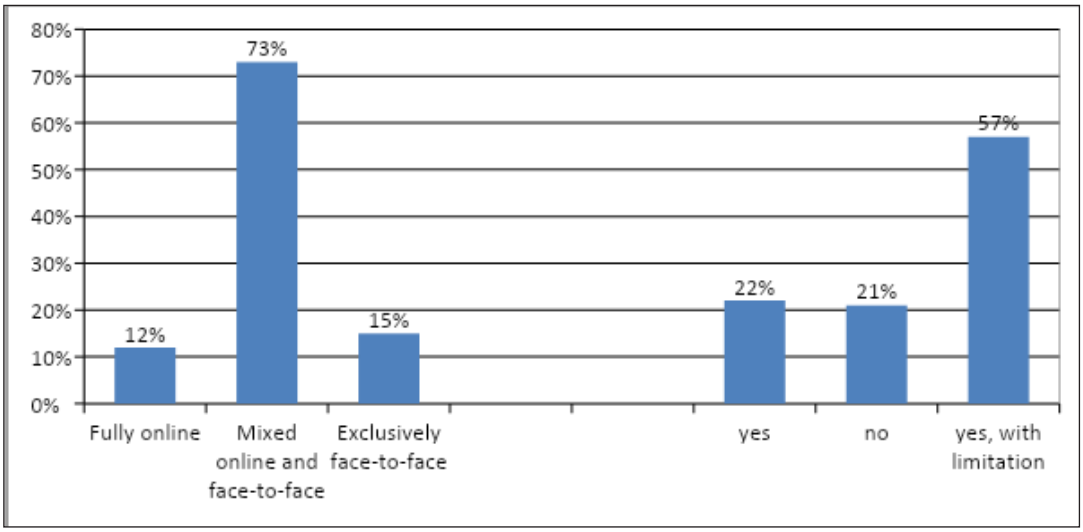

Figure 1 – Teaching environment

The main questions were "How you conduct the lesson?", "Do you allow the use of smartphones, electronic techniques for students during the lesson?". The bulk answered the question positively. Analyzing this survey, we can say that at the present time, blended learning is developing well in Kazakhstan.

Student assessment can be done both online and in class. Online testing can be conducted and performance of various projects and tasks. Final score – credit or exam – is held only in the classroom.

Discussion

E-learning and distance learning applications technologies allow students to create more accessible and flexible learning environment that greatly expands the possibilities of collaborative the work of trainees [6]. For the effective implementation of the study of the discipline in the system of blended learning, it is necessary, first of all, to develop a methodological providing a training program that includes:

– teaching materials: the content of the subject, corresponding to the goals and objectives of education, aimed at learning students of a certain amount of scientific knowledge; materials for formation of worldview, cognitive activity, interest in professional activity;

– computer support created on the basis of information and communication technologies: educational process software (system and application programs and software systems, used in some form, including tool environments to create training programs and software systems); computing, telecommunications and other equipment; data channels.

Interactive training courses are a kind of electronic textbooks, filled with text, animation, video, sound, simulations. Courses can be written to discs, run in local mode, upload to sites. The advantage of using online training courses is as follows:

– development of self-study and self-control skills;

– stimulating active learning;

– interactive visibility of the material;

– study of the investigated processes from the inside through various – simulations;

– study of impossible, life-threatening or expensive scenarios and situations, such as radiation equipment, operations, parallel worlds and so forth;

– use of video materials.

Conclusion

With obvious advantages of using video courses, such as a variety of educational materials, demonstration of production processes,learning control – there are drawbacks: reducing the active role students in training; possible technical problems with software or hardware. The introduction of a blended form of education is associated with the need to make changes in the regulatory framework, requires investment in the development necessary educational content, staff retraining.

For blended learning is characterized by the preservation of the general traditional principles

of the construction of the educational process with the inclusion of elements of online learning. The ratio of these two forms of education is determined by the readiness of the educational institution for such a construction of the educational process, as well as by the desire and technical capabilities of students. Technology transforms education, and its influence is constantly is growing. Blended learning is a promising learning system which combines the benefits of traditional and interactive learning. In our opinion, the development of a mixed form of education can be one of the key areas for the modernization of the entire educational sphere.

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