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Blended Learning: Leading Modern Educational Technologies

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Abstract

The article describes the experience of active use of e learning in the western countries and compared with traditional forms of learning, based on the direct personal contact teacher and the student. Identified strengths. The strengths of e-learning include flexibility, personalization, interactivity and adaptability as the ability of the educational process for students with different abilities and demands, etc. The strengths of the traditional full-time students rank the emotional component of personal communication, spontaneity in the formation of chains of association of ideas and discoveries.

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1. Introduction

"If we teach today as we taught yesterday, we rob our children of tomorrow."  

John Dewey

Special feature of modern life is high rate of changes in various fields of person's activity. Each new generation from the moment of birth plunges into intensively changing living conditions that by all means affects trajectory of development and formation of the person. The system of Russian education dynamically develops, considering requirements and conditions which pupils and school leavers meet.

New and complex tasks are set for school and pedagogical collective. These tasks concern not only knowledgeable preparation being trained, but also development of competences of the critically conceiving, socially active, ready to work in fast-changing vital conditions school leaver with deep outlook.

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The federal state educational standard (Russian Federation) of the second generation focuses on transition from teaching where pupil – object of teacher's influence, to the educational activity which subject is being trained, and teacher acts as organizer, employee and assistant. Gradually school changes principles of organization of educational process, creating conditions for realization of dynamic flexible personalized training.

Experience of electronic training active use in western countries and its comparison with traditional forms of education based on direct personal contact of teacher and trainee, revealed accurately distinguishable strengths of each of these forms. For example, to strengths of electronic training refer flexibility, individualization, interactivity, adaptability as possibility of organization of educational process for trainees with different possibilities and inquiries, etc. Strong poits of traditional full-time tuition include emotional component of personal contact, spontaneity in formation of chains of associative ideas and discoveries.

The combination of advantages of each education forms laid the foundation for technology of blended learning which is being used for more than ten years at schools of Europe and the USA. System approach in organization of educational process, being expressed in a combination of intramural and electronic teaching, is called as blended learning.

The American organization Innosight Institute (www.innosightinstitute.org) studies experience of implementation of technology of blended learning in schools of America since 2007. Results schools leavers are given in their annual reports, which always higher, than of school leavers that are being trained on traditional intramural tuition.

Experience of the American schools allowed allocating blended learning models. Each model differs by prevalence of one of three components of blended learning technology:

1. Component of traditional direct personal interaction of educational process participants.
2. Component of interactive interaction mediated by computer telecommunication technologies and electronic information and educational online resources.

Introduction in educational process of blended learning allows solving a number of tasks:

- to expand educational opportunities of students at the expense of increase of availability and flexibility of education, accounting of their individual educational requirements, and also speed and a rhythm of development of a training material;
- to stimulate formation of subject position of a student: increase of his motivation, independence, social activity, including in development of training material, reflection and introspection and, as a result, increase of educational process efficiency as a whole;
- to transform style of a teacher: passing from translation of knowledge to interactive interaction with student, promoting a student to design his own knowledge;
- to personalize educational process: student independently defines his educational purposes, ways of their achievement, considering his educational requirements, interests and abilities, teacher is an assistant of student.

2. Monitoring and analysis of activity

Realization of these tasks is impossible without complex monitoring and analysis of activity of all educational process participants.

Let's turn attention to working conditions teacher accompanying pupil in innovative technology of teaching. Teacher together with student builds their individual educational trajectories both within lesson, and out of it; organizes different types of activity with the use of information and educational resources, including the Internet; coordinates activity of students both internally, and remotely in conditions of hi-tech education-information environment of school.

Teacher continuously carries out monitoring of educational process and complex analysis of intermediate results of activity of each pupil. To these data, as a rule, refer operating time in networks, quality of the control tasks carried out in test form, number of attempts of accomplishment of this or that task, resort to additional educational resources within educational platform, data on individual consultation with teacher within the platform, data on activity of work at a forum.

The teacher is able to select electronic educational content corresponding to the purposes of a lesson, or creates his own multimedia products, including audio recordings, video lectures. It is necessary not because the sphere of
information technologies can become an additional element of teacher and pupil bringing together that is important but also because information technologies simplify and intensify educational activity at the same time: schoolboy can have online electronic educational resources on mobile device, they can be sent to the schoolmate, to discuss the contents at a thematic forum and so forth

The teacher gives individual support intramural and distant, including emotionally rewarding, and follow-up of the pupil. It is very important for teacher to create "a presence situation" in conditions of distant operating mode. Comfort of this situation is that student understands that timely succor will be rendered to him, he isn't lonely in virtual educational environment. The most effective way of support in a format of remote interaction is providing feedback by commenting of progress and speed of passing of a training material, success of its performance. Implementation of this requirement is feasible thanks to functionality and services of the information and educational environment: forums, system of personal messages, videoconferences.

3. Models of blended learning

Traditionally in foreign practice they allocate six models of blended learning.

Table 1. Models of the blended learning

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
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<tbody>
<tr>
<td>«Face-to-Face Driver» Model</td>
<td>Considerable part of the training program is studied at school at direct interaction with teacher. Electronic training is used as addition to the main program, most often work with electronic resources will be organized at computers during a lesson.</td>
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<tr>
<td>«Rotation» model</td>
<td>The school hours are distributed between individual electronic training and training in class together with the teacher. The teacher working on-site in class also carries out remote support at electronic training.</td>
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<tr>
<td>«Flex» Model</td>
<td>The most part of training program accustoms to conditions of electronic training. The teacher accompanies each pupil remotely, for working out of subjects difficult in understanding, he organizes on-site consultations with small groups or individually.</td>
</tr>
<tr>
<td>«Online Lab» model</td>
<td>Training program accustoms to conditions of electronic training which is organized in schools, as a rule, in classrooms equipped with computer equipment. Online training is attended by teachers. Pupils, in spite of online courses, can be trained and in a traditional form in class-fixed system.</td>
</tr>
<tr>
<td>«Self-blend» model</td>
<td>The model is traditional for higher educational institutions of America. Students independently choose additional to the main education courses. Different schools and educational institutions can act as suppliers of an educational content.</td>
</tr>
<tr>
<td>«Online Driver» model</td>
<td>The most part of training program accustoms by means of electronic resources of information and educational environment. On-site meetings with the teacher have periodic character. Procedures of intramural consultations, interviews, examinations are obligatory.</td>
</tr>
</tbody>
</table>

As the main models we offer those which mean the combination and alternation of intramural and electronic instruction and interaction (Rotation group, models "Inverted Class", "Change of Working Zones", "Autonomous Group"), and the models implementing personalized approach (Personal Choice group, the models "New Profile", "Individual Curriculum", "Interschool Group").

The general for models of "Rotation" group is that the blended learning is implemented within one subject and class and means alternation of direct personal contact of the teacher and participants who were trained with interaction of the educational process, mediated by telecommunication technologies.

The order of alternation can be fixed or flexible at the discretion of the teacher.

The explanation of a new training material, its fixing and working out of skills can be carried out both within intramural interaction, and within the distant. For example, acquaintance to a new training material is carried out with the use of online resource, and fixing and working out of skills – at lessons in class, or vice versa.

The model "Autonomous Group" is used in case when students in class strongly differ on the psychological features, level of motivation, formation of ICT - competence and regulatory universal educational actions. In this case the class is divided on groups, in one of which the main training is conducted online, and personal interaction
with the teacher is used for consultation, group or individual. In other group the main training is conducted in a traditional form, and electronic training is used for support and skill training. The spatial organization of class has to have two zones – for a traditional lesson and a zone of online occupations. Working in this model, the teacher has to possess skill of distribution of attention between two groups, be able to organize informative activity of students through system of individual or group tasks, acquaintance to a new training material, carrying out function of the assistant while performing task.

It is possible to transfer a zone of online training in computer class. In this case implementation of the model requires assistant (tutor, laboratory assistant) who would watch autonomous group.

"Iverteded Class" model is used in case if students in class slightly differ on their psychological features, level of motivation, ICT- competency and regulatory universal educational actions. In this case class works as one group for which components of on-site and electronic instruction alternate. Thus implementation of electronic training is accomplished out of school: teacher provides access to electronic educational resources for preliminary theoretical preparation at home. Practical activities on makeup work of knowledge, skills is organized at the lesson. Such organization of educational process doesn't require zonation of the class room or additional rooms. During the work in "Inverted class" mode share of responsibility of a student increases, development of his personal characteristics (activity, responsibility, initiative, etc.) and metasubject skills (self-organization, management of temporary resources, etc.) is stimulated. Indispensable condition of use of this model is availability of home PC with Internet connection.

The Change of Working Zones model is the most difficult in respect of the organization and realization. In a sense it is model development "Autonomous Group", but the number of groups can increase on number of types of educational activity (online training, group independent work, individual independent work, work with the teacher). Use of this model demands difficult zoning of the big educational room or allocation of additional rooms, and also participation of the assistant (tutor). Advantage of this version of model is that the binding of a certain kind of activity to a certain place which in time reduces time expenditure on student inclusion in relevant kind of activity.

Models of Personal Choice group are suitable for senior class pupils having high motivation to study, level of ICT competence, personal and metasubject skills. Within this group of models educational activity and responsibility for its results is assigned on student as process is built mainly with the use of electronic educational resource. School tasks in this case are reduced to granting time (hours provided in schedule for online-course ) and spatial (room with computer and Internet connection) resources, and also rendering psychological and when necessary pedagogical support. Under certain conditions (configuration in schedule of the subjects involving school attendance, in the form of cluster) the student can master online courses out of school. Models of this group differ only with way of formation of educational groups: in a parallel of one school with the fixed set of courses for online studying – "New profile"; within parallel of one school with a various set of courses for online studying – "Individual curriculum"; in parallels of one age of different schools for studying of certain online course – "Interschool group".

4. Conclusion and suggestion

Thus, we consider it expedient to form the educational environment of school which conforms to the following requirements:

- ensuring complete development of a human nature. Education has to develop equally creative, intellectual, spiritual, social qualities of each child. In educational process approaches aimed at the full development of social and personal qualities of pupils have to prevail;
- development of independent educational activity of pupils is the central link of educational process. Here an important role plays not only mastering knowledge, but also their application in practice, i.e. use of knowledge is priority in comparison with assimilation and reproduction. Special importance is gained by close connection of learning with life, a clear understanding, where and how the received knowledge can be used in practice;
- perception of teacher not as carrier of knowledge and supervising subject of knowledge, but as coordinator, the organizer of independent informative activity of children;
- training differentiation taking into account preparation level on subject, abilities, interest to this or that area, features of perception of information, with obligatory draw on expertise and experience;
- training in cooperation, use of group, collective and pair forms of work, joint reflections and discussions.
So, we consider that school staff applying in educational process various technologies of training creates conditions for formation of the full-fledged personality possessing all listed above necessary qualities.

References


