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## **FEATURES OF EDUCATION IN HIGH SCHOOLS IN TERMS OF INFORMATION TECHNOLOGY IMPLEMENTATION**

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### **Abstract**

Currently, High School follows the path of qualitative changes, which include innovative technology training and monitoring related to the implementation of interactive touch boards, score-rating system of evaluation of students, distance learning systems, technology platforms for the automation of the management of the university. Introduction of interactive SMART technology in education leads to a fundamental change in the learning process itself, as the use of electronic aids can significantly enhance the visibility of the material, to attract the attention of students, to get them interested. The introduction of information technology, the use of distance learning in the educational process, technology of educational process on the basis of distance learning allow students to form individual educational trajectory realization of personal potential in education. All of the above places new demands on teachers and students as advanced users who own e-learning technologies, fundamentally changing training to employment on the part of both students and teachers.

**Keywords:** distance learning, virtual learning environment, individual educational trajectories, mark and rating system, course work

### **1. Introduction**

Currently, high school is developing towards qualitative changes, which include innovative teaching and control technologies associated with the introduction of interactive sensor boards, score-rating assessment system of students' work, distance learning system, the technological platforms to automate university management, such as information analytic system (IAS) "Electronic University" of FSAEU VE "Kazan (Volga) federal University" and the system "1C: University" of FSBEI HPE "Volga region state academy of physical culture, sports and tourism".

The introduction of interactive SMART technologies in education leads to a fundamental change of the educational process, as the use of electronic aids may enhance significantly the visibility of the taught material, to attract the attention of students, to interest them. The introduction of information technologies, the use of distance learning in the educational process, the educational process technologies on the basis of distance learning allow students to develop an individual educational trajectory of personal potential realization in education [1, 2]. The learning process is associated with the targeted interaction of a teacher and a student, which should be inseparable and systematic one ideally. All mentioned above puts forward new requirements for teachers and students as the advanced users experienced in e-learning technologies, fundamentally changing the preparation for classes both from students and teachers.

## **2. Research Methodology**

The study material was collected during the implementation of pedagogical activities at FSAEU HPE "Kazan Federal University" and FSBEU HPE «Volga region state academy of physical culture, sports and tourism" (Academy). At that the educational and cognitive, social and communicative activities with the students was carried out in a virtual educational environment using the distance learning platform Moodle.

The study of literature, legal documents, the documents of FSAEU HE "Kazan Federal University" and FSBEU HPE «Volga region state academy of physical culture, sports and tourism", the theoretical analysis and personal experience of author work with SMART Boards, the development of electronic educational resource systems in DLS Moodle on ecology and biology work experience in IAS KFU "Electronic University" and "IC: University" within the terms of score-rating system of students' knowledge evaluation system allows us to offer an organizational and methodical aspect of a high school teacher work for discussion and the methodical developments of individual educational trajectories, current and additional attestation of students with different forms of education, a statement of score-rating coursework assessment.

## **3. Main Part**

According to the modular technology the studied course is divided into learning modules, the students' work in each of which must be evaluated. Training module is a logically connected and a functionally complete unit of information concerning training and educational learning material. The module includes a precisely formulated learning goal attainable at the end of the module study; educational material in the form of training programs; methodological guidelines for module study; practical, laboratory classes and assignments; tests which determine a goal attainability.

Current control in IAS KFU "Electronic University" and "IC: University" allows to evaluate the quality of a student academic work and the effectiveness of each module study.

An electronic course usually consists of three modules: a zero module and two training ones. Zero module includes general information, and two training modules are completed, methodically holistic fragments of a training course.

The structure of an electronic course depends on the form of a student learning, but it has the following constituent elements in a general approach:

- The description of a course: name, academic purpose, developed competences;
- The course study plan: the schedule of theoretical material study, the implementation of practical, laboratory, test works and the scores received due to their implementation, according to the score-rating assessment of students' knowledge;
- Training module topics with the description of their contents: lecture and practical material presented in the form of abstracts, presentations; virtual laboratory works and practical tasks;
- The list of educational and teaching materials, laboratory equipment, teaching aids, necessary for the discipline study; Reference and external resource links provided in the electronic virtual library of the university;
- Guidelines on the implementation of independent work, for test and examination preparation;
- Practical tasks;
- Control assignments, tests for the assessment training purpose level achievement.

After a student admission at a university, each of them receives an individual login and a password, which opens the network access to e-courses in the system of distance learning Moodle.

The introductory lecture allows students to obtain initial information about the features of the educational process with the use of distance learning technologies in a virtual educational environment of a high school and it usually includes the following aspects:

- Education order using distance learning technologies;
- The analysis of modern communication technologies used for the information exchange between a student and a university;
- The requirements on tasks fulfillment and the procedure of their implementation;
- The use of electronic educational-methodical discipline complexes;
- Testing procedure for current and intermediate control;

- The planning of independent work during a semester;
- Terms of control work implementation and sending;
- The procedure of preparation for examinations;
- The peculiarities of consultation obtaining from teachers in on-line and off-line modes.

The study of e-learning course on the distance learning platform requires certain skills from students concerning the work with information resources. It is very important to develop working skills in respect of information resources during the initial stage of training and organize the study of "Computer science" discipline during the first semester of the 1-st course of study which promotes the development of self-education skills and the work skills concerning information resources. During the initial stage the training skills (TS) are developed, which implies the mastery of basic computer knowledge, then generalized skills (GS) are developed, extending the range of developed skills application. Later GS allow to learn disciplines independently, which indicates the formation of self-education skills for the work with information resources (SS), which, in its turn, lead to the formation of a student training level (STL) on a number of different disciplines. A further result of the didactic chain (TS → GS → SS → STL) may be the student's ability to plan, organize and control an individual educational trajectory [2, 4].

The learning process for full-time students takes place mainly at an institution: lectures, practical studies, seminars and laboratory classes. Independent work of a student is determined in accordance with the work program, and is performed in person or in a remote form at a teacher's discretion. The students of correspondence courses attend lectures and practical training according to a curriculum. The study of electronic courses by these students takes place mainly on their own: all necessary materials are presented in the distant learning system and they are available to them only for self-study at any time. They are actively involved in virtual polls, chat rooms, forums in on-line and off-line modes. At any stage of learning activities the students of this form of training have the opportunity to contact with faculty, staff, Information Department, the administration distantly for the consultation and the explanation of encountered difficulties [5, 6]. A full-time delivery of student works, tests and exams is a common one among the students of all forms of training. As a matter of course, it is assumed that a modern teacher is an advanced user who can most effectively use Moodle distance learning opportunities, use the third-party interactive technologies (flash, javascript, etc) in a work, the links to external resources, the interactive features SMART Notebook software for the interactive sensor board SMART board. With the appearance of interactive boards in the educational institutions the teachers are required to study their capabilities through the mastering of the software which includes vast resources.

Any means used in the learning process, is only one of didactic system equal components, along with its other units: objectives, content, forms, methods, teacher and student activities. The use of interactive boards without the study of functional programs by a teacher will not reveal the functional capacity of an interactive board.

It is easy to imagine the advantages of an e-course with a web-quest, which meets the requirements and peculiarities of the educational environment as the method of student knowledge and skills training control. But the technology of web-quest development is not an easy process, requiring great time costs from a teacher who attracts a vast information of Internet resources according to a stated topic. Yes, working on the implementation of this kind of independent work, a student may choose the most convenient pace of a task performance, regardless its operation in a team or individually. Furthermore, students have the opportunity to find more information on a subject, but within certain limits, set by a teacher. However, this involves a preliminary selection of sites by a teacher, the assessment of information from the point of view of its use possibility, the selection of Internet resources, the creation of a database, or a "virtual world", in which students move through hyperlinks [7].

However, in addition to the creative process of electronic products creation, the use of the ELR requires a tremendous amount of time on low-skilled labor for information input, the design of presentations, the filling in of databases, data copying, transfer and protection, and more. A typical Moodle test requires an intellectual work from a teacher for its creation and a huge amount of time on its mechanical input in a system.

Among the benefits of working in such a mode for a teacher is the possibility of a convenient automatic form selection for performed task validation and monitoring and this really facilitates a teacher's task.

The introduction of the rating system in universities is usually presented in two ways: as an effective management of education quality and as a teaching work improvement [8].

The success of a module study and the course as a whole is assessed according to the "Regulation on the score-rating knowledge assessment system among students at the Federal State Autonomous Educational Institution of Higher Professional Education "Kazan (Volga region) Federal University" and according to the "Regulations on the score-rating assessment of students' knowledge at FSBEU HPE "Volga region GAFKSiT". An individual student's rating is developed as the result of the current, intermediate and final control - an individual assessment of his current (in the course of a semester), intermediate (after the passing of tests and examinations) and final (after the passing of state certification tests) professional training. The rating system is designed to improve the objectivity and reliability of student preparedness evaluation, used as a key element of educational process management at high school, implies a

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unified approach to the evaluation of student learning activity results, provided by the relevant professional educational programs [9].

The evaluation of students is conducted during each semester and includes the current and additional component. Current certification provides two control weeks, which actually determine the schedule of two training modules passing.

The use of module-rating system has some significant advantages [10, 11], but its implementation requires a systematic approach and a clear structuring of teacher training material content.

The technological platforms "Electronic University" and "1C: University" for the automation of administrative activity at IAS university may plan learning process, track the results of curricula development, the duration of classes, take into account the working time of teachers, load, and draw up reports and also allows the managers of training departments to monitor the effectiveness of teachers.

#### **4. Summary**

The innovative technologies of training and supervision related to the implementation of interactive sensor boards, a score-rating system of student work evaluation within distance learning system, the technological platforms for administrative activity automation at IAS KFU "Electronic University" and "1C: University" lead to a fundamental change in the learning process, putting forward new requirements, especially for teachers as the advanced users experienced in e-learning technologies, fundamentally changing the preparation for classes.

The basis of e-learning study as the part of individual educational trajectory implementation by students is presented by modular technology with the use of information and communication resources and technologies.

The success of the module and course study as a whole is evaluated according to the Regulation on the score-rating assessment of students' knowledge, the results of which develop the individual student's score. The use of distance learning technologies and e-learning removes spatial and temporal boundaries, increases the availability of quality education for all citizens, regardless of education form and health status, allows to realize individual educational trajectories.

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## References

1. Analytical survey Distance Education for the Information Society: Policies, Pedagogy and Professional Development // UNESCO Institute for Information Technologies in Education. –Moscow, 2000. – P. 3–6.
2. Brassard C., Teutsch Ph. Proposition de critères de proximité pour l'analyse des dispositifs de formation médiatisée. Distances et médiations des savoirs [En ligne], 5 | 2014, mis en ligne le 26 février 2014. <http://dms.revues.org/646>.
3. Bertin Jean-Claude. L'ergonomie didactique face au défi de la formation ouverte et à distance. ASp [En ligne], 41-42 | 2003, mis en ligne le 01 avril 2010. <http://asp.revues.org/1163>; DOI: 10.4000/asp.1163.
4. Brassard C., Teutsch Ph. L'engagement des enseignants dans un dispositif d'enseignement à distance/Caroline Brassard et Philippe Teutsch// Distances et médiations des savoirs [En ligne]. - 2013, mis en ligne le 18 février 2013. - <http://dms.revues.org/175>.
5. Kamaleeva, A.R. Self-education as a prerequisite for continuing education of a modern man / A.R. Kamaleeva // Science of Krasny yar. - 2012. - №2. pp. 203-219.
6. Nicole Racette, Bruno Poellhuber, Terry Anderson, Carroll-Ann Keating et Sirléia Rosa. Apprentissages en profondeur et rencontres sociales dans un cours à distance. Revue internationale de pédagogie de l'enseignement supérieur [En ligne], 28-2 | 2012, mis en ligne le 27 novembre 2012. <http://ripes.revues.org/648>.
7. Isaeva, A.V. Web quest as the form of student independent work organization. Organization of independent work of students: Proceedings of the II-nd All-Russian scientific and practical Internet-conference "Organization of independent work of students" (6-9-th December 2013) - Saratov: Publishing House "New Project", 2013. - pp. 44-49.
8. Latypova, Kh. Sh. Point-rating system as the factor of educational service competitiveness increase // Proceedings of RSPU named after A.I. Herzen. 2007. №43. -1. URL: <http://cyberleninka.ru/article/n/ballno-reytingovaya-sistema-kak-faktor-povysheniya-konkurentosposobnosti-obrazovatelnyh-uslug>
9. Levina A.S., Krut'ko T.P., Voronchihina L.I. The rating system of students' knowledge assessment // Successes of natural science. - 2011. - № 3 - pp. 59-60.
10. Belenky P.P., Efimenko V.N., Sushchenko M.I. The ways of teaching quality evaluation at a university on the basis of FSES HPE // The introduction of European standards and guidelines for education quality assurance

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systems: the collection of VIIIth International Forum materials from the Guild of Experts / edited by pedagogical  
science doctor G.N. Motova. - M.: Guild of experts in the field of vocational training, 2013. - pp. 422-425.

11. Depover, C., Quintin, J.-J., & De Lièvre, B. (2003) Un outil de scénarisation de formations basées sur la collaboration. Actes de la conférence EIAH (pp. 469-476), Avril 2003, Strasbourg, France.DOI: 10.1016/j.iheduc.2004.02.001.

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