TEACHING THE SCIENCE OF «INFORMATION TECHNOLOGIES IN EDUCATION» IN HIGHER EDUCATION INSTITUTIONS ON THE BASIS OF SMART TECHNOLOGIES

Urinboev Zokir,
Basic Doctoral Student of Department of Optimal Management Methods, Samarkand State University, Email: email: MZokir090890@gmail.com

ABSTRACT. In the educational system of developed countries in the world, including the USA, South Korea, Japan, France, and Russia, informationization of the educational system, introduction of multimedia didactic tools and SMART technologies into the educational process are among the main priorities. In particular, the period until 2030 adopted by international organizations and developed countries recognizes education as the main driving force of development and an important activity leading to the goals of sustainable development in the new concept of education.

Keywords: SMART, education, information, electronic, multimedia, personnel, scientific, interactive, intelligent, modern.

ОЛИЙ ТАЪЛИМ МУАССАСАЛАРИДА "ТАЪЛИМДА АХБОРОТ ТЕХНОЛОГИЯЛАРИ" ФАНИНИ SMART ТЕХНОЛОГИЯЛАР АСОСИДА ЎҚИТИШ

Ўринбоев Зокир,
Оптимал бошқарув усуллари кафедраси таянч докторанти, Самарқанд давлат университети

Аннотация. Жаҳонда ривожланган мамлакатлари таълим тизимида, жумладан АҚШ, Жанубий Корея, Япония, Франция, Россияларда таълим тизимини ахборотлаштириш, таълим-тарбия жараёнига мультимедиали дидактик воситалар ва SMART технологияларни жорий этии асосий устувор йўналишлардан ҳисобланади. Жумладан, халқаро ташкилотлар ва ривожланган давлатлар томонидан қабул қилинган 2030 йилгача бўлган давр янги таълим концепциясида таълим – тараққиётнинг асосий ҳаракатлантирувчи кучи ва барқарор ривожланиш мақсадларига етакловчи муҳим фаолият сифатида эътироф этилган. Мазкур мақолада юқорида қайд этилган тадқиқотлар хусусида сўз боради.

Калит сўзлар: SMART, таълим, ахборот, электрон, мультимедиа, кадрлар, илмий, интерактив, ақлли, замонавий.

ПРЕПОДАВАНИЕ НАУКИ «ИНФОРМАЦИОННЫЕ ТЕХНОЛОГИИ В ОБРАЗОВАНИИ» В ВУЗАХ НА ОСНОВЕ SMART-ТЕХНОЛОГИЙ

Уринбоев Зокир,
Докторант кафедры Оптимальных методов управления Самаркандского государственного университета

Аннотация. В системе образования развитых стран мира, в том числе США, Южной Кореи, Японии, Франции и России, информатизация системы образования, внедрение в учебный процесс мультимедийных дидактических средств и SMART-технологий являются одними из основных приоритетов. В частности, период до 2030 года, принятый международными организациями и развитыми странами, признает образование главной движущей силой развития и важной деятельностью, ведущей к целям устойчивого развития в новой концепции образования.

Ключевые слова: SMART, образование, информационная, электронная, мультимедийная, кадровая, научная, интерактивная, интеллектуальная, современная

Introduction. In the educational process based on the informatization of education in foreign countries, virtual educational technologies, electronic resources, multimedia electronic educational complexes are widely used. Therefore, SMART technology plays an important role in the training of qualified and modern specialists using the educational process, including the training of information technology teachers in education. Currently, higher education institutions are rapidly developing the use of various types of visual materials, electronic resources for learning based on computer technology, including SMART technologies.

There are several pedagogical studies to improve the teaching system «Information Technologies in Education» in higher educational institutions of our republic. However, there is a need for systematic research that fully covers the main components of the creation of SMART technologies for higher educational institutions in the direction of «Information Technologies in Education». In this sense, our republic needs to improve the content of the creation of SMART technologies for higher educational institutions and to revise existing teaching methods and technologies [1].

Materials and methods. Theoretical and methodological foundations for the use of information and communication technologies in the educational process, the creation of electronic information and educational resources and their use in the educational process in our republic conducted research by Abdukadyrov A.A.[1], Aripov M.M. [2], Begimkulov U.Sh. [5,6], Zakirova F.M.[3], Lutfillaev M.Kh.[4], Antonnikov A.A., Ivkina L.M., Mikhailishin A.Yu., Yu. A. Gorohova, N. G. Sabitova, A. E. Satunina.

An analysis of the available theoretical resources shows that the improvement of the methods of teaching information technology in education using SMART technologies in an integrated educational environment has not been studied as a pedagogical problem in the preparation of future teachers of computer science.

SMART technologies are a necessary technology for the functioning of society. SMART technologies mean turning work into a smart and innovative management strategy. This is necessary for the transition to a new society based on flexibility and individuality, which puts human dignity first.

The training of personnel with creative and creative potential, capable of working and thinking in a changing world, is the most important task of today and leads to the introduction of a SMART education system. At the heart of this issue lies the ability to quickly and effectively find and use information, the possession of an information culture, which is becoming a mandatory requirement. There will be no need for a specialist who does not have practical skills in working in social networks and electronic resources, who does not know how to create a personal knowledge base, and SMART education will develop [8].

A.A. Abdukadyrov [9] stated: SMART education is a fundamentally new educational environment; is to combine the forces of teachers, professionals and students to use the world's knowledge and the transition from passive content to active content, that is, educational activities. SMART education is an educational process organized on the basis of innovations and the use of the Internet; makes it possible to acquire professional competencies based on the study of subjects, considering the systemic multidimensional vision and the versatility and continuity of renewal. In our study, we adopted this opinion of A. A. Abdukadyrov as a working definition of SMART education [10]. From our point of view, the teaching of information technologies in education based on SMART technologies occupies an important place in the training of future physics teachers in pedagogical universities.

SMART education, or «smart» education, is a flexible education that allows you to access public content from anywhere in the world in an interactive learning environment [15].

"Smart" education poses new challenges for the teacher. The teacher should not only be a professional in his field, but also have a large amount of information, knowledge, resources and be able to use various technologies when working with students. At the same time, smart learning opens up new opportunities for teachers to share experiences and ideas, engage in additional research, customize the course depending on the task and skills of the student, and save time by using existing information instead of creating content from scratch.

Results and Discussion. In the research work of N.I. Tailakov on the topic "Pedagogical foundations for creating a new generation of educational literature for the system of continuous education (on the example of a computer science course)", pedagogical requirements, criteria, structure, forms and types are scientifically and scientifically substantiated. pedagogically analyzed as an integral integral system [16].

The electronic resource created by N.I. Tailakov, N.R. Rustamova [11, 12, 13, 14, 15] for the course «Computer Science» for universities is also significant due to the harmony of the information provided with sound and various animations, the presence of hyperlinks to basic terms and basics, and other indicators [17].

The result of the above analysis showed that electronic resources using SMART technologies occupy a special place, they fundamentally differ from conventional resources in the following characteristics:

• the methodological support tool closest to the teacher;

• the possibility of displaying theoretical and practical information, laboratory classes, etc. for each chapter and topic of science using audiovisual means;

• manifestation of various information in action;

• availability of practical programs related to science;

• the presence of control questions, tasks, entertaining games in the natural sciences;

• compactness of information;

• the ability to provide a large amount of information in a short time;

• Improving the efficiency of student learning.

SMART is a complex process using technology that does not require a long time. At present, when there is a great need for SMART technologies in the educational process, the creation of such SMART software for computers and tablets for each subject and course has become a requirement of the time.

In the modern educational process, great importance is attached to the use of SMART technologies, so SMART technologies are effective in learning and serve to improve the quality of teaching. Proper use of SMART computers and tablets in the educational process leads to successful results.

One of the advantages of electronic resources used with the help of SMART technologies is that they are designed for comprehensive assimilation of educational materials and scientific information through independent learning, creative thinking, and the formation of skills and competencies. Also, manuals of this type are better than traditional ones in terms of the concentration of scientific information, considering the age and physiological characteristics of students.

Electronic manuals using SMART technologies are presented in an attractive, effective form, the main concepts and definitions are written clearly and understandably, and at the same time they have the ability to control users' knowledge.

Recently, a scientific apparatus has been formed in the field of education with the help of SMART technologies, and professors and teachers of higher educational institutions pay

great attention to creating a learning system focused on the distance education system.

This is an electronic version of the State Educational Standard, which contains electronic publications, standard and work plans, as well as sets of exercises and tasks, albums of maps and diagrams, structural atlases, subject catalogs, instructions for graduation projects, reference books prepared for the most important sections of the sciences of the state educational standard. Contains complete multimedia or virtual material on a subject or course, created in one of the programming languages or html using SMART technologies. There are two options for using SMART technologies: online and offline. The On line option (open) implies a long stay of the user in the global or local network, and the Off line option (closed) implies occasional access to the network.

Conclusion. In connection with the need to improve the algorithm for using SMART technologies in universities, when studying universities in the discipline «Information Technologies in Education» by improving the algorithm for using SMART technologies, the technology for creating and using modern didactic tools through technological methods of conveying educational information visually, in a consistent manner - bases and principles, their general structure and features are specified in a logical way.

REFERENCES:

1. Абдуқодиров А., Пардаев А. Масофали ўқитиш назарияси ва амалиёти // Монография. – Тошкент, 2009. –146 б.

2. Абдуразаков М.М. Направления совершенствования подготовки к профессиональной деятельности будущего учителя информатики / М.М. Абдуразаков, Г.М. Гаджиев // Информатика и образование. 2006. - № 2. -С. 98-102.

3. Абдуразаков М.М. Совершенствование содержания подготовки будущего учителя информатики в условиях информатизации образования: автореф. дис. … д-ра пед. наук. /М.М. Абдуразаков. М., 2007. – 44 с.

4. Андреев А.А. Дистанционное обучение в системе непрерывного профессионального образования: Автореф. дис. ... док. пед. наук. – Режим доступа: http://www.iet.mesi.ru/dis/oglo.htm.

5. Андресен Б. Б. Мультимедиа в образовании : спец. учеб. курс / Б. Б. Андресен, К. ван ден Бринк. -2-е изд., испр. и доп. - М. : Дрофа, 2007. – 125 с.

6. Арипов М., Тиллаев А.И. Масофали ўқитиш технологиялари асосида таълимни ташкил этиш // Ахборот-коммуникацион технологиялар ўқув жараёнида: муаммолар, ечимлар ва истиқболлар. Республика илмий-методик конференцияси материаллари. – Самарқанд, 2007. –93 б.

7. Ахмедов А., Тайлақов Н.И. Информатика. Академик лицей ва касб – ҳунар коллежлари учун дарслик. – Тошкент: Ўзбекистон, 2008. –272 б.

8. Бакмаев А.Ш. Профессионализация информационно-технологической подготовки будущих учителей математики в процессе применения компьютерных математических систем: Дис. ... канд. пед. Наук. -Махачкала, 2005. –148 б.

9. Бегимкулов У.Ш. Олий таълим муассасаларининг ягона ахборот маконини ташкил этиш ва уни ривожлантириш истиқболлари. //Халқ таълим ж. – Т.- 2006. – № 4. – Б. 4-7.

10. Бегимкулов У.Ш. Педагогик олий таълим муассасаларида замонавий ахборот технологияларини жорий этишнинг илмий-назарий асослари. Монография. – Т. Фан, 2007. – 160 б.

11. Yunusova D.M., Ilhamova I.N., Daulanova K.I. Rustamova N.R., Normuradova G.M. Using of interactive educational technologies in teaching medical terms. Journal of Advanced Research in Dynamical and Control Systems, 12 (2020)

12. Nurmukhamedova, D., Akramova, L., Buriev, I., Abdullaev, A., & Khonimkulova,

F. (2021). Smart-Technologies in the Process of Teaching the Russian. □□□□□ (□□□□□), 48(8).

13. Akramova, L., Akhmedova, K. O., & Khashimova, F. (2020). The Problems of Distance Education in the Conditions of the Pandemic. PalArch's Journal of Archaeology of Egypt/Egyptology, 17(7), 8577-8583.

14. Rustamova, N. R. Contents and technology of vitagen education of higher educational institution students European Journal of Research and Reflection in Educational Sciences, 8 (2) Part II, 56-61. Aviable to: http://www. idpublications. org/wp-content/uploads/2020/02/Full-Paper-contents-and-technology-of-vitagen-education-ofhigher-educational-institution-students. pdf.

15. Rustamova, N. R. (2019). Media Culture as a Developing Factor of Rational Thinking of Secondary School Students. European Journal of Research and Reflection in Educational Sciences Vol, 7(3).

16. Rustamova, N. (2021, March). Clarify of Basic Concepts of Vitagenic Education. In E-Conference Globe (pp. 177-180).

17. Isyanov, R., Rustamov, K., Rustamova, N., & Sharifhodjaeva, H. (2020). Formation of ICT competence of future teachers in the classes of general physics. Journal of Critical Reviews, 7(5), 235-239.