MIDDLE SCHOOLS PSYCHOLOGICAL AND PEDAGOGICAL REQUIREMENTS FOR MULTIMEDIA ELECTRONIC LITERATURE CREATED FOR

J. A. Elmurodov,
Oriental University, Department of Economics and
Tourism, Associate Professor v.b

Abstarct
Psychological and pedagogical requirements for multimedia electronic educational literature created for secondary schools are presented.

Keywords. Multimedia, electronic textbook, electronic educational literature.

Creating e-learning materials is a process that requires skill and time. The creation of such tools for each subject and course has become a requirement of the time when electronic educational literature is effective in the educational process and there is a great need for them. That is why in our republic an apparatus is simultaneously being formed in the field of creating electronic educational publications. At the same time, the main concepts are: multimedia electronic educational literature (EEL) - these are publications related to the most important sections of science in specialties and areas based on the state educational standard, sample and work plan, as well as a set of exercises and tasks, an album of maps and diagrams related to with such structures as atlases, readers, instructions for graduation project, reference book, encyclopedia, simulator[1-3].

There is also the option to post the EEL on the website as a zipped file or files. Thus, EEL:

• must comply with the curriculum and meet the requirements of educational and methodological publications; the manual may be completely new or published for the first time, may be an electronic version of a previously published teaching aid, and may also be intended for general, special and optional courses;

• it must disclose the content of the course being studied (or part of it), have sufficient volume to achieve the educational and methodological goal;

• the manual should contain hyperlinks to other chapters and, where appropriate, links to external web resources and resources;

• should have control questions that allow for self-assessment of the student's learning of educational material and self-assessment.

• It is necessary to involve specialists in various fields in the process of creating an EEL, at least to study their opinions. These professionals include:

• teacher;

• psychologist;

• testologist - a specialist in methods of monitoring learning outcomes;

• form designer or webmaster;

• developer.

A useful EEL can only be created with the help of proven information technologies and pedagogical methods.

MEEL, like other manuals, serves as a carrier of educational content and a learning factor.

To date, there are the following types of electronic educational literature:

An electronic lesson (EL) is a short computer program designed to study a small topic;

An electronic textbook (ET) is a fairly large information unit that ensures the achievement of the learning goal, consisting of several electronic lessons;

An electronic course (EC) is a functionally completed large information unit, consisting of several electronic textbooks, which ensures the achievement of the educational goal:

In the electronic textbook, the data arrangement can be divided into the following groups: linear, tree-like, full dependence.

When creating an IEO, the following requirements are taken into account:

• completeness, degree of generalization and dimensions of the part described on the computer;

• level of individualization of training (isolation);

• taking into account the historicity of teaching;

• the type of information transfer that needs to be explored in the program;

• possibilities and scope of control of the program by the student;

• type of control in the system (depending on the reaction or depending on the process), type of feedback (open or closed);

• composition of the main blocks and ways of interaction between them.

The applied level includes two levels: pedagogical and software-implementation. The level of the pedagogical application includes a textbook and an algorithm of actions, and can also be in the form of a script [2].

The software implementation layer determines how the system behaves at any given time during training.

The program script must meet the following requirements:

• be understandable to all participants in the process;

• provide adequate clear coverage of each step of the system at any time during training;
• the availability of ways to respond to the most unexpected responses of the students;
• ensure adequate impact of the training system on any, even the most difficult situation;
• taking into account the psychological and pedagogical originality of the educational process at all stages of education;
• ensure interaction with other programs.

At the software application level, the script is converted (translated) into a computer program. It usually refers to programming languages or a hardware system. The quality of an educational program depends on the extent to which it relies on three main nodes (problems) in its design:
• purpose of education (why study?);
• learning content (what to study?);
• principles of organization of the educational process (how to study?).

The above-mentioned multi-level construction of information technology learning factors requires a new approach to the analysis of the content, style, organization, form and means of learning. The effectiveness of informatization of education can be achieved only if the following conditions are met:
• if the learning technology itself manifests itself as a systematic design method from the goal of learning to the result;
• if information about the training is sent to all its organizers;
• if the training is aimed not only at the content of the subject, but, above all, at the development of the student's personality.

The following basic psychological and pedagogical requirements are imposed on the educational programs for designing the MELE:
• Scientific content: providing an opportunity to see the content of educational activities, taking into account the basic principles of pedagogy, psychology, cybernetics, system design theory;
• openness (transparency): the possibility of implementing a voluntary method of managing educational activities; on the one hand, the theoretical views of those who process the educational program, and on the other hand, the existence of a choice that is compatible with educational goals;
• making changes to the methods of managing educational activities, providing the possibility of modification;
• purposefulness: providing the student with constant information about the immediate and distant goals of education, the levels of achieving the goal;

• providing motivation: active forms of work, high visibility, timely feedback, the formation of constant high motivation, supported by purposefulness; motivation should not be related to interest in the computer itself;

• the presence of access control: diagnostics of the student in order to individualize the preparation before starting work, as well as providing the necessary first aid;

• individualization of education: the content of the individualization of the subject and the complexity of educational tasks should be considered taking into account the individual and age capabilities of students, the acquired knowledge, skills and competencies.

All of the above are psychological and pedagogical requirements for the creation of electronic teaching aids.

Literature

1. Тайлакова Д.Н. "Она тили" фанини моделлаштириш ва электрон дарслик яратиш // Ёш олим. - 2013. - №5. - 772-775 бет. рус тилида).

2. Isaqulov T.M. The challenges of creating 3D interactive e-learning courses // Academicia an International Multidisciplinary Research Journal South Asian academic research Journals a publication of CDL college of education. – India, 2020. – P. 122-126. (Impact Factor-7.223). https://saarj.com

3. Исақулов Т.М. 3D форматдаги интерфаол мультимедиа дастурий маҳсулотларини шакллантириш технологиялари // Барқарор ривожланишда узлуксиз таълим: муаммо ва ечимлар: Халқаро илмий-амалий анжуман илмий ишлар тўплами. – Чирчиқ, 2019. – Б. 318-319.