УДК 37-042.4:004

ІНТЕРАКТИВНИЙ ЕЛЕКТРОННИЙ ПЛАКАТ ЯК ЗАСІБ КОЛЕКТИВНОГО НАВЧАННЯ НОВОГО ФОРМАТУ

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У статті розкривається актуальність розробки й використання інтерактивного плакату як засобу колективного навчання нового формату. Розглядається його визначення, наводяться особливості, що відрізняють його від інших електронних освітніх ресурсів. Інтерактивні електронні плакати дають можливість обирати оптимальний темп навчання, контролювати й коригувати хід засвоєння навчального матеріалу. Крім того, здобувачі освіти дістають можливість реалізувати власні методи й прийоми засвоєння навчального матеріалу. Доведено переваги використання інтерактивних плакатів для організації колективної пізнавальної діяльності учнів (студентів). Наведено перелік сучасних інформаційних технологій для створення інтерактивних електронних плакатів. Представлено приклади результатів колективного дослідження певних тем вивчення різних дисциплін.

Ключові слова: електронні засоби навчання, інтерактивний електронний плакат, колективне навчання, здобувач освіти.

ИНТЕРАКТИВНЫЙ ЭЛЕКТРОННЫЙ ПЛАКАТ КАК СРЕДСТВО КОЛЛЕКТИВНОГО ОБУЧЕНИЯ НОВОГО ФОРМАТА

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В статье раскрывается актуальность разработки и использования интерактивного плаката как средства коллективного обучения нового формата. Рассматривается его определение, указываются особенности, отличающие его от других электронных образовательных ресурсов. Электронные интерактивные плакаты дают возможность выбирать оптимальный темп

обучения, контролировать и корректировать ход усвоения учебного материала. Кроме того, соискатели образования получают возможность реализовать собственные методы и приемы усвоения учебного материала. Доказано преимущества использования интерактивных плакатов для организации коллективной познавательной деятельности учащихся (студентов). Приведен перечень современных информационных технологий для создания интерактивных электронных плакатов. Представлены примеры результатов коллективного исследования определенных тем изучения разных дисциплин.

Ключевые слова: электронные средства обучения, интерактивный электронный плакат, коллективное обучение, соискатель образования.

INTERACTIVE ELECTRONIC PLACARD AS A MEANS OF COLLECTIVE EDUCATION OF A NEW FORMAT

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The article focuses on the relevance of the development and the use of interactive placards as means of collective education of a new format. Its definition is considered, and features are presented that distinguish it from other electronic educational resources. It is proved that the use of interactive placards allows not only individualization of education within the general educational process, but also promotes the formation of cooperation skills. In the process of teaching using interactive electronic placards, education applicants are attracted to an active, specifically focused on their activities. Electronic interactive placards allow you to choose the optimal pace of teaching, control and adjust the course of mastering the educational material, and the result of the work can be seen almost immediately, and not after a while. In addition, education applicants have the opportunity to implement their own methods and techniques of teaching the material. It is determined that one-level placards are usually a working area with the necessary training material and a set of different interactive elements. Multi-level interactive placards consist of several single-level, as well as two-level placards. The advantages of using interactive

placards for organization of collective cognitive activity of students (students) have been proved. The results of the study can serve as the basis for further study of the problem of designing interactive e-placards. We consider a promising study of the methodology of using software for the creation of interactive electronic placards.

Key words: electronic learning tools, interactive electronic placard, collective training, education applicants.

Formulation of the problem. The use of new information technology in the teacher's work today is not vogue, not delight, but real need. In connection with the active introduction of information technology in the educational process, there is need to generalize the experience, to find the best forms and methods for using different ICT tools in practice. The system-activity approach in the training proposed by the new standards implies the implementation of educational development potential and requires the transition to new forms of activity of students and college students, the use of which makes it possible to vary the scenarios of an effective educational process, optimally combine the principles of the traditional educational system and information and communication technologies.

Informatization of all spheres of the life of modern society, the transformation of the computer into the object of everyday life, the emergence of the possibility of virtually unlimited access to the vast majority of sources of information – create the prerequisites for a significant increase in the "potential volume" of the content of the educational material. There is a need to intensify the teaching process of teaching material, which actualizes the need to develop new visual training facilities, including on the basis of computer technology. The use of interactive electronic placards will make it possible not only to individualize teaching within the general educational process but also to foster the development of skills of cooperation, collective qualities.

The **analysis** of recent researches and publications showed that the issue of informatization of educational activity was disclosed in the works of V. Bykov, L. Belousova, B. Gershunsky, R. Gurevich, M. Zhaldak, Y. Mashbits, N. Morse,

E. Polat, I. Robert, G. Selevko and others; the question of the theoretical foundations for the training of future teachers for the use of ICT in professional activities is given in the researches of V. Arestenko, M. Blagov, G. Genseruk, S. Gunko, R. Gurevich, R. Gurin, N. Dykanska, M. Zhaldak, O. Ivanova, S. Isakov, O. Krasnozhon, L. Morskoy, S. Rakov and others. The use of social network services Web 2.0 is becoming more and more common in teachers' teaching practice, as evidenced by the work of O. Andreev, N. Balik, Y. Bykhovsky, S. Belov, N. Dementyevska, N. Djaglo, N. Yevtushenko, A. Zabarna, O. Zaslavska, M. Zolochevska, O. Krupoderova, M. Meniakina, M. Nimatulaev, E. Patarakin, M. Reznin, V. Starodubtseva, A. Filatova, B. Yarmakhov, E. Yastrebtsova and others. Possible ways of using virtual interactive whiteboards in the educational process are discussed in the publications of O. Biletskaya, O. Badanov, N. Kachanyuk and others.

The learner should be intensively involved in the teaching process, not as a passive listener, who perceives information communicated by a teacher or as one of the means of teaching, but as a subject that can increasingly control the teaching process and its own teaching activities [5]. All this leads to the search for new methods and means of training, focused on the development of intelligence, on independent study and mastering of knowledge.

In our opinion, the new generation of visual-didactic means – interactive electronic placards that attracted the attention of many domestic and foreign researchers – deserve special attention. To this theme were addressed: A. Andreikanich, P. Belchev, A. Ermokhin, M. Zatynaychenko, T. Krush, S. Savinkin, T. Tabler and others. However, the potential of electronic interactive placards in solving educational tasks today is underestimated by the professional community. The own experience of preparing future teachers shows that most of them do not understand their pedagogical potential.

Formulating the purpose of the article. The purpose of the article is to uncover the concept of "interactive e-placard", highlighting the possibilities of its use in the process of collective education of education applicants.

Presentation of the main research material. Many years of experience testify, and the results of various psychological and pedagogical studies confirm that the effectiveness of any study depends on the degree of involvement in the perception of information of all organs of the human senses. Man knows the world in general through sight and hearing, but the throughput of obtaining information through these bodies is different. According to UNESCO, only 12 % of information is absorbed by the ear, with the help of sight – about 25 %, and in the process of audio-visual perception – up to 65 % [6].

It is the emergence of information technology based on the computer played a significant influence on the development of visual training. There was a need for a theoretical and methodological justification of expediency of creation and application of electronic visual means of education in the educational process. The main characteristic feature of electronic visual training means is interactivity. By definition, A. Ostapenko, interactive teaching – this is training that provides interaction of active subjects of the educational process. In the process of working with students and students are not given ready knowledge, they are induced to independently search for information using various teaching tools [4].

If a polygraph placard is digitized, we will receive a placard in an electronic format that can be projected using the projector on the screen. But this will be just an electronic copy of the educational placard, which differs from its original only by the fact that this placard can be projected onto the screen. But if the same electronic placard "give" the ability to actively and variably respond to user actions, we will get an interactive placard as an electronic teaching tool of a new type.

Many authors in different ways disclose the concept of "interactive placard." Thus, "an interactive placard is an electronic educational tool of a new type that provides a high level of engagement of information channels for the perception of the educational process." An electronic educational placard has an interactive navigation that allows you to display the necessary information: graphics, text, sound. Compared with conventional placards or electronic placards, interactive ones are a modern multifunctional teaching tool and provide more opportunities for the organization of

the teaching process [1]. In the digital educational resources of this type information is not immediately provided, but "deployed" depending on the user's actions. This tool, like no other, allows you to vary the level of immersion in the subject.

Under the electronic interactive placard, we will understand the new means of presenting information that allows the teacher to improve the efficiency of the educational process, to raise the interest of students and students in studying one or another topic. An interactive placard, like no other tool, allows you to vary the level of immersion in the training material. Interactivity is provided by using various interactive elements: links, transition buttons, audio and video files, illustrations, animations, and text. In the process of teaching, an interactive placard achieves two very important results: using interactive elements to engage a student or a student in the process of obtaining knowledge; as a result of using various multimedia to achieve maximum disclosure of information. Thus, interactive placards are a great help as a teacher in the process of conducting classes, as well as students or students in the process of self-knowledge acquisition. Due to the use of interactive elements, one of the most important tasks faced by modern educational institutions can be solved - involving students and students in active cognitive activities. The novelty of the experience of using an interactive placard is the integrated approach to the application of multimedia technologies. Therefore, teachers need to independently create various multimedia teaching tools, including interactive placards.

The concept of collective education is realized in the system of principles, the main of which is the principle of compulsory and continuous exchange of knowledge, in which all members of the group transmit to each other teaching in the process of teaching material. With the help of an interactive e-placard, you can design different scenarios for organizing collective forms of student teaching. The main pedagogical idea of using an interactive placard as an educational resource lies in the fact that it allows, on the one hand, to form key concepts through the visual demonstration from the learners of knowledge, and, on the other hand, allows the teacher to manage the information that should be developed in a lesson or lecture. Teaching tools in this format will allow students and students to learn new material. Interactive teaching

with such placards involves the active interaction of the participants in the educational process, that is, the competitor acts not only as an active listener but also as an acting person. The application of collective collaboration during classroom classes allows the full implementation of the concept of interactivity through the organization of so-called co-teaching or mutual teaching.

Interactive placards are primarily intended for use in studying new material or lectures, but they can also be used in the process of repetition and consolidation of the learner. They are primarily intended to provide a high level of mastering the educational material. Any interactive placards for students of general education institutions and students of higher education institutions should be created in order to present the educational material. It should take into account the availability of text for reading, use of vivid and beautiful fonts, creation of simple and convenient navigation [3].

Interactive electronic placards are characterized by the form and content, in particular, they choose, depending on the volume, a one- or multi-level model of their construction. A one-level placard, as a rule, is a work field with a set of different interactive elements. Its content varies depending on the state of the interactive elements (button presses, the contents of the text input fields, etc.) (fig. 1). The developer chooses only the elements of interactivity that he needs in the design of a placard. Many placards use animation. With the help of animation creates an illusion of motion, change and development. All this makes the visibility more emotional and exclusive. Thus, the dynamics of computer animation is used not only and not so much to enhance the emotional effect through displaying the movement of objects, as for the activation of cognitive activity. In this placard there are buttons (fig. 1) that can be turned on one another and listen to the necessary training material or turn off this explanation at any time.

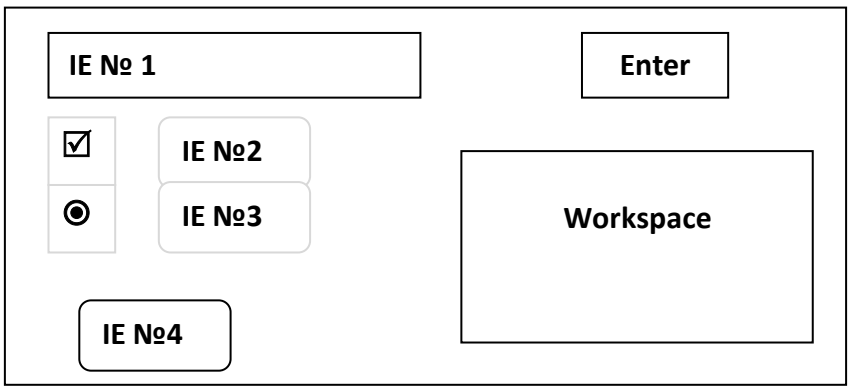

Figure 1. An example of a one-level interactive placard

Significance of interactivity in education is conditioned by the possibilities of modern information technologies in the simultaneous presentation of information on the basis of the application of a set of techniques, methods, methods of collecting, accumulation, processing, storage, transmission, production of audio-visual, textual and graphical information in conditions of interactive interaction of the user with the information system. One of the most important features of the media as a means of teaching is its ability to represent in a visual form various processes, phenomena, events, dependencies, numerical relations, etc., that is, to influence the visual-shaped components of thinking, which play an exclusively important role in teaching, including in the process of explaining and assimilating many theoretical concepts [2]. Modelling with the help of media allows you to study the object or phenomenon in different conditions and from different points of view. The use of multimedia technology makes it possible to involve all the organs of human senses in the assimilation of the new one and forms a bright, voluminous image of the object being studied, to establish associative connections that contribute to a better assimilation of the material being presented. Such placards can be created for almost every lesson.

Gradually there are a large number of files. The developer is faced with a problem when you need to combine created placards. Multi-level placards are more practical in use. Such a placard consists of a certain number of electronic pages. Let's consider an example of a multi-level placard (fig. 2). The title page is usually the main one.

On the title page there is an instruction, information about the authors and resources used, a button to go to the menu that contains information on the subject of

interactive placards. Each individual placard has its own structure depending on the topic (fig. 1). All placards have a button that allows you to go to the EU, which contains the content (menu). There is also a button on this page where you can go to the title page (fig. 2). If necessary, another series of electronic pages (higher level) may be created, but in this case it is necessary to carefully consider the structure of the placard, in order to avoid overload of the material. By developing a multi-level placard, the teacher can combine the training material that he has the opportunity to study with students or students for several years. He can combine several placards by grouping them into sections.

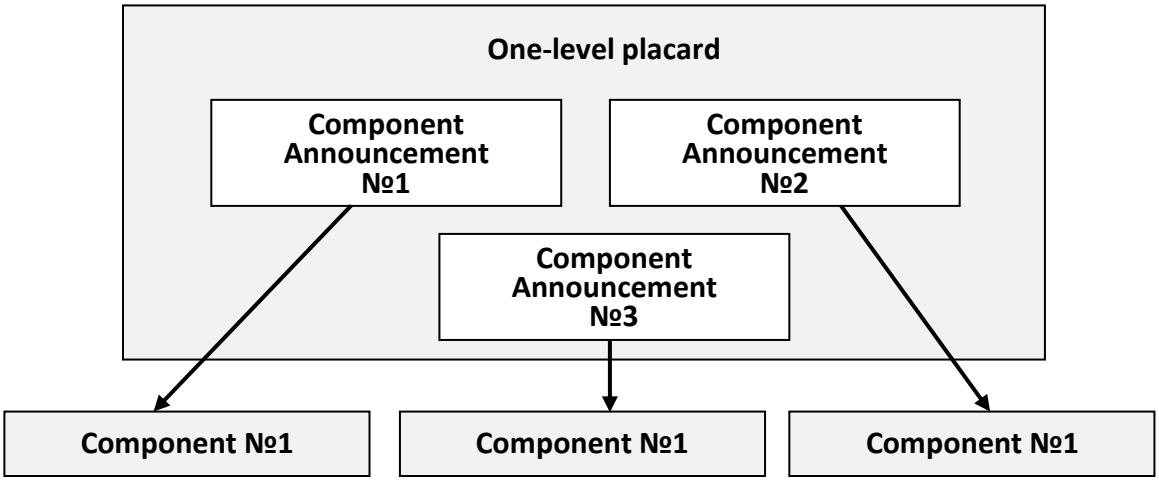

Figure 2. An example of a multi-level interactive placard

The compulsory component is methodical recommendations. The content of methodical recommendations for created interactive placards should consist of information on the purpose and purpose of this resource, the installation of this electronic resource on a personal computer, recommendations for the study of theoretical material and navigation buttons.

There are many modern information technologies for creating interactive e-placards: MS Office software (Microsoft Power Point, Microsoft Word) and the Adobe Flash package; specially designed pedagogical software tools (Smart Notebook); pedagogical software tools (designer of interactive placards); Internet services (Prezi, Glogster, Thinglink, LIno it, Padlet, Cacoo), etc. In the context of collective education, it is advisable to use boards for collaborative work with a variety of editable content (Padlet, Popplet, Twiddla, Rizzoma, LIno it, Educreations,

Realtimeboard, etc.). The result of the collective study of the musical language of composers from different countries is presented in figure 3 (http://padlet.com/elenaperesichanskaya1996/srxf35bo28no), studying the signs of equality of the triangle – in figure 4 (https://edu.glogster.com/glog/oznaki-rivnosti-trukytnikiv / 22jo0q962k0). The success of independent search work depended on the intellectual contribution of each of its participants. Obvious is the social significance of such a model of education: the role of each student in the general task is emphasized, group consciousness is formed, positive interdependence, communicative skills. In addition, the skill and quality of training of all group members' increases [2].

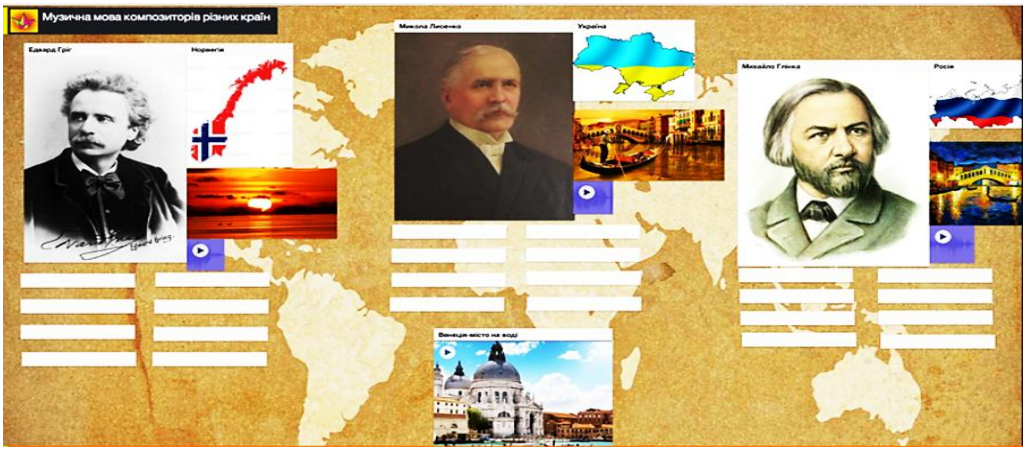

Figure 3. A Sample Placard Created with Padlet

Figure 4. A sample of a placard created with the Glogster service

Conclusions from this study and prospects for further exploration in this direction. Interactive electronic placards almost completely replaced the placards

from the educational process of modern educational institutions. It is proved that the use of interactive placards as demonstrative training tools is more effective than electronic placards. There is no doubt that the share of the use of interactive electronic placards in the educational process of modern general education and higher educational institutions will increase all the time.

The study does not exhaust all aspects of the affected problem, in particular, we consider the prospective study of the methodology of using the software for the creation of interactive electronic placards.

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