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PEDAGOGICAL CONDITIONS OF FORMATION OF WEB-COMPETENCE IN FUTURE INFORMATICS TEACHERS

Abstract: This article considers the conditions of the scientific and methodological basis of the subject "Web-design", the factors of development of special web-competence of students in its study. A model of scientific and methodological support for the training of future professionals in the field of web design is proposed, which describes the pedagogical conditions for its implementation.
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Introduction

At present, there is almost no area of human activity that is not affected by design. Design simultaneously assimilates and adapts new subjects of knowledge and technology, as a phenomenon of social life, actively rooted in all areas of human creativity, today has become a broader category - "project culture".

The professional training of future IT teachers in the field of web design is aimed at training a competitive employee who is in demand in the labor market, qualified, responsible, knowledgeable and focused on the relevant areas of activity, striving to become a professional. need The development and mastery of new technologies related to the use of digital technologies should be a program for the future specialist.

In connection with the implementation of the Bologna process, higher education institutions in our country have taken the direction of implementing a competency-based approach, which has been announced as one of the important conceptual rules for updating the content of education. Competence and competencies are considered as basic units of updated content. Following these concepts, the term Web-competence is widely used today by professional educators. Prospective computer science teachers must have specialized professional competencies and knowledge, skills, and competencies to train future web design technology professionals. In order to implement this approach, it is necessary to develop a model of scientific and methodological support of the science of "web design" in order to form web competence from future professionals in the field of web design, scientifically substantiated and tested during experimental research. As a result, the identification of a set of pedagogical conditions that will help future computer science teachers to effectively form web-competence, the so-called methodological package for the subject for all forms of teaching in specialized and non-core specialties, as well as It will be necessary to develop scientific and methodological support for the subject of "Web Design", which includes z.

The main concepts of the study are defined by:

Scientific-methodical support - scientific-theoretical substantiation of the structure and content of science, planning and creation of the optimal complex of educational-methodical documents, didactic tools and teaching necessary for quality teaching of students. The state educational standard is determined by the relevant educational program, as well as modern achievements of science and technology.

Design is a project activity based on the combination of scientific principles in design with artistic principles, creating an effect that cannot be achieved in traditional design [4].

Web design is the design and development of a website's information architecture using Web technologies, as well as optimizing application code for the most efficient use and promotion on the Internet.

Web-competence is the process of independently designing and implementing key components of website design.

The structure of a modern web design, which includes five main blocks in the research process, is given in the table below (Table 1)..

Table 1. The structure of modern web design

Web-design				
Information architecture	SEO optimization	Usability	Artistic interpretation	Creation technology
The purpose and function of creating a website	Internal seo-optimization	Ease of navigation	Compositions	Provide static view of information
The logical structure of a website	External SEO optimization	The right choice of colors	Color and coloristics	Provide a dynamic (interactive) view of information
The physical structure of a website	Website promotion	Accuracy of website structure	Computer graphics	

The information architecture of a website deals with the principles of organizing and working with data to help the user successfully find and process the information they need. It includes a description of the site idea, its purpose and function. The logical structure of the site consists of a set of thematic headings with hyperlinks pre-created between the documents distributed by sections and all the pages of the source. Physical configuration is the method and appearance of placing files in the directory of a website.

Website creation technologies are divided into two groups: static and dynamic data presentation. Static web pages are hosted on a server and on request the server sends them to the browser without modification. Dynamic pages do not exist in a predefined form on the server, but they are created using server-side scripts that can be used at the same address, under different conditions, with a completely different appearance and content in the browser.

Nowadays, there are many examples to be found on the internet that can be used to create many websites. Most of them are completely free, and some templates are provided for a fee. It is possible to save some time by using the above ready-made templates in the process of achieving the goal when creating a website.

Decorating a website usually starts with creating a design using computer graphics. The designer creates one or more design options according to the terms of reference. However, the design of the main page and the designs of the standard pages are created separately. To carry out such activities, it is necessary to have an understanding of the main categories of composition, color and coloristics. Composition is the construction of a whole work, a graphic representation in which all its elements are interdependent and harmonious. The most important formative categories of composition include scale, proportions, rhythm and scale, contrast and nuance, symmetry and asymmetry. Color is a set of systematic data from physics, physiology and psychology that studies the natural phenomenon of color, as well as philosophy, aesthetics, art history, philology, ethnography, literature, color as a cultural phenomenon. coloristics is a branch of the science of color that studies the theory of the practical application of color in various fields of human activity.

Usability is a microergonomic concept that refers to the ultimate level of ease of use of an object for its intended purpose. Usability is the assessment of a website's availability by a potential customer. Valued attributes include page load time, ways users can find the information they need, source structure optimization, design, ease of navigation, etc. are important prerequisites for long-term operation on the Internet, as several proven facts are: If he or she does not answer his or her key questions, he or she will leave the site.

Website SEO optimization is divided into three stages: internal, external and network advertising. Internal SEO starts with a definition of the semantic core, where the keywords that attract the most visitors and are written into the website application code are

identified. Texts, links, and other code structures are customized so that search engines can successfully find them through keywords. Optimizing external SEO usually depends on creating an inbound link structure. Advertising on the Internet includes registration of the site in the main search engines, directories, other sites through cross-linking, as well as registration using automated systems [5,7].

This structure of modern web design determines the requirements of employers for website design professionals. The composition of the competence of the specialist, the main customers of the higher education system are determined by employers, the state and society, on the other hand - the student himself as a future specialist and by the education system. Employers, society, the state are external participants in the education system, but they, in the end, evaluate the quality of training, first and foremost, from a practical point of view. A high level of professionalism of the specialist is important for the employer, which means the ability to effectively perform professional functions, solve certain classes of tasks and problems in practice.

There are vacancies in the modern labor market in the field of web design: web designer, web programmer, web designer (programmer) and others. Examining them, the following professional requirements for a design specialist were identified. Website Design Specialist:

● Ability to create website architecture and design;

● Ability to develop websites using client and server software;

● Skills such as optimization and knowledge of basic ways to promote websites should be combined.

The defined structure of modern web design and the requirements of employers serve as the basis for defining the components of web competencies that a web design specialist should have [1] (Figure 1).
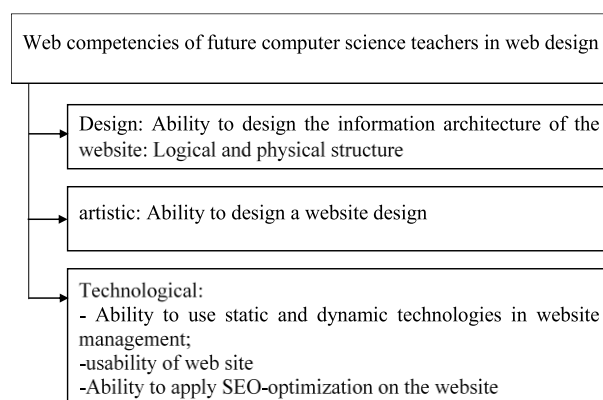

Figure 1. The structure of the web-competence of a future computer science teacher in the field of web-design

In order to effectively form web-competence in the study of the subject "Web-design" developed a model of scientific-methodological support of training, which includes the following levels:

● socio-pedagogical (social order, motivational-targeted component);

● scientific-theoretical (bases of formation of web-competence, axiological component, components of web-competence);

● educational-methodical (ontological, procedural-activity, reflexive-evaluative components) (Figure 3).

The socio-pedagogical level of the model implies the presence of professional mobility and social order to train qualified personnel in the field of web design, competitive in the labor market, web-competent, well-versed in web-design technologies, ready for continuous professional growth.

The formation of web-competence, such as the scientific and theoretical level of the model, the requirements of the state educational standard of higher education, the development trends of web design technologies, trends in changing labor market requirements, systematic, personality-oriented and competency-based describes the basics of based approaches. These elements affect the axiological component of specialist training, which focuses on the system of assessment systems, installation and relationships in the use of web technologies in the professional activities of students. At the scientific-theoretical level, the components of web-competence have been identified: design, artistic and technological, which define the main modules of educational content in the discipline of "Web-design".

The educational and methodological level of the model includes three components.

The ontological component represents the modular science content of Web Design. At this stage, in the context of the implementation of an approach based on professional excellence, the field of knowledge, which is characterized by the transformation of the subject-thematic structure of

educational content into a systemic activity, is taken into account. The training of future computer science teachers meets the level of development of web technologies and the requirements of the State Education Standard**.**

Table 2. Content structure of the subject "Web design"

The project	Web-sayt maqsadlari, funktsiyalari, auditoriyasini ochib berish. Saytning axborot arxitekturasini yaratish (mantiqiy va jismoniy tuzilish). Web-saytni loyihalashda foydalanish qulayligi (usability) prinsiplaridan foydalanish
art	The concept of composition, color and coloristics. Creating options for block compositions, color schemes for the website. Using computer graphics to create a website design
Technological	Using static and dynamic technologies to create a website. Basic principles of SEO optimization

The procedural-active component of the formation of web-competence is aimed at developing website creation, creativity, independence, activism, systematic thinking, projective, research, technological skills. This goal will be achieved through the use of sufficient forms, methods and tools to shape the web skills of web design professionals in the future. The procedural-activity component is based on the principles of variability, scientific nature, availability, vision, activity, consistency and sequence, individualization of teaching, professional orientation [1,5,6].

We use a rating control system to assess learning outcomes, the advantage of which is the transition to a credit system that is actively used in most countries participating in the Bologna process. The rating control system in higher education is built as an integral part of the pedagogical system, the main purpose of which is to manage the quality of training at all stages of the educational process [3,5].

Independent work on the subject of "Web design" plays an important role in the formation of web-competence. The result can be included in the graduate's portfolio, allowing the employer to provide more detailed information about the prospective employee's qualifications.

The main purpose of independent work is to strengthen the theoretical knowledge and practical skills acquired in the study of "Web-design". In this work, the student demonstrates knowledge of the theoretical foundations of web technologies; Ability to design a website, justify the expediency of including various components of the design in it; must have skills such as the ability to use client and server programming technologies.

This work is evaluated in comparison with the study of academic discipline, that is, the results of the current performance of independent work and its defense are summarized and presented on a 100-point scale. The rating points are then recalculated on a 5-point scale.

Independent work consists of three stages: I - Website development; II - Registration of independent work; III - Protection of independent work.

Phases I and II are considered under the current control, III - under the final control.

The implementation of independent work on teaching web design, in our opinion, will help to train "experts in the field of design, integration, interdisciplinary thinking" [1, 2]. The study of the main categories of design significantly increases the effectiveness of the process of artistic and aesthetic education at the university.

The result of the implementation of the model of scientific and methodological support of the subject "Web-design" should be the training of a specialist with well-developed web-competence, competitive and in demand in the labor market.

Thus, the introduction of a model of scientific and methodological support for the training of future web design professionals provides a number of advantages in the formation of web competence: it allows you to simulate activities close to web-conditions. Studios increase learning motivation, provide a person-centered approach, shape the level of knowledge appropriate to the needs of the commercial market, allowing students to properly assess their capabilities and achieve the required level of professional independence.

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