PROBLEMS OF TEACHING WEB DESIGN IN THE DEVELOPMENT OF WEB-COMPETENCIES OF FUTURE COMPUTER SCIENCE TEACHERS

Rakhmonkulov Feruz Pardaboyevich
Jizzakh State Pedagogical Institute Department of
Informatics Teaching Methods Jizzakh, Uzbekistan
feruz0123@jspi.uz

ABSTRACT:

In the rapidly evolving world of digital technology, we are confronted with a huge amount of information on the internet that affects and affects all areas of human activity. This has led to a sharp increase in demand for Web design professionals who can provide easy access to internet resources for internet users. In this regard, one of the most pressing issues today is to think about the quality and challenges of training specialists in this field, to develop solutions to existing problems.
Keywords: web design, graphic design, digital technology, web competence.

I. INTRODUCTION:

Web design is one of the most important disciplines for the future specialist, aimed at developing students' web competence, developing their creative abilities and forming a qualified specialist who is able to independently solve professional tasks, organize their time properly. . These goals are achieved in the science of web design: the development and strengthening of practical skills in theoretical classes, practical and laboratory courses, as well as in the process of creating web projects in the process of independent work.

One of the tasks of modern pedagogical and design education is the acquisition of the latest information technologies by future computer science teachers.

As a result of the rapid development of global Internet technologies, the process of web design (Web design), in particular the development of the website and its use in various fields of human activity, has grown rapidly, making it one of the fastest growing areas of information technology. or in other words, the formation of knowledge, skills, and competencies in future computer science teachers on the in-depth mastery of website and website development technologies has become one of the most pressing issues.

To provide future web designers, web page creators with professional guidance and equipping them with the necessary knowledge and skills, general principles of web page development, design solutions, web design and graphic design Many questions about the differences and similarities between the two are regularly raised in professional circles. According to some experts, the development of mobile technology has led not to a decline in attention to web technologies, but to their further development and popularization. Roundtables, congresses and conferences of graphic and web designers, the organization of various advertising associations prove the above ideas. The main issue to be discussed is the relevance and complexity of modern web design, the problems of studying it at a time when the industry is developing rapidly, and its solutions.

One of the best ways for web designers to gain knowledge and skills in web design is through online courses. In many cases, such courses provide a very narrow understanding of the specialty - the course can be organized with the possibility of real-time communication with the teacher by phone or computer. In addition to online courses, knowledge of this profession can be obtained in the courses of leading training

centers, with practical designers through a teacher.

Another way to become an expert in this field is with a bachelor's and master's degree in web design. This opens up opportunities for research and analysis in the field of web design in higher education.

In the process of creating websites and presenting them to the public, higher education institutions are interested in organizing and involving various laboratories in the formation of concepts that a future specialist should know: web design is a professionally oriented unit of future professionals. is considered as a criterion that plays an important role in limiting. Thanks to this curriculum, it is possible to talk about the special training of students, because web design combines all the knowledge theoretically and practically with different areas of graphic design.

There is no doubt that the ability to work with graphic and visual information is one of the mandatory components of training a web designer. a future web design specialist will study information technology, web design, and computer graphics from the first year of undergraduate study. Web design is one of the main disciplines in the curriculum of computer science teaching methods.

With the development of web design as a professional activity, new requirements are placed on the education system of designers: graduates must master web space technologies after graduation. Graphic design and web design are becoming an important part of training modern web designers, and the inclusion of this subject in the curricula of pedagogical higher education institutions shows the need to improve teaching methods so that students have a professional demand in the labor market.

However, it should be noted that there are certain difficulties in the practice of teaching this subject to students in higher education.

Identifying the specifics and complexities of web design teaching in pedagogical universities should begin with taking into account existing perspectives in the field of web design professionalism. [1]

One of the modern trends at the moment is to look at the object in the graphic design of this website. Other practitioners see web design and graphic design as different professional activities.

Web design and graphic design are concepts that generalize to each other. These directions have a common origin, i.e. they are based on concepts such as coloristics (ability to combine colors and shades), propaedeutics, basics of project graphics, basics of font culture. In addition to web design and graphic design, in addition to artistic taste, a set of graphic editors (e.g., Photoshop, Illustrator) and a perfect knowledge of the software designed for the layout. Nevertheless, the design of websites and materials for printing has a number of fundamental differences that are more technically related, but also affect the creative process itself.[5]

A web designer is a computer technology professional who is responsible for how a website looks and feels. He invents various graphic elements, logos, banners for the site, thinks about the functionality of the site navigation - determines what the text will look like and where to place it. The designer should not only create an interesting and professional website, but also take into account its loading time. At the same time, a web designer should not only focus on visual design, but he should also worry about the usability of the site.

In his work, from this point of view, the graphic designer works closely with expert programmers, which allows him to create an effective website. Based on this assumption, the graphic designer will apply his knowledge of HTML, CSS languages, and the basics of HTML layout in his work. Web design is therefore seen as the process of creating sites, where the key word is the site, which consists of technical

development, creating a user-friendly structure for the web page, graphic design, and data transmission to the network.

The first complication of web design development for graphic designers is to consider web design as an independent field or as one of the areas of professional activity of graphic designers.

In the modern mobile world, internet design or web design remains one of the trends in graphic design and often goes beyond a professional product due to the technological universalization of results. Given the complexity of modern technology, the process of creating web resources falls on the shoulders of various professionals. In addition to web designers, this process will involve telecommunications engineers, programmers and others. It is almost impossible for one person to carry out a complex project, so every specialist should pay attention to the performance of their duties. This combination of professional interests is the most effective way from the creation of a design concept for the site development process to the final layout of the site, as each professional is engaged in their own work, each team solves a specific task.

The lack of specific research on the content and methodology of teaching web design for students of pedagogical universities creates difficulties in teaching and implementing the science. Scientific and methodological research is mainly focused on e-learning manuals close to web design, Internet capabilities in distance learning.

Examining the available electronic manuals and professional-oriented seminars, we can say that the main focus is on technical training, study of computer graphics programs. While books, articles, and websites are devoted to the problem of effective use of computer graphics and web design as a tool for designers 'work, art culture and graphic language are dedicated to understanding the creative processes of work in web design and, in particular, problems in creation.

Issues of content and methods of teaching web design to students - future web designers need a systematic scientific basis. Web designer is one of the professions that can be obtained in special training courses, vocational higher education institutions, pedagogical higher education institutions, specialized authoring courses. In this article, we will look at how web design skills can be acquired in pedagogical higher education institutions in the field of "Methods of teaching computer science." In this case, we think about the problems in creating concepts of web design in pedagogical higher education institutions and ways to overcome them, which depends on the competencies being developed in this area.

The purpose of the training program for future teachers of computer science is to form in the future specialist a variety of competencies (general cultural, general professional and professional), as well as competencies that allow to effectively solve professional problems, SMM technology, multimedia and visual communication problems and its professional mobility, competitiveness and contribution to the stability of the labor market, as well as the educational institution in which it operates.[2]

The following competencies are formed by students:

- Ability to use modern font culture and computer technology used in design engineering;

- Ability to solve standard tasks of professional activity based on information and bibliographic culture, using information and communication technologies and taking into account the basic requirements of information security;

- Ability to search, store, process and analyze data from various sources and databases, present them in the required format using computer and network technologies;

- Practical application of the technology required in the implementation of the design project; Competencies in professional web design are not reflected in the standard of training future computer science teachers. In object-oriented programming, a number of factors influence the formation and implementation of the competence to master this area of activity: trends in the development of web design; trends in labor market demand changes; is a set of scientific and methodological approaches and principles of professional training of modern graphic designers.[3]

Based on a theoretical analysis of specialized literature on the ability to move freely on the global Internet; the ability to create basic logic structures of the site, its appearance and easy-to-use web content; The ability to design a project in a stylistic way, the requirements for future teachers of computer science who can work with graphic data in the Internet space can be specified as follows:

- Ability to design websites based on modern requirements using various graphics and web editors; to promote a website, to know its features that distinguish it from other websites in the field to which it belongs.

In other words, a web designer must have basic skills in designing an interface using modern hardware and software tools (authoring design concept and individual elements) (how designers work, how long it takes to create a website, and the site understanding how to manage properly).

By focusing on learning to use modern graphics and web design software to help a web designer improve their skills, our focus on creating the methodological unity of websites and developing the ability to develop artistic taste will help improve the quality of visual communications. The formation of such a special competence in the field of web design in students of pedagogical higher education institutions allows to establish logical connections between the components of professionally oriented disciplines, which affects the integrity of the pedagogical process.

Difficulties in educating future computer science teachers in web design are also present in the technical equipment of the teaching process. Not all specialized departments are able to provide the necessary education in this subject due to the fact that the modern material and technical base is obsolete or not at all, as well as access to the Internet. A lot of software (graphics and web editors) is used in the learning process. Information technology is a dynamically evolving field characterized by frequent changes in software. In many cases, this is due to a radical change in the way the software is used. These situations can lead to a delay in the student's learning process, which is currently due to the need for certain skills. Thus, a future computer science teacher will not be able to use his / her abilities, because the knowledge they have acquired at the beginning of their professional activity, the concepts they have formed in themselves, can be considered spiritually obsolete.

The content of the program should not only focus on learning graphic and web editors, but also teach the knowledge, skills and competencies listed below to the prospective professional. It is not enough to know how every editor works. Knowing the program, it is not possible to immediately start practical work on website development. It's important to understand what web design is, how a designer's work works, what customers expect, and how to look for ideas; work in a modular way when creating a website and create your own module; know the properties of color and font composition; Working with UX and UI design, knowing the difference between mobile and web design, and more. To do this, special attention should be paid to the allocation of hours for the study of this subject. Existing web design science programs have been found to have fewer lecture

hours per semester to provide a complete understanding of the subject. It is enough to get acquainted with graphic and web editors in practical and laboratory classes and give insights on their effective use, to explain their categories, but to plan the processes associated with creating and organizing a professional web project, to achieve a result short term. In order to increase the effectiveness of training future computer science teachers as web specialists, it is necessary to include a theoretical part in the curriculum with the addition of lecture material, as well as increase the number of hours allocated for training.[4]

However, one of the most important problems of teaching in this subject is the level of professionalism of professors and teachers. As a rule, teachers should have a sufficient understanding of the modern information and technical capabilities of the use of computerized education. Some experts in the field of computer technology do not have an idea about the specifics of the use of modern information technology in education, so teachers of web design should have knowledge in the field of network technology and different types of design. have a broad knowledge, know the basic principles of teaching methods in the field of design. Invite professional staff - practicing designers, programmers to the relevant departments, as well as to train teachers in continuous professional development courses or in relevant higher education institutions or leading design organizations to overcome the shortcomings identified in the professional retraining courses. 'should be trained in the process of practice.

From this we can say that the web design course is important in the organization of web competencies of future computer science teachers. This allows us to talk about a systematic approach to the professional training of future professionals. The need to develop a methodology for teaching web design to future professionals and to supplement the content of this subject specifically for graphic and web designers will increase the effectiveness of their professional mobility in the context of modern society.

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