



WEB DESIGN COMPETENCE DEVELOPMENT OF TEACHING STAFF AT VOCATIONAL EDUCATION INSTITUTIONS

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Abstract

Relevance: in modern conditions, teachers are actively involved in the creation of electronic textbooks, interactive notebooks, various forms and test tasks, etc. All this means developing and designing objects of the Internet information environment from the standpoint of user-friendliness and meeting the user's aesthetic needs. The web design competence development of teaching staff at vocational education institutions is an urgent need in the context of digitalisation of education.

Aim: defining the structure of competence in web design for teaching staff of vocational education institutions and substantiating the methodology for its development.

Methods: analysis and synthesis – to determine the development state of the problem under study and the list of competence in web design of teaching staff; generalization – to formulate conclusions and recommendations for the web design competence development of teaching staff at vocational education institutions; diagnostic (testing, conversation) – to find out the level of competence in web design of teaching staff.

Results: it was found that more than 17% of teachers design and create websites and web pages that combine text with sounds, pictures, graphics and video; 5-7% use various graphic editors and image processing services; about 80 % of respondents carry out independent design development of electronic publications (a product containing information in electronic form); less than 6 % of respondents indicated that there is a unified approach to the design of educational materials on hard copy and for posting on the Internet. The structure of competence in web design for teaching staff of vocational education institutions consists of technical skills (basics of composition, typography, colour science, graphic design, design software, user interface (UI), user experience (UX), responsive design) and soft skills (project management, time management, copywriting, web design awareness, creative thinking, critical thinking, attention to detail, communication, self-reflection). To assess this competence, four levels (initial, low, medium, high) have been developed, taking into account the indicators of motivational, cognitive, activity and reflective criteria. Taking into account the specifics of the teaching staff activities at vocational education institutions, a methodology for their design education has been developed, which is aimed at developing competence in web design and includes seven stages.

Conclusions: Teaching staff of vocational education institutions are involved in the development of e-learning content, but have a low level of competence in web design. The web design competence of a teaching staff member of a vocational education institution is a combination of knowledge, skills and attitudes to web design technologies to create educational content for performing tasks, solving problems, communicating, managing information, working together in the information and educational environment of a vocational education institution, doing it effectively, appropriately, safely, critically, creatively, independently and ethically. At the same time, the teacher does not have to be a web designer, he/she uses the tools and ready-made algorithms of the services he/she works with, the basis of his/her training in this field is graphic design, typography, copywriting, etc. for the effective presentation of electronic content.

Keywords: *teacher of a vocational education institution, web design, design education, web design competencies, professional training.*

Introduction. Contemporary education theory and educational policy in Ukraine are increasingly defined by discussions about standards and competencies. It is clear that there arises a need to understand how these trends influence the preparation of pedagogical staff in vocational (vocational-technical) education institutions. This issue gains particular importance against the backdrop of the current process of reorganizing the structure and content of pedagogical education based on the higher education standard of Ukraine for the specialty 015 Professional Education (by specializations) for bachelor's (2019) and master's (2020) levels.

To enable pedagogical staff of vocational (vocational-technical) education institutions in their professional activities to guide learners in a world that is increasingly digitizing, the training programs for pedagogical staff must lay the foundations for the development of digital skills and media pedagogical competence. Therefore, educators must be prepared for such tasks as the use and pedagogical-didactic application of digital technologies at every stage of the educational process. However, apart from these skills, it is also crucial for pedagogical staff to have an open attitude and a willingness to experiment regarding rapidly changing digital developments (Kryvorot & Pryhodii, 2020).

In modern conditions, pedagogical staff actively participate in creating electronic textbooks, interactive notebooks, various forms of tests, etc. All this entails the development and design of objects in the Internet information environment from the standpoint of user interface understandability and meeting their aesthetic needs (Pryhodii et al., 2023).

Therefore, the development of web design competency in pedagogical staff of vocational (vocational-technical) education institutions is an urgent need in the context of education digitalization. However, as a separate content element, web design is encountered in educational-professional programs for bachelors in the specialty 015 Professional Education with specializations in: computer technologies; digital technologies; design.

While web design is typically an elective educational component, network object design is considered a secondary topic. Instead, attention should be focused on developing the web design competency of pedagogical staff since the effectiveness of screen information assimilation depends on color representation, types and sizes of fonts, and overall image composition.

However, this does not mean that a pedagogical worker should possess the experience

of a web designer, as they have a different production specificity – educational. Therefore, it is necessary to identify the peculiarities of web design competency for pedagogical staff, taking into account the specifics of education in vocational (vocational-technical) education institutions.

The aim of the article is to define the structure of web design competency of pedagogical staff of vocational (vocational-technical) education institutions and to substantiate the methodology for its development.

Research methods: analysis and synthesis – to determine the state of development of the studied problem and the list of competencies in web design of pedagogical staff; generalization – to formulate conclusions and recommendations for the development of web design competency of pedagogical staff of vocational (vocational-technical) education institutions; diagnostic (testing, conversation) – to ascertain the level of web design competency of pedagogical staff.

Results and discussion. Describing the specificity of the activities of a modern educator is extremely complex. All these innovations associated with the digitalization of education impose additional requirements on the formation of professional competencies of educators. Regarding the creation of digital content, it is expected that they should possess a high level of web design knowledge, which goes far beyond simply solving problems of imagery and function.

Before creating a digital product, teachers must be able to analyze design tasks, find creative solutions, and be familiar with the latest technologies and trends that they can apply in the web design of educational material. They should develop the design of an internet resource considering the specifics of the target group and the peculiarities of the educational process and, of course, develop aesthetically attractive, sensory images. Considering the specifics of communication allows the use of the effect of colors, fonts, scales, contrasts, and nuances to give educational products semantic, that is, certain non-verbal meaning. At the same time, at least superficially, be familiar with the specifics of web programming so as not to create overly 'complex' elements (Erlhoff & Marshall, 2008).

To investigate the specifics of pedagogical staff activities in vocational education institutions concerning the development of educational materials for online distribution, a survey of 372 respondents was conducted. This survey focused on the creation and use of electronic educational guides,

interactive forms, tests, worksheets, and infographics. It was found that 17% of respondents actively participate in developing electronic educational guides, either independently (8%) or as part of a workgroup (9%). Notably, nearly 12% prefer Google Sites, citing its free tariff plan and a logically accessible algorithm for creating an electronic educational guide. Over 5% mentioned services like Adobe InDesign, Canva, Visme, Icecream PDF Editor, FlippingBook, Scrivener, etc.

The most popular software for creating electronic guides, as indicated by 77% of educators, was the Microsoft Word application. They highlighted its advantages: ease of use, the ability to integrate hyperlinks and images, facilitate internal text structure navigation, and easily convert the final version to PDF format. Less than 6% of respondents indicated that creating electronic educational guides is not relevant for them, as they use paper media, demonstration experiments, or distribute documents in DOC/DOCX format via email and messengers.

Analyzing responses about creating interactive forms, tests, and worksheets suggests that over 77% actively use various services, preferring one among them: Google Forms (15%), Quizizz (12%), Wizer.me (14%), LearningApps (9%), Kahoot! (11%), and others (5%). Approximately 11% of educators use two or more software products to accomplish various tasks. About 23% of respondents indicated occasional use of services for creating tests and worksheets, or employing products prepared by others.

In terms of creating and using infographics, 68% stated that the tools in Word, Excel, and PowerPoint are sufficient; 7% use various software products like Canva, Infogram, Adobe Photoshop, CorelDRAW, etc.; 35% reported that they do not deliberately create infographics but rather illustrate textual information with charts, diagrams, and images.

Based on the analysis of responses from vocational education institution staff, several conclusions can be drawn:

- Over 17% of educators are involved in designing, creating websites and web pages that combine text with sounds, drawings, graphics, and video.
- Between 5 to 7% use various graphic editors and image processing services.
- Approximately 80% independently design electronic publications (products containing information in electronic form).

- Less than 6% confirmed a unified approach to designing educational products on paper media and for online distribution.

Given the majority of educators are engaged in web design, there is a need to justify the competency structure in web design for vocational education institution staff. Pedagogical staff requires a broad spectrum of web design skills, such as visual language design, where infographics, color, and space utilization are combined in an attractive balance. Skills like communicability, perseverance, and patience are crucial for both designers and educators. Properly and calmly receiving and using feedback from colleagues and learners is good practice, helping to maintain composure, develop critical thinking, and self-reflection.

Following J. Ajobiewe (2023), J. Cardello (2020), C. Chapman (2021), P. Lombardi (2023), R. Naina (2023), we can define a two-component structure of competence in web design. The first component, "Technical Skills," includes HTML, CSS, JavaScript, content management systems (e.g., WordPress), image design/editing software (Photoshop, Adobe After Effects, or Adobe Illustrator), web server management, internet marketing, adaptive design, user experience (UX), user interface (UI), graphic design, search engine optimization (SEO), web hosting/computer systems management, typography, composition basics, and color theory. The second component, "Soft Skills," comprises creative thinking, critical thinking, resilience to criticism, awareness of new web design topics, time management, consciousness and self-awareness, persistence, copywriting knowledge, dedication, presentability, patience, compromise, attention to detail, self-reflection, interpersonal communication, discipline, communication, project management, and collaboration.

Active developers of electronic educational materials, 17% of respondents (63 educators), were invited to participate in an expert assessment of the technical and soft skills to be included in the competency structure for vocational education institution staff. The educators were asked to rate the relevance of technical skills on a 10-point scale, where 0 points mean the skill is not relevant, and 10 points mean the skill is extremely necessary. The following results were obtained from the expert assessment (Table 1).

Table 1

Matrix of results for determining rank based on the average sum of scores and deviations of score sum from the average for technical skills

Technical Skills n_j	Experts m_i							Total Scores S_j	Deviation of Score Sum from Average $d_j = S_j - \bar{S}_j$	Rank
	1	2	3	...	61	62	63			
HTML	1	1	1	...	1	2	1	85	-192	13
CSS	2	1	1	...	2	2	2	86	-191	12
JavaScript	2	2	1	...	2	2	1	87	-190	11
CMS	2	1	2	...	1	1	1	98	-179	9
Design Software	8	8	8	...	9	8	8	526	249	5
Web Server Management	2	2	2	...	1	1	1	79	-198	14
Internet Marketing	2	2	1	...	1	2	1	77	-200	15
Responsive Design	6	4	5	...	4	4	5	339	62	8
UX	5	5	7	...	6	6	6	355	78	7
UI	7	6	5	...	7	5	7	378	101	6
Graphic Design	9	9	10	...	8	9	7	529	252	4
SEO	1	1	1	...	1	1	1	47	-230	16
Web Hosting	1	2	1	...	2	2	1	96	-181	10
Typography	9	9	8	...	10	10	9	552	275	2
Basics of Composition	9	9	8	...	10	9	10	567	290	1
Color Theory	9	8	9	...	8	7	9	532	255	3
Total:								$\sum S_j$	4433	$\sum_{j=1}^n d_j^2 = 675653$
On Average								\bar{S}_j	277	

To assess the generalized measure of experts' opinion agreement on all skills, we will use the

concordance coefficient calculated by the formula (Grabovetsky, 2000):

$$K_{\text{KOH}} = \frac{\sum_{j=1}^n d_j^2}{\frac{1}{12} [m^2(n^3 - n) - m \sum_{i=1}^m T_i]}, \quad T_l = \sum_{i=1}^L (t_i^3 - t_i),$$

Where: m – number of experts; i – expert numbers; n – number of skills proposed for evaluation; j – skill numbers; dj – deviation of score sum from the average sum; Tl – tied ranks; L – number of groups of tied (identical) ranks; tl – number of tied ranks in each group; l – tied ranks.

= 0.7 – 0.9, the agreement is high, W = 0.5 – 0.7 indicates noticeable agreement, and W < 0.3 – 0.5 represents low agreement.

The concordance coefficient varies from 0 to 1. With complete agreement of experts, W = 1, if W L = 225:

Let's verify the agreement of experts' opinions regarding the selection of technical skills for the competence structure in web design for educational professionals.

$$\sum_{i=1}^m T_l = (3^3 - 3) + (5^3 - 5) + (4^3 - 4) + \dots + (7^3 - 7) + (2^3 - 2) + (2^3 - 2) = 29304.$$

$$K_{\text{KOH}} = \frac{675653}{\frac{1}{12} [63^2(16^3 - 16) - 63 \cdot 29304]} = \frac{675653}{\frac{1}{12} [16193520 - 1846089]} = 0,565.$$

It can be noted that the agreement of experts' opinions is noticeable. At the same time, it is important to mention that educational professionals

with various web design experiences were involved in the expert evaluation. Therefore, the outlined skills are useful for developers of electronic

educational products regardless of their preparation level (fig. 1). Similarly, this group of experts was asked to determine the rank of soft skills necessary

for educational professionals for successful web design of electronic educational products (table 2).

Table 2

Matrix of results for determining rank based on the average sum of scores and deviations from the average sum for soft skills

Soft Skills n_j	Experts m_i							Total Scores S_j	Deviation of Scores from the Average $d_j = S_j - \bar{S}_j$	Rank
	1	2	3	...	61	62	63			
creative thinking	10	9	9	...	9	9	9	566	217	5
critical thinking	9	8	10	...	8	9	9	556	207	6
resilience to criticism	1	2	1	...	2	1	1	88	-261	19
awareness of web design	9	8	9	...	7	9	9	567	218	4
time management	9	9	9	...	10	9	10	585	236	2
consciousness and self-awareness	1	2	1	...	1	2	1	89	-260	18
perseverance	2	2	3	...	2	1	3	130	-219	15
copywriting	10	9	9	...	10	10	10	580	231	3
dedication to work	2	2	3	...	3	2	1	126	-223	16
presentability	3	4	2	...	4	3	4	211	-138	13
patience	4	4	3	...	4	4	2	197	-152	14
compromise	2	2	2	...	2	2	1	91	-258	17
attention to detail	9	8	9	...	8	9	8	521	172	7
self-reflection	8	7	7	...	8	7	8	471	122	9
interpersonal communication	4	4	3	...	3	5	4	279	-70	10
discipline	4	4	4	...	4	4	4	253	-96	11
communication	8	7	8	...	8	6	8	487	138	8
project management	10	9	10	...	10	9	10	596	247	1
collaboration	4	4	3	...	3	4	4	234	-115	12
Total:							$\sum S_j$	6623	$\sum_{j=1}^n d_j^2 = 740851$	
On Average:							\bar{S}_j	349		

The following data were obtained:

$L = 341: 2(1; 1); 3(2; 2; 2); 4(4; 4; 4; 4); 2(8; 8); 4(9; 9; 9; 9); 2(10; 10); \dots; 3(10; 10; 10).$

$$\sum_{i=1}^m T_i = 16632.$$

$$K_{\text{KOH}} = \frac{740851}{\frac{1}{12} [63^2(19^3 - 19) - 63 \cdot 16632]} = \frac{740851}{\frac{1}{12} [16193520 - 1846089]} = 0,341.$$

The consensus among experts is low, but present. Therefore, based on expert assessment, the structure of competence in web design for pedagogical staff of vocational (vocational-

technical) education institutions will have the following content of technical and soft skills (see Fig. 1).

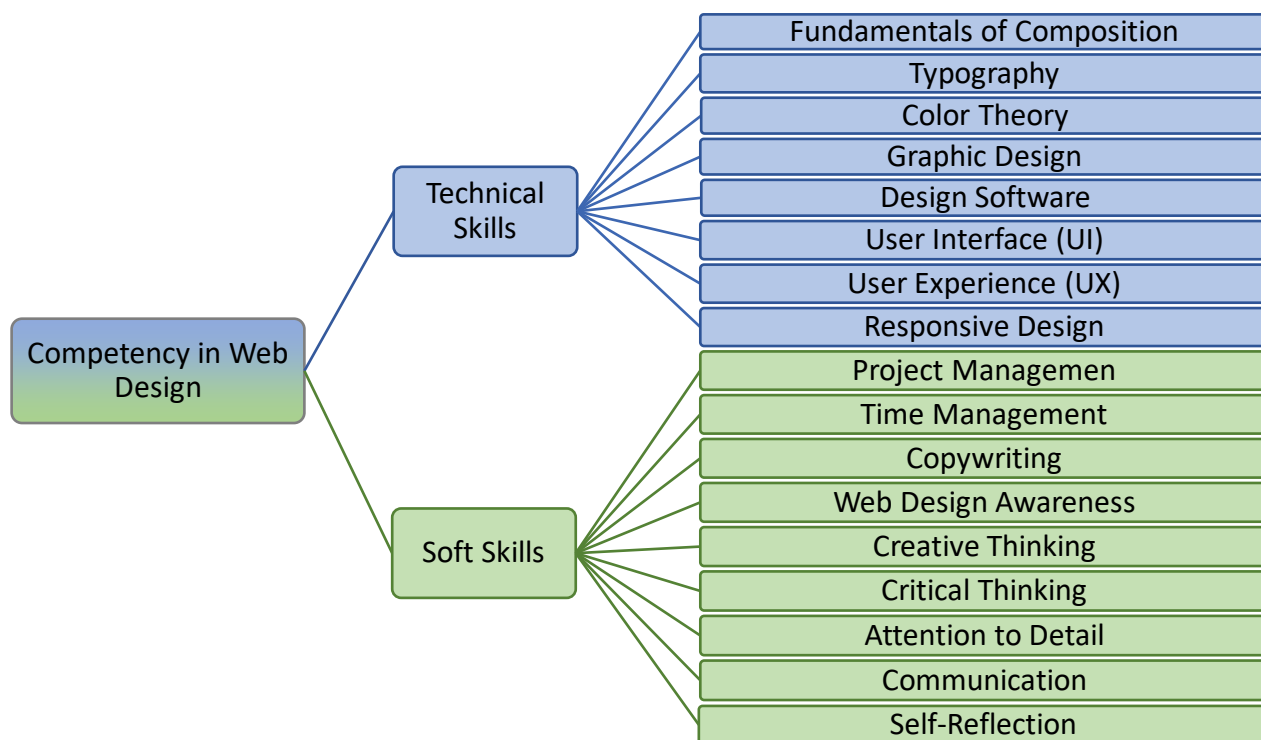


Fig. 1. Structure of Competence in Web Design for Pedagogical Staff of Vocational (Vocational-Technical) Education Institutions

Utilizing the approach of A. Skov (2016) and the Description of Digital Competence for Pedagogical Staff (Morze et al., 2019), it was determined that the competence in web design of a pedagogical staff member of a vocational (vocational-technical) education institution is the combination of knowledge, skills, and attitudes towards web design technologies for creating educational content with the aim of task execution, problem-solving, communication, information

management, collaborative work in the information-educational environment of the institution, executing this effectively, appropriately, safely, critically, creatively, independently, and ethically. For the assessment of this competence, a four-structure matrix will be used, including motivational, cognitive, active, and reflective criteria (Pryhodii, 2021), taking into account the results of expert conclusions on structural components (Table 3).

Table 3

Criteria and indicators for assessing the level of competence in web design of pedagogical staff in vocational (vocational-technical) education institutions

Criteria	Indicators
Motivational	Interest in creating electronic educational content.
	Awareness of the importance of web design in the vocational (vocational-technical) education system.
	Aspiration to increase knowledge in web design of educational content.
Cognitive	Knowledge of graphic design, fundamentals of composition, and color theory.
	Knowledge of the purpose and tools of design software (Adobe Photoshop, Adobe After Effects, Adobe Illustrator, or others).
	Knowledge of typography and copywriting.
	Knowledge of user interface (UI) and user experience (UX) fundamentals.
	Knowledge of the basics and purpose of adaptive design.

Activity-based	Ability to create a web page design considering the laws of artistic construction.
	Selecting fonts considering educational objectives, volume, and content of the text, etc.
	Executing projects using specialized software (Photoshop, Adobe After Effects, Adobe Illustrator, or others).
	Applying user interface (UI) and user experience (UX) basics in web design of educational content.
	Implementing adaptive design of content.
Reflective	Ability to manage, self-reflect, and control one's own activities during web design.
	Evaluating the suitability of chosen technologies and methods for the tasks arising in the web design process.

The evaluation of web design competence among pedagogical staff in vocational education institutions is justifiably characterized by four levels (Pryhodii, 2019):

1. Beginner Level - Pedagogical staff possess fragmentary knowledge regarding the creation of electronic content for educational use; they may demonstrate basic graphic design skills; are familiar with the purpose of design software but are not interested in their additional features; show no interest in web design for educational activities and do not seek to expand their knowledge independently.

2. Low Level - Pedagogical staff have basic concepts and knowledge about applying web design in the educational process; their skills in using design software are selective and unsystematic; they are familiar with user interface and experience features; understand the importance and purpose of responsive design in educational activities, but do not show persistence in professional growth; have doubts about their copywriting, typography capabilities, and independently deepening their web design knowledge.

3. Intermediate Level - Pedagogical staff demonstrate knowledge and understanding of the necessity of web design; use design software proficiently; possess fundamentals of graphic design and artistic construction; control their project activities considering user interfaces and experience; implement adaptive design; consider the basics of copywriting and typography for creating electronic educational content; accumulate information about web design but do not always apply it effectively; show persistence in independently deepening their knowledge, and are interested and inquisitive in the web design process.

4. High Level - Pedagogical staff know and understand the specifics of web design for

educational content; possess knowledge of the stages and features of graphic design of electronic content; continuously improve skills and practical abilities in using design software; actively analyze new approaches to user interfaces and experience; pay significant attention to independent work for deepening knowledge in copywriting, typography, and adaptive design; recognize the necessity of applying web design as an important factor in enhancing the effectiveness of electronic learning.

Within the scientific research "Methodological Principles of Applying Digital Technologies in the Training of Future Skilled Workers" (0121U107472), conducted by the Laboratory of Electronic Educational Resources at the Institute of Vocational Education of NAES of Ukraine, a survey and evaluation of web design competence were carried out among training participants (47 pedagogical staff).

It was found that 41 survey participants intuitively choose the design of electronic resources, more than five stated that they have fragmentary knowledge in web design, and only one indicated proficiency in the basics of electronic content design. Regarding design software preferences, 21 participants preferred Adobe Photoshop (one mentioned InVision Studio), with others mentioning PowerPoint, Paint, CorelDRAW, and even Word/Excel, indicating the low awareness of the participants in web design in education.

To assess the level of web design competence formation, pedagogical staff were offered to take a test consisting of 36 questions: motivational criterion - 7 questions, cognitive - 18, operational - 5; reflective - 6. Based on the analysis of the evaluation results, it can be concluded that there is insufficient preparation of pedagogical staff in web design for educational content among this group of respondents (Fig. 2). One of the survey

participants showed a high level of competence, as they are an administrator of an educational

institution's website and have undergone web design courses.

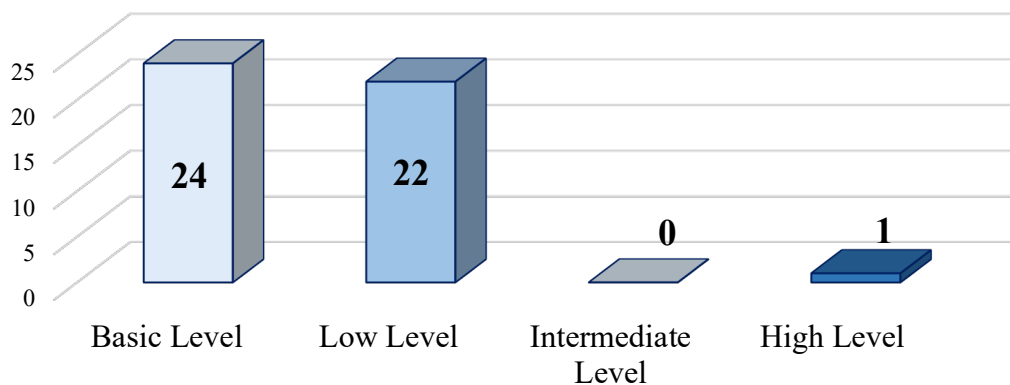


Fig. 2. Evaluation results of the competence formation level in web design among pedagogical staff of vocational (vocational-technical) education institutions

Considering the specifics of the activities of pedagogical staff in V(PT)E institutions, the necessity of developing a methodology for their design education has been proven. This is aimed at developing web design competence and includes seven stages.

First Stage. Familiarization with the specifics of creating electronic educational content and its role in the current stage of education digitalization.

Second Stage. Learning the role of web design in the professional (vocational-technical) education system, and the peculiarities of educational content development by pedagogical staff.

Third Stage. Studying the basics of graphic design, composition, color theory, and typography.

Fourth Stage. Introduction to the fundamentals of copywriting for educational electronic content.

Fifth Stage. Exploring the tools of design software.

Sixth Stage. Familiarization with the basics of applying user interfaces (UI) and user experience (UX) in web design of educational content, as well as the specifics of adaptive content design.

Seventh Stage. Development of electronic educational content. Evaluating the appropriateness of selected technologies and methods to the tasks that arise in the process of web design.

Conclusions. It has been proven that pedagogical staff of V(PT)E institutions are involved in the development of electronic educational content,

but they have a low level of competence in web design. The competence in web design of a pedagogical staff member of a V(PT)E institution is defined as a combination of knowledge, skills, and attitudes towards web design technologies for creating educational content with the aim of performing tasks, solving problems, communicating, managing information, collaborating in the information-educational environment of the V(PT)E institution, doing so effectively, appropriately, safely, critically, creatively, independently, and ethically. Attention is focused on the fact that the pedagogical staff of V(PT)E institutions should not be web designers, but should be able to use the tools and ready algorithms of the services they work with for effective presentation of electronic content. The structure of competence in web design of the pedagogical staff of V(PT)E institutions consists of technical skills (basics of composition, typography, color theory, graphic design, design software, user interface (UI), user experience (UX), adaptive design) and soft skills (project management, time management, copywriting, awareness of web design, creative thinking, critical thinking, attention to detail, communication, self-reflection); four levels of competence formation evaluation (basic, low, intermediate, high) have been defined, considering the indicators of motivational, cognitive, operational, and reflective criteria. Recommendations for improving the content of design education for pedagogical staff of V(PT)E institutions and developing their competence in web design have been formulated.

Further research is aimed at the detailed development of a methodology for design education of pedagogical staff of V(PT)E institutions, which

will involve developing their competence in web design.

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РОЗВИТОК КОМПЕТЕНТНОСТІ З ВЕБ-ДИЗАЙНУ ПЕДАГОГІЧНИХ ПРАЦІВНИКІВ ЗАКЛАДІВ ПРОФЕСІЙНОЇ (ПРОФЕСІЙНО-ТЕХНІЧНОЇ) ОСВІТИ

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Реферат:

Актуальність розвитку компетентності з веб-дизайну педагогічних працівників закладів професійної (професійно-технічної) освіти є нагальною потребою з огляду на стрімкі темпи цифровізації освітнього процесу; педагогічні працівники активно долучаються до створення електронних підручників, інтерактивних зошитів, різних форм та тестових завдань тощо, що передбачає розроблення та оформлення об'єктів інформаційного середовища Інтернету з позицій зрозумілості інтерфейсу для користувача, задоволення його освітніх та естетичних потреб.

Мета: визначити сутність, структуру, критерії, показники і рівні розвитку компетентності з веб-дизайну педагогічних працівників закладів професійної (професійно-технічної) освіти.

Методи: аналіз та синтез – для визначення стану розробленості досліджуваної проблеми, обґрунтування структури компетентності з веб-дизайну педагогічних працівників, критеріїв, показників і рівнів її розвитку; узагальнення – для формулювання висновків і рекомендацій щодо розвитку досліджуваної компетентності; діагностичні (тестування, бесіда) – для з'ясування рівня компетентності з веб-дизайну педагогічних працівників.

Результати: здійснено теоретичний аналіз вітчизняних і зарубіжних публікацій з дизайн-освіти; проведено опитування 372 педагогів закладів П(ПТ)О щодо створення та використання ними електронних засобів навчання (навчальних посібників; інтерактивних форм, тестів, робочих аркушів; інфографіки); узагальнено отримані відповіді (понад 17 % педагогів розробляють дизайн, створюють інтернет-сайти та веб-сторінки, що поєднують текст зі звуками, малюнками, графікою і відео; близько 80 % – виконують самостійну дизайнерську розробку електронних видань; від 5 до 7 % – використовують різні графічні редактори та сервіси обробки зображень; менше 6 % – засвідчили користування одним підходом до дизайну навчальних продуктів на паперових носіях та для розміщення у мережі Інтернет); доведено необхідність розвитку компетентності з веб-дизайну педагогічних працівників закладів П(ПТ)О, обґрунтовано її структуру критеріїв, показники і рівні розвитку.

Висновки: доведено, що педагогічні працівники закладів П(ПТ)О залучені до розроблення електронного освітнього контенту, але при цьому мають низький рівень компетентності з веб-дизайну; компетентність з веб-дизайну педагогічного працівника закладу П(ПТ)О визначено як поєднання знань, навичок і ставлення до технологій веб-дизайну для створення освітнього контенту з метою виконання завдань, вирішення проблем, спілкування, управління інформацією, спільної роботи в інформаційно-освітньому середовищі закладу П(ПТ)О, здійснюючи це ефективно, належним чином, безпечно, критично, творчо, незалежно і етично; структура компетентності з веб-дизайну педагогічних працівників закладів П(ПТ)О складається з технічних навичок (основи композиції, шрифтографія, кольорознавство, графічний дизайн, програми для проектування, користувальницький інтерфейс (UI), користувальницький досвід (UX), адаптивний дизайн) та м'яких навичок (управління проектами, тайм-менеджмент, копірайтинг, поінформованість про веб-дизайн, творче мислення, критичне мислення, увага до деталей, комунікація, саморефлексія); визначено чотири рівні оцінювання сформованості даної компетентності (початковий, низький, середній, високий) з урахуванням показників

мотиваційного, когнітивного, діяльнісного та рефлексивного критеріїв; сформульовано рекомендації з удосконалення змісту дизайн-освіти педагогічних працівників закладів П(ПТ)О та розвитку в них компетентності з веб-дизайну.

Ключові слова: викладач закладу професійної (професійно-технічної) освіти, веб-дизайн, дизайн-освіта, компетентність з веб-дизайну, професійна підготовка.

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