



FEATURES OF DEVELOPMENT OF ELECTRONIC MANUALS ON SEWING PRODUCTION PROFESSIONS

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Abstract.

The relevance of the study is due to: the active entry of distance and blended learning in the modern educational process, the restrictions imposed in many countries in connection with the pandemic situation; low level of readiness of the pedagogical community and students to effectively interact in conditions of a mixed or distance model of education; the conditions of the educational environment formed as a result of the introduction of blended and distance learning technologies; the need to find new approaches to the development of effective didactic and methodological tools for the formation of professional competencies of students of vocational education; creation of optimal pedagogical conditions for training working personnel for sewing industry, taking into account the rapid pace of introduction of the latest production technologies.

Purpose: substantiation of the relevance of the development of electronic teaching aids for the sewing industry professions and the selection and structuring of the content of the manual 'Technologies for making blouses', taking into account innovative production technologies.

Methods: theoretical (analysis, synthesis and generalization of scientific and pedagogical works on textbook creation, development of electronic manuals); empirical (study and analysis of pedagogical experience, working plans, training programs for future skilled workers in the garment industry and the results of their activities).

Results: an electronic educational publication 'Blouse Manufacturing Technologies' has been developed and introduced into the educational process of training working personnel in the sewing industry professions.

Conclusions: the relevance of the development of electronic learning tools for the sewing industry professions is substantiated; the content and structure of the manual 'Technologies for making blouses' are characterized; the expediency of its use to increase motivation, formation of professional competences of vocational education students and develop ICT competences of professional training teachers and industrial training masters of sewing manufacture professions is shown; the main tasks of digitalization of the process of training skilled workers are outlined.

Keywords: *vocational education, vocational education students, teachers and masters of industrial training, electronic educational publication, educational content.*

Introduction. Active development of production technologies, introduction of unprecedented social restrictions in connection with the pandemic situation in Ukraine and the world and the resulting comprehensive virtualization and digitization of education and digitalization of many areas of activity highlight the need to develop, test and implement the adequate (to time requirements) electronic learning tools and manuals, open online courses, interactive textbooks and workbooks. Under such conditions, vocational education requires the accumulation of efforts of teachers and directs them to the development and use (in

everyday professional activities) of high-quality digital educational product, which will provide favorable conditions for vocational school students to acquire professional skills. The development of e-learning tools requires thorough training from teachers, in particular, masters of industrial training, who must master digital, design, information and media competencies. The tasks set by the modern educational process are solved during the implementation of professional development and self-improvement of teachers and masters of industrial training.

Due to this, teachers of vocational education institutions already have considerable positive experience in the development of e-learning tools, because the development and implementation in the educational process of vocational education institutions, which are modern providers of quality services in training working personnel and developing e-learning tools, are a requirement today. Therefore, creative teachers of one of the leading VET institutions in Khmelnytsky region – state educational institution 'Khmelnytsky VET Service Industry Center' – has been working in this direction for a long time. Teachers of this institution joined the project realization 'Profession to create fashion', which is a platform for distance education, expanding horizons and raising the prestige of light industry professions and organized by the Public Association 'National Branch Partnership in Light Industry of Ukraine, 'Fashion Globus Ukraine' and the Association of Sewing Schools of Ukraine on support of the Ukrainian Cultural Foundation. The initiator, organizer and leader of the project is the Chairman of the Presidium of the Public Association 'National Branch Partnership in Light Industry of Ukraine, Fashion Globus Ukraine' is Golda Vynogradska. Teachers of state educational institution 'Khmelnytsky VET Service Industry Center', Kyiv Higher Vocational School of Technology and Clothing Design, state educational institution 'Regional Center for Vocational Education of Garment Production and Service Industry of Kharkiv Region', Khust Vocational Lyceum of Service Industry took part in this project. Teachers of state educational institution 'Khmelnytsky VET Service Industry Center' developed an electronic manual 'Blouse Manufacturing Technologies'. The introduction of this manual in the educational process of training workers in the garment industry has yielded positive results.

Thus, there is no doubt about the need to develop and implement e-learning tools in vocational education institutions that provide the opportunity to implement professional training of working personnel in both full-time and distance or blended learning.

Sources. The development of the electronic manual has actualized the need to take into account aspects of ICT competence of teachers (Kononets, 2019), the use of information resources to update knowledge in the information society, increasing the motivation of teachers (Polukhtovych and Melnychuk, 2020), the approval of the image of the electronic manual as a mandatory element of modern educational environment (Kolossova, 2019), under-

standing the e-learning means as the main prerequisite for modern quality vocational education (Vnu-kova, Mishchanchuk and Kulenyuk, 2019), the positive impact of e-learning publications on the development of vocational education students, increasing the motivation during distance learning, providing access to modern knowledge and data presentation formats, development of creativity and cognitive activity (Motalo and Gomenyuk, 2020), requirements to the structure and functions of the electronic manual (Puzikov, 2018).

When developing electronic manuals, we took into account the theoretical and applied aspects of the creation and operation of the e-book, its interactivity and hypertextuality (Diner, 2016, p. 74; Markova, 2009, p. 69-74), technological characteristics, social functions (Maistrovich, 2007, p. 51), stages of e-book creation: information-content (selection of material), illustrative (selection of audiovisual means), design (interface development), functional (Kovalchuk, 2015, p. 400), requirements for the components of the electronic edition (Onyshchuk, 2019).

The article aims to substantiate the relevance of the development of electronic teaching aids for the garment industry professions and the selection and structuring of the content of the manual 'Technologies for making blouses' taking into account innovative production technologies.

Methods: theoretical (analysis, synthesis and generalization of scientific and pedagogical works on issues of textbooks creation, development of digital learning resources); empirical (study and analysis of pedagogical experience, working plans, training programs for future skilled workers in the garment industry and the results of their activities).

Results and discussion. In the course of the research, it has been proved that the use of the electronic manual has a positive effect on the process of professional training of working personnel in the garment industry professions and contributes to the growth of ICT-competence of masters of industrial training, teachers of professional training when working with the electronic manual. In addition, the use of the manual makes it possible to modernize the educational and methodological base of the educational institution in the training of working personnel in the field of sewing. The manual is developed in accordance with the professional standards of the professions 'Seamstress', 'Tailor', 'Cutter', which are based on a modular competence. While developing this electronic manual, we took into account the specifics of work of modern equipment and means of small mechanization used in garment enterprises;

modern innovation and production technologies used in garment enterprises in the manufacture of products, which is important for the organization of quality training of skilled workers.

The manual is based on the analysis of practical experience of teachers, the content of current printed manuals and electronic sources. While developing the concept of electronic textbook we took into account didactic and methodological recommendations for the design and creation of electronic textbooks, the basic principles of development of modern electronic textbooks and their use in the educational process. When designing and visualizing the manual registration, the peculiarities of the subject content and ways of presenting educational tasks in the electronic textbook were taken into account (Guralyuk et al., 2014).

The e-textbook developed by us can be used for the following forms of study: full-time, part-time, distance, dual and individual. The electronic edition provides continuity and ease of access to educational information, autonomy of work of the subjects of the educational process with the manual. The content presented in the textbook is built in a logical sequence, on the principle of general to partial one. The material of the publication is accompanied by instructional and technological cards of the sequence of product components processing; video materials (personal demonstration of the teacher); color photographic materials; color images of technological schemes of processing of components with the provision of the sequence of machine operations; tables; text material; webinars.

The electronic edition developed by us provides a control apparatus: questions for self-examination after each section, test tasks, task cards, reproductive exercises to consolidate knowledge. The content about outstanding specialists of Ukrainian fashion, fashion (in general) and its creators, video-fashion stories, quotes of outstanding fashion designers, interesting shows in history of Ukrainian designers, interesting information about fashion in the electronic manual contributes to the expansion of cognition.

A creative group of talented, creative teachers, professionals who are constantly improving their level and engaged in self-education, internships at leading companies, improving their knowledge and skills, worked on the creation of the electronic textbook 'Technologies for making blouses'. The development and implementation of the manual has been carried out during the implementation of professional training of working personnel in the sewing production professions in the Scientific Research

Center of Modern Sewing Technologies, which operates on the basis of the educational institution. Scientific Research Center is equipped with the most modern sewing, cutting, ironing equipment and CAD software 'Giulivi'.

The content of the textbook describes the features of selection of materials, methods of construction and modeling of blouses, offers modern equipment and the latest methods of processing knots, reveals the history of occurrence of women's blouses, current trends in fashion; types and classification of women's blouses by silhouette, types of sleeves, collars, fasteners, style. The structural components of the manual 'Choice of fabric for different styles of blouses', 'Measurement for the construction of blouses', 'Additions', 'Construction of the design of blouses' have a purely practical direction.

Much attention is paid to modeling, namely, the disclosure of different ways of transfer of leaks, the formation of basic structural lines, modeling blouses by parallel and conical expansion of patterns, modeling of different styles. Working with our proposed e-learning tools, students can also get acquainted with the choice of equipment and features of its purpose, because the publication reveals the classification of sewing machines, modern sewing equipment and means of small mechanization, which can be used in the manufacture of women's blouses.

Diverse educational content of the publication covers all types of work used in the manufacture of garments, directly the technology of manufacturing the product (processing of basic parts, fasteners of blouses, production of collars and sleeves of blouses, finishing and repair of finished products). The final section is the publication part 'Creating own collections of blouses', which provides step-by-step detailing of the creation of collections of blouses and allows students of vocational education to practically realize their competencies in the manufacture of their own products.

The use of the electronic manual developed by us in pedagogical activity opens to teachers and masters of industrial training additional opportunities to increase the efficiency of preparation of working personnel, namely, the content and the organization of training; allows to dynamically supplement or change text, video or illustrative material; visually present all the didactic materials at group and individual lessons; gives the opportunity to structure the student's work, with specific tasks, requirements for their implementation and assessment criteria; allows to use means and methods of differentiation and individualization of training through the possibility of

choosing the content of educational material, pace and mode of study and effectively combine the use of new and traditional learning technologies based on the use of ICT.

The introduction of the electronic manual in training the staff for state educational institution 'Khmelnysky VET Service Industry Center' makes it possible to make sure that the use of this manual increases the level of motivation of students to study; opportunities for independent work are created; professional competencies are improved; conditions are created for active participation in the process of acquiring knowledge, skills and abilities and for design and research work on the creation of clothing collections; visual, creative thinking through the use of digital elements is developed.

The result of using the electronic textbook was the training of a skilled garment worker, able to apply advanced methods of designing and modeling clothes, work with modern sewing, ironing, cutting equipment and use means of small mechanization; use traditional and innovative production technologies in the manufacture of products; motivated to prolong the increase of own professional level.

The main tasks of digitalization of the process of training skilled workers are outlined: development of high-quality content of e-books of educational and reference nature (creation of e-books, which is relevant in connection with the active introduction of distance, blended learning in the coronavirus pandemic in Ukraine and the world); active introduction of electronic educational and methodical publications into the educational process; creation and distribution in educational network pedagogical communities of motivational and advertising trailers for new electronic textbooks; involvement of professional education seekers in the diversification of educational content of electronic publications.

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In the future we will present the results of approbation of this electronic textbook in vocational education institutions of the sewing profile.

Conclusions. The relevance of the development of electronic teaching aids for the garment industry professions and the selection and structuring of the content of the manual 'Technologies for making blouses', taking into account innovative production technologies, is substantiated. It is noted that the use of electronic textbooks is designed to increase the motivation and professional competencies of vocational education students and teachers of state educational institution 'Khmelnysky VET Service Industry Center'. It helps for the subjects of educational activities to rethink the role in learning; develop qualities and technical skills for effective use of ICT in the learning process.

The main tasks of digitization of the process of training skilled working personnel are outlined: development of high-quality content of e-books of educational and reference nature (creation of e-books, which is relevant in connection with the active introduction of distance, blended learning in the conditions of coronavirus pandemic in Ukraine and the world); active introduction of electronic educational and methodical publications into the educational process; creation and distribution of motivational and advertising trailers for new electronic textbooks in educational network pedagogical communities; involvement of vocational education students in the diversification of educational content of electronic publications.

In the future it is planned to present the results of approbation of this electronic textbook in vocational education institutions of the sewing profile.

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Особливості розроблення електронних посібників з професій швейного виробництва

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Реферат.

Актуальність дослідження зумовлена: активним входженням дистанційного та змішаного навчання у сучасний освітній процес, обмеженнями, уведеними у багатьох державах світу у зв'язку із пандемічною ситуацією; низьким рівнем готовності педагогічної спільноти, здобувачів освіти до ефективної взаємодії в умовах змішаної або дистанційної моделі освіти; умовами освітнього середовища, що утворилося у результаті впровадження технологій змішаного і дистанційного навчання; необхідністю пошуку нових підходів до розробки ефективного дидактико-методичного інструментарію для формування фахових компетенцій здобувачів професійної освіти; створенням оптимальних педагогічних умов підготовки робітничих кадрів для швейного виробництва із урахуванням стрімких темпів упровадження новітніх виробничих технологій.

Мета: обґрунтування актуальності розроблення електронних засобів навчання для професій швейної галузі та відбору і структурування змісту посібника «Технології виготовлення блузи» з урахуванням інноваційних виробничих технологій.

Методи: теоретичні (аналіз, синтез та узагальнення науково-педагогічних праць із питань підручничотворення, розробки електронних посібників); емпіричні (вивчення та аналіз педагогічного досвіду, робочих планів, програм підготовки майбутніх кваліфікованих робітників швейного виробництва та результатів їхньої діяльності).

Результати: розроблено й упроваджено в освітній процес підготовки робітничих кадрів з професій швейного виробництва електронне навчальне видання «Технології виготовлення блузи».

Висновки: обґрунтовано актуальність розроблення електронних засобів навчання для професій швейної галузі; охарактеризовано зміст і структуру посібника «Технології виготовлення блузи»; показано доцільність його використання для підвищення мотивації й формування фахових компетенцій здобувачів професійної освіти, розвитку ІКТ-компетентностей викладачів професійної підготовки і майстрів виробничого навчання професій швейного виробництва; окреслено основні завдання цифровізації процесу підготовки кваліфікованих робітничих кадрів.

Ключові слова: професійна освіта, здобувач професійної освіти, педагоги та майстри виробничого навчання, електронне навчальне видання, навчальний контент.

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