ELECTRONIC LESSONS - A MAJOR PART OF THE TRAINING AND DEVELOPMENT OF DIGITAL COMPETENCIES IN VOCATIONAL EDUCATION

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Abstract: The development of technologies and their active use are changing the emphasis of the required competencies in vocational education, as more and more attention is paid not only to the acquisition of competencies and skills but to the acquisition of a certain group of skills. Demand for people with technological skills, especially obvious - IT skills and programming, social and emotional skills, "soft skills"(initiative, entrepreneurship, skills for effective people management), as well as cognitive skills (critical thinking, creativity, information analysis) increases compared to the demand for people with physical and manual skills (repairs, manual control of machines, technical skills) and basic cognitive skills (information collection and processing). Specific to this type of required skills is that once acquired, they need continuous improvement due to the rapid development of technology, which requires modern training, creating skills and attitudes for learning, and continuous upgrading and acquisition of new competencies.
Positive qualities can be developed in the student through learning content presented in an electronic environment, so e-learning consistently and permanently enter vocational education.
The variety of ICT-based teaching methods and the effectiveness of their use reinforces the fact that in a digital environment, students' knowledge is easier to master, while lasting and functional, and the educational process is defined as aware and motivated.
Keywords: online education, digital competencies, technologies, professional education

1. INTRODUCTION

Presentation of the 1: 1 model, which is popular and practiced effectively in many countries around the world. In the last ten years, the "one student - one device" model has established itself as a successful way to implement information technology in school organizations. It is defined as a model for organizing learning, in which “every student in school is provided with a laptop, tablet or other mobile devices. Thus, the student works with his device in the classroom and outside it. Other researchers emphasize that this model "supports student collaboration and creativity, providing one device for each student, most often a tablet. In recent years, 1: 1 (One to One) is defined as a model of the organization of education, in which each student and teacher, in addition to having their electronic device with a permanent Internet connection, also have a personal profile (account) in a cloud. platform.
The electronic profiles themselves provide access to the necessary learning content (homework, e-learning materials, tests, documents, forms, and other Internet resources) anywhere and anytime. On the other hand, both students and teachers can use their devices freely in any class, in the classroom, and outside, including at home. The considered model assumes significant changes on the one hand in the design of teaching (in the course of the lesson, the teaching and learning processes in which IT is integrated, the role of teachers), and on the other hand in the design and interior of the classroom. The one-to-one model is also related to the construction of a specific educational environment, which makes it possible to transform the experience of students in the classroom by personalizing their learning.
The educational environment of Model 1: 1 presupposes the implementation of "hybrid learning, which combines the advantages of direct learning" face to face, with group activities and self-preparation, through digital content and information technology. Within this specific environment, 21st-century skills are being successfully developed.

2. MATERIALS AND METHODS

The stages in developing an e-lesson can generally be classified as follows:
• Set a task related to modeling an object, process, or phenomenon.
• Drawing up a conceptual plan for implementation.
• Defining a generalized topic - performed by a specialist teacher (geographer, historian, physicist, etc.)
• Determining the type of lesson.
• Selection of teachers and students who will implement the project.
• Discuss the topic, clarify the details, focus on the main elements of the lesson.
• Methodical development of the lesson.
• Creating an appropriate design.

• Choice of the software environment for the implementation of the electronic lesson.
• Computer development of the lesson.
• Clearing of technical and factual errors.
• Approbation of the lesson.
• After corrections, if necessary, it is tested in class in front of several classes.
• Recent improvements and final layout.

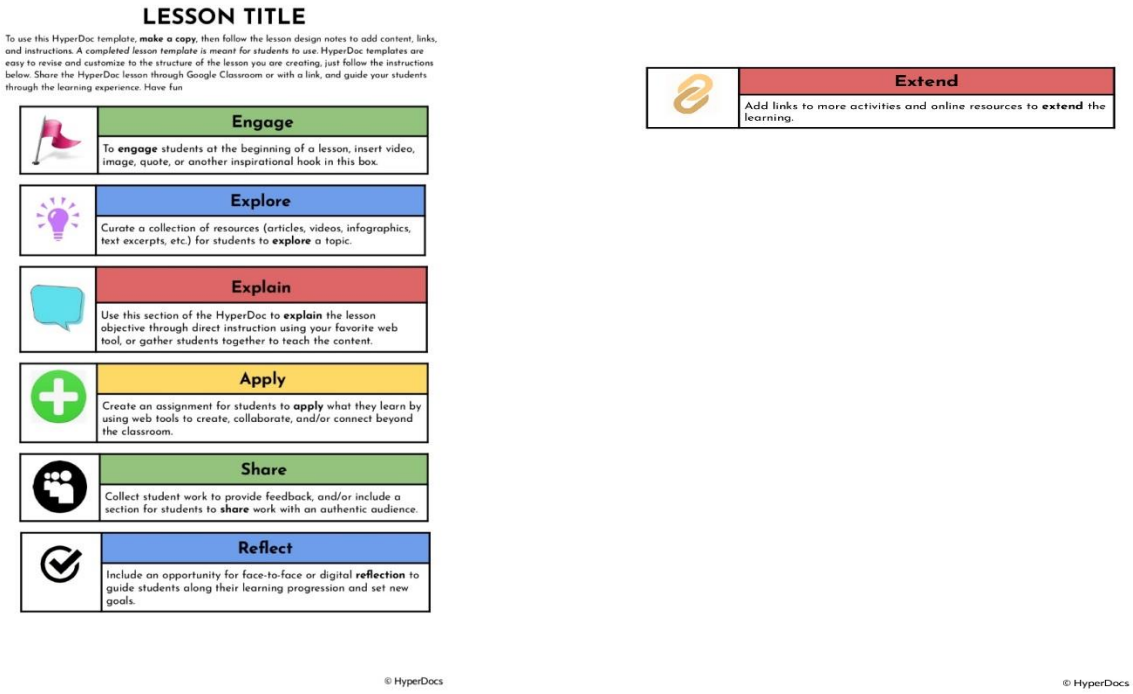
The types of electronic lessons can be classified in the following areas:

To demonstrate experience, illustrate a process (duration about 10 minutes) - provides opportunities for visual presentation of an element of the studied material. Such a demonstration can replace expensive equipment and materials.

• Lesson for new knowledge - synthesized in several points the new main elements of the lesson are shown.
• Exercise lesson - here you can apply more creativity and offer different options for interpretation, to consider different aspects of the study and outside the mandatory program. Students and teachers themselves can apply creativity and deepen the development to the desired degree.
• Control of the assimilated material - tests are created to check the degree of assimilated material.
• Distance learning lesson (without teacher assistance).
• Lessons for children with special needs.
• Creating a series of lessons that build a whole topic.
• Development of electronic courses on all material in a given discipline.

Model of Universal design of a planned lesson - The variety of ICT-based teaching methods and the effectiveness of their use reinforces the fact that in a digital environment, students' knowledge is easier to master, while lasting and functional, and the educational process is defined as aware and motivated. Multi-Media Text Sets is a method that allows you to organize learning resources on a specific topic in one place, regardless of whether the resources are text, in the form of presentations, graphics, or video files. Project-based learning in an electronic environment is person-centered learning that is developmental and based on the creative acquisition of knowledge in the process of independent activity for information retrieval, construction, research, and evaluation of content aimed at developing learning projects that are the product of the conducted training.

This type of learning can include the acquisition of knowledge from different subjects, which is achieved by researching a problem posed by the teacher and providing a solution by students in an interactive way using various acquired means of visualization./form 1./



Form 1. - Model of universal design of a planned lesson https://hyperdocs.co/courses

3. RESULTS

With the help of electronic lessons, participants have the freedom to show their personal views, to realize their idea, and this leads to a desire to participate and intrinsic motivation. What greater satisfaction than the fact that you are the creator of something new and unique that is interesting and useful for many people.

Positive qualities can be developed in the student through educational material presented in electronic form, namely speed of reactions, a good degree of concentration. E-learning provides an opportunity for individualization of training, as well as the opportunity for self-assessment and self-assessment through tests and other forms of assessment of knowledge, skills, and competencies.

4. CONCLUSIONS

Electronic lessons provide an opportunity to model processes and phenomena that cannot be observed in any other way. The learning material can be presented attractively enough to hold the trainer's attention. E-lessons can replace expensive equipment and materials needed for laboratory exercises on the topic and project development encourages students to research, search for information from different sources, comparison, data analysis, systematization, and presentation - all skills for practical application of learning.

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