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THE IMPORTANCE OF ASSEMBLY DRAWINGS IN EDUCATIONAL PROCESSES AND WORK

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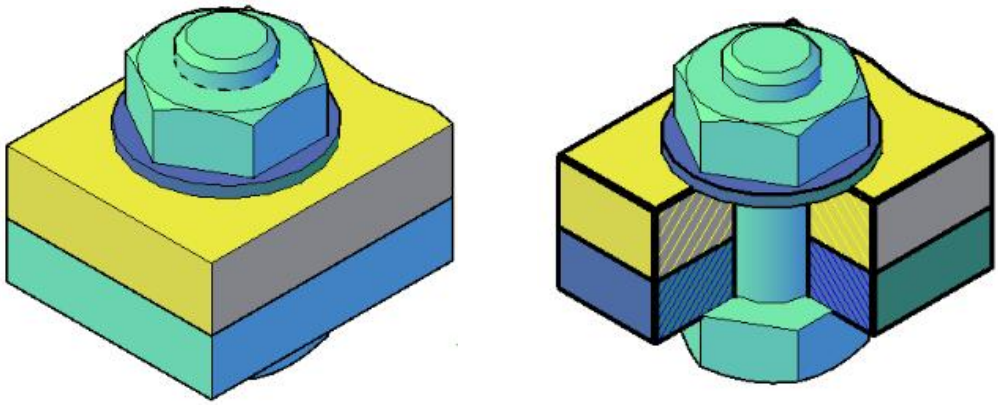
Abstract: The article examines the features of using information and communication technologies in the educational process. In particular, the possibilities of ICT as a means of increasing the effectiveness of education in the educational process are described.

Keywords: information and communication technologies (ICT), computer technologies, educational process, systematization of knowledge.

It is a relevant and important topic that meets the requirements of the time and aims to raise the educational process to a new level through the integration of pedagogy and technology. There are several main reasons and necessity for choosing this topic. Today, digital technologies, in particular, computer programs, 3D modeling, virtual reality and other advanced tools occupy an important place in the teaching process. The importance of assembly work drawings in educational processes and production is great. These drawings are an important tool not only for designers and engineers, but also for teaching students technical skills, understanding manufacturing processes, and quality control. The main importance of assembly drawings can be summarized as follows: Studying assembly drawings helps students understand work processes and how technical equipment is connected to each other. In this process, students visualize the assembly process by using 3D models and better understand the structural features through drawings. helps to better understand its parts and structure. Through 3D models, students can more clearly see the order of assembly of an object, the relationship between parts.



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assembly drawings and 3D modeling, students learn to work with AutoCAD software, which helps prepare them for modern industrial technologies and manufacturing processes. Accurate and accurate assembly drawings are important in manufacturing. Showing the dimensions and location of each part reduces uncertainties and saves time during the assembly process (Figure 2).

- **Avoiding errors** : Errors in assembly drawings can cause serious problems in production or assembly. Proper preparation and verification of assembly drawings can help prevent these errors.
- **Communication tool** : Assembly drawings clearly show all the parts and details, as well as the order of their assembly. This helps the production team or assembly specialists to clearly understand their tasks.
- **Quality Control : Having quality** assembly drawings in manufacturing helps ensure high-quality production. Clearly defined parts and assembly procedures in the assembly process improve the quality and consistency of production.

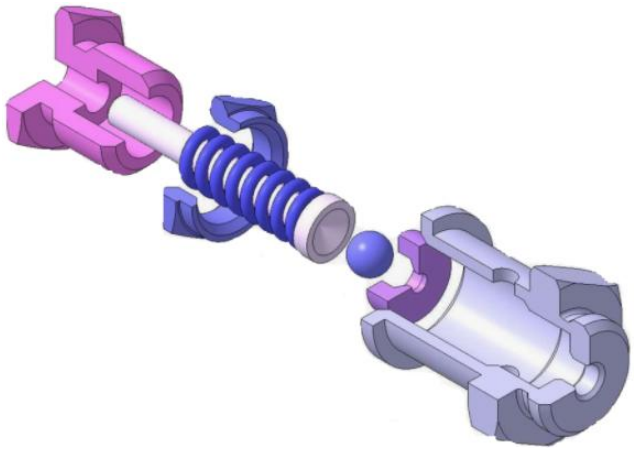
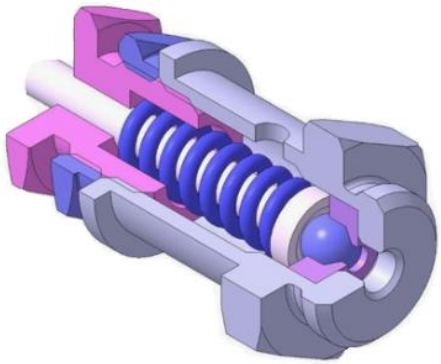


Figure 2

3D models are an important tool in showing the assembly process. They allow not only to see and understand the parts, but also to virtually simulate the assembly processes. The process of preparing a 3D model of assembled units includes the following steps:

- **Modeling :** Individual modeling of each part of the assembly unit using 3D modeling software . At this stage, exact dimensions and geometric shapes of parts and details should be defined.
- **Assembly and Positioning** : Determining how all the parts fit together and the connections between them. In this case, the correct connection and mutual location are important.
- **Simulation** : Testing the assembly process in a 3D model, checking the fit and fit of the parts. This process has the potential to detect errors and problems.
- **Drafting** : Drafts from the 3D model include all the details, measurements, and material information needed to be used during the assembly process.

Assembled units are mechanical devices that are organized by interconnecting several parts, each part of which is processed separately and combined as an assembled unit. The process of making a sketch of assembled units and making a working drawing in the AutoCAD program requires the use of precise dimensions and geometric shapes in the creation of mechanical structures (ab Fig. 3). In this article, we will look at the process of sketching assembly unit details and creating a working drawing in AutoCAD.



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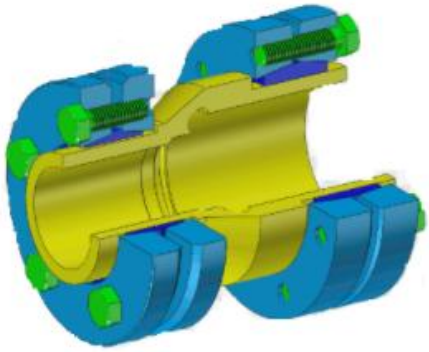

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assembly is to sketch out the details. This process is the main stage of mechanical design , the geometric shape, dimensions and other technical characteristics of each detail are determined.

Sketching assembly details and working drawings in AutoCAD is an important step in the efficient development of mechanical structures . It is necessary to use various tools and methods to create a sketch accurately and correctly , and to create professional drawings in the AutoCAD program. Together, these processes help to improve the quality of the design and production of mechanical parts. After the drawing of the details of the assembly is completed, the necessary specifications, materials and manufacturing processes for them are clearly defined.

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