

Сучасні педагогічні технології

Kizim S.S.

PhD, Assist. Prof.,

Vinnitsia State Pedagogical University named after by Mykhailo Kotsyubynsky,

c.Vinnitsia, Ukraine

TEACHING GRAPHICS TO UNIVERSITY STUDENTS MAJORING IN TEACHER TRAINING

The onrush of technology along with the increasing use of information and communication technology (ICT) brought about major changes in the field of professional training of teachers to be. In order to successfully and consistently use ICT in teaching and learning activities, future teachers must have a good grasp of general principles of custom-made software development as well as its didactic potential and functionality. Graphics editors, which are used for visualizing learning content, are of particular importance since graphic information technology (including tools of computer graphics) provides for new opportunities in building spatial reasoning of students by means of diverse ways of visualizing data submission.

Present-day software market offers various editing programmes, which make it possible to process and edit graphics. Such diversity can add to the problem of choosing “right” graphics editors. At the same time adequate choice of software tools with the view to solving a given graphic processing problem is a key success factor in getting adjusted images. Choosing most relevant graphics editors appears to be a burning problem in the process of presenting learning material.

The issues of applying computer graphics, which are an integral part of computer technologies, in teaching and learning activities have been the focus of attention of both domestic and foreign scholars. They point out that using

graphics editors can diversify and extend study materials, boost future experts' learning activity and generate a higher return from education.

Let us consider some innovative approaches to carrying out training of future teachers in the field of graphics by means of using *Adobe Photoshop* and *Corel Draw* graphics editors.

Under conditions of conventional teaching of graphics at higher educational establishments students can encounter considerable difficulties related to the perception of spatial characteristics of geometric entities and understanding transformations of their spatial models into plane orthogonal images. Technological capacities of computer-graphics features make it possible to clearly demonstrate and observe transformation of three-dimensional models into two-dimensional ones.

Modern software proved to be an efficient aid to teachers who plan and give lessons. Computer tools enhance comprehending and remembering teaching materials by pupils. The one who seeks for better ways of visualising learning material cannot help but apply graphics editors for creating drawings, charts, diagrams and other graphic matter.

Graphics editor is a specific software tool, which enables creating and transforming graphics. Graphics editors ensure graph-based mapping of data from spreadsheets, databases or individual graphics files in the form of diagrams, charts, bar graphs etc. They make it possible to create graphic illustrations to various documents, tutorials, didactic materials etc. [1, p. 211].

The use of graphics editors as a means of graphic representation of learning material facilitates students' comprehension of complex theoretical constructs, contributes to the development of their creative skills, improves their space sensibility by means of maps, charts, graphs, diagrams, sets of cards with texts, figures and drawings.

In the course of professional training of undergraduate students in the subject area of 0101 "Teacher Training", special field 6.010103 "Technological

Education”, the normative subject “Computer Graphics” is aimed at equipping future teachers with knowledge of fundamental rules of executing algorithmic basic principles of two-dimensional and three-dimensional graphics, developing students’ skills in the field of creating and processing graphics with the help of *Adobe PhotoShop* and *CorelDraw* editors for the purpose of graphic representation of teaching material.

Teaching “Computer Graphics” to university students is directed at acquiring by the latter basic knowledge needed for efficient processing of information represented in the graph form as well as for using computerized images in their learning and future professional activities. In the course of studying this subject future teachers are supposed to gain ample theoretical knowledge and practical skills in using computer-aided software and computer environments for creating, processing and visualising bitmap graphics and vector based images. In this respect, equally important are the skills to create new images and drawings and those related to editing existing ones, restructuring computer images and their colour models, importing properly prepared graphic images into office documents, websites etc.

Adobe Photoshop and *Corel Draw* graphic editors have proved to be powerful means for the graphical representation of teaching materials in the course of training teachers to be.

Adobe Photoshop is a bitmap graphics editor, developed and distributed by *Adobe Systems Incorporated*. This software is a market leader among commercial editing means for bitmap graphics as well as the most distinguished product by *Adobe Systems Inc*.

Because of great fame of *Adobe Photoshop* software, its major competitors such as *Macromedia Fireworks*, *Corel PhotoPaint*, *Pixel image editor*, *WinImages*, *GIMP*, *Jasc Paintshop Pro* and others provide for supporting its file format – PSD [2, p. 529-532].

CorelDraw vector graphics editor is an ideal tool for creating vector based

images. Such images created by means of *CorelDraw* can change their scale with no loss in quality. For instance, a logo image created in the format of *CorelDraw X3* can be printed on both a business card and a billboard with no loss in quality.

User-friendly *CorelDraw* tools offer various filling patterns: solid colour, *PostScript*, bit-mapped graphics or occlusion masks (including 24-bit coloured photographs), fractal structures and four types of fillings with shading. Fractal fillings create a huge variety of interesting textures and surfaces. At the same time, one can hardly deny that such flexibility associated with high separating capacity can lead to a major side effect – disastrous diminished performance.

On balance, the above advanced features of *CorelDraw* enable creating various drawings, graphic images etc.

Conclusion. Innovative approaches to teaching graphics, which are based on using *Adobe Photoshop* and *Corel Draw* graphic editors, have a potential to facilitate teacher training process. The above editors focus on creating and processing graphic information and can promote graphical representation of teaching materials. Using these editors one can create individual folders of drawings, charts, diagrams and other means of carrying out training of teachers to be. In comparison with similar graphics editors *Adobe Photoshop* and *Corel Draw* have clear benefits: they provide for creating high quality small-sized images, which can be used for creating teaching resources.

References:

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2. Internet resources [Electronic source] – Access mode: – http://phys.ippo.kubg.edu.ua/?page_id=662