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DEVELOPING AND USING MODERN MULTIMEDIA APPLICATIONS FOR EDUCATIONAL PURPOSES

Multimedia software products are among the most effective methods used for instruction. They represent the powerful pedagogical tool beyond the traditional classroom-based educational system at modern schools. Educational use of multimedia in developed countries has the following ramifications: video encyclopedias, interactive guides, multimedia training systems, situational role-playing games, electronic lecturing, research-based training involving analog or abstract modeling of the process under study, self-testing systems of student knowledge, and in-depth situation modeling, which represents virtual reality.

Currently, there is a substantial shortage of high quality educational multimedia resources in Russia.

Some examples of commercially available products for teaching basic subjects at secondary schools are the "Virtual School of Cyril and Methodius", multimedia supplements for biology textbooks by N. Sonin and M. R. Sapin ("Drofa" Publishing House), electronic atlases for high school students, and a series of atlases in botany, zoology and anatomy issued by the "TcheRo" Publishing House. These products meet the requirements of school curricula and include animation, video materials, multimedia training systems, final examination questions, assignments, and self-test questions.

However, the coverage of even secondary school disciplines and the quality of presenting material are of low level. Development of such high-quality multimedia teaching tools is certainly very time-consuming and effort-costly.

Undoubtedly, it is essential that such expenses should be justified. For example, flash-presentations are created in specialized design environments. The developer must be able to program in a high-level programming language (more often in object-oriented languages), or must be able to create flash animations, or both.

In addition, development and creation of electronic educational programs suggests an interest in receiving high-quality result. However, not every teacher in the fields of technical or natural sciences is capable of developing high quality educational product for information support of his or her own lecture courses, to say nothing of the teachers in humanities.

We suggest that the problem can be partially solved through a partnership between humanities and technical departments at the institutions of higher education and at universities. This partnership could result in developing completely novel and original interactive courses for information support of university curricula.

IT-field students could be involved in creating multimedia products while completing their course or diploma qualification projects. Working on actual projects commissioned by university professors, department chairs along with secondary school teachers and school, gymnasium, and lyceum principals would help them acquire and consolidate their professional skills.

We have successful collaborative experience of the kind. Students at the International School of Applied Information Technology, Yuri Gagarin State Technical University of Saratov (SSTU), successfully created multimedia flash presentations with 3D modeling for SSTU Departments of Ecology, Culturology, Socio-Cultural Services and Tourism, and Applied Computer Science and Software Engineering.

In addition, IT-field students developed multimedia applications for lessons in musical literature, biology, and anatomy for high schools in Saratov and Saratov region, and also designed websites for a number of educational institutions and commercial companies.

Viability and mutual benefit of such collaboration are confirmed by the positive feedback from such well-known local establishments as Tchernyshevsky Opera and Ballet Theatre of Saratov, Radischev Art Museum, Borisov-Musatov Museum, Crystal-Balalaika folk group, Slovakia Hotel, Music School №1, and Saratov Cadet School.