

EduGIS Academy

Description of a good practice:

EduGIS Academy is aimed at popularizing use of information and communication technologies (ICT) as well as geoinformation (GIS) in the fields of science and environmental education in junior high schools and high schools in Poland.

The project is based on professional experience exchange (meetings, online communication) between Polish and Norwegian educators as the use of modern geotechnologies in schools in Norway is widely implemented. Thus, in the frames of the project, the EduGIS Working Group was set up. It consists of teachers, methodological consultants, experts in the field of science teaching, representatives of the Ministries of Education as well as experts in the field of Geographic Information Systems (GIS) from Poland and Norway. Furthermore, Polish members of EduGIS WG played the role of national and regional ICT/GIS promoters to help other educators from all over Poland to acquire and develop ICT/GIS skills as well as to use them in the classroom practice.

By the end of the project, more than 100 science educators (geography and biology teachers in particular) were trained by EduGIS WG members. In addition, EduGIS portal with e-learning module was developed. Finally, a guidebook “GIS at schools” was prepared. The manual consists of ready-to-use lesson scenarios with all necessary educational materials (multimedia presentations, worksheets for students etc.). It contained also the guidelines for geography, biology, nature teachers to show them how to introduce ICT/GIS technologies into school practice.

Strong points and opportunities:

- “Snow-ball” effect implemented for spreading projects' results (WG members training other teachers and methodological consultants who disseminate information on GIS/ICT use in education among their colleagues etc.);
- The guidebook in Polish and English with ready-to-use scenarios based on geotechnologies use (map applications, satellite images, GIS software, spatial data, GPS devices etc.);
- Thematic scope of the lessons based on common, everyday life activities (analyses of flood risk, urban sprawl, biodiversity analyses during field trips etc.);
- Technology and tools introduced in the project – geotechnologies are widely used by professionals (scientists, engineers, experts etc.), which can make them interested in their students' work as well;
- Educational materials available online (downloading is possible whenever needed);
- Free and open EduGIS knowledge base in Polish and English containing links to (geo)resources and additional sources of information for educators and students as well as inspiration for teachers who would like to develop their own lesson scenarios.

Limitations:

- Teachers need to acquire new knowledge and skills to be able to use GIS in the classroom (for instance by taking part in trainings, workshops, e-learning courses);
- More time is needed for beginning educators to introduce a new software, tools and teaching methods based on geoinformation in the classroom (ordinary lessons can be too short);

- Some technical conditions need to be satisfied (good Internet connection, fast computers) to effectively implement GIS in education;
- Educational materials developed in the project (for instance EduGIS base knowledge containing information on new GIS software and applications) need to be constantly kept up to date (not finished after EduGIS Academy finalized them).

Added value with regard to the 3 topics of the MASS project (see next page):

WG1 practical examples of ICT/GI tools in science education (*GIS at school* guidebook); source of inspiration for educational activities and projects (in junior high schools in particular); students can learn how to use professional geotools and applications to solve interdisciplinary problems.

WG2 the use of geoinformation during lessons supports individual development of new skills and knowledge among students as they are focused on formulating conclusions based on available materials, information and data (from the Internet, by means of GIS applications etc.).

WG3 visualization of geographical information on digital maps, 3D models as well as practical tasks, such as gathering data with GPS devices, give a chance to awaken students' interest and cognitive activities. GI tools can support students in observing the same problem, taking different perspectives into account – analyze and formulate conclusions (new way of arousing interest in science education).

Age of students:

12 – 18 years (primary school, junior high school, high school in Poland)

Prerequisites needed:

- Fast Internet connection
- Adequate technical resources (computers, GPS devices etc.)

Links, resources:

<http://www.edugis.pl/en/for-teachers/guide>

<http://www.edugis.pl/en/for-teachers/edugis-knowledge-base>



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