

## HOW BUSINESS STUDENTS GAIN KNOWLEDGE AND SKILLS ON GEOGRAPHIC INFORMATION SYSTEMS. THE RESULTS OF GIS PROJECT DEVELOPMENT

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### **Abstract:**

Geographic information systems can be used in many areas (e.g. trade, marketing, logistics, public administration, meteorology, forestry, agriculture, environmental monitoring, aviation). Young people born in the era of IT want and need to use and learn new technologies and applications. Students are interested in internet of things, virtual reality, augmented reality, big data and mobility. These technologies create large amounts of information that has to be appropriately captured, ordered/filtered and presented preferably in a graphical form. Nowadays we can observe growing interest in presentation of phenomena/processes in a form of interactive maps that can be created with the use of GIS - computerized systems for capturing, storing and visualizing data related to positions on Earth's surface. The aim of the paper is to present results of research on students' knowledge and skills in the area of geographic information systems. The article contains theoretical background of GIS. Presents the course framework entitled "E-logistics and GIS". The course was prepared for students of logistic at Maria Curie-Skłodowska University in Poland. The main part of the article contains the results of quantitative research in the area of gaining knowledge and skills on GIS that were performed in June 2016 on a group of students of logistics.

The performed research shows that students associate GIS mainly with maps, location, data processing, they acquire knowledge and skills in the area of GIS watching video tutorials, following the instructions received from teacher and by observing and listening their colleagues. The main problems that occurred during GIS project development were related to GIS tool usage, data acquisition and lack of basic knowledge.

*Keywords: GIS, geographic information system, GIS education, GIS knowledge, QGIS, ArcGIS, GIS project, students' opinions*