

## **ABSTRACT**

*This paper starts from the analysis of needs of specialty training for Geography teachers when confronted with the scientific evolution of the field and considering the challenges imposed by an ever changing educational system. Within this framework, the Faculty of Geography at "Babeş-Bolyai" University, Cluj-Napoca, Romania, as a supplier of teacher training courses, organized a training course in the field of Geomatics. We analyzed the necessity and usefulness of this type of training course considering the number of teachers interested in this training course and an evaluation form of the course. Additionally, we evaluated the way in which the competences obtained during the formation program in Geomatics were put into practice on two separate components: an increase in the degree of attractiveness in Geography lessons and the improvement of students' school performance. The efficiency of the training program was evaluated by comparing the knowledge taught during a reference lesson in which the teaching was carried out in two different ways. The following step was to apply a unique test to two different student groups with a similar level of knowledge, which revealed that the best results belonged to the students in the group in which the methods and techniques used to deliver the teaching were the ones acquired during the training course. By validating the initial hypothesis, we reached the conclusion that it was necessary to introduce these GIS-TIC contents in the educational context for pre-university education.*

**Keywords:** *Geomatics, school performance, computer aided instruction, educational software, student-centred methods*