



ICT competence in geography: a targeted course based on an Internet-based study tool with quantified effects on improvement of the students

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The information and communication technology (ICT) is a tool of development for acting or prospective teachers. In geography, however, this competence often needs directed improvement, especially for the students less information and motivation for using the full potential of this tool. In the MA program for prospective teachers of geography there is a course held by one of the authors (PTI) to introduce the students into all possibilities of ICT. The course is focused at and widely illustrated by the GEOGRAPHY nEtQUIPMENT, which is a homepage, first published in Hungarian still in 2006 (<http://netszkozkeszlet.ektf.hu>), to help in orientation among the rapidly growing information on the Internet. The main objective of the GEOGRAPHY nEtQUIPMENT is to convey structured information to teachers and pupils, as well as, professors and students of geography. It can be used free after registration. The homepage counts ca. three thousand registered users. The English version is available from the same entry. The set of appliances is based on Dreamweaver MX program.

Development of the students' ICT-competence was measured in 2008 during the course. Before the course 38 students answered 110 questions and, after the course, the same questions were answered by 29 students. The questions were related to their attitude to ICT, technical abilities in using a PC and projections on application in a school environment. In 31 cases the answers fell into one category not allowing the chi² test. From the 79 remained questions, there were not any which were reflected significant step-back in the ICT-competence. At the same time, significant improvement of the competence appeared in 29, 41 and 48 % of the questions at the 1, 5 and 10 % level. The course and the homepage also improved their ability to (i) memorise and reconstruct the pieces of knowledge, (ii) reconstruct the patterns in space from their 2D-images, (iii) explain the images and documents in their own words, and (iv) co-operate with each-other for working.

These results indicate that the course really helps our students in obtaining strong info-communication competence to follow the developments of science, related events of mankind and practical applications of geography.