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VIRTUAL REALITY IN TEACHING GEOGRAPHY

[Abstract Preview](#) | [Printer Friendly Preview](#)**VIRTUAL REALITY IN TEACHING GEOGRAPHY****G. Bujdosó<sup>1</sup>, E. Jász<sup>2</sup>, Z.M. Császár<sup>3</sup>, A. Farsang<sup>4</sup>, J. Kapusi<sup>5</sup>, E. Molnár<sup>6</sup>, K. Teperics<sup>6</sup>**<sup>1</sup> *University of Debrecen (HUNGARY)*<sup>2</sup> *Medgyessy Ferenc Grammar School and Secondary School of Arts (HUNGARY)*<sup>3</sup> *Institute of Geography and Earth Sciences, University of Pécs (HUNGARY)*<sup>4</sup> *University of Pécs, Faculty of Science and Informatics (HUNGARY)*<sup>5</sup> *Bethlen Gábor Vocational Secondary School of Economics (HUNGARY)*<sup>6</sup> *University of Debrecen, Department of Social Geography and Regional Development (HUNGARY)*  
*bujdosogyongyi@inf.unideb.hu, jaszerezsebet@gmail.com, cszuszsa@gamma.ttk.pte.hu, farsang@geo.u-szeged.hu, geo.bethlen@gmail.com, molnar.erno@science.unideb.hu, teperics.karoly@science.unideb.hu*

Teaching needs to find new ways all the time. This research aims to renew both the contents and the methodology of teaching the geography of Hungary in primary and secondary education by developing a package of new tools (tasksheets, online and ICT-based activities, teacher support material and even VR), which focus on a selection of regions, landscapes and settlements. It is based on the activities of a research group of the Hungarian Academy of Sciences established in 2016, involving both secondary school teachers, university lecturers and teacher trainees. The research is concluded within the methodological framework of problem-based (Barrows, Kelson) and project-based learning (Dewey, Kilpatrick), but also relies heavily on digital devices and Internet-based resources. The purpose of the research group is not only to expand teachers' inventory and skill set but to help modern methods and practices spread across teaching communities while offering students new ways to improve their skills and digital competence within their Geography studies.

As part of this research, a sample learning environment has been developed to show secondary schools geography teachers how to use the VR environment for designing problem-based methods. The Lake Balaton area, one of Hungary's most visited tourist regions, is used to present the sample environment. We use the MaxWhere collaborative service (3D Web + 3D Cloud + 3D Apps) that provides predesigned and predefined working areas in which users (teachers and students) can manage their own projects with personalized and shared contents by using modern Web technologies in a very natural and creative way. In that particular case, students are encouraged to discover this new digital environment and create their own interactive Balaton projects, which require individual research and are all connected the recent geographical issues and problems raised in the teaching material.

We believe the introduction of VR to Geography teaching is not only motivating for students and teachers but demonstrates some collaborative techniques that can be applied to knowledge transfer and the development of creative thinking in other subjects as well.

Keywords: Virtual Reality, Motivation, Teaching Geography.