
The platform eDIVE: A Solution for the Geography Education in Collaborative Immersive Virtual Environment

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Abstract:

Several years ago, a research team at Masaryk University developed the first software solution for collaborative geography education in virtual reality. Afterwards, an empirical qualitative study was conducted to explore the possibilities and constraints of using collaborative immersive virtual environments in education. The study results showed the great potential of immersive virtual environments not only in the field of geography, especially when they contain collaborative aspects and offer enough interactivity (Šašínska et al., 2019).

Based on the experience from the first study, an interdisciplinary applied research project was established, which aims to develop, implement in practice, and evaluate courses for secondary education in geography and foreign languages. The authors of this publication, Šašínska, Chmelík, Šašínsková, Stachoň, created a wider conception of education in collaborative immersive virtual environments (CIVE), which enables overcoming some of the constraints related to teaching in physical classrooms, utilizing the actual potential of the current CIVE technology, and deepens the insight into how educational processes in VR work. Furthermore, the authors have designed the universal software platform eDIVE, which is currently being developed, optimized, and evaluated in practice in the context of the research project.

The presentation aims to describe the conception of geography education in CIVE in greater detail and the eDIVE software platform, including the pilot educational scenario “Contour lines”.

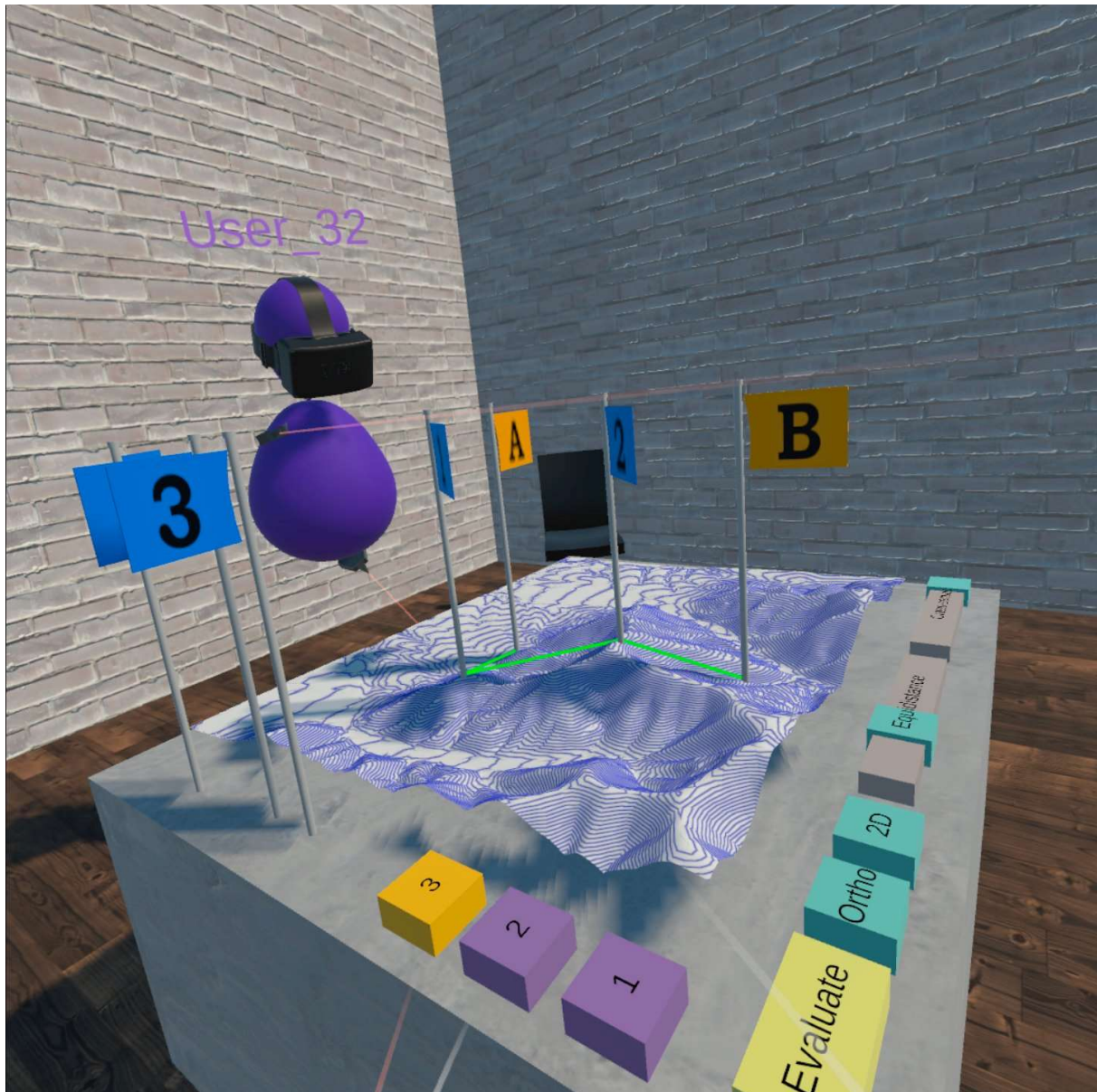


Figure 1. Example of the lesson “Contour lines education” on the original eDIVE platform. Students may use several functions (e.g. switching between 2D and 3D visualization, feedback) which enable interaction with the educational material.

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References

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