



## **Developing problem-oriented worksheets for expanding the possibilities of teaching Hungary's geography**

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Although numerous attempts have been made before, the methodology of geography teaching has been highly difficult to renew in Hungary. The reasons for it are very complex, and one of the contributing factors is the scarcity of teaching and methodological aids available for teachers, which do not only describe new methodological trends or contain the prepared curriculum, but which combine both. Another significant problem is that mainstream geography teaching still strongly focuses on disseminating lexical and static information, and it hardly encourages students to take part in the process of knowledge acquisition.

Based on our preliminary studies, our main goal is to provide geography teachers and their students with tools suitable for problem-oriented education, and with digital technology innovations which are supposed to make the methodological renewal of geography education more effective than it has been ever before. Another aim of ours is to provide a kind of starting point for both the teachers of geography working in public education and the students to develop more practical knowledge acquisition and learning methods based on an interactive and student-centered approach.

The educational aid we are currently developing is a student's handbook, accompanied with a teacher's resource book, both of which include specially developed worksheets processing the geography of certain micro- and mesoregions as well as some selected towns of Hungary. The handbook is recommended to be used from Grade 8 to Grade 13. Each worksheet employs a problem-centered approach when discussing the selected topic, and they also help teachers develop their own methodological techniques and adapt them to other parts of the curriculum. The already prepared worksheets are tested, teacher and student feedback is taken into account when designing new ones, and necessary changes are made accordingly. The effectiveness of knowledge acquisition is also measured with the help of an educational assessment professional.

The main principles are as follows. Each worksheet consists of four pages. The use of informative, descriptive, textbook-like texts is reduced, and other, problem-oriented exercises are used instead. These exercises include utilizing large-scale maps of different periods, introducing contemporary environmental and/or social problems of a selected region or town, providing thought-provoking exercises, and a wide variety of different source materials like datasets, figures, sketch maps, pictures, etc. Both the worksheets and the teacher's resource book contain QR codes which can be used to log into websites containing interactive on-line worksheets. In addition, the teacher's resource book includes different teaching methods and possible solutions of the individual worksheets depending on the target group as well as additional information, educational and didactic tips and tricks.

The poster displays the goals and the steps of our research development, and it presents the preliminary results through a concrete example.