

A Comparative Analysis

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Theoretical Background and Relevance

Conceptual change has been one of the hottest research themes of contemporary educational research since the 1970s. The emergence and development of scientific misconceptions is a closely related study area of conceptual change. Although international research on geographical misconceptions is substantial, Hungarian educational research lags behind in the investigation into geographical misconceptions as well as scientific misconceptions in general.

The definition of misconception used in the present study is that of E. Korom's, who states that misconceptions are concepts, systems of concepts, models of certain environmental phenomena that are not in accordance with the generally accepted present-day scientific knowledge, which are deeply rooted in the cognitive structure of children and adults alike, strongly resist to any formal education, and, as a result, they are difficult to change (Korom 2002, 139).

Sample

Being part of a major research project that ranges from primary school to university students, the present study only focuses on the comparative analysis of two university groups: one majoring in Geography, the other majoring in English.

Methods

The survey was pilot tested in the spring of 2012. It consists of a background information questionnaire, a word association test, an aptitude test with open-ended questions, and an achievement test. Two areas of physical geography are investigated: global warming and plate tectonics. The reason of selecting these topics is based upon the former observation and exam results of Geography major students, as reported by their university professors.

As the nature of misconceptions is rather special in terms of objectivity, mainly qualitative, but also quantitative methods are applied when evaluating the surveys. The evaluation process is based on triangulation: the fundamental theory applied is grounded theory. Data collection and evaluation are still in progress.

Conclusion

Based on previous experience of university professors, little significant difference is expected to be found between the geographic knowledge of the two groups despite one of them consisting of Geography major students, who receive a really thorough formal geography education. Preliminary results also suggest that while culturally induced misconceptions are not present, layman's experience, mistakes in textbooks, flaws in teachers' explanations as well as media coverage of certain topics interfere in the emergence of geographical misconceptions.



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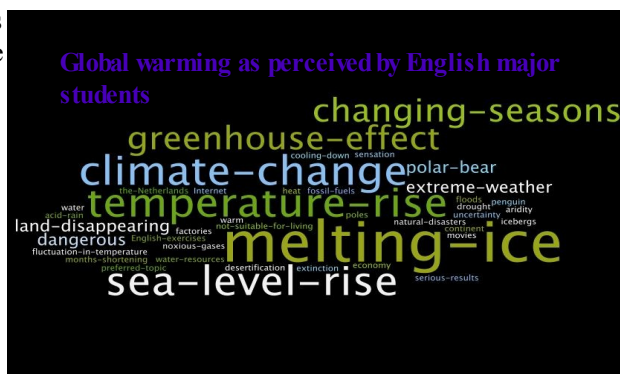
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Research Questions

What is the difference between the structuring of geographical information of the two different groups?

What misconceptions may arise in the answers of the different groups?

What are the possible explanations for the emergence of misconceptions?



Literature

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