



GÖTEBORGS UNIVERSITET

Biologisk mångfald i läroböcker i biologi

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Fakultetsopponent: Professor Marianne Ødegaard,
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Abstract

Title: Biologisk mångfald i läroböcker i biologi
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The aim of this thesis is to analyse offered meaning, that is, what and how subject content is communicated to the recipients. In this case the subject content is biological diversity and the communicative artefacts are biology books for the latter grades in the Swedish compulsory school. The four papers cover aspects of biodiversity in biology books (I), connections between biology books and the world outside school (II), the definition of the species concept and the use of the concept species in textbooks and in pupils' assertions (III), and finally how instances of modes are connected in a multimodal text and how the design of texts may affect the possibilities of meaning making (IV).

The biology books used for data collection are multimodal texts with different types of written text and a rich amount of illustrations. The collected data was primarily used for content analysis but also to explore the design of the books. In paper III and IV data was also obtained by two questionnaires to students. Data is analysed and the results are discussed on the basis of a social semiotic theory of communication and meaning making.

The books contain many facts about biological diversity, but the concept is not defined explicitly in several of them. In relation to human beings and human activities are beneficial aspects of biological diversity given precedence over ethical, aesthetic and economic aspects. The results also show that the books contain inaccuracies and questionable formulations regarding biodiversity, as well as simplifications and colloquial expressions rather than scientifically accurate terminology. Direct address, anthropomorphism, analogies and connections to life outside school are also found in the books. To recognize themselves in many of the connections to everyday life, pupils need to have visited many habitats in different seasons. The use of concepts is an area where there is a great potential for change. The species concept can be seen as an example of how a concept is introduced early and that understanding is taken for granted in the remaining text. Responses from the questionnaires suggest that more time needs to be given to basic biological concepts and that a big amount of instances of modes may impede meaning making.

Textbooks are compromise products created to suit a diverse audience. There is a risk that the offered meaning of the books is not consistent with the perceived meaning of the students. The results of the thesis may contribute to reduce the gap between offered and perceived meaning. If awareness is raised about the problems pupils may face when using textbooks, the teachers' and the authors' ability to support meaning making may increase.