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Postprint

This is the accepted version of a paper presented at *EARLI SIG 9*.

Citation for the original published paper:

Holm, K. (2014)

Perceptions of the Concept of Evolution among Undergraduate Biology Students.

In: *EARLI Special Interest Group 9. Phenomenography and Variation Theory: Disciplinary knowledge and Necessary Conditions of Learning* (pp. 15-15). University of Oxford

N.B. When citing this work, cite the original published paper.

Permanent link to this version:

<http://urn.kb.se/resolve?urn=urn:nbn:se:uu:diva-233032>

Disciplinary knowledge and Necessary Conditions of Learning
EARLI Special Interest Group 9. *Phenomenography and Variation Theory*

1-3 September 2014, at Regent's Park College, University of Oxford

Paper Session Proposal

Perceptions of the Concept of Evolution among Undergraduate Biology Students

Abstract

The concept of evolution is central to biology. As empirical and natural phenomena, evolution and evolutionary processes constitute the primary study objects for a number of disciplines within the biological field of study. Furthermore, the concept comprises the fundamental cornerstone in the theoretical framework, the theory of evolution, which is assumed to unite all of the life sciences. It may therefore be worthwhile to attempt to describe in detail what conceptional variations in the understanding of the term that may exist among students in biology. In this study, written responses were collected from students attending the Bachelor Programme in Biology at Uppsala University during 2012. The responses were subjected to a reading aimed at elucidating qualitatively different categories of understanding and the interrelationship of these categories. The theoretical underpinnings of this reading have been inspired by hermeneutics and theoretical developments of phenomenography. The findings outline qualitatively different notions of the concept of evolution that ranges from definitions of an isolated entity to more sophisticated evaluations that reveal an interest in discussing the limits and validity of evolutionary explanations within and outside the scientific domain.

Keywords: phenomenography, hermeneutics, higher education, biology studies, evolutionary concept