

Professional knowledge in and about nature

Exploring processes of informal learning concerning biodiversity among local users of natural resources in Sweden

Aim and research questions

This research aims to further contribute to the knowledge on informal learning processes, in professional contexts, and understanding on the influence of nature as living and workplace on learning processes about biodiversity.

It has as specific research questions:

- Which are the main dimensions of learning involved in the generation of work knowledge about biodiversity?
- How learning process concerning biodiversity is influenced by work practices in nature?

Theoretical points of depart

Informal learning is considered to be the result from daily activities related to work, family and leisure. Informal learning is not structured in terms of objectives, time and learning support, and is often unintentional from the learner's perspective (CEDEFOP 2008).

Definitions of learning vary substantially between disciplines, various fields and within fields (see Barron et al. 2015). In educational research, learning can be seen as the interaction between individual's mind and a social constructed world. Cairns and Malloch (2008) describe learning as "*an outcome of an interactional engagement in experience and thinking*" (p. 9). More specifically in this research, learning is considered as "*all the processes that lead to relatively lasting changes of capacity, whether they be of a motor, cognitive, psychodynamic (i.e. emotional, motivational or attitudinal) or social character, and which are not due to genetic-biological maturation*" (Illeris 2003, p. 397).

Illeris' contribution to learning theorization is mainly known in the educational research field of workplace learning (see Illeris 2003; 2008). In this, Illeris highlights the importance of two central assumptions on his theory of learning. Firstly, that learning includes two types of processes: "*an external interaction process between individual and his/her social, cultural and material environment, and an internal process of elaboration and acquisition of new impulses that connect with the results of prior learning*" (2003 p. 396; 2008 p. 35). Secondly, that learning includes three dimensions:

1. The dimension of knowledge, understanding, skills, abilities and attitudes.
2. The dimension of emotions, feelings, motivations and volition.
3. The social dimension of interaction, communication and cooperation.

In line with this, modern brain research (see Furth 1987; Damasio 1994) offers evidence for the important connection between cognition, emotions and motivations in acquisition process (learning). For this reason, this research focuses on the three dimensions of learning suggested by Illeris (2003; 2008). Conforming to Illeris' perspective on learning as a process, particularly, the interaction between individual and his/her social, cultural and material environment, Billett (2008) highlights the relational interdependence between personal and social factors and contributions, a combination of "*work pedagogies and personal epistemologies at and for work*" (p. 52). Billett (ibid) affirms that what constitutes work is negotiated between institutional facts and other social forms that constitute the social suggestion or social experience, and individuals 'cognitive experience'. Both social suggestions and individuals' cognitive experience require each other.

Research design and methodology

This educational research pays attention to the fundamental idea of education as a human practice. It addresses the investigation of educational aspects surrounding everyday work practices in nature. With the aim to contribute to knowledge on informal learning processes, in professional contexts, and understanding on the influence of nature as living and workplace on learning processes about biodiversity, this research answers to the specific research questions regarding the main dimensions of learning involved in the generation of work knowledge about biodiversity, and the influence of work practices in nature on learning process concerning biodiversity among a group of farmers. For this, case study is the method used in this qualitative research (Creswell et al., 2007; Gerring, 2007) – a common method in the social sciences.

Focusing on a case study of farmers with a variety of geographical localisations, business sizes and high economic dependencies to the natural resource (e.g. tourism, production of meat, milk or cereal, honey) allows this research to explore a variety of learning processes that have different sociocultural and physical contexts surrounding farmers' work practices.

Generalisations from case studies can be of two different types: 'analytical generalisation' and 'statistical or empirical generalisation' (Lundholm, 2004). Lundholm refers to analytical generalisation as a way of generalising results to a level of theory or theories. Statistical or empirical generalization concerns results from the selected cases can be generalised to a population. In the line with this distinction, the results from the case studies in this research are generalizable at the theoretical level. Furthermore, the results of this research could also be generalised at the empirical level, considering a population of professional users with similar backgrounds, in similar cultural and social contexts, and living in similar landscapes and biotopes.

The case was selected base on three specific criteria:

1. Landscape types and biotopes of relevance for biodiversity in Sweden (i.e. agricultural landscape and forest), due to species threats and conditions.
2. The impact (positive or negative) of local users on these landscape types and biotopes through work practices.
3. The cultural and historical value of these work practices for biodiversity conservation and sustainable use of natural resources.

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