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Suomen kasvatustieteellinen aikakauskirja

Ahopelto, Ilona – Mikkilä-Erdman, Mirjamaija – Penttinen, Marjaana – Antto, Erkki. 2009. Adult students' conceptions about photosynthesis and conceptual change. *The Finnish Journal of Education Kasvatus* 40 (4), 307–316.

The purpose of this study was to find out adult learners' preconceptions about photosynthesis and observe how these conceptions changed during a text-reading process. We were also interested in learners' metaconceptual awareness in different stages of the learning situation. In the pretest many of the participants had difficulties to understand that plants make their nourishment by themselves and do not draw it from the soil. A remarkable result is that in the posttest there existed no more misconceptions about how plants get their nourishment. Although some participants had a so-called synthetic model where coexisted both naïve conceptions and scientific facts about plants' nourishment acquiring. The other result was that those participants who had experienced a radical conceptual change had also a quite high level of metaconceptual awareness compared to those participants who did not succeed so well. From the results we can draw a conclusion that a logical, argumentative text works as a quite effective facilitator of conceptual change. Thus, textbook texts which are coherent and express causes and consequences would presumably support learning also at school. Also learners' preconceptions should be better taken into account so that learners' metaconceptual awareness could arise in learning situation.

Descriptors: conceptual change, text-book text, naïve conception, naïve model, synthetic model, metaconceptual awareness

Kiili, Carita – Laurinen, Leena – Marttunen, Miika. 2009. Internet as a learning environment – Students' Internet reading strategies. *The Finnish Journal of Education Kasvatus* 40 (4), 341–351.

The purpose of this study was to investigate the interrelations between information searching, text-processing, information evaluation, and metacognition when upper-secondary school students used Internet as a source for an essay. Additionally, the study examines how these processes are mirrored in essay writing. Students ($n = 24$) were asked to search for source material from the Internet for 40 minutes in order to write an essay on a given topic. They were asked to verbalise their thoughts while they were gathering their source material. Their verbalisations and actions were recorded and analysed.

The results indicated that skillful Internet reading demands a metacognitively competent reader. Skillful students were able to plan and evaluate their performance, and adjust their activities to the task demands. They were also able to focus on elaborative text-processing. On the contrary, students who had difficulties in locating relevant information on the Internet regulated their activities rather superficially. For example, they were not able to change their ineffective search queries. Additionally, the results indicated that the use of elaborative text-processing strategies was positively associated with the breadth and causality of the students' essays. Hence, the strategic reading functioned as the basis for the quality of writing.

Descriptors: internet reading, reading strategies, metacognition, evaluation of information

Kiiveri, Leena – Hännikäinen-Uutela, Anna-Liisa. 2009. The empowerment and identity reconstruction of a woman convicted for narcotics and violent crime. *The Finnish Journal of Education Kasvatus* 40 (4), 294–306.

Besides absolute commitment, desire for change, and motivation, a prisoner's social environment and external setting may promote or hinder her efforts to change her course of life. In prison, the best support for such change comes from the staff's trust in the prisoner, offering a sober and respectful environment, and from the prisoner's own resources to work on her identity. When getting out of the prison, the prisoner's empowerment process is promoted by an adequate support network, other people's non-stigmatising attitude, experiences of normality, and finding a job without undue delay. Spiritual values may play an important role in empowerment and identity reconstruction. Personal characteristics and strengths seem to reinforce empowerment.

This article is based on a Master's thesis in special education (University of Jyväskylä, Faculty of Education). The study investigated a female prisoner's empowerment and identity reconstruction and explored some major factors pertinent to this empowerment process. The theoretical framework was the general formal theory of empowerment. This qualitative case study gave a voice to the experiences of a person who is giving up her criminal career. The data were collected by means of thematic interviews and observation. In addition, the material included a biography written by the subject and also two video documents.

Descriptors: narcotics and violent crime, giving up a criminal career, empowerment, process of change, identity reconstruction, integration into society

Nyman, Tarja. 2009. Newly qualified teacher in the working community. *The Finnish Journal of Education Kasvatus* 40 (4), 317–327.

This article focuses on the construction of the expertise of newly qualified foreign language teachers (NQT) in the working community based on the teachers' accounts of their first years at work. In the study, a qualitative approach to data and data analysis was adopted in order to develop a closer understanding of the realities of the participants' everyday life. The data consist of essays and journal entries written during the years 2003–2008. From the data emerged descriptions of teachers' tasks and situations where NQTs needed collegial assistance, and of factors that promoted or prevented the development of expertise in the working community. The participants of this study (N=11) began working at school between 2003–2006; their average age was 24 at the time. Some NQTs stressed the importance of foreign language and culture, some holistic education and school development. All NQTs needed collegial assistance in matters pertaining to education and instruction but in order to get it, they had to be brave. The development of expertise appeared as a complex, individual process. The findings of the study can be used to further develop the school and teacher education.

Keywords: newly qualified teacher, outset of working life, working community, development of expertise

Pitkäniemi, Harri. 2009. Towards the integrative approach in research on teaching. *The Finnish Journal of Education Kasvatus* 40 (4), 328–340.

Current research on teaching still uses mainly qualitative or quantitative approaches. Based on the history of teaching research we easily think that these monomethod approaches are quite distinct, dissimilar and even opposite to each other. Recent methodological analyses by researchers in different countries indicate that at the ideal level these mono-strand approaches actually aim at the same purposes in many essential points. On the other hand, the practice of research on teaching can tell otherwise as deep-seated traditions keep shaping also present methodologies – with some exceptions, of course. The integrative approach (or mixed methods/models) has been supposed to become one noteworthy challenger to the mono-strand approaches. Nowadays, many typologies of mixed methods models are presented reflecting a variety of ways to design empirical research. Anyway, it is quite difficult to discover the methodological principles and exemplary studies in

which the mixing has been applied in “full”, i.e., in a radical and seamless way. This article presents a few ideas for methodology in which qualitative and quantitative orientation will actually interact “inside” a research design. In addition, to promote valid research on teaching in the future, we will need to adopt a broader, more comprehensive and interactive approach to the phenomenon.

Descriptors: methodology, quantitative research, qualitative research, integrative approach, teaching