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Krokkfors , Leena – Kynäslahti, Heikki – Stenberg, Katariina – Toom, Auli – Maaranen, Katriina-Jyrhämä, Riitta – Byman, Reijo – Kansanen, Pertti. 2009. Teachers for the changing school – evaluation of research-oriented teacher education. *The Finnish Journal of Education Kasvatus* 40 (3), 206–219.

This article discusses research-oriented teacher education both theoretically and empirically. The theoretical point of view includes analysing the degree of practicality and conceptualisation of teacher education as well as training for teaching and research. As a result from this analysis, we present a model for research-oriented teacher education. The empirical section deals with teacher educators' views about the research-oriented approach and its connections to the everyday practice of teacher's work. Empirical findings confirm that research-orientation is seen as a significant approach for teacher education and teachers' daily practice. The results indicate that teacher educators perceive the research-oriented approach as follows: It is a theme that organises education in general and it is based on the academic nature of education. Besides, it shows in curricular contents and also in teachers' pedagogical thinking.

Descriptors: teacher education, research-oriented approach, teacher educators

Malmberg , Jonna – Järvenoja, Hanna – Järvelä, Sanna. 2009. Self-regulated learning in the gStudy learning environment – How do the third grade students use information processing strategies? *The Finnish Journal of Education Kasvatus* 40 (3), 244–256.

The aim of this article is to investigate how elementary school students (N=16) adapt their information processing strategies when studying natural sciences. Strategy use is an essential part of active learning processes, where students themselves monitor and control their learning processes towards the learning goal. The students used a gStudy learning environment that offers cognitive tools aimed to stimulate the use of information processing strategies during self-regulated learning. At the same time gStudy records traces of the students' strategic use of the cognitive tools.

The data constitutes mind maps the students constructed in the gStudy environment, trace data and student interview data. In the analysis, students mind maps were first categorised into three groups. Second, three students from each group were selected for the interview analysis. Finally, examples of two students working with gStudy are presented with corresponding trace data.

The results show that those students who – according to the interview – were using organisational strategies were able to detect and analyse the hierarchical structure of the main concepts during their gStudy sessions, unlike the students who only described using memorisation strategies. It seems that students' strategic knowledge influences their actual use of learning strategies. The example of the two students working on the gStudy exercise illustrates the actual differences between a goal-directed and strategic activity and a weakly regulated activity.

Descriptors: self-regulated learning, strategy, metacognition, computer supported learning

Nokelainen, Petri – Miettinen, Miikka – Ruohotie, Pekka. 2009. Prediction of Learner Profiles, Actions and Learning Outcomes with Bayesian Computation. *The Finnish Journal of Education Kasvatus* 40 (3), 257–271.

This study explored the relationships between learning outcomes, actions and motivational, learning strategy and social ability profiles in a custom-made computer-supported learning environment (CSLE) prototype. The sample, consisting of sixteen Finnish adult learners, was collected from a university level applied statistics course between October 2007 and March 2008. The following research questions were formulated: 1) Are differences in the learners' profiles statistically related to differences in their learning outcomes? 2) Are the learners' actions in the CSLE during the course related to their learning outcomes? 3) Are the learners' actions in the CSLE related to differences in their profiles? The results showed that all motivational factors were directly or indirectly positively related to learning outcomes. Also self-reported resource management skills and preference for learning by doing were directly positively related to learning outcomes. The use of social navigation tools in the CSLE was strongly positively related to self-reported group work abilities.

Descriptors: CSLE, learning motivation, learning strategies, social abilities, learning outcomes, Bayesian methods

Pasma, Jenni – Koivuniemi, Kirsi – Pihlajamaa, Johanna – Korhonen, Anne – Isohanni, Irene. 2009. The role of research and development in teaching at a university of applied sciences. *The Finnish Journal of Education Kasvatus* 40 (3), 220–230.

The purpose of this study was to explore how research and development (R&D) occurs in teaching by examining the curricula and teachers' viewpoints. In Finnish legislation, R&D is defined as one of the main tasks of the universities of applied sciences. Teachers' views were inquired through an Internet-based survey, which was answered by 37% of the teachers (n=231) in Oulu University of Applied Sciences. The curricula were analysed by content analysis and the teachers' views by descriptive statistical methods. According to the findings, R&D-related studies in the curricula consisted of three dimensions: research methods, the basis of R&D, and practical applications. About 40% of the respondents taught R&D-related courses very little or not at all. However, a quarter of the teachers taught such courses a lot. In addition, almost every third respondent utilised working life connections developed in R&D-activities in their teaching.

Descriptors: university of applied sciences, research and development, teaching, curriculum, learning organisation

Perho, Hannu. 2009. Do initial professional orientation, personality and teaching skill predict class teachers' burnout? *The Finnish Journal of Education Kasvatus* 40 (3), 231–243.

Aim of the study was to examine links between vocational orientation and personality traits before studies and later burnout of class teachers at work. Study concerned connections between vocational motives, values and interests, self-rated skills, self-concepts – all measured in context of entrance examination – and grade in teaching skill with class teachers' burnout components: emotional exhaustion, cynicism or depersonalization and personal accomplishment. The sample consists of the admitted women (n=97) and men (n=45) to Joensuu and Savonlinna class teacher education in 1983 and 1984, whose burnout at teachers' work was studied 22–23 years later. Teaching skill was connected in women and men with personal accomplishment. Intrinsic motives generally protected from burnout. External motives, choice as a substitute, and other peoples' influence on choice were linked with burnout. Original interest in education and children was connected with later personal accomplishment at work. In women, resiliency traits (adaptation & coping with stress, leadership skill, energy, self-esteem & quick-thinking) protected from burnout. In men, adaptation & coping with stress protected strongly from emotional exhaustion. Results indicated, that in addition to demands and resources, quality of vocational orientation and personality have impact on burnout.

Descriptors: class teacher, motive of vocational choice, vocational orientation, teaching skill, self-concept, burnout