

Keywords: Computer-supported collaborative learning, Inquiry learning, Self-regulation, Lifelong learning
Presenting Author:Khadija Mohamud, Institute of Educational Technology / Open University, United Kingdom

The Self-Organised Learning Environment (SOLE) and Granny Cloud: A Students' Perspective ABSTRACT While much research has been conducted to demonstrate how students are benefitting from Self-Organised Learning Environments (SOLEs) from a researcher's perspective, no research has been conducted to investigate students' perspectives of SOLE and the Granny Cloud in India. This qualitative case-study starts to fill that gap and is the first research on this particular SOLE Lab, which is in a remote village in West Bengal. The study's key research question is: 'What do students believe they are learning from engaging with SOLE and Granny Cloud'. 32 students, 2 learning hub facilitators, 2 teachers and 4 parents participated in this study. Data were collected through observations, focus groups, interviews and field notes within a two-week time frame. Data were analysed through coding and thematic analysis. Credibility and trustworthiness were ensured through: cross-checking data consistency during data collection, systematically coding key ideas into themes, and triangulation of multiple data sources. Comprehensive ethical principles of informed consent and confidentiality were applied. The findings suggest that students generally believe they are learning from engaging with SOLE and the Granny Cloud. They gave clear examples of what they learnt as a result of utilising the facilities. Examples included; learning techniques that made real life impacts, learning English, developing ICT competence, increasing confidence, developing communication and teamwork skills. Nevertheless the study presented some interesting findings that stimulated students' interest in SOLE and Granny Cloud sessions. These included; preferences for easy and hard SOLE big questions and granny approach of conducting Granny Cloud sessions. However, some tensions were also evident from the data. This paper addresses the conference theme and questions by discussing how SOLE and Granny Cloud is facilitating self-directed learning and presenting challenges posed and way forward. Keywords: SOLE; Granny Cloud; learning hub

Individual, team and organisational learning from incidents: What do we know and where are we going?

Keywords: Informal learning, Professions and applied sciences, Workplace learning, Lifelong learning
Presenting Author:Victoria Murphy, Open University, United Kingdom; **Co-Author:**Allison Littlejohn, Open University, United Kingdom; **Co-Author:**Bart Rienties, Open University, United Kingdom

Learning from incidents (LFI) is a sub-section of workplace learning that looks at how companies learn after accidents and near-misses in order to prevent similar occurrences. The literature on LFI has focused on learning from a variety of perspectives: the individual, the team, and the organisation. Studies have drawn on a multiplicity of theoretical perspectives related to learning, but there exists limited understanding of how LFI functions as a learning process from its beginning to its end. To conceptualise LFI as a form of adult learning and identify current gaps in understanding a systematic literature review was undertaken. 60 studies were identified that analysed aspects of LFI as a learning process. To outline current understandings of LFI as a learning process, the individual, team and organisational learning perspectives considered in the articles were drawn together and summarised. This allowed for identification of gaps of knowledge in the current conceptualisation of LFI. Studies on individual learning can be connected to two educational theories: experiential learning and agency. While agency, particularly barriers to engaging with LFI, has been explored in many studies, relatively few have looked at how learning activities can guide individual development through experiences. Learning activities that can guide development at the team level have been explored to an extent in the current body of literature, but there remains much scope for development in this area, including how different teams interact with each other. The organisational level of learning has been investigated from several perspectives including models of the procedures and methods of evaluation. The field could benefit from more studies that investigate how individual and team learning affect organisational learning, for example, the impact a particular type of learning activity has on the accident and near miss rates of an organisation.

Supporting the development of inquiry skills: An analysis of Hungarian chemistry textbooks

Keywords: Inquiry learning, Primary education, Science education, Secondary education
Presenting Author:Gábor Z. Orosz, University of Szeged, Hungary; **Co-Author:**Veronika Németh, University of Szeged, Hungary; **Co-Author:**Erzsébet Korom, University of Szeged, Hungary

The aim of our research is to analyze how one can use the new Hungarian chemistry textbook's exercises to develop inquiry skills. We analyzed the textbooks of 5., 7., 9. (Type A and B) and 10. grade (Type A and B). We used the model of *Wenning* to define inquiry skills and make categories. We calculated the percentage of the developing exercises to the total number of exercises. Our result shows observation is absent in the textbook of 5. and 8. grade, and it is present in the highest proportion in the Type B textbook of 10. grade (5.36%). The skill of identifying a problem and formulating a research question is present only in Grades 7 (1.48%) and 10 (Type A) (0.89%). The skill of formulating hypotheses and making predictions is present only in Grades 7 (0.49%) and 10 (Type A) (0.89%). Designing an experiment is practiced in every grade. It is least frequent in Grade 8 (0.56%) and most frequent in Grades 9 (Type A) (3.14%) and 5 (5.13%). The skill of conducting an experiment is entirely absent from 5th and 8th grade while it appears with the highest frequency in Grade 7 (19.50%). The skill of collecting and organizing data is also absent from 5th and 8th grade textbooks and it occurs with the highest frequency in Grade 7 (4.43%). The skill of analyzing and interpreting data appears with the lowest frequency in Grade 8 (0.56%) and with the highest frequency in Grade 9 (Type A) (22.64%). Drawing conclusions is absent from the textbooks of 5th, 8th and 10th (Type B) grades, and occurs with the highest frequency in Grade 9 (Type A) (7.55%). Exercises involving the communication of the results appear in Grades 7 (0.99%) and 9 (Type A) (1.89%) only. Our results reveal that exercises that enhance inquiry skills are included in every grade's textbook, but with a low frequency. The different inquiry skills are represented in varying proportions. Neither the number nor the complexity of skill

enhancing exercises increases from grade to grade.

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Instructional Design, Learning and Special Education

Best of JURE - Paper

Keywords: Early childhood education, Educational Psychology, Instructional design, Learning disabilities, Metacognition, Peer interaction, Quantitative methods, Secondary education, Self-efficacy, Special education

Interest group: SIG 05 - Learning and Development in Early Childhood , SIG 06 - Instructional Design

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Connections between academic self-concept and perceived learning difficulties among adolescents

Keywords: Learning disabilities, Quantitative methods, Secondary education, Special education

Presenting Author:Anna Widlund, Åbo Akademi University, Finland; **Co-Author:**Karin Linnanmäki, Åbo Akademi University in Vaasa, Finland

Previous research has shown that academic self-concept has a significant effect on students' academic performance, learning strategies, well-being and motivation. It is also known that academic demands and independence increases during adolescence which effects students' well-being. In this longitudinal study, we want to examine the relation between and the development of academic self-concept and perceived learning difficulties during the critical transitional period from ninth grade to upper secondary school. The effect of gender and choice of upper secondary education was also included in the study. Data was collected at two time points. At the first time point, the sample consisted of 1152 nine grade students (574 girls and 574 boys) in 14 lower secondary schools in the Swedish speaking areas of Finland. The follow-up took place two years later when the students were attending either an academic or a vocational upper secondary school. Trained research assistants conducted the measurements of academic self-concept and perceived learning difficulties in the students' own schools during ordinary lessons. Statistical analyses were performed to analyze the data. Consistent with previous findings, the results show that there are strong negative correlations between academic self-concept and perceived learning difficulties and that the development of academic self-concept and perceived learning difficulties differs between vocational and academic upper secondary students. Even though the development of academic self-concept decreases for students who choose an academic track and increases for students who choose a vocational track, students who choose an academic track consistently have higher academic self-concept and perceives less learning difficulties than students who choose a vocational track. The findings of this study support previous assumptions that academic self-concept and academic achievement affect each other both ways, and indicates that the transitional period from lower to upper secondary school affects student's academic self-concept.

Task specific aspects of retrieval practice

Keywords: Instructional design, Metacognition, Quantitative methods, Self-efficacy

Presenting Author:Tino Endres, University of Freiburg, Germany; **Co-Author:**Lena Kranzdorf, Albert-Ludwigs-University Freiburg, Germany; **Co-Author:**Vivien Schneider, Albert-Ludwigs-University Freiburg, Germany; **Co-Author:**Alexander Renkl, University of Freiburg, Germany

Choosing a specific type of retrieval task format is one of the most obvious decisions to make when trying to implement retrieval practice in classroom teaching. Taking theoretical frameworks as a basis (especially the elaborative retrieval theory; Carpenter, 2009) there should be differences in direct learning effects as well as in remedial learning after retrieval. Never the less the available findings on meaningful learning, do not suggest big differences in learning outcomes between different tasks-formats on a meta-analytic level. In this study we analyzed potential theory based task-format differences when looking on educational outcomes on a more differentiated level. In a within-subject design, 54 university students studied identical learning materials (expository texts), followed by either a short-answer or a free-recall test-for-learning. Short-answer tasks lead to a better retention of the retrieved parts of the learning contents, while free-recall tasks lead to a better retention of various parts of the learning contents. In addition, short-answer tasks increased calibration. Free-recall tasks lead to a significant increase in self-efficacy and situational interest. The present findings confirm the assumption that implementing a retrieval practice arrangement with different task formats such as short-answer and free-recall makes has influence on learning relevant factors. In line with the elaborative retrieval theory, different tasks lead to distinct activation pattern of different content parts. This pattern of results highlights the role of spreading activation as a key mechanism for the testing effect. This findings have also some implications for practice. If some learning contents have few, very central aspects it might be recommendable to use short-answer-tasks directly addressing these aspects. If a content needs a broader activation of several aspects to gain understanding, free-recall tasks could ensure a wider activation pattern. Overall, the task formation should match the specific learning goals.

Language construction within Inclusive ECEC settings: contributions of an enactive approach

Keywords: Early childhood education, Educational Psychology, Peer interaction, Special education