Relationships among Civil Engineering Students' Approaches to Learning, Perceptions of the Teaching-Learning Environment, and Study Success

This study examines the relationship among civil engineering students' approaches to learning, their perceptions of the teaching-learning environment, and their study success. The aim was to identify civil engineering students' approaches to learning and how their approaches to learning are related to their perceptions of the learning-teaching environment and their study success. The data of the study consist of the students' answers to a questionnaire (n=215) and their study success data (n=204), which were gathered from their university's study register. The study success data consist of the cumulative study credits and weighted averages of their course grades. The students were classified into four clusters according to their approaches to learning. Differences in their perceptions of the teaching-learning environment and study success between the clusters were statistically significant. Students who belonged to clusters that emphasized the deep approach to learning experienced their teaching-learning environment more positively than did other students. Students who belonged to clusters emphasizing organized studying earned more credits and higher marks in their studies than did other students.

General information
State: Published
Ministry of Education publication type: A1 Journal article-refereed
Organisations: Research group: Construction Management, Industrial and Information Management, University of Helsinki
Authors: Salmisto, A., Postareff, L., Nokelainen, P.
Publication date: 1 Oct 2017
Peer-reviewed: Yes

Publication information
Journal: Journal of Professional Issues in Engineering Education and Practice
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Scopus rating (2016): SJR 0.381 SNIP 0.732 CiteScore 1.08
Scopus rating (2015): SJR 0.678 SNIP 1.509 CiteScore 0.96
Scopus rating (2014): SJR 0.479 SNIP 1.172 CiteScore 0.94
Scopus rating (2013): SJR 1.386 SNIP 1.598 CiteScore 1.01
Scopus rating (2012): SJR 0.897 SNIP 1.947 CiteScore 1.02
Scopus rating (2011): SJR 0.566 SNIP 1.315 CiteScore 0.63
Scopus rating (2010): SJR 0.771 SNIP 1.125
Scopus rating (2009): SJR 0.366 SNIP 0.635
Technological-Enhanced Learning Environments (TELEs) support social interaction between teachers and learners and are common in engineering higher education institutes. TELEs are often equipped with professional hardware and software, which not only enable learners to gain access to a variety of learning instruments, but also allow learners to practice with authentic equipment and design tools. Furthermore, teachers can use TELEs and scaffolding principles to organize teaching in several ways that are beyond traditional classrooms. This paper discusses the potential of TELEs to shape the zone of proximal development (ZPD) of learners such that they could do harder learning activities than would otherwise be possible in less conducive environments. In addition, an example of a conducive TELE is presented that might have enlarged ZPD of learners, and, as such, may partly explain good learning outcomes obtained. The illustrations in this paper may help teachers to gain better understanding of the benefits of environment creation as well as to organize learning episodes that are suitable for ZPD-based thinking.

Pedagogical Content Knowledge in Product Development Education

Engineering education at university faces challenge concerning the efficiency in producing results in learning. Engineering Education will be exposed to globalisation resulting in tough competition between the service providers and individual contributors. This study focus on capturing and discussing teachers’ pedagogical content knowledge on product development education. Currently there are no holistic approaches presented from teacher knowledge viewpoint. The next steps how to develop this knowledge of product development teaching further by focusing on the continuous learning process.
WorldSkills achievers' and their co-workers' and employers' perceptions of vocational expertise and school-to-work pathways

This paper examines the perceptions of vocational expertise and school-to-work pathways among WorldSkills Competition (WSC) achievers and their co-workers and employers within the Finnish context. At the biennial international WSC, young people (aged 18-to-23 years) from over 60 countries demonstrate their skills in more than 40 trades. Individualized training for this competition is provided through the cooperation of vocational institutions (e.g., expert coaches, team leaders and competition panellists) and industry (e.g., mentors, sponsors, materials, equipment). Semi-structured thematic interviews (N=51) were conducted in 2013 and 2014 with former Finnish WSC medal or diploma winners (n=18) who had since begun their working lives (1-to-15 years of work experience). Their employers (n=16) and colleagues (n=17) were also interviewed. Results showed that in addition to vocation-specific knowledge and skills, problem-solving skills, creativity, social skills and self-regulatory skills were acknowledged as the most significant elements of vocational expertise. The findings also indicated that formal vocational education combined with deliberate practice and training based on expert mentoring improved the long-term career progress and vocational expertise of the WSC achievers.
Survey of health informatics education in Finland in 2017

The European Union and the USA collaborate in developing the skills of the application of information technology in the health care workforce. A part of this activity is a project which studies the gaps in the present education and proposes methods of filling these gaps. The objective of this paper is to identify the existing IT related education to the health care workforce in Finland. A secondary objective was to get an impression of the experience and attitudes of the members of this workforce about health IT education.

This paper presents the results of the survey of how information technology is educated to the students of the health care professions in Finland in the year 2017. In addition to literature search including also the study guides of many major health care professional education organizations, 24 telephone interviews of health care professionals in different fields in Finland were made.

The results show that although basic information technology education is often available at every level of education, it is expected that the health care professionals learn to use the health information systems during their training periods or later in working life. The interviews showed that the given education varied considerably and some of the personnel had received no or only a little education on IT during studies. As the amount and quality of on-the-job information technology education varies, many health care professionals are not able to fully benefit from the information systems if their general feeling is that they just "survive" from daily activities with them.

Guiding the workplace learning in vocational education and training: A literature review

This review provides an overview of the empirical research concerning guidance in the context of vocational education and training (VET). The study examines practices, providers and supporting and hindering factors related to guidance and learning at the workplace. After the inclusion/exclusion process, the final number of research articles included in this review is 18. Results show strong evidence for the collective nature of workplace guidance, with the entire work community providing learners with guidance and assistance. Guidance provided to VET students at workplaces seems to relate strongly to the activities of the members of communities of practice. Guidance provided by the members of communities of practice opens up opportunities for learners to participate in collective practices by gradually assuming more responsibility and more demanding tasks as their skills develop. The learner’s self-regulative skills, such as
responsibility and the ability to take the initiative and to actively seek guidance, affect how guidance is afforded to him/her in the work community during training. Furthermore, these skills may also determine the learner’s prospects for developing expertise in future workplaces.

**General information**
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Organisations: Industrial and Information Management, Research group: Knowledge and Learning Research Center
Authors: Mikkonen, S., Pylväs, L., Rintala, H., Nokelainen, P., Postareff, L.
Publication date: 2017
Peer-reviewed: Yes
Early online date: 18 Apr 2017

**Publication information**
Journal: Empirical Research in Vocational Education and Training
Volume: 9
Issue number: 9
ISSN (Print): 1877-6345
Ratings:
Scopus rating (2016): CiteScore 0.71 SJR 0.307 SNIP 0.644
Scopus rating (2015): SJR 0.231 SNIP 0.63 CiteScore 0.65
Scopus rating (2014): SJR 0.142 SNIP 0.616 CiteScore 0.29
Scopus rating (2013): SJR 0.121 SNIP 0.331 CiteScore 0.21
Scopus rating (2012): SJR 0.2 SNIP 0.535 CiteScore 0.14
Scopus rating (2011): SJR 0.127 SNIP 0.07
Scopus rating (2010): SJR 0.141 SNIP 0.108
Original language: English
Electronic versions:
s40461-017-0053-4
DOIs:
10.1186/s40461-017-0053-4
Links:
Research output: Scientific - peer-review › Review Article

**Katsaus oppisopimuskoulutukseen instituutiona Saksassa, Englannissa ja Suomessa**

**General information**
State: Published
Ministry of Education publication type: A2 Review article in a scientific journal
Organisations: Industrial and Information Management
Authors: Rintala, H., Nokelainen, P., Pylväs, L.
Pages: 128-140
Publication date: 2017
Peer-reviewed: Yes

**Publication information**
Journal: Kasvatus
Volume: 48
Issue number: 2
ISSN (Print): 0022-927X
Original language: Finnish
Research output: Scientific - peer-review › Review Article

**Otos iloa – Lasten kokemuksia iloa tuottavasta oppimisympäristöstä**

**General information**
State: Published
Ministry of Education publication type: A1 Journal article-refereed
Organisations: Industrial and Information Management, Research group: Knowledge and Learning Research Center, University of Tampere, University of Helsinki
Authors: Huhtamäki, E., Holma, H., Nokelainen, P., Kumpulainen, K.
Pages: 336-352
Teacher perceptions of teaching CLIL courses

Assessing business learning by analysing ERP simulation log files

How to develop a new innovation education tool: case of impact canvas
Affective experiences and student engagement in higher education

General information
State: Published
Ministry of Education publication type: A4 Article in a conference publication
Organisations: Department of Information Management and Logistics, Research group: Novi, Language Centre, Managing digital industrial transformation (mDIT)
Authors: Helander, N., Boedeker, M., Hellsten, P., Jussila, J., Myllärniemi, J., Tukiainen, M.
Publication date: 13 Sep 2016

Host publication Information
Title of host publication: 44th Annual Conference Of The European Society For Engineering Education : 12-15 September 2016, Tampere, Finland
Place of publication: Tampere
ISBN (Print): 9782873520144
Keywords: Affective experience, Higher Education
ASJC Scopus subject areas: Education
Links:
Research output: Scientific - peer-review › Conference contribution

Integrating mobile orienteering to team forming activity in a software engineering course

One of the most important skills software engineers need when entering work life is working in teams, including communicating, collaborating, as well as coordinating work in a team. This paper presents a team building activity aiming to support the first phases of team formation with a mobile orienteering activity. Created tasks at orienteering checkpoints were related to communication, collaboration and work division. Students were enthusiastic about the activity and expressed in their group reports on the activity that it supported the team building activity well, helped break the ice and supported agreeing the ways of working. Students also liked getting out of the classroom. The approach seems promising and we will investigate in the future similar type of activities in the first phases of team formation as well as will explore further integrating physical activity to the exercise sessions.

General information
State: Published
Ministry of Education publication type: A4 Article in a conference publication
Organisations: Department of Pervasive Computing, Research area: User experience
Authors: Väätäjä, H., Ahtinen, A.
Publication date: Sep 2016

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Title of host publication: SEFI 2016 Annual Conference Proceedings : Engineering Education on Top of the World: Industry University Cooperation
Publisher: European Society for Engineering Education SEFI
ISBN (Electronic): 9782873520144
Keywords: soft skills, engineering skills, collaboration, Team working, group forming, mobile orienteering, team forming
Links:
Research output: Scientific - peer-review › Conference contribution

Näkemyksiä nykyopettajudesta yliopistossa

General information
State: Published
Ministry of Education publication type: D3 Professional conference proceedings
Organisations: Department of Information Management and Logistics, Research group: Novi
How to facilitate freshmen learning and support their transition to a university study environment

ABSTRACT
Most freshmen enter universities with high expectations and with good motivation, but too many are driven into performing instead of true learning. The issues are not only related to the challenge of comprehending the substance, social and other factors have an impact as well. All these multifaceted needs should be accounted for to facilitate student learning. Learning is an individual process and remarkable improvement in the learning practices is possible, if proper actions are addressed early enough. We motivate and describe a study of the experience obtained from a set of tailor-made courses that were given alongside standard curriculum. The courses aimed to provide a “safe community” to address the multifaceted needs. Such support was integrated into regular coursework where active learning techniques, e.g. interactive small groups were incorporated. To assess impact of the courses we employ the feedback obtained during the courses and longitudinal statistical data about students’ success.

General information

State: Published
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Organisations: Department of Electronics and Communications Engineering, Department of Electrical Engineering
Authors: Kangas, J., Rantanen, E., Kettunen, L.
Number of pages: 16
Pages: 1-16
Publication date: 28 Jul 2016
Peer-reviewed: Yes

Publication information

Journal: European Journal of Engineering Education
ISSN (Print): 0304-3797
Ratings:
Scopus rating (2016): SJR 0.501 SNIP 1.043 CiteScore 1.01
Scopus rating (2015): SJR 0.812 SNIP 1.456 CiteScore 1.34
Scopus rating (2014): SJR 0.84 SNIP 1.213 CiteScore 0.96
Scopus rating (2013): SJR 1.048 SNIP 1.105 CiteScore 0.95
Scopus rating (2012): SJR 1.163 SNIP 1.125 CiteScore 0.83
Scopus rating (2011): SJR 1.622 SNIP 1.543 CiteScore 1.19
Scopus rating (2010): SJR 0.931 SNIP 1.044
Scopus rating (2009): SJR 0.322 SNIP 0.973
Original language: English
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10.1080/03043797.2016.1214818
Source: RIS
Source-ID: urn:BE2A6B2857AAA2500273835E2A83BFF6
I feel great - university students affective experiences on learning and teaching

According to Kolb [1], experience is the source of learning and development. This is a statement that serves as the starting point of this study. We argue that the role of affective experiences cannot be overlooked when evaluating university learning and teaching. In the present paper, we will study students’ affective experiences in higher education setting, specifically in engineering education in a technological university. The perceived affective experiences are empirically analysed through a mystery shopper data set, which was gathered in the case university by a group of students. The study bases theoretically on affective experiences framework, more familiar from the consumer behaviour research stream. The aim of the study is to analyse what kinds of affective experiences students recognise when studying in a technical university and further to elaborate, how these affective experiences could be used to increase student engagement and the students’ motivation to learn. The study provides an innovative approach to university learning and teaching by applying mystery shopper method and affective experience approach from more business-oriented disciplines. The contribution to education science is the increased understanding of the role of affective experience in learning.

General information
State: Published
Ministry of Education publication type: A4 Article in a conference publication
Organisations: Language Centre, Department of Information Management and Logistics, Research group: Novi, Managing digital industrial transformation (mDIT)
Authors: Tukiainen, M., Helander, N., Hellsten, P., Jussila, J., Myllärieml, J., Boedeker, M.
Number of pages: 8
Pages: 4453-4460
Publication date: 4 Jul 2016

Host publication information
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Place of publication: Barcelona
Publisher: IATED Academy
Editors: Gómez Chova, L., López Martinez, A., Candel Torres, I.
ISBN (Electronic): 978-84-608-8860-4

Publication series
Name: EDULEARN Proceedings
Publisher: IATED Academy
ISSN (Electronic): 2340-1117
Keywords: Affective experience, Mystery shopper, learning, student engagement
DOIs: 10.21125/edulearn.2016.2080
Links:
https://iated.org/edulearn/
Research output: Scientific - peer-review → Conference contribution


General information
State: Published
Ministry of Education publication type: D4 Published development or research report or study
Organisations: Teaching and Learning Services
Authors: Pajarre, E.
Number of pages: 42
Publication date: 26 Jan 2016

Publication information
Publisher: Tampereen teknillinen yliopisto
Original language: Finnish
Keywords: harjoittelu, yliopisto
Links:
https://tyylihanke.files.wordpress.com/2016/01/harjoittelu_tyyli_yliopistoissa_loppuraportti_01_2016.pdf
Research output: Professional → Commissioned report
How is it sustainable? Identifying key indicators for sustainable educational design

General information
State: Published
Ministry of Education publication type: A4 Article in a conference publication
Organisations: Department of Civil Engineering
Authors: Sandström, N., Hytti, V., Nenonen, S., Lonka, K.
Number of pages: 3
Pages: 4217-4219
Publication date: 2016

Host publication information
Title of host publication: 10th INTED 2016 Conference Proceedings : 7-9 March, 2016, Valencia, Spain
Editors: Gómes Chova, L., López Martínez, A., Candel Torres, I.
ISBN (Electronic): 978-84-608-5617-7

Publication series
Name: INTED proceedings
ISSN (Electronic): 2340-1079
Keywords: 516 Educational sciences
DOIs:
10.21125/inted.2016.2037
Source: Bibtex
Source-ID: urn:6581b3d417d27c5477c844ae899e72da
Research output: Scientific - peer-review › Conference contribution

Huomio! Obel Alert! "Työelämä on globaalissa murroksessa ..."

General information
State: Published
Ministry of Education publication type: B1 Article in a scientific magazine
Organisations: Teaching and Learning Services
Authors: Nokelainen, P.
Pages: 4-8
Publication date: 2016
Peer-reviewed: No

Publication information
Journal: Ammattikasvatuksen aikakauskirja
Volume: 18
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ISSN (Print): 1456-7989
Original language: Finnish
Links:
Research output: Scientific › Editorial

Pääkirjoitus

General information
State: Published
Ministry of Education publication type: B1 Article in a scientific magazine
Organisations: Teaching and Learning Services
Authors: Nokelainen, P.
Pages: 4-6
Publication date: 2016
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Publication information
Journal: Ammattikasvatuksen aikakauskirja
Volume: 18
Issue number: 1
ISSN (Print): 1456-7989
Self-regulation and competence in work-based learning

This chapter discusses the connection between self-regulation and competence in both formal and informal contexts of vocational and professional education. The goal is to show that self-regulation has a theoretical linkage to a multifaceted and holistic approach to competence and that self-regulatory abilities play a role in the development of vocational competence. Different theoretical approaches to self-regulation and competence and the link between the two concepts are discussed. We argue that self-regulation plays an important role in the development of competence, as it is needed to acquire competencies, unified sets of knowledge, skills and views. Self-regulation acts as an indirect factor between competencies and direct formal, non-formal and informal learning processes (e.g. vocational studies, leisure time activities and work) aimed to develop them. In this chapter, we present results of empirical studies on self-regulation and competence to support this argumentation. Several studies with vocational skills competition competitors show that strong self-regulatory abilities are related to successful competition performances. Also results from a study with Finnish in-service air traffic controllers indicate a link between vocational excellence and self-regulative action. Our conclusion is that self-regulatory skills should be taught in addition to the vocation-specific skills in competence-based vocational and professional education.

General information
State: Published
Ministry of Education publication type: A3 Part of a book or another research book
Organisations: Teaching and Learning Services, School of Education, University of Tampere
Authors: Nokelainen, P., Kaisvuo, H., Pylväs, L.
Pages: 775-793
Publication date: 2016

Host publication information
Title of host publication: Competence-based Vocational and Professional Education. Bridging the Worlds of Work and Education
Publisher: Springer US
Editor: Mulder, M.
ISBN (Print): 978-3-319-41711-0
ISBN (Electronic): 978-3-319-41713-4

Publication series
Name: Technical and Vocational Education and Training: Issues, Concerns and Prospects
Volume: 23
ISSN (Print): 1871-3041
ASJC Scopus subject areas: Education
DOIs:
10.1007/978-3-319-41713-4_36
Research output: Scientific - peer-review › Chapter

STACK assignments in university mathematics education

Students' learning process can be assisted and diversified with the help of e-learning tools and virtual environments. In Tampere University of Technology, the aim is to utilize software that delivers assignments, checks students' answers and gives feedback to the students, in the mathematics courses. The software that has been used is called STACK, which can be integrated into Moodle. STACK assignments have been created as a part of the STEM education material bank Abacus.

Written feedback can be generated in STACK assignments as necessary. Feedback guides the students to identify their errors and revise them. It can also motivate the students to try again after giving a wrong answer.

This study concerns the use of STACK in TUT mathematics courses. Especially we are interested in
- how do the points gathered and the time of the last submission in STACK exercises correlate with the exam grades?
- when and for how long do the students solve the STACK assignments?
- how does the activity in STACK differ between honours and engineering mathematics students?

In STACK assignments, the students were able to give their answers in Moodle. For each lecture week, they had one week to solve and return the answers. All the student activity related to the STACK assignments was saved in the Moodle logs. Data was analysed with Matlab by the means of educational data mining.

We observed that the activity in STACK was the greatest near the deadline. We also found that, on average, the better the
grade, the earlier the students gave their final answers in STACK. Additionally, the honours mathematics students made their submissions earlier: many of them considered STACK exercises as a good way to revise the subjects considered in the lectures, while engineering mathematics students mostly rehearsed with STACK near the deadline.

According to the survey polls, students found the STACK exercises as a nice and efficient way to rehearse and learn mathematics. Especially, the instant feedback was mostly appreciated. However, some of the students felt writing the answers with a computer unappealing, but generally this aspect was not considered a problem.

General information
State: Published
Ministry of Education publication type: A4 Article in a conference publication
Organisations: Department of Mathematics, Research group: MAT Positioning
Authors: Mäkelä, A., Ali-Löytty, S., Humaloja, J., Joutsenlahti, J., Kauhanen, J., Kaarakka, T.
Number of pages: 14
Publication date: 2016

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Title of host publication: Proceedings of the 44th SEFI Conference, 12 - 15 September 2016, Tampere, Finland
Publisher: European Society for Engineering Education SEFI
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ASJC Scopus subject areas: Education
Links:
Research output: Scientific - peer-review › Conference contribution

Utilizing electronic exams in programming courses: a case study
A great number of university students’ work during their studies, leading to problems with the scheduling of courses and examinations. One way to solve the problem related to exams is to utilize electronic tests, which allow flexible timetables and video–based control against cheating. In Finland, a consortium of 20 universities is using a recently developed electronic examination system called Exam. The system supports essay and multiple choice examinations in particular. In this study, we experiment with the Exam system in computer programming tests. The outcome of the study is discussed from both the students’ and teachers’ perspectives.

General information
State: Published
Ministry of Education publication type: A4 Article in a conference publication
Organisations: Pori Department, Research group: Software Engineering and Intelligent Systems
Authors: Saari, M., Mäkinen, T.
Number of pages: 6
Pages: 7155-7160
Publication date: 2016

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Keywords: Electronic exam, Programming education, Exam room, Student feedback
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10.21125/edulearn.2016.0560
Research output: Scientific - peer-review › Conference contribution

Virtual Reality Situational Language Trainer for Second Language: Design & Evaluation

General information
State: Published
Ministry of Education publication type: A4 Article in a conference publication
MYSTERY SHOPPERS RECOGNISING KNOWLEDGE SHARING BARRIERS IN HIGHER EDUCATION

This study focuses on the knowledge sharing barriers in the space between learning and teaching in higher education as reported by mystery shoppers. There is surprisingly little context-specific research on learning and teaching in a knowledge intensive community like a university from the perspective of knowledge management (KM). Discussing learning and teaching within KM is based on considering students controversially as customers or stakeholders. Thus including them more meaningfully in assessing and developing teaching practices, or knowledge flow, seems justified. The specific aim of this paper is to first recognize possible knowledge sharing barriers and then categorize such barriers emerging from the material into three larger domains, namely, individual barriers, technological barriers and organisational barriers.

There were 45 students from all faculties participating in a mystery shopper project in a Finnish university of technology. They observed their learning experience for six weeks in order to supplement data from other sources, to add a student voice on the process of developing learning and teaching in higher education.

The research approach represents qualitative content analysis in which knowledge-sharing barriers were recognized from the qualitative mystery shopper data. The results identify teaching practices that contribute to creating knowledge sharing barriers. More detailed and almost real-time contextual activity sampling is suggested as a method for further study and also an avenue for instant feedback for teaching staff. The results will provide data on current knowledge practices and learning processes in a technical university in Finland.

University Students’ Perceptions of Academic Writing: An Academic Literacies Perspective

General information
State: Published
Ministry of Education publication type: A4 Article in a conference publication
Organisations: Language Centre, Department of Information Management and Logistics, Research group: Novi, University of Tampere
Authors: Tukiainen, M., Mäkinen, M., Helander, N.
Publication date: 16 Nov 2015

Host publication information
ISBN (Electronic): 978-84-608-2657-6
Links: https://iated.org/iceri/

Bibliographical note
ORG=kie,0.5
ORG=tlo,0.5
Research output: Scientific - peer-review › Conference contribution
A Barrier framework for open e-learning in public administrations

E-Learning and openness in education are receiving ever increasing attention in businesses as well as in academia. However, these practices have only to small extent been introduced in public administrations. The study addresses this gap by presenting a literature review on Open Educational Resources [OER] and E-Learning in the public sector. The main goal of the article is to identify challenges to open E-Learning in public administrations. Experiences will be conceptualized as barriers which need to be considered when introducing open E-Learning systems and programs in administrations. The main outcome is a systematic review of lessons learned, presented as a contextualized Barrier Framework which is suitable to analyze requirements when introducing E-Learning and OER in public administrations.

General information
State: Published
Ministry of Education publication type: A1 Journal article-refereed
Organisations: Managing digital industrial transformation (mDIT), Ruhr West University of Applied Sciences, Jyvaskylan Yliopisto
Authors: Stoffregen, J., Pawlowski, J. M., Pirkkalainen, H.
Number of pages: 11
Pages: 674-684
Publication date: 2015
Peer-reviewed: Yes

Publication information
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Issue number: B
ISSN (Print): 0747-5632
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Scopus rating (2015): SJR 1.556 SNIP 2.123 CiteScore 4.22
Scopus rating (2014): SJR 1.519 SNIP 2.327 CiteScore 4.16
Scopus rating (2013): SJR 1.727 SNIP 2.531 CiteScore 4.16
Scopus rating (2012): SJR 1.528 SNIP 2.099 CiteScore 3.47
Scopus rating (2011): SJR 1.492 SNIP 2.083 CiteScore 3.67
Examples of the Teaching of the Health Questions of Electric and Magnetic Fields at Tampere University of Technology in Finland

General information
State: Published
Ministry of Education publication type: A1 Journal article-refereed
Organisations: Department of Electronics and Communications Engineering, Research group: Environmental Health
Authors: Korpinen, L., Pääkkönen, R.
Number of pages: 6
Pages: 277-282
Publication date: 2015
Peer-reviewed: Yes

Publication information
Journal: Journal of Physical Science and Application
Volume: 5
Issue number: 4
ISSN (Print): 2159-5348
Original language: English
ASJC Scopus subject areas: Electrical and Electronic Engineering
DOIs:
10.17265/2159-5348/2015.04.005
Research output: Scientific - peer-review › Article

Finnish Innovations and Technologies in Schools: a Guide towards New Ecosystems of Learning

General information
State: Published
Ministry of Education publication type: C2 Edited books
Organisations: University of Helsinki
Number of pages: 175
Publication date: 2 Oct 2014

Publication information
Place of publication: Rotterdam
Publisher: Sense Publishers
ISBN (Print): 978-94-6209-747-6
Original language: English
Source: Bibtex
Prologue: Towards a Global Ecosystem

General information
State: Published
Ministry of Education publication type: A3 Part of a book or another research book
Organisations: University of Helsinki
Authors: Niemi, H., Multisilta, J., Lipponen, L., Vivitsou, M.
Pages: ix-xii
Publication date: 2 Oct 2014

Host publication information
Title of host publication: Finnish Innovations and Technologies in Schools: a Guide towards New Ecosystems of Learning
Place of publication: Rotterdam
Publisher: Sense Publishers
Editors: Niemi, H., Multisilta, J., Lipponen, L., Vivitsou, M.
ISBN (Print): 978-94-6209-747-6
Source: Bibtex
Source-ID: urn:428e026a42270240fd84f51f0240c03f
Research output: Scientific - peer-review › Chapter

Matka AVOmerelle: Avoimuutta ja verkostomaista toimintakulttuuria tutkimassa

General information
State: Published
Ministry of Education publication type: D4 Published development or research report or study
Organisations: University of Tampere
Authors: Lappalainen, Y.
Number of pages: 104
Publication date: 31 Mar 2014

Publication information
Publisher: University of Tampere
ISBN (Print): 978-952-6669-02-1
ISBN (Electronic): 978-952-6669-03-8
Original language: Finnish
Links:
http://wiki.eoppimiskeskus.fi/display/AVOkoulutukset/Matka+AVOmerelle+-+avoimuutta+ja+verkostomaista+toimintakulttuuria+tutkimassa
Research output: Professional › Commissioned report

Angry Birds for Fun in Learning

General information
State: Published
Ministry of Education publication type: A3 Part of a book or another research book
Organisations: University of Helsinki
Authors: Harju, V., Multisilta, J.
Number of pages: 8
Pages: 69-76
Publication date: 2014

Host publication information
Title of host publication: Finnish Innovations and Technologies in Schools: a Guide towards New Ecosystems of Learning
Publisher: Sense Publishers
Editors: Niemi, H., Multisilta, J., Lipponen, L., Vivitsou, M.
ISBN (Print): 978-94-6209-747-6
Source: Bibtex
Source-ID: urn:065aa8172889a9755c90a3e8fa4fcbd2
Research output: Scientific - peer-review › Chapter
Avoimuus oppimisverkostossa

General information
State: Published
Ministry of Education publication type: B3 Non-refereed article in conference proceedings
Organisations: University of Tampere
Authors: Lappalainen, Y., Sihvonen, M.
Pages: 37-43
Publication date: 2014

Host publication information
Title of host publication: Tuovi 12: Interaktiivinen tekniikka koulutuksessa 2014-konferenssin tutkijatapaamisen artikkelit
Publisher: University of Tampere
Editors: Viteli, J., Östman, A.
ISBN (Electronic): 978-951-44-9561-8

Publication series
Name: TRIM Research Reports
No.: 12
ISSN (Electronic): 1799-2141
Links:
Research output: Scientific › Conference contribution

Children as co-creators of video stories: mobile videos for learning

General information
State: Published
Ministry of Education publication type: A3 Part of a book or another research book
Organisations: Regulation of learning and active learning methods (REALMEE), University of Helsinki
Authors: Multisilta, J., Niemi, H.
Pages: 588-592
Publication date: 2014

Host publication information
Title of host publication: 2014 37th International Convention on Information and Communication Technology, Electronics and Microelectronics (MIPRO)
Source: Bibtex
Source-ID: urn:3cae9f1d4bb2c72aca7cc513991df35e
Research output: Scientific - peer-review › Chapter

Content and Language Integration as a part of a degree reform at Tampere University of Technology

General information
State: Published
Ministry of Education publication type: A4 Article in a conference publication
Organisations: Language Centre
Authors: Niemelä, N., Jauni, H.
Number of pages: 15
Pages: 39-53
Publication date: 2014

Host publication information
Title of host publication: HEPCLIL, Higher Education Perspectives on CLIL, University of Vic - Central University of Catalonia, VIC, 27 and 28 March 2014
ISBN (Print): 978-84-941644-9-1
Links:
http://mon.uvic.cat/hepclil

Bibliographical note
HEPCLIL (Higher Education Perspectives on Content and Language Integrated Learning)<br/>Contribution: organisation=kie_FACT1=1<br/>Portfolio EDEND: 2014-12-30
Source: researchoutputwizard
Digital Storytelling for 21st-Century Skills in Virtual Learning Environments

This article finds that the new virtual learning environments comprise more spaces and practices in which digital resources, tools, and applications are used. The article introduces how digital storytelling can create virtual learning environments when it is used for learning 21st-century skills and competencies needed in students’ future working life. The study describes how students (n = 319) in three countries and their teachers (n = 28) value digital storytelling and what they think students have learned. Their experiences are analyzed using a theoretical conceptualization of the global sharing pedagogy that sets categories of processes or tools as mediators: 1) learner-driven knowledge and skills creation, 2) collaboration, 3) networking, and 4) digital literacy. Analyses have been quantitative and qualitative. The article describes students’ experiences when they created their digital stories and how they engaged in learning. The major findings are that students enjoyed creating their stories, and they were very engaged in their work. They learned many 21st-century skills when creating their digital stories.

General information
State: Published
Ministry of Education publication type: A1 Journal article-refereed
Organisations: University of Helsinki
Authors: Niemi, H., Harju, V., Vivitsou, M., Viitanen, K., Multisilta, J.
Number of pages: 15
Pages: 657-671
Publication date: 2014
Peer-reviewed: Yes

Publication information
Journal: Creative Education
Volume: 5
ISSN (Print): 2151-4755
Original language: English
Keywords: 21st-century skills, 21st-Century Skill, Digital Story Telling, Learning, collaboration, digital story telling, engagement, learning, videos
DOIs: 10.4236/ce.2014.59078
Source: Mendeley
Source-ID: 5e35104f-3945-3a84-9ee6-9119a2e4c65e
Research output: Scientific - peer-review › Article
Epilogue: What are Innovations in the Finnish Educational Ecosystem

Global is Becoming Everywhere: Global Sharing Pedagogy
Leikilliset oppimateriaalit innostavat oppimaan

General information
State: Published
Ministry of Education publication type: A3 Part of a book or another research book
Organisations: University of Helsinki
Authors: Harju, V., Multisilta, J.
Number of pages: 15
Pages: 270-284
Publication date: 2014

Host publication information
Title of host publication: Rajaton luokkahuone
Place of publication: Jyväskylä
Publisher: PS-kustannus
Editors: Niemi, H., Multisilta, J.
ISBN (Print): 978-952-451-618-1

Publication series
Name: Opetus 2000
Source: Bibtex
Source-ID: urn:d30c0cd7fa0fca27885cc0eb957cad66
Research output: Scientific - peer-review › Chapter

Leikkien mutta tosissaan: Leikillä iloa oppimisympäristöön

General information
State: Published
Ministry of Education publication type: A3 Part of a book or another research book
Organisations: University of Helsinki
Authors: Harju, V., Multisilta, J.
Number of pages: 15
Pages: 153-167
Publication date: 2014

Host publication information
Title of host publication: Oppiminen pelissä
Place of publication: Tampere
Publisher: Vastapaino
Editors: Krokfors, L., Kangas, M., Kopisto, K.
ISBN (Print): 978-951-768-441-5
Source: Bibtex
Source-ID: urn:ce86df96eaa96c4017e9e8db1435839d
Research output: Scientific - peer-review › Chapter

Media ja yhteisölliset sovellukset

General information
State: Published
Ministry of Education publication type: B2 Part of a book or another research book
Organisations: University of Helsinki
Authors: Multisilta, J.
Publication date: 2014

Host publication information
Title of host publication: Ikäteknologia
Editor: Leikas, J.

Publication series
Name: Vanhustyön keskusliiton tutkimuksia
No.: 2
Source: Bibtex
Source-ID: urn:84e5b0766f301d285b265f3c25b0ef85
Research output: Scientific › Chapter

Miten suomalainen koulu valmistaa tulevaisuuteen?

General information
State: Published
Ministry of Education publication type: A3 Part of a book or another research book
Organisations: University of Helsinki
Authors: Multisilta, J., Niemi, H., Lavonen, J.
Number of pages: 13
Pages: 286-298
Publication date: 2014

Host publication information
Title of host publication: Rajaton luokkahuone
Place of publication: Jyväskylä
Publisher: PS-kustannus
Editors: Niemi, H., Multisilta, J.
ISBN (Print): 978-952-451-618-1

Publication series
Name: Opetus 2000
Keywords: 516 Kasvatustieteet
Source: Bibtex
Source-ID: urn:b9336b7394ddd242e1e061bc729a2ccb
Research output: Scientific - peer-review › Chapter

Pelataan suomalainen koulu kukoistukseen

General information
State: Published
Ministry of Education publication type: D1 Article in a trade journal
Organisations: University of Helsinki
Authors: Multisilta, J.
Number of pages: 1
Pages: 18
Publication date: 2014
Peer-reviewed: Unknown

Publication information
Journal: Tiedosta
Volume: 2014
Issue number: 1
ISSN (Print): 1795-5351
Original language: Finnish
Keywords: 516 Kasvatustieteet
Source: Bibtex
Source-ID: urn:b91a1807d1c1d15a3f68efb6b92d65a7
Research output: Professional › Article

Videot nuorten maailmassa ja digitaalinen tarinankerronta

General information
State: Published
Ministry of Education publication type: A3 Part of a book or another research book
Organisations: University of Helsinki
Designing Learning Ecosystems for Mobile Social Media

Social media has gained interest not only in entertainment applications, but also with learning and business applications; however, there are not many research frameworks available for designing learning activities for learning ecosystems based on mobile social media. In this chapter, a framework for designing and analyzing learning activities in learning ecosystems that are based on mobile and social media is presented. The framework is based on Activity Theory (AT) and Experiential Learning Theory (ELT). In the chapter the existing research on e-learning, mobile learning, and multimodal learning are discussed and reviewed. The research on learning ecosystems based on mobile social media is also positioned to this multi-scientific research field. Finally, two examples of using the framework for designing, learning, and analyzing learning activities in mobile social media learning ecosystems are presented.
On Actor-Network Theory and Learning Ecosystems based on Mobile Social Media

In this paper we will define learning ecosystems based on social media and try to describe the learning process in these environments using Actor-Network Theory. Especially, we are interested in the question of how an ad-hoc group of learners could be understood as an actor-network in ANT. We claim, that the availability of social media does not guarantee that the actors in the social media system form the actor-network. However, it would be important to know under which conditions the actor-network is formed and what kind of quality we get from the actor-networks. Finally, we conclude that pedagogically meaningful and high-quality learning ecosystems based on mobile social media can be described as actor-networks.

General information
State: Published
Ministry of Education publication type: A4 Article in a conference publication
Organisations: Regulation of learning and active learning methods (REALMEE), University of Helsinki
Authors: Multisilta, J.
Pages: 193-198
Publication date: 2011