



Good Practices for Learning 2.0

The Potential of Social Computing to support Innovation in Learning

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Good Practices of Learning 2.0 – Innovation Context & Aims

Context

- Part of the 'Exploratory Research on the Socio-Economic Impacts of Social Computing' (EROSC) of IPTS;
- Element of the broader study 'The Impact of Web 2.0 Innovations on Education & Training' of IPTS;
- Broader study combines the elements of i) literature review; ii) case database and analysis; iii) *in-depth case study analyses* (i.e. on innovation and inclusion); iv) validation seminar; and the v) development of policy options.

Aims

- To provide inputs to the broader study 'The Impact of Web 2.0 Innovations on Education & Training' of IPTS;
- *To investigate the potential of Social Computing to support Innovation in Learning.*

Good Practices of Learning 2.0 – Objectives

- To study in depth *8 cases of the use of social computing for learning*, identifying factors for failure and success with the aim of *assessing good practice and the impact of Learning 2.0 on innovation*;
- To study in depth *8 cases of using social computing to offer lifelong learning opportunities to groups at risk of exclusion*, i.e. in particular: ethnic minorities, early school leavers, older people;
- To select cases reflecting the scope and variety of Learning 2.0 initiatives in Europe, while *respecting the pre-dominance of organised learning*.

Good Practices of Learning 2.0 – Study Structure

- Iterative Identification & Selection of Good Practices;
- Methodology & Toolkit Development;
- Data Collection;
- Analysis & Synthesis of Results;
- Validation;
- Reporting.

Good Practices for Learning 2.0 – Selection Criteria

- Different learning settings/educational sectors;
- Different social computing/Web 2.0 applications;
- Activity, maturity and potential of the initiative;
- Fair geographical distribution;
- Accessibility of data and data sources.

Good Practices for Learning 2.0 – Identification & Selection Process

- Identification of potential case studies through desk research, the IPTS Database, personal expertise, and existing contacts to experts/networks in the field;
- Structured selection using the pre-defined criteria;
- Multiple iterative peer reviews of the cases and refinement of selection between the stakeholder of the study i.e. IPTS, ILI/FIM and Arcola;
- Definition of 8 cases and 4 substitute cases to be assessed and analysed in depth.

Good Practices for Learning 2.0 – General Research Questions I

- What are their characteristics, in terms of *technical configurations; learning scenarios; pedagogic methods; institutional arrangements*?
- What kinds of *innovative learning approaches and pedagogies* are facilitated and supported by particular Learning 2.0 initiatives?
- What kinds of *new digital skills* are emerging as a result of the use of Learning 2.0 applications?
- What *specific learning outcomes* are associated with the use of Learning 2.0 applications and initiatives?

Learning 2.0 & Innovation – General Research Questions II

- What *institutional and organisational changes* – for example on organisational cultures; on the educational enterprise – are associated with the use of Web 2.0 applications in lifelong learning?
- What *unforeseen, negative, additionality and displacement effects* are associated with the use of Learning 2.0 applications and initiatives?
- What *barriers on institutional, organisational and technical level* occurred when implementing the initiative and how was dealt with these barriers?
- What *key motivational aspects* played a role for project managers, teachers/tutors and users when organizing and carrying out the activity?

Learning 2.0 & Innovation – Methodology Design & Data Collection Tools I

Phase	Objectives	Methods & Tools
1. Logistics	Establish protocols for implementing case studies	Case Study Procedures
	Identify key informants and data sources; contact key 'gatekeepers'; arrange site visit	Logistics Audit
2. Positioning & Profiling	Desk research to collect preliminary data on the case	Case Profile Template
	Situate the case in its cultural and organisational 'life world'	Environmental Audit

Learning 2.0 & Innovation – Methodology Design & Data Collection Tools II

Phase	Objectives	Methods & Tools
3. Data Collection	Collect preliminary data on key research questions with main informant	Key Informant Interview Schedule
	Collect data on user experiences	User Self-Administered-Questionnaire (SAQ)
	Collect group data on user experiences	User Focus Group Guideline
	Collect in depth data on user experiences	User Interview Schedule
	Observe how the initiative operates on the ground/virtual	Observation Guideline
	Analyse content produced by the initiative	Content Analysis Checklist
	Collect data generated through utilisation of platform and tools	Automated Data Collection Guideline

→ Selection and adaptation of tools respecting the requirements of the single case.

Learning 2.0 & Innovation – Selected Good Practices

- (1) Welker's Wikonomics (Switzerland & International);
- (2) SecondReiff - WISE (Germany);
- (3) Protovoulia (Greece);
- (4) IBM Internal Knowledge Management (Germany & Worldwide);
- (5) KooL – English for Glass Professionals & Glass Compendium Wiki (Germany);
- (6) ETZ Stuttgart – ELKOnet (Germany);
- (7) LeMill – Calibrate (Belgium, Finland & Europe-wide);
- (8) Nettilukio – Internet Upper Secondary School – (Finland).

Learning 2.0 & Innovation – Positioning the Good Practices I

General Research Questions	Welker	WISE	Protouvoulia	IBM	KooL	ELKOnet	LeMill	Nettilukio
General Case Characteristics	✓	✓	✓	✓	✓	✓	✓	✓
Approaches & Pedagogies	✓	✓	✓	✓	✓	✓	✓	✓
Digital & Non-digital Skills	✓	✓	✓	✓	✓	✓	✓	✓
Learning Outcomes	✓	✓	✓	✓	✓	✓	✓	✓
Institutional Changes	✓	✓	✓	✓	✓	✓	✓	✓
Negative Effects of Web 2.0 Implementation	✓	✓	✓	✓	✓	✓	✓	✓
Barriers	✓	✓	✓	✓	✓	✓	✓	✓
Motivational Aspects	✓	✓	✓	✓	✓	✓	✓	✓
Scenarios	Welker	WISE	Protouvoulia	IBM	KooL	ELKOnet	LeMill	Nettilukio
Grass-root Activity	✓	✓	✓					
Institutional or Public Top-down Programme				✓	✓	✓	✓	✓
Commercial Tool				✓				
Enhancing traditional e-Learning			✓			✓		✓
Integration into Training	✓	✓			✓	✓		✓
Language Learning					✓			

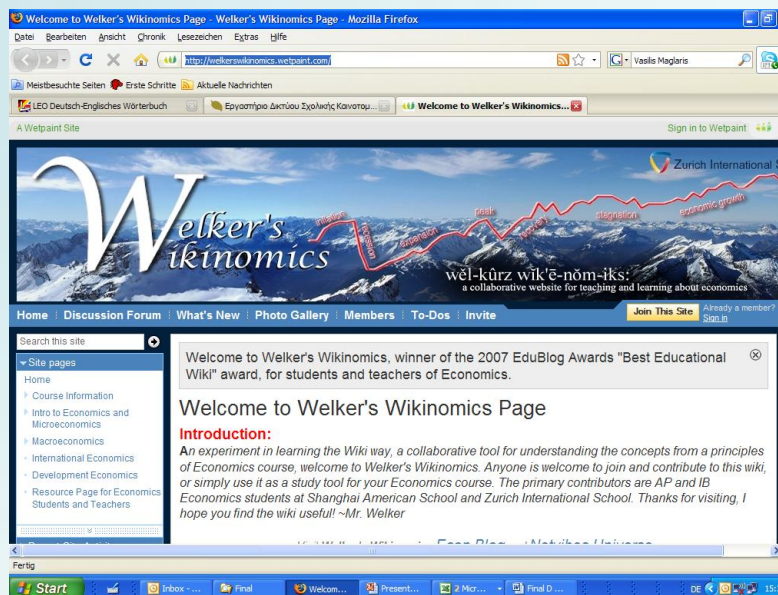
Learning 2.0 & Innovation – Positioning the Good Practices II

Target Group	Welker	WISE	Protovoulia	IBM	Kool	ELKOnet	LeMill	Nettilukio
Primary School			✓					
Secondary School	✓		✓					✓
Vocational Education & Training					✓	✓		
Higher Education		✓						
Teacher Training			✓				✓	
Workplace Learning				✓				
Lifelong / Adult training						✓		✓
Method/Objective	Welker	WISE	Protovoulia	IBM	Kool	ELKOnet	LeMill	Nettilukio
Peer Production / Review	✓	✓	✓	✓	✓		✓	✓
Collaboration	✓	✓	✓	✓	✓	✓	✓	✓
Communication	✓	✓	✓	✓	✓	✓	✓	✓
Knowledge Management			✓			✓		
Language Learning					✓			
Simulation		✓						

Learning 2.0 & Innovation – Positioning the Good Practices III

Technical Platform	Welker	WISE	Protovoulia	IBM	KooL	ELKOnet	LeMill	Nettilukio
Wiki	✓	✓	✓	✓	✓	✓	✓	✓
Blog	✓	✓	✓	✓	✓	✓	✓	✓
Learning Platform			✓		✓	✓	✓	✓
MUVE		✓						
Social Community	✓	✓	✓	✓		✓	✓	
Podcasts					✓			
Virtual Meeting		✓		✓				✓
Social Bookmarking				✓		✓		
Personal Learning Environment								✓
E-Portfolios					✓			✓

Innovative Learning 2.0 Practices 1 – Welker's Wikinomics I



Case Characteristics:

- Secondary School i.e. Zurich International School, Switzerland; international extensions;
- Grass root activity; Collaborative learning; Supporting teaching in classroom by offering online cooperation, communication and information environments like a blog, wikis and discussion forums;
- Web: <http://welkerswikinomics.wetpaint.com>

Innovative Learning 2.0 Practices 1 – Welker's Wikinomics II

Specific Research Questions:

- What key factors (teacher, students, school, environment, content, methods) are relevant for the successful implementation of a Web 2.0 grass root activity in a school environment?
- Which barriers exist in this environment and how can these be overcome?

Data Collection Instruments:

- Key Informant Interview;
- User Questionnaires (21 responses);
- Online Observations.

Results:

- Teacher and students evaluate the project as very positive and valuable;
- Web 2.0 tools are rated as very useful by the students (blog: 4.2/5; n=15; wiki: 4.8/5; n=15) and clear benefits are seen ("Improved my general knowledge": 4.64/5; n=14; "Improved my knowledge about particular subjects": 4.71/5; n=14).

Innovative Learning 2.0 Practices 1 – Welker's Wikinomics III

Success Factors:

- Support and technical equipment of the school;
- An inspired and motivated teacher ('Personal Learning Network' in the Web 2.0 Community);
- Students with good technical equipment at home and adequate ICT skills;
- Reasonable use of the tools (i.e. collaborative wiki to replace textbooks; blog and videos to provide real life examples; discussion forums for communication);
- Well-structured online environment and a meaningful connection to classroom teaching.

Innovative Learning 2.0 Practices 1 – Welker's Wikinomics IV

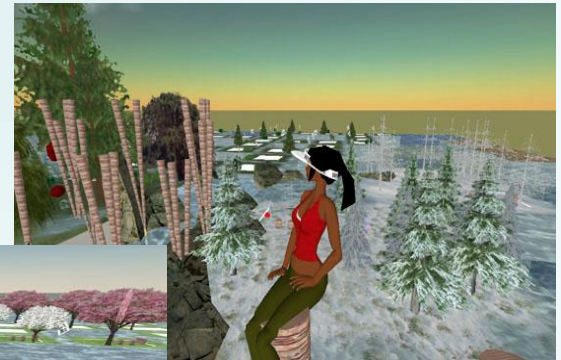
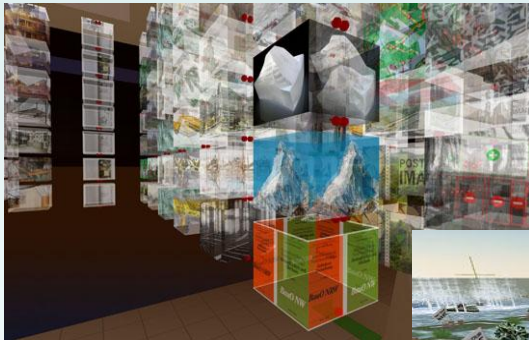
Lessons learned:

- Learning with Web 2.0 tools can be successfully installed as a compulsory part of classes in secondary school;
- Initial knowledge and ongoing motivation of the teacher are crucial;
- Initial introduction of the tools and their value to the students are essential);
- Intuitive navigation, easy relocation of information, not overwhelming structure (i.e. reasonable number of different tools and no other distractions) and regular updates of the online environment are important to maintain students' motivation.

Innovative Learning 2.0 Practices 2 – SecondReiff – WISE I

Case Characteristics:

- Higher Education i.e. RWTH Aachen, Germany;
- Pilot project; WISE is a Second Life project space of the RWTH Aachen School of Architecture; SecondReiff is the first pilot project in a series of planned projects using the space for combining and using real and virtual world learning in studies of architecture;
- Web: <http://www.w-i-s-e.net>



Innovative Learning 2.0 Practices 2 – SecondReiff – WISE II

Specific Research Questions:

- How can MUVES like Second Life been used for a Web 2.0 inspired learning approach?
- How do representations of learning activities in 3D virtual worlds interact with real-world learning?
- What motivational, organisational and technical advantages and barriers exist when realising this approach in a higher education environment?
- Which collaboration and communication facilities are used to support learning activities?

Data Collection Instruments:

- Key Informant Interview;
- User Questionnaires (1 response);
- Meeting with project managers in Second Life.

Innovative Learning 2.0 Practices 2 – SecondReiff – WISE III

Results:

- 3D elements: 1. Communication and meeting space; 2. Media repository tool (using Web 2.0 approaches); 3. Workbench for 3D architectural content creation;
- 2D elements: private websites and blogs of students;
- Communication tools: Voice Chat, Instant Messenger;
- Only a small group of teachers participated in the project because of time constraints. An initial two-week teacher training took place. The architecture students have good skills in working with 3D tools and Web 2.0 applications.

Innovative Learning 2.0 Practices 2 – SecondReiff – WISE IV

Success Factors:

- Use of the potentials of virtual worlds (*vs.* 1:1 representations of reality or traditional web spaces);
- Hybrid space using Web 2.0 mechanisms combined with functionalities of the virtual world (e.g. user-generated elements are displayed in foreground/background depending on visit rates);
- Motivation (i.e. comfortable environment; attractiveness of SL for students);
- Small-scale, selective pilot approach.

Barriers:

- Complexity of Second Life (SL); accessibility (installation, initial skills); system downtimes; problems with simulation speed; integration of other 3D-software not possible; high expenditure of time; SL is not students' 'lifestyle 2008' yet.

Innovative Learning 2.0 Practices 2 – SecondReiff – WISE V

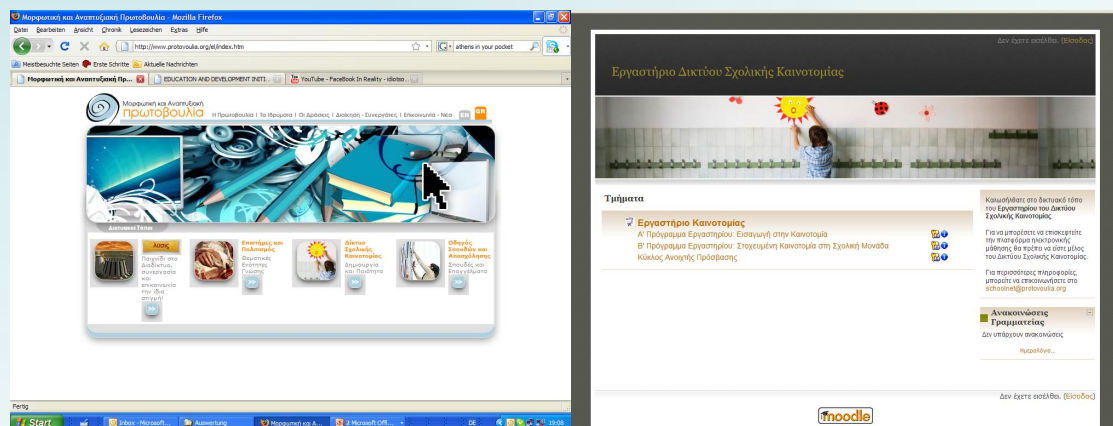
Lessons learned:

- SL enables to learn spatial understanding (e.g. to make ultra-small-scale structures like chemical molecules visible; potential for study subjects like architecture, chemistry, biology, medicine) but can also be used as a space for communication and collaboration in all fields of studies;
- Learning in virtual worlds can be connected with Web 2.0 ideas, approaches and tools (e.g. for reading of longer texts, structuring of elements);
- Still, high efforts are necessary to be able to use the added value of virtual worlds like SL;
- Acceptance of virtual worlds among educators is still rather low (i.e. there are no clearly obvious applications for the classroom yet and it needs high expenditures of time);
- There are several technical obstacles to overcome when using SL for teaching.

Innovative Learning 2.0 Practices 3 – Protovoulia I

Case Characteristics:

→ ‘Umbrella’ site of innovative online services for teachers and pupils in Greek primary and secondary schools (and beyond).;



→ Started as a grass root activity of eight Greek foundations and developed into an institutional programme; Collaborative content production and learning through LMS combined with blogs, wikis, forums etc; Supporting school innovation and the opening up of schools towards society;

→ Web: <http://www.protovoulia.org/en/prwtovoulia.htm>

Innovative Learning 2.0 Practices 3 – Protovoulia II

Specific Research Questions:

- What key factors and barriers (e.g. motivational, organisational, and technological) are relevant for the successful implementation of Web 2.0 tools in Teacher Training?
- How can peer-reviewing and collaboration between different contributors (e.g. teachers, teacher trainers, students, and third parties) enhance teaching and learning processes by using a Web 2.0 tool?
- How can Web 2.0 applications contribute to the quality of teaching and learning content and processes?

Data Collection Instruments:

- Key Informant Interviews & Focus Group with four Programme Managers;
- Online User Questionnaires (3 responses) and data from the Evaluation Report of Phase 1;
- Online Observations.

Innovative Learning 2.0 Practices 3 – Protovoulia III

Results:

- Network of School Innovation (i.e. of 57 schools);
- Organised, technology enhanced and project based Teacher Training (i.e. for 143 teachers) on educational programming and organisational change;
- Informal collaborative peer production and learning space around selected educational themes e.g. history of science and European civilisation;
- TT programme corresponded to needs of teachers, which increased the motivation of participants; majority are e-Learning and Web 2.0 first timers; nevertheless low drop rates of participating schools and teachers (approx. 8%);
- Teacher Training fostered inter-and intra-institutional as well as cross-professional exchange and collaboration in order to achieve the self-defined goals of their TT projects (e.g. on environmental and multi-cultural aspects; to encourage pupils to read).

Innovative Learning 2.0 Practices 3 – Protovoulia IV

Success Factors:

- Comprehensive introduction to programme in order to overcome inertia and resistance amongst schools and teachers;
- Adequate digital competences (basic and higher) amongst teachers to increase confidence to use them in the own learning, training and later on in the teaching process; continuous technical and content related tutorial support;
- Meaningful i.e. content and activity related integration of Web 2.0 technologies;
- Adequate managerial, administrative and organisational embedding and support.

Innovative Learning 2.0 Practices 3 – Protovoulia V

Lessons learned:

- Successful implementation of Web 2.0 in Teacher Training relies on: i) access (equity); ii) competences and; iii) motivation; further mediated through: iv) individual needs; v) course structure; and vi) adequate (external) support structures;
- Technology enhanced, project based Teacher Training and peer production of content are adequately supported by purpose-fit social computing tools e.g. blogs and wikis; contribute the perception of ownership of the learning process and results; and to the motivation to engage in the learning experience;
- Social computing tools support and complement existing ICT infrastructures and e-Learning solutions i.e. e-mail, discussion forums, CMS and LMS;
- Technologically and pedagogically competent and qualified teachers can serve as incubators and multipliers of innovation in- and outside schools (e.g. teachers becoming teacher trainers).

Innovative Learning 2.0 Practices 4 – IBM Internal Knowledge Management I



Case Characteristics:

- Corporate Learning i.e. IBM Software Group, Germany & Worldwide;
- Internal use of commercial products and methods ('use what you sell'); Development of implementation strategies and tools for Web 2.0 in organisations and companies for internal information exchange, collaboration, informal learning and knowledge sharing;
- Tools: 'bluepages' (expert search), personal blogs, wikis, discussion forums, social bookmarking; communities; virtual meeting software;
- Web: www.ibm.com/software/de/web20/

Innovative Learning 2.0 Practices 4 – IBM Internal Knowledge Management II

Specific Research Questions:

- What are benefits, challenges and obstacles of Web 2.0 implementation in the corporate sector?
- How are changes in learning at the workplace and in organisational culture associated with the implementation of Web 2.0 tools?
- What is the relation between Web 2.0 knowledge management methods and intra- and inter-organisational learning processes?

Data Collection Instruments:

- Key Informant Interviews;
- Content analysis of publications and conference presentations.

Innovative Learning 2.0 Practices 4 – IBM Internal Knowledge Management III

Results:

- Web 2.0 tools are used in an extensive way at IBM (e.g. 580,000 profiles in 'bluepages'; 1,400 Communities; 150.000 threads in discussion forums; 13,000 Blogs; 12,000 wikis with 190,000 pages; 550,000 social bookmarks);
- Added value for employees is seen in internal documentation of personal knowledge (reputation, career development); easier information detection and (cross-hierarchical) communication; more efficient collaborative work on project level; knowledge transfer, creation of new ideas (use of 'hidden/tacit knowledge') and; personal further education and competence development;
- Three different user groups: 1. Young Professionals (i.e. digital natives); 2. Professionals in the age of 25-45 (computer literate; able to easily acquire the new competencies); 3. Senior experts (more difficult to convince).

Innovative Learning 2.0 Practices 4 – IBM Internal Knowledge Management IV

Success Factors:

- Open organisational culture;
- Added value of the tools for employees = added value for the organisation;
- Easy integration of the system in existing environments (e.g. MS-Office or web-browser-integration), software should fit to standards and should offer various interfaces;
- Voluntary participation and social computing guidelines.

Barriers:

- Data security regulations in organisations;
- Inadequate organisational culture or lack of flexibility (more problematic in large enterprises than in SMEs).

Innovative Learning 2.0 Practices 4 – IBM Internal Knowledge Management V

Lessons learned I:

- Various potential benefits of Web 2.0 implementation in the corporate sector: internal documentation and exchange of individual knowledge and information; easier, more efficient and more open ways of communication; collaborative work; increased creativity and innovative potential; further education of employees;
- Challenges are the corresponding change of organisational culture, the integration of certain groups of employees (e.g. senior experts) and some technical issues (e.g. data security, software integration);
- Added value of the Web 2.0 tools for the individual employee is highlighted as a key factor. An individual added value leads to higher user rates and an added value on organisational level.

Innovative Learning 2.0 Practices 4 – IBM Internal Knowledge Management VI

Lessons learned II:

- Enterprise mash-ups (i.e. applications combining functionalities of other applications in a flexible way) and virtual worlds are regarded as future trends and are currently in research and development at IBM;
- Relation between knowledge management and internal learning processes is realised by the possibility for the employees to select individually interesting information from the knowledge database for personal further education purposes (e.g. by finding communities of interest, finding bookmarks corresponding to personal interests or identification of a new trend by a tag cloud);
- These are fun and interesting and subsequently easier learning processes.

Innovative Learning 2.0 Practices 5 – KooL – English for Glass Professionals & Glass Compendium Wiki I

Staatliches Berufskolleg Glas • Keramik • Gestaltung des Landes NRW • Rheinbach

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KooL Der Modellversuch
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Willkommen im e-Le@rning-Portal

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English for Glass Professionals

English for Design Professionals

KooL: "Kooperatives Lernen in web-basierten Lernumgebungen in der Dualen Ausbildung" - so heißt der Modellversuch, der vom Ministerium für Schule und Weiterbildung des Landes Nordrhein-Westfalen sowie vom Bundesministerium für Bildung und Forschung gefördert wird.

Er ist in das Modellvorhaben SKOLA eingebunden: "Selbstgesteuertes und kooperatives Lernen in der beruflichen Erstausbildung". Träger ist die Bund-Länder-Kommission für Bildungsplanung und Forschungsförderung. Die wissenschaftliche Leitung haben Prof. Dr. D. Euler (Universität St. Gallen) & Prof. Dr. G. Pätzold (Universität Dortmund). KooL ist auf eine Dauer von drei Jahren angelegt: 2005 bis 2008. Der Modellversuch wird an allen Glas-schulen Deutschlands durchgeführt:

In Rheinbach, Hadamar, Zwiesel und Vilshofen. Die Federführung bei der Projektentwicklung hat das Berufskolleg Rheinbach. Wissenschaftlich begleitet wird KooL von Prof. Dr. H.-Hugo Kremer vom Institut für Wirtschaftspädagogik an der Universität Paderborn.

Im Modellversuch werden die Potenziale neuer Medien genutzt, um kooperatives Lernen in der Dualen Ausbildung zu ermöglichen. Da allein die Nutzung neuer Informations- und Kommunikationstechnologien nicht zwingend mit einer Verbesserung der Lernkultur verbunden ist, werden in KooL didaktisch fundierte kooperative Lernumgebungen entwickelt. Sie sollen ein kontinuierliches und situ-iertes Lernen in komplexen, problem-orientierten Lernsettings ermöglichen.

Case Characteristics:

- Vocational Training i.e. Staatliches Berufskolleg Glas Keramik Gestaltung des Landes NRW, Rheinbach, Germany;
- Federal state funded pilot project, extended on national level; Integrated, collaborative online environment for English language learning by study subject-related media produced by students applying a blog, wikis, podcasts and videos;
- Web: <http://www.rheinfit.de/GlassProfessionals.htm>

Innovative Learning 2.0 Practices 5 – KooL – English for Glass Professionals & Glass Compendium Wiki II

Specific Research Questions:

- How can a Web 2.0 based learning project be successfully integrated into vocational training?
- How can language learning be supported by a Web 2.0 based approach?

Data Collection Instruments:

- Key Informant Interview;
- User Questionnaires (8 responses);
- Third party evaluation results;
- Online Observations.

Innovative Learning 2.0 Practices 5 – KooL – English for Glass Professionals & Glass Compendium Wiki III

Results:

- Higher general activation and motivation of students when using the Web 2.0 tools;
- Motivation differs by two groups of students (i.e. digital natives vs. beginners/digital immigrants);
- Third-party evaluation shows very positive ratings of students;
- Own user evaluation shows indifferent results partly representing the digital divide amongst students (wiki: 4.25/5; n=8; podcasts: 2.38/5; n=8; “Improved my knowledge about particular subjects”: 4.0/5; n=8; “Improved my English language skills”: 2.63/5; n=8)

Innovative Learning 2.0 Practices 5 – KooL – English for Glass Professionals & Glass Compendium Wiki IV

Success factors:

- Stable technical environment (e.g. network connection, hardware);
- Self-organized quality management by students;
- Integrated (*vs.* isolated tools), complex (i.e. different difficulty levels) and process-oriented (*vs.* product oriented) learning environment;
- Scientific counselling and monitoring;
- Support by the school (through more open curricula and time schedules) and a voluntary participation strategy (for teachers).

Barriers:

- Digital divide among students;
- Reluctance towards new technologies amongst teachers (related to lacking competence building through Teacher Training).

Innovative Learning 2.0 Practices 5 – KooL – English for Glass Professionals & Glass Compendium Wiki V

Lessons learned:

- Schools (at least in Germany) are in general less well technically equipped (compared to universities); need for external additional funding for innovative projects necessary;
- Web 2.0 provides an opportunity to bridge the gap between the two different training locations within the German 'Dual System' i.e. company and vocational school (e.g. by using learning diaries in personal student blogs); but mitigated by inhibiting in-company factors (i.e. reluctance, organisation, equipment), especially in SMEs;
- Web 2.0 can create new ways of foreign language teaching by e.g. inclusion of native speaker digital media in class or by peer production of written (e.g. in a wiki) and spoken (e.g. by podcasts) materials in foreign language by students;
- Web 2.0 tools can increase students activation and motivation and improve general computer literacy especially among the digitally disadvantaged group of students.

Innovative Learning 2.0 Practices 6 – ETZ Stuttgart – ELKOnet I

Case Characteristics:

- Vocational Training & Further Education i.e. Elektro Technologie Zentrum (ETZ) Stuttgart, Germany ;
- Federal state funded pilot project, extended on national level; Online community for knowledge extension and exchange among students with discussion forums, a wiki, a blog and social bookmarks; Step-by-step extension of the environment with Web 2.0 tools towards an integrated platform;
- Web: <http://community.etz-stuttgart.de>



Innovative Learning 2.0 Practices 6 – ETZ Stuttgart – ELKOnet II

Specific Research Questions:

- How can an existing online learning community been extended by Web 2.0 tools?
- What are the advantages of a Web 2.0 online community in vocational training and further education and which obstacles exist in these educational sectors?

Data Collection Instruments:

- Key Informant Interview;
- Online Observations.

Innovative Learning 2.0 Practices 6 – ETZ Stuttgart – ELKOnet III

Results:

- Use of the forums is satisfactory and popular amongst learners;
- Implementation and acceptance of the Web 2.0 tools (especially when usage in a collaborative way) demands thorough introduction and continuous support;
- Community runs partly self-organized, partly requires moderation and is especially intensively used during exam/test preparation phases;
- Added value especially through the wiki application;
- Regular updates of the blog are essential for its success;
- Split in two different groups of students regarding digital literacy and motivation can be observed also in this vocational training case.

Innovative Learning 2.0 Practices 6 – ETZ Stuttgart – ELKOnet IV

Success factors:

- Introduction of the tools and regular support of the participants;
- Integrated or embedded solutions (e.g. interactivity between CMS/LMS and Web 2.0 tools); enabling data transfer and; enhancing collaborative content creation.

Barriers:

- Digital divide among participants (i.e. digitally natives vs. disadvantaged/digital immigrants);
- Cost-benefit-ratio is negative for some groups of participants/forums.

Innovative Learning 2.0 Practices 6 – ETZ Stuttgart – ELKOnet V

Lesson learned:

- Integrated technical solutions offers advantages compared to isolated use of Web 2.0 tools (data transfer, facilitation of collaborative content creation); possible conflict between integration of tools *vs.* usability;
- Active participation of learners increases efficiency of keeping content up-to-date, while initial creation of content can be done by experts;
- Digital divide among students in vocational training can be found also in this case; in-depth introduction/training on ICT and Web 2.0 tools in early phases of vocational training helps students to get prepared for digital classroom learning and to reduce the digital divide;
- Online community is an instrument to keep students in sustainable learning processes (e.g. continuous learning after finishing a course; information about follow-up courses).

Innovative Learning 2.0 Practices 7 – LeMill – Calibrate I


LeMill


Web [community](#) for finding, authoring and sharing learning resources


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Content

Methods

Tools

Teaching and learning story / collection:
[matematika angly kalba](#)
 In the beginning of the lesson mathematics teacher introduces Mathematics V9.2 program. Teacher explain a basic toolbox of this program and plots some functions. (15 minutes).

Then pupils work with this computer program and plot three functions: $\sin(x)$; $\sin(x/2)$; $\sin(2x)$.

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Find learning content, method, tool or people...

LeMill is a web community of 2846 teachers and other learning content creators. At the moment LeMill has 1442 reusable learning content resources, 295 descriptions of teaching and learning methods, and 476 descriptions of teaching and learning tools. If your learning resource is not yet in LeMill, please join the community and let's make it together.

Case Characteristics:

- Teacher Training i.e. Calibrate project consortium; LeMill development at University of Art and Design, Helsinki, Finland;
- EU-funded project, establishment as national learning material platform in several European countries; Web-service for creation and exchange of learning materials and resources for teachers using repositories from several different European countries; community, collaborative resource development and sharing, blogs, wikis;
- Web: <http://lemill.net>

Innovative Learning 2.0 Practices 7 – LeMill – Calibrate II

Specific Research Questions:

- What added value do Web 2.0 tools have for an online resource sharing and collaboration platform?
- What are the main issues regarding the target group of teachers, especially in an international context?

Data Collection Instruments:

- Key Informant Interview;
- User Questionnaires (15 responses);
- Online Observations.

Innovative Learning 2.0 Practices 7 – LeMill – Calibrate III

Results:

- Teachers have a demand to share not only textual materials, but also multimedia and interactive content;
- Exchange of methods and tools for teaching are as important for them as exchange of materials;
- Web 2.0 tools are rated as useful by the teachers (forum = blog: 4.57/5; n=7; blog: 3.86/5; n=7; wiki: 4.00/5; n=7) as well as the general platform (4.00/5; n=7);
- Teachers see clear benefits from taking part in the community: “Helped you to use computers to do more complex things” (4.14/5; n=7), “Improved my general knowledge” (4.29/5; n=7), “Improved my qualifications” (4.29/5; n=7).

Innovative Learning 2.0 Practices 7 – LeMill – Calibrate IV

Success factors:

- Environment structure: 1. Content, 2. Methods, 3. Tools and 4. Community, that works on the three types of resources;
- Adaptation of the structure and addition of functionalities according to the demand of the teachers;
- Simplicity and clarity of the user interface (e.g. non-technical terms that are understandable also by teachers with limited ICT skills e.g. 'blog' → 'forum');
- Appropriate filtering functionalities according to the respective actual size of the platform (i.e. amount of content) and self-organized user tagging ('folksonomies').

Barriers:

- Critical mass of materials/community members in each language.

Innovative Learning 2.0 Practices 7 – LeMill – Calibrate V

Lesson learned:

- Social communities provide group functionalities (e.g. blogs; forums) supporting collaboration and exchange of learning materials; tagging enables user generated allocation of metadata to resources;
- Services should respect the demands of the target group of users; in an international context national approaches (e.g. national validators/multipliers, national Teacher Training workshops) can be recommended;
- Multi-lingual content and metadata is a challenge for an international resource exchange platform; similar to other popular web-services (e.g. del.icio.us) a multilingual tag-cloud with no language separation was chosen;
- Design of the user-interface is a key factor i.e. simplicity, clarity and choice of terms adapted on the knowledge of users and filtering/search functionalities adapted to the respective actual amount of content in the platform are essential.

Innovative Learning 2.0 Practices 8 – Nettilukio – Internet Upper Secondary School I

nettilukio [Pääsivulle]

- ETUSIVU
- OPISKELU
- KURSSITARJOTIN
- HAKEMINEN
- YHTEYSTIEDOT
- IN ENGLISH

Internet Upper Secondary School

Internet Upper Secondary School is part of Otava Folk High School. The formal entrance requirements are the minimum age of 18 and a school leaving certificate. All material and tutoring is in Finnish. We don't depend on terms i.e. the studies can be started any time.

At Internet Upper Secondary School you can study every day of the year, round the clock and round the country - and even round the world. Our school is a good choice if you are able to work and study independently and with a fixed target.

Lue nettilukiolaisten blogeja:

Case Characteristics:

- Teacher Training i.e. Adult Learning & Secondary Education i.e. Otava Folk High School, Finland;
- ESF-funded pilot project, now running as an officially recognized secondary school; Complete online study programme of Finnish upper secondary school level using a learning platform, virtual classroom technology, wikis and blogs;
- Web:

http://www.nettilukio.fi/fi/sisalto/nettilukio/06_in_english?n:selres=765612

Innovative Learning 2.0 Practices 8 – Nettilukio – Internet Upper Secondary School II

Specific Research Questions:

- How can Web 2.0 tools been integrated into an online study programme for adult learning?
- How do the Web 2.0 tools enhance communication and motivation in distance learning?

Data Collection Instruments:

- Key Informant Interview;
- User Questionnaires (62 responses).

Innovative Learning 2.0 Practices 8 – Nettilukio – Internet Upper Secondary School III

Results:

- 450 students; participants are a selection of people for whom distance studies offer the necessary flexibility (e.g. business men, three-shift-workers, mothers, disabled people, people with social anxieties, professional athletes, Finns living abroad);
- Learning platform (4.12/5; n=33) and e-mail (4.61/5; n=31) are rated as most important; wikis (3.94/5; n=33) and blogs (2.75/5; n=32) are considered as moderately useful tools;
- Learners see high benefits in taking part in the study programme: highest ratings (> 4.00/5) received “Increased general knowledge”, “Increased reading, writing and language skills” and “Increased knowledge about particular subjects”;
- Improved my basic computer skills” was rated with 3.48/5; n=29;
- Students report about high motivation, especially in the beginning of the programme;
- Students improve their ICT skills, are learning to learn better and improve their self-organisational skills.

Innovative Learning 2.0 Practices 8 – Nettilukio – Internet Upper Secondary School IV

Success factors:

- Full integration to national school system;
- Blended mix of open course system (i.e. no semester schedules) and scheduled courses;
- Personal learning plans, learning portfolios (e-Portfolios) and learning diaries/journals;
- Teachers take over teacher/tutor role alternately + additional mentors.

Barriers:

- Open information *vs.* privacy issues;
- Communication *vs.* self-organisation (possible solution: inter-course communication structure);
- Self-motivation has to be kept high over three years (possible solution: involvement of mentors).

Innovative Learning 2.0 Practices 8 – Nettilukio – Internet Upper Secondary School V

Lesson learned:

- Integration of wikis and blogs open a window to the real world from a closed online learning environment (e.g. through real life examples, communication with externals);
- Virtual classroom technology can successfully bridge the gap between traditional classroom teaching and online learning;
- Structures enabling inter-course communication between students (i.e. addressing the issue of individual learning plans), wikis and blogs (i.e. opening up the communication and collaboration to the outside world) and virtual classroom technology (i.e. bridging the gap between classroom and online students) are important factors for successful communication processes in online learning environments;
- Long-term motivation of students can be supported by trainers that take over different roles according to the current individual demand (i.e. teacher/tutor/mentor).

Learning 2.0 & Innovation – Results Synthesis & Lessons Learned I

Innovation I:

- New ways of collaborative creation, identification, aggregation and exchange of learning content and metadata;
- New forms of interconnection and communication amongst learners and teachers/trainers (*vs.* digital isolation);
- More personalized and learner-centred environments (e.g. individual documentation of competencies; e-Portfolios; personal learning plans; learning diaries);
- New forms of blended learning scenarios (formal/informal; classroom/distance; intra-/extra-institutional; mixed learning scenarios & pedagogical approaches);

Learning 2.0 & Innovation – Results Synthesis & Lessons Learned II

Innovation II:

- Motivational advantages by active, joyful, discovery-based learning approaches and learner's sense of ownership of produced content;
- Trend towards embedded or integrated solutions (e.g. CMS/LMS & Web 2.0 tools) *vs.* isolated tools;
- Virtual worlds and mash-ups (i.e. flexible combinations of functionalities from different applications) are near-future trends as well as an more intense integration of external social communities (e.g. Facebook) and tools (e.g. del.icio.us, flickr, YouTube)

Learning 2.0 & Innovation – Results Synthesis & Lessons Learned III

Success Factors & Barriers I:

- Reasonable use and meaningful integration of Web 2.0 tools;
- Well-structured online environments respecting the needs of the target group of users (e.g. navigation, clear structure, not too many distractions, user-interface, terminology);
- Regular up-dates of the online environment (i.e. new content) and critical mass of users/content;
- Adequate and stable technological infrastructure (for organisations and learners at home);
- Support by institutional management level & open, flexible organisational culture;
- New roles for teachers: learning facilitators ('space creators'), teachers, tutors, mentors giving initial and continuous support to the learners;

Learning 2.0 & Innovation – Results Synthesis & Lessons Learned IV

Success Factors & Barriers II:

- Partly higher level of initial technical knowledge and higher technical requirements for some applications (e.g. virtual worlds);
- Continuous motivation of all involved groups of people (special barrier: digitally disadvantaged groups);
- Self-organisation/individual learning schedules *vs.* learner-learner-communication;
- No consolidated Web 2.0-specific pedagogical frameworks yet;
- Concerns about scientific quality of user-generated content;
- IPR management, identity & privacy issues on individual and organisational level (e.g. terms of use, social computing guidelines).

Learning 2.0 & Innovation – Results Synthesis & Lessons Learned V

Knowledge, Skills & Competences:

- Developing subject specific (e.g. general and confined knowledge and qualifications; language learning) and higher order skills (e.g. reflective thinking, learning-to-learn, self-organisation);
- Training basic and more complex ICT (depending on users' initial digital literacy) and multimedia skills (e.g. production of audio-visual or three-dimensional content);
- Fostering specific communication skills; networking skills;
- Enlarging multi-tasking skills and complexity management;
- Increasing meta-cognitive and quality management skills;
- Issue of assessment and formal certification of Web 2.0 experiences and knowledge gained by these means;
- Need for systematic development of skills in Teacher Training (i.e. Web 2.0 related skills; communicative, collaborative and meta-cognitive skills).

Learning 2.0 & Innovation – Results Synthesis & Lessons Learned VI

Institutional Impacts:

- New interfaces between formal and informal learning environments and settings;
- Acceptance and support by the organisation *vs.* bypassing of traditional institutional systems;
- Decentralized, loosely joined, individualized character of Web 2.0 learning settings *vs.* standardized, enduring, often hierarchical structure of educational organisations;
- Demand for open, flexible organisational structures (e.g. course schedules, Teacher Training, data protection regulations);
- Opening of Education & Training (E&T) organisations towards society and closed learning environments towards the outside world;
- Chance to keep users in continuous learning processes (e.g. after finishing a course, in periods of transfer to follow-up courses) or in relation to the organisation (e.g. alumni portals).

Thank you very much for your attention! Questions, Suggestions, Feedback?

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