KeyCaseNote
Key Competence Network on School Education

FINLAND [3] - 2012
CO-DESIGNING LEARNING ENVIRONMENTS

A. BASIC INFORMATION

Country:	Finland
Title of initiative:	**[FI]** *Käyttäjälähtöinen oppimistilasuunnittelu* **[EN]** Co-designing Learning Environments
Coordinator/ Organization:	University of Jyväskylä, Agora Centreer
Key competences addressed:	**[FI]** *Kommunikointi äidinkielellä* **[EN]** Communication in the mother tongue **[FI]** *Kommunikointi vierailla kielillä* **[EN]** Communication in foreign languages **[FI]** *Matemaattinen, tieteellinen ja teknologinen kompetenssi* **[EN]** Mathematical competence and basic competences in science and technology **[FI]** *Digitaalinen kompetenssi* **[EN]** Digital competence **[FI]** *Oppimaan oppiminen* **[EN]** Learning to learn **[FI]** *Sosiaalisuuteen ja kansalaisuuteen liittyvät taidot* **[EN]** Social and civic competence **[FI]** *Aloitteellisuus ja yrittäjyys* **[EN]** Sense of initiative and entrepreneurship **[FI]** *Tietoisuus kulttuurista ja kulttuurin ilmaisumuodot* **[EN]** Cultural awareness and expression.
Type of initiative and channels used for implementation (e.g. curriculum reform introduced through legislation etc.)	Theoretical and practical model of the 21st century learning environment
Partners:	· Jyväskylä Teacher Training School · University Properties of Finland Ltd.
Scope: (student/teacher/school level; local/regional/national)	School level Local
Learning context: (formal or non-formal)	Formal

School education level/s: (primary, lower secondary, upper secondary)	Upper secondary
Target groups:	Students, teachers
Time frame: (start and end date)	6 August 2012 to 31 December 2013
Relevant links:	· Agora Centre Wiki: https://webapps.jyu.fi/wiki/pages/viewpage.action?pageId=12193132 · University of Jyväskylä Teacher Training School: www.norssi.jyu.fi/

B. SUMMARY

The Co-Designing Learning Environments project aims to adapt physical learning environments in order to better support the teaching and learning of key competences that are important for the 21st century. This is a cross-curricular project (visual arts, physics, chemistry, mathematics, ICT, mother tongue and literature, English and Spanish) but is conducted mainly as a part of the visual arts course. During the project there is a focus on all eight key competences but the ultimate objective is for these competences to be even more conscientiously included in the teaching and learning process after the reforms. Goals and standards are defined together with different stakeholders but are based on previous research on ideal learning environments.

The goals of the project are

- to transform the natural science classroom and its closely connected hallway into a space that enables diversified learning and the adoption of all eight key competences;
- to involve the members of the school community in the transformation process by means of a user-centred co-design and development process for any schools involved in the project.

The approach is systemic and holistic, with changes designed in harmony with the vision and the mission of the school and social practises and new infrastructure co-designed and co-developed simultaneously with internal and external stakeholders.

After the co-design and the reforms, support will be offered to teachers for the implementation of new practises and evaluation of the impact will be based mainly on qualitative data (e.g. user perception and user experiences). Furthermore, the possible scalability of the project will be analysed.

C. IN DEPTH INFORMATION

Rationale/contextual background/motivation for introducing the initiative/reform:

Physical learning environments need to be updated in order to better support the teaching and learning of Key Competences that are considered important for the 21st century.

Objectives:

The goals of the project are:

- to transform the natural science classroom and its closely connected hallway into a space that enables diversified learning and the adoption of all eight key competences.
- to involve the members of the school community in the transformation process by means of a user-centred co-design and development project.

There is a focus on all eight key competences during the project but the ultimate objective is that following the reforms, these competences will be even more conscientiously included in the teaching and learning process.

Dimensions targeted by the initiative/reform (e.g. student curriculum, assessment, initial/in-service teacher education, school autonomy etc.):

Learning environment: the entire physical and virtual environment related to the learning process including personal factors and social relationships where study and learning take place. (Definition of the learning environment, see Finnish Core Curriculum, National Board of Education 2004).

Overall approach (e.g. holistic – existence of an overarching strategy, or targeted approach focusing on a specific dimension etc.):

Our approach is systematic and holistic:

1. **Changes are designed in harmony with the vision and mission of the school** (e.g. importance of internalisation of entrepreneurial education, problem-based and inquiry-based learning and of creating a high-quality, pedagogically viable ICT-learning environment. See the description of Jyväskylä Teacher Training School: www.norssi.jyu.fi/esittely-ja-yhteystiedot/info-1/university-of-jyvaeskylae-teacher-training-school-normaalikoulu)
2. **Social practises and new infrastructure are co-designed and co-developed simultaneously with internal and external stakeholders** (instead of external reforms, innovative practises are designed and spread internally based on the existing school culture).

Detailed explanation of the key competence/s concerned:

- **Communication in the mother tongue:** e.g. oral presentations, group discussions (defending personal arguments, finding consensus), writing reports, writing on the blog.
- **Communication in foreign languages:** e.g. exchanging information during the project about ideal learning environments with the partner school in Spain using English and Spanish and maintaining contacts created after the project has finished.
- **Mathematical competence and basic competence in science and technology:** e.g. reflecting the ideal teaching and learning environment for sciences, the use of tablets as a teaching and learning tool, researching and selecting the ideal technological tools and applications to be used in the future space, creating 3D-models, calculating budgets.
- **Digital competence:** e.g. searching and selecting relevant information on the internet.
- **Learning to learn:** e.g. giving students lots of autonomy in planning their work.
- **Social and civic competences:** e.g. participating in the co-design experience with different stakeholders.
- **Sense of initiative and entrepreneurship:** e.g. opportunities to participate in a real project, acquiring experience of interior designers work.
- **Cultural awareness and expression:** e.g. expressing one's opinions through artistic expression.

Aside from the main key competences outline above, this project also develops the following skills:

- **Critical thinking:** e.g. self-evaluation and evaluating the work of others through constructive criticism.
- **Creativity:** e.g. use of imagination during the design process.
- **Problem solving:** e.g. overcoming challenges, finding innovative solutions to problems.
- **Risk assessment:** e.g. anticipating possible risks.
- **Decision taking:** e.g. collaborative decision making.
- **Constructive management of feelings:** e.g. coping with disappointments.

Specific subjects concerned or cross-curricular approach:

The project is cross-curricular (e.g. visual arts, physics, chemistry, mathematics, ICT, mother tongue and literature, English and Spanish) but is conducted mainly as a part of the visual arts course.

The national curriculum outline of the course is as follows:

Environment, place and space (KU2)

OBJECTIVES

The objectives of the course are for students:

- to learn the basics of design and architecture, including vocabulary and knowledge of materials, aesthetics and planning processes;
- to learn to make observations about environmental planning and design using different criteria (e.g. aesthetic or ethical) and from the perspective of socially and culturally sustainable development;

- to learn to examine the environment as a natural, built, social and psychological phenomenon and also as a cultural message;
- to understand the significance of community and environmental art in environmental planning and in visual culture in a broader sense.

CORE CONTENT

- space as a concept: perception of space as a psychological, physical and social place;
- the basic concepts of architecture and design: scale, motion, space, proportion, structure, colour, form, shape and material;
- landscapes, buildings, objects and works of art as material, intellectual and aesthetic messages and as representations of the cultural history of their respective periods;
- architecture and design from the perspectives of culturally sustainable development and economic life;
- modelling, projections, scale models and experiments with different materials.

How the initiative/reform is being implemented (e.g. process followed, political commitment, consultation with stakeholders and their respective roles, incentives for stakeholders, dedicated funding, teaching material, definition of goals and standards, assessment and evaluation mechanisms, impact on teacher training/professional development and school practices/leadership, scaling-up approach, based on research/evidence? etc.):

The following stakeholders are involved in this project:

- University Properties of Finland Ltd. (budget, reforms, architects, interior designers).
- The Innovative Learning Environments research department (expertise in pedagogy and ICT, international comparisons).
- School administration (general vision and commitment)
- Teachers of different subjects (subject specific expertise)
- Students in teacher training and masters programmes (pedagogical use of technological equipment)
- Upper-secondary school students studying the course outlined above (benchmarking in other innovative schools, research, creating 3D designs)
- Companies that provide equipment, furniture, tools and materials; editorials, etc.

Goals and standards are defined together with different stakeholders but are based on previous research about ideal learning environments.

After the co-design and reforms are complete, support will be offered to teachers for the implementation of new practises and evaluation of the impact will be based mainly on qualitative data (e.g. user perception and user experiences). Furthermore, the possible scalability of the project will be analysed.

TIMETABLE:

- Planning of the project (April to August 2012)
- A project course on space planning for upper-secondary school students (24 September to 8 November 2012)
- Proposal for space planning (December 2012)
- Further design carried out by professionals and planning of technical implementation (January to April 2013)
- Space alterations and building (June to August 2013)
- A user study on the learning spaces (September 2013)

Present stage/phase of implementation:

The school administration, teachers, trainee teachers and students initiated the project together with the researchers in autumn 2012.

Pedagogical issues (issues related to how key competences are being taught to students and how are teachers being prepared to teach them):

Both students and teachers are made conscious of how key competences form part of the project and should be considered when designing future spaces. This is done, for example, by reflecting how they are or could be present in the teaching and learning of different skills (for more examples of how key competences are taught see the section “Detailed explanation of the key competences concerned”).

What works well (to identify enablers):

No information provided.

Challenges and how these are being addressed (to identify obstacles and solutions):

One challenge is to determine how to permanently integrate new practices into the learning environment. There may also be various conflicts of interest and blurred role distinctions (e.g. being a designer, advisor, evaluator or implementer). It is not easy to collaborate and find consensus when working with people from different backgrounds and with different interests.

KeyCaseNote
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Monitoring & evaluation so far/planned, and which methods are being used (e.g. internal/ external quality assurance, inspection, national assessments, international tests, self-evaluation, formative or summative evaluations):

Formative evaluation: e.g. expert reviews, self-evaluations, user-experiences, openness to constructive criticism from people outside the project.

Impact (e.g. any planned impact assessment?):

International theoretical and practical models of 21st century learning environments will be developed. The initiative provides information that can be applied to the rebuilding and redeveloping of other learning environments (scalability). Deployment and impact will be analysed after the implementation.

Communication of the initiative/dissemination of outputs and activities:

National and international publications (Marja Kankaanranta, Tiina Mäkelä, Inka Mikkonen), dissertations (Tiina Mäkelä) and master's theses (Saara Alatalo, Riikka Niilola, Antti Nikula).

Next steps/follow-up:

The knowledge acquired during and after the case study can be applied to the design processes of multifaceted learning spaces at different school levels.

Additional information:

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