

Finland

Liikkeelle! (On the Move!)

“On the Move!” is an initiative to take secondary school students (age 13 to 19) and teachers out of the class-rooms to study and evaluate their local environment, for example, by mapping the area or by measuring air quality. The aim is authentic, collaborative and inquiry-based learning in the school neighbourhood, using modern technology and media in a pedagogically meaningful way. Students are stimulated to observe their environment in new ways, using many senses, and gain integrated and holistic knowledge in interdisciplinary projects. There is an internet platform that students and teachers use to share and discuss the project work. Students take an active role in setting goals, designing activities, and evaluating results.

Main focus of Innovation: LEARNERS, CONTENT, RESOURCES, ORGANISATION

Other keywords: blended/non-formal, learning space, technology-rich

General Information

Name of the ILE: Liikkeelle! (On the Move!)

Location/Address: Heureka, the Finnish Science Center, POB 166, FI-01301 Vantaa, Finland

Website: www.liikkeelleymparisto.fi

ILE submitted by: Finnish National Board of Education

Rationale

Why do you suggest that it should be included in the project? How does it respond to 21st century learning challenges?

On the Move! is a development project for learning environments funded by The Finnish National Board of Education. The project is implemented by the City of Kalajoki and Heureka, the Finnish Science Centre. The three-year project commenced at the beginning of 2008.

On the Move! takes the pupils and teachers out of the class-rooms to study and evaluate their local environment. The project aims at producing a concept of authentic, collaborative and inquiry-based learning in the school neighbourhood, using modern technology and media in a pedagogically meaningful way.

The project will produce an Innovative Learning Environment in the Internet, including a social forum, an interactive GIS-platform, as well as methods and tools for different subjects and for project management at school. Furthermore, the project will develop a concept for the implementation of an interdisciplinary, collaborative project in lower and upper secondary schools.

Eight pilot schools participate in the project in the school year 2008–2009. They are located in different areas, and thus their activities will be focused differently. The pupils gather information about their local environment, for example, by carrying out air quality and noise measurements, evaluating the pleasantness and aesthetics of the environment, and familiarizing themselves with local history and urban planning.

Key subjects include natural sciences, history and civics, art, mother tongue, as well as sports and health education. One of the goals is to enhance cooperation within the school between the different subjects and disciplines, but also to increase communication and mutual learning between the schools and other actors of the society. Methods, materials and tools will be produced for various subjects as well as project management. Close co-operation with the piloting teachers will add knowledge of everyday school work and extensive pedagogic expertise.

A virtual learning environment is developed to enhance learning, sharing and networking. The students insert the collected data, media clips and their comments on a GIS platform, thus creating spatial information. Furthermore, a social Internet forum is used by students and teachers to upload and share, e.g., stories, photos, projects and ideas. The goal is to create a flexible, user-oriented environment that the students might also use in their free time, and to narrow down the gap between the school and the everyday reality of the youth outside school.

The participation of young people is a key element. The students share their knowledge and insights with local authorities, politicians, and experts. Besides the more conventional methods to do this, the project experiments using social media as a tool for societal participation of young people.

The project co-operates with the University of Helsinki, the University of Oulu and experts from the fields of education and social sciences, environmental sciences, and community planning.

The project attempts to respond to several 21st century learning challenges. Situated, customized and self-oriented learning are known to result in good learning outcomes, and the methods used respond well to the learning needs and motivations of the digi-native generation. The knowledge gained by the students is integrated and holistic rather than fragmented and de-contextualized. The role of the teacher is of a guide or a team leader of the learning project. As students usually are more skilled in using new technology and social media, they can actually become experts in this sense. A diversity of learning sources is used, and the cooperation with experts in different fields provides the students role models and more realistic ideas of career options.

The students attain knowledge, skills and attitudes that are needed in active citizenship and democracy. At schools, the project aims to have an influence on the pedagogic policies and practices, and to help forward the ambience and culture of a learning community.

Evidence

Is there any evidence or indications showing that this initiative achieves the outcomes that it is aiming at?

The project and its results are evaluated by the University of Helsinki and the University of Oulu. As the project is still at an early stage, the evaluation is not available yet. However, we asked some of the schools to describe some of their learning projects.

Simonkylä Lower Secondary School

Simonkylä School is located in Vantaa, in the Helsinki Metropolitan Area. The school participated in the project On the Move by participating in several pilot projects and further developing them. The projects include History and Social Studies, Health Education, Mother Tongue and Literature, and Visual Arts.

Time-Space Path was a project that was conducted by several schools, including the Simonkylä School. It is a scientific method in the field of geography, developed by Dr. Alan Latham, (University College London) on the basis of Professor Torsten Hägerstrand's time geography of the 1950s and 60s. The method focuses at the personal relationship of a person with their daily environment. The method has been further developed by Professor Sirpa Tani and geography student Outi Surma-aho from the University of Helsinki to make it suitable to be used as a learning project in lower and upper secondary schools.

At Simonkylä School the method was used in a joined project of Mother Tongue and Literature and Visual Arts. During one day, the students wrote a diary and took photographs, documenting the places they visited or travelled through, and describing the impressions and emotions that these places arouse. The students were asked to use all their senses. Afterwards, each student created a visual presentation of the day, using a computer. In the presentation, they visualize their day as a path through time and space, accomplishing it with comments and photos.

The Time-Space Path was completed with additional learning tasks in both subjects. In Visual Arts, the students were asked to make a photograph during the day of one place that is special to them. It could call forth stronger emotions than most places, or relate to one's personal history and memories. The task was to make a photo that would manifest the emotion as strongly as possible. In Literature, the students wrote a poem or a short text to accompany the photograph. To do this, they were asked to apply a specific formula.

Studying phenomena from various perspectives is essential in both Visual Arts and Literature. The project urged the students to observe their environment in several new ways, and using many senses. Using literary and artistic expression, the students put their experiences in their daily environments into a visual form.

The project consisted of nine hours of school work, including lessons of Visual Arts, Literature and IT. Additionally, the students worked on the project in their free time. As the project was carried out in the last few weeks of the school year, formal assessment was not done. The project or the individual learning experiences were not reflected, as the school year run out. Instead, the students received feedback throughout the project. The experiences of both students and teachers were encouraging, and they were very satisfied with their outcome. However, the teachers decided that a mutual evaluation of the learning project should be arranged next time when the project is concluded.

Etelä-Tapiola Upper Secondary School

Etelä-Tapiola is an Upper Secondary School with emphasis on Social Sciences and Economy. The school is well-known for its numerous international projects. It is located in Espoo, a neighbouring city of Helsinki.

Project On the Move! was a central part of the optional course Sustainable development in Social Sciences. The class met weekly during October-May. Additionally, the students and the teachers discussed on the e-learning environment. The course was facilitated by teachers of biology and geography, chemistry, and philosophy and religion.

During the course, the school vicinity was explored through various methods, including noise measurements and air quality measurements conducted in cooperation with local authorities and experts. The school also carried out the project Time-Space Path and interviewed local inhabitants. Furthermore, the class tried out a GPS-based learning solution to enable mobile learning in the neighbourhood. However, they didn't find the solution satisfactory and moved on to use regular GPS-devices. During the new school year, the teachers are looking forward to developing ways of using GPS in a way that is both pedagogically reasonable and interesting to the students.

The students were only evaluated on a passed/failed -scale. Instead, the students and teachers reflected both personally and collectively upon the learning project. As the course was a piloting course, the feed-back and ideas are used to develop the course further.

Kallio Upper Secondary School

Kallio School in Helsinki is a specialized school with an emphasis on the performing arts. In addition to the usual school subjects, students can study drama, speech communication, media studies, creative writing, dance, staging, theatre lighting and sound, and theatre history. There are about 500 students and 50 teachers in Kallio Upper Secondary School. Every year, 155 students who come from all over Finland, are selected from almost triple the amount of applicants.

On the Move! was conducted as an optional course in applied sciences. The course consisted of contact teaching with the whole class, group meetings, and individual work. There were whole class sessions, each lasting 75 minutes. Each student used about 10 hours of their spare time to conduct their block study.

As the major part of the school's students comes from other parts of the city, and cities nationwide, the neighbourhood of the school is not such a familiar environment to them. The main topic was traffic and its various impacts on the environment and human well-being. Furthermore, the subjective experience and observation of the environment had a key role.

One of the methods used was the Block Study. Each student chose a city block in the area. In that block, they carried out many types research. The students, for example, learned about the history of the buildings, parks, etc, interviewed local inhabitants, mapped the ambiance and the scenery of noises in different parts of the block, made photos and calculated the traffic levels. The results of the project were presented on a map.

The students received feedback from their teacher and other students throughout the course. The students were only evaluated on a passed/failed -scale depending on whether they accomplished their study on time. Two students gained extra study credits for participating in the project youth group.

Furthermore, some activities and projects developed in the national On the Move! project were applied in the lessons of obligatory classes of chemistry, biology and geography. These activities diversified the normal school work.

Kalajoki School

Kalajoki Lower and Upper Secondary School is located in the city of Kalajoki on the West Coast of Finland.

Games Atelier a learning resource created by Waag Society in Netherlands has been tested at the Kalajoki secondary school and upper secondary school , Games Atelier is a learning-game application that enables students to make, to play and to review location-based games and can be integrated into the curriculum.

The suitability of Games Atelier as a new pedagogical tool in Finnish schools has been tested in Kalajoki in many different ways – in a separate course, in a lesson, when introducing Kalajoki to visitors and when getting to know each other and building team spirit among the group of students.

To make and play the games students use mobile phones with integrated GPS (Nokia N95) and Internet. The application uses OpenStreetMap which is a free editable map that allows anybody to view, edit and use it. As there was no map made for Kalajoki, the students and teachers have been mapping the centre of Kalajoki as an extra project.

The Kalajoki Upper Secondary School organizes an annual project week in April. During this week special courses concerning different subjects are offered. This year one of the courses was integrated into the Liikkeelle!-project. During the week the students familiarised themselves with the Games Atelier – application and also produced their own games. In addition they mapped parts of Kalajoki which were relevant to their games. The topics of their games were fairly free and the students decided to make games for example about water, traffic and the important places in Kalajoki. They worked mainly with computers but also spent quite a lot of time outside the school neighbourhood testing their games. At the end of the week a group of students from another school came for a visit. Our own students were responsible for teaching the visitors how to play the games. In mixed groups they played the games and feedback was encouraging. The students who made the games were motivated and took the responsibility to make everything work for the visit. The collaboration between the visiting students and our own students worked well as students were able to collaborate and get to know each other without teachers and while playing.

The project described above was carried out as a one-week-course (36h) but Games Atelier can be used also in a lesson. A simple game can be built in a two-hour lesson and can be played in one lesson. Games Atelier offers new possibilities to broaden and deepen the knowledge outside of the classroom. For example in mathematics Games Atelier can be applied in the teaching of geometry and trigonometry to nature. Geography, History, Arts, Sports, Biology, Chemistry and Physics individually or together can use the application for learning. Games Atelier supports a holistic and active learning style. It gives a new aspect to teaching and increases motivation.

When Games Atelier is used as a tool for learning and teaching, the evaluation can't be as in a traditional school. The self assessment and learning process are highlighted. In Kalajoki the students evaluated their learning in three stage of their learning process. In the beginning the students write down their preconceptions and set their own goals. In the middle they evaluate their learning which helps the teacher to recognize the misconceptions and confusions. In the end the students evaluate how they achieved their goals and what they learned during the project.

Learning Aims / Intended Learning Outcomes of the ILE

What are the core learning aims and which knowledge, skills or attitudes are to be acquired? (These may include outcomes related to learners' social, interpersonal, or meta-cognitive development)

The knowledge and skills to be by the students are, e.g.: Using and evaluating various sources of information to acquire knowledge, using the scientific method, representing their knowledge and insights to other people, understanding how the democratic society functions and how to participate, using the modern information technology and media in a meaningful, safe way. Furthermore, each school and teacher set their specific learning goals in different subjects. Attitudes and qualities to be attained are, e.g., self confidence as a learner and an actor, collaborative skills, responsibility for one's life-long learning.

Learners

Which group(s) of learners is it aiming at? Who is eligible to take part? How many learners are there? What are their ages?

The ILE is aimed at lower and upper secondary school students and teachers in Finland. The ages of these students vary between 13 and 19. The ILE will be published in the Internet in year 2010. It is developed with public funding from the Finnish National Board of Education, and will be available free of charge to all Finnish schools.

Facilitators

Who are the teachers/facilitators? Who are the leaders? What are their professional backgrounds? What are their roles?

In each pilot school, an interdisciplinary team of teachers is responsible of the school's project. Furthermore, the teachers actively participate in the working group of the overall project. These teachers represent mathematics, chemistry, geography, history and social sciences, psychology, philosophy, arts, and Finnish language. The project also has a working group of pupils, which participates in producing and testing learning methods and tools.

The project is coordinated by two persons, Heli-Maija Asikainen (M.Sc., teacher, environmental sciences) and Tiina Hyttinen (M.E.). The project is directed by a steering group, attended by Dr. Matti Rossi (Ph.D., Director of Learning at Heureka, the Finnish Science Centre, specialist in geography), Riku Saksholm (Principal, Secondary School of Kalajoki City, teacher of history and social sciences), Sirpa Tani (Ph.D., Professor of Geography and Environmental Education, University of Helsinki, Faculty of Behavioural Sciences), Kari Kumpulainen (Ph.D., Deputy Head of the Department, University of Oulu, Faculty of Education), Tony Manninen (Assistant Professor / Research Scientist, University of Oulu, Department of Information Processing Science), Kimmo Koskinen (Senior Adviser, Finnish National Board of Education) and Päivi Ojala (Vice Principal, Upper Secondary School of Kalajoki City, teacher of mathematics and chemistry).

Organization of the ILE

How is learning organised? How do learners and facilitators interact? What kind of pedagogy do they follow? What curriculum is used?

Each school carries out their own project, based on their local environment, social interests and learning goals. The school neighbourhood, as a physical and social environment, is used as a learning environment and a source of information in several subjects. As the schools in Finland still operate mostly based on subjects rather than holistic projects, cooperation between subjects is encouraged. The teachers act as overhead managers, but also students take an active role in setting the goals, designing activities and evaluating the result.

Methods are developed together with experts of different fields. The GIS platform allows examining, schools and areas. Thus, data produced in geography, chemistry or art can be used in a project of social sciences.

The ILE and the concept support the national core curriculum. The aim is to guide the way towards the use of more innovative, collaborate and project-based learning practises. The project produces a certain amount of methods and materials, but the key idea is that teachers continue the work, developing their own work and sharing their ideas and best practises on the ILE.

Learning Context

In which context does learning take place? What does the physical learning environment look like? Are community resources used to facilitate learning and how?

Learning takes place in the school neighbourhood and in places visited, such as the local environmental or city planning bureau, museums, city council, and so on. Schools are encouraged to seek cooperation with local authorities, experts and NGOs. The virtual ILE, whether used at school or at home, is one key learning environment. However, the school building and the classrooms also maintain their importance as a social meeting point for the community.

History of ILE

Who initiated it? For what reasons was it started and with what purpose? Have these changed since?

The ILE was initiated by Heureka, the Finnish Science Center. The aim was to provide schools with tools which would help them to cooperate with scientists and experts in a meaningful way, and to meet the learning challenges of the 21st century. The Secondary School of Kalajoki had similar visions of developing their work. The goals of the project have stayed alike since the project proposal made in September 2007.

Funding of the ILE

How is it funded?

The ILE is funded by the National Board of Education (67%), Heureka and City of Kalajoki (both together 33%).

Learning Outcomes

What are the learning outcomes achieved by the ILE, including academic, social, interpersonal and meta-cognitive outcomes? How is learning assessed?

For Learning outcomes see Learning Aims/Intended Outcomes of the ILE. Learning is assessed by the teachers and by the University of Helsinki and the University of Oulu.

Documentation describing or evaluating the ILE

Is there documentation on this learning environment? Is there a website? Films? Research reports or evaluations? Other forms of documentation? (please supply references or links)

Documentation has not yet been published. The main forum for information and documentation will be the projects website, as a part of the ILE. The results of the project evaluation made by the University of Helsinki and the University of Oulu will also be published.