



Irmeli Halinen & Ritva Järvinen (editor)

Futures education

Finnish National Board of Education

## Preface

**F**utures education does not require large scale projects – it only requires imagination, creativity and the deliberate wish to bring out the futures dimension and discuss it with the pupils.

For someone who has been involved in the planning and launching of a project it is a great pleasure to follow the project's development and deepening. Futures education became a matter of public interest in the local education department in Helsinki at the end of the 1990s. My superior at that time was Paula Sermilä, head of general education, who had a vision and enthusiasm for futures education. The work started to get shape as Seija Salminen, an education planning specialist in Espoo, Helsinki University's Palmenia Centre for Continuing Education in Vantaa, Eija Prossor, a planning specialist, and some schools in Helsinki and Espoo expressed their enthusiasm on futures education, too. Our work was inspired by the high-quality research done in terms of future in Finland, and by the outlines of the Committee for the Future in the Finnish Parliament.

A five-year project concerning environmental education, which was implemented in cooperation between Helsinki, Espoo, Vantaa, and Sotsi municipal educational administration and schools, was coming to its conclusion in 1999. The schools wanted to continue the cooperation, but wished for fresh ideas. Negotiations about futures education being the next theme were first started with Sotsi, but the participants wished that other countries would join the network, too. The idea was given a warm welcome also in Sotsi, and at the beginning of 2000 Futures education-project was started. It continued until the end of 2006. Some schools in Sweden and Norway joined the project along the way.

This publication presents the development work of futures education and the practical achievements of the work. The nature of futures education and its objectives



took shape during the project. The work was closely connected to the curriculum work which was in progress at the beginning of 2000. Methods and materials were developed, and the shared learning process deepened our belief in how significant future-orientation is for the learning and growth of a person. It was characteristic of the development approach that problems were discussed openly, and the participants were open to a variety of solutions and ready to share experiences.

School principals and teachers played a central role in the development work. I want to thank some of them because their commitment to the work was essential for the project. Principals Anneli Rautiainen and Taru Räsänen in Helsinki, Martti Hellström in Espoo and Pekka Rokka in Kerava each furthered the work in their schools, and they also took a great responsibility for planning the project and doing practical arrangements. Martti Hellström, Anneli Rautiainen and Seija Salminen, an education planning specialist, also drew up the final report for the project on the basis of which this publication has been edited.

The fact that we had the opportunity to learn from experts contributed to the success of the work. Two people in particular played a major role in providing expert advice. One of them is Chris Roberts, a vice-principal in Bolton, England, who told us about the experiences of his school and infused enthusiasm into us in the beginning of our project. Another important person is Anu Haapala, Doctor in Pedagogy, who for several years worked and shared ideas with us untiringly. Ideas were exchanged also between other researchers, the Finnish National Board of Education and the representatives from local education departments in the participating countries.

The Finnish National Board of Education supported the project financially, and as the project progressed, it was joined to be part of the Finnish National Board of Education's Koulutus tulevaisuuteen (Education in to the future) -development work. Through the Finnish National Board of Education the project was also connected to a broad international project of OECD, Schooling for Tomorrow. The Finnish Futures education -project is unique in the sense that the most important part of the development work took place in the daily encounters between the pupils and teachers. The pupils played an active and central role in



the work. By discussing the future with pupils they are provided the abilities needed in encountering different futures and the courage to take action for a good future.

It is essential that children and young people are carefully listened to and observed, because they carry the future in them. Education always involves the building of the future and thus teachers could be seen as the builders of the future. Futures education helps to deepen the awareness of what kind of future we are building together, and what kinds of skills are needed in the building of the future. Although this publication presents a six-year project, it is safe to say that futures education does not necessarily require large scale projects. Instead, it requires imagination, creativity and the will to bring out the futures dimension for the pupils to discuss in any school work situation.

I want to thank all those who provided ideas and worked in the project, or supported the project in any way. Hopefully their work will be of inspiration to everyone else and make it easier for them to take part in the building of the future.

Helsinki October 23<sup>rd</sup> 2007

*Jumeli Halinen*

Counselor of Education  
Finnish National Board of Education

© Writers and Finnish National Board of Education

Graphical arts  
Veera & Riika Alanko, 1994

Make-up  
Pirjo Nylund

ISBN 978-952-13-3436-8

Helsinki 2007



# Contents

1	Background and starting points for futures education project	6
1.1	A need for futures education	6
1.2	Selected development approach	7
1.3	Objectives for the work and the nature of futures education	9
2	Project phases and modes of action	12
3	Definitions for futures education	17
3.1	Central concepts in futures education	17
3.2	Futures education methods	19
3.3	Futures education in the school curriculum	25
4	Futures education and pupils/students	31
5	Evaluation of the project's effect	33
6	Ten good practices	36



# 1 Background and starting points for futures education project

## 1.1 A need for futures education

The change of the millennium brought with it the understanding that the world was irrevocably in a new phase of development. The new phase has many names such as post-industrialism, information society, experience society, post-fordism and postmodernism. Everything seems to be changing, including the change itself. Development which used to be slow and easy to predict is turning faster and harder to anticipate. Instead of manifesting itself in trends, the change itself is changing into a whirl, into turbulence. New phenomena are born and they die at an accelerating pace. Everything affects everything, and the interrelations of influence are complex.

Changes have a great impact also on the school work. The traditional mission of the school has been to provide children with the tools they need in the future. To succeed in this mission the educators need information about the future world the children will live and operate in. Educators also need information on the children's individual aspirations. However, it is now more difficult to predict what kind of future the children will experience. Therefore the capacity to bear uncertainty and chaos is considered one of the central abilities needed in the future.

Several instances ponder on which skills are required for survival and success in the new kind of world? Which skills should be taught for the learners of today? And how would they best learn those skills?

These questions were of such interest for professionals in education in Helsinki and Espoo that a project concerning futures education was started in 2000. At first the participants included six schools in Helsinki and Espoo and Russian partner schools in Sotsi at the shore of the Black Sea. The particular Russian schools worked in cooperation with Finnish schools also earlier in terms of environmental education. Support and guidance for cooperation were provided by local education departments in Helsinki, Espoo and Sotsi and by the Lifelong Learning Institute Dipol-



li which also organized training based on futures dimension. Later also other schools in Helsinki, Espoo, Kerava and also in Katrineholm city in Sweden joined the project.

The Finnish National Board of Education considered the project interesting in terms of international cooperation and pedagogic development. Municipalities applied and were granted funding for the project by the Finnish National Board of Education through its resources for international actions. Also municipalities funded the project within their own budgets.

### 1.2 Selected development approach

**T**he futures education project was developed to survey the challenges of the future. It was a pedagogic development project and the selected approach was inquiry-based learning. Learning was defined as the building of shared meanings. Within a broad framework of objectives each school was given the opportunity to participate in the common development project in a manner appropriate for each school in question.

A steering group was set to link the participating countries and municipalities. It included both representatives from the local education departments and school principals who all worked actively for the development of futures education. The group's tasks were to take care of the common guidelines, planning and steering of action and many practical issues such as seminar arrangements, meeting invitations and memos, study trip arrangements, international communication and reporting to municipalities and the Finnish National Board of Education. As the project went on the significance of the group proved great as it strengthened the common direction and organized the activities. 1)

As there was no existing concept of futures pedagogy available, it needed to be drafted together during the project. The participants of the project were not required any previous knowledge about futures education and thus the learning process was very equal. From the start the development work was based on open pondering and shared learning which took place at all levels at the same time. The administrators in the local education departments, the



principals, teachers and pupils were all equal learners.

It was realized that Futures-work would require activity and most of all pro-activity from the schools. The schools do not only react to changes, but they should aim at promoting good things in the world by anticipating the future and by utilizing the channels it has.



Work during the project consisted of school-specific activities, cooperation between the local education departments, close contacts between administration, research and practical teaching work, and the exchange of experiences and ideas during seminars and study trips. From the beginning it was clear that futures education was intended to become a part of everyday school work for all participating schools. Development work was also connected to the new curriculum-thinking because at the same time with the project the drafting of the new national core curriculum was progressing in the beginning of 2000. The development of futures education became an essential part of school-specific curriculum work and it also had an impact on the curriculum's starting points in the municipalities.

The multicultural aspect of the project – confronting versatile operational cultures – was from the start both a challenge and a resource for the project. Communication and interaction between administration and school work and also between practical work and research were equally important. The fact that pupils were involved in an active discussion about the future and in creating the modes of action increased the creativity of the work remarkably. In terms of futures education the school's atmosphere and operational culture proved particularly important. Openness, caring, trust in the pupils and respect for the pupils' rights were essential.

Futures education project was continued as multi-voiced and multi-dimensional until the end of 2006. The activities which were developed during the project lived on in the schools' operational cultures even after the actual project was concluded.

1) Footnote: The project was initiated by the head of general education division Irmeli Halinen, education planning specialists Seija Salminen from Espoo and Eija Prossor from Lifelong Learning Institute Dipoli. Irmeli Halinen chaired the project in 2000–2003. In the beginning of 2004

she was transferred from Helsinki local education department to the Finnish National Board of Education. Therefore Seija Salminen from Espoo and Anneli Rautiainen from Helsinki were in charge of the project from 2004 onward. The steering group for the project also included principal Taru Räsänen from Helsinki, principal Martti Hellström from Espoo, and later principal Pekka Rokka from Kerava. Irina Badayan, a head of municipal educational administration, represented Sotsi. During the early years of the project education planning specialist Eija Prossor was in charge of coordinating the international cooperation. Later Seija Salminen and Anneli Rautiainen together were in charge of the coordination.

### 1.3 Objectives for the work and the nature of futures education

**T**he work was started by thinking. First of all, the participants needed to comprehend what futures education comprised and what its goals were. Second, it needed to be clarified which ways of action were needed in order to achieve those goals.

It was stated by the participants that futures education was to affect the development of the pupils so that the abilities needed in the future society would be strengthened. These abilities were called future abilities. During the project it became clear that there are at least three kinds of future abilities: abilities concerning thinking, skills and actions. Stimuli for development were needed in order for the future abilities to develop. Thus work methods and contents of instruction which would best strengthen the abilities needed to be determined. Gradually it also became clear that the operational culture of the school plays an important role. How the school operates affects the mind, attitudes and actions of the pupils as much as actual instruction does.



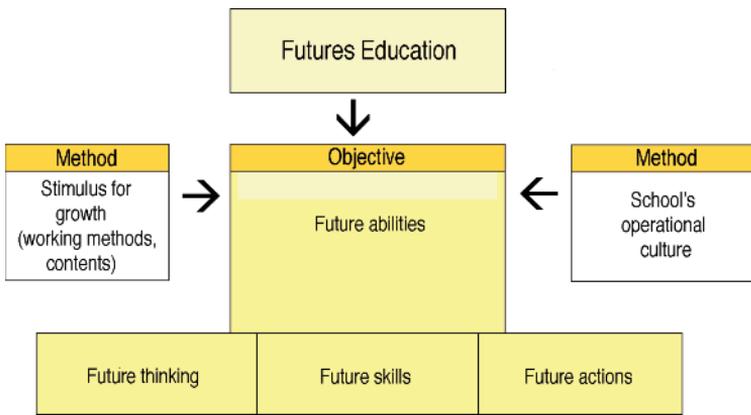


FIGURE 1. Components of Futures Pedagogy

The aims of futures education, which were defined in the beginning of the project, proved functional in the practical instruction work. By setting the objectives the team took a stand on defining the future abilities. The aim would be to support the pupils' growth so that

- 1) their future-oriented thinking will develop
- 2) they will comprehend the world as a whole
- 3) they will understand that the actions they make today influence their future
- 4) they will become aware of the values concerning nature, environment, humane life and societal development
- 5) their interaction, cooperation and negotiation skills will develop
- 6) their abilities of using information and communications technology in communication and in searching, modifying, producing and transmitting information will strengthen
- 7) they will be encouraged to participatory and active citizenship

The first four objectives concern foremost thinking and values, the next two objectives concern skills and the last objective concerns actions. During the project it became clear that sometimes thinking and awareness are needed in order to become motivated to practice skills or take responsibility in the form of action. However, sometimes the actions take place first. Then skills are developed through actions and gradually the pupil's awareness on the matter deepens and comprehension which leads into new actions

is developed. Adults need to observe carefully which approach is needed in each situation. During the project especially the objectives concerning skills expanded and were put more emphasis on.

The local school departments and schools which participated in the project wanted to develop their own future-oriented thinking, future skills and take concrete action for the future. For this reason the project work was organized so that it would present models for the modes of action to be utilized with pupils. In the beginning of the project the objectives concerning the implementation of the project were defined as follows:

- 1) the project strengthens the cooperation and interaction between the participants
- 2) the work promotes future-oriented thinking and education in schools and in their operational cultures
- 3) the work strengthens the awareness of each one building one's own future and the cultural awareness of all participants, especially of the pupils
- 4) the project produces concrete material to support futures education and in-service training for teachers
- 5) the project will be documented in virtual environment and experiences are openly discussed

The project's modes of action were evaluated together as the work progressed, and the direction, work methods and contents were revised if necessary.



## 2 Project phases and modes of action

The futures education project was designed gradually through shared learning experiences. It was formed through consecutive and partially overlapping cycles during which the work deepened.

The first two years of the project, 2000-2002, can be described as *the phase of building the organization and network*. The framework and foundation for action were created. The organization was established. The role of the steering group proved great as it planned the work and drafted the common guidelines. The group consisted of representatives from administration and schools. The project work was started in Ala-Malmi school (grades 1–9), Katajanokka school (grades 1–6), Kulosaari school (grades 1–6) and Kallahti school (grades 1–9). Participating schools in Espoo included Aurora school (grades 1–6) and Iivisniemi school (grades 1–6). The participants in Sotsi comprised schools 136, 31, 19, 24 and the Extra School Activities Center.

The second phase could be called *the phase of encounters and seminars*. Along with clear steering it was equally important that all participants gathered on a regular basis to share their experiences and discuss their decisions. Feedback and wishes from teachers contributed to the planning. International cooperation was challenging. Especially in the beginning of the project inadequate information technology made communication and the exchange of experiences difficult. Personal contact in the seminars strengthened the reciprocal trust and strengthened the ability to understand the forms of action, values and terminology typical of schools in other countries. At least two seminars were organized each year. In addition to this the participants visited schools and had meetings in smaller groups.

“Meetings, trips and seminars made it possible to meet personnel in other schools with whom it was easy to share ideas and news in other occasions, too.” (teacher)

The third phase brought with it *new participants and fuller activity*. The number of project schools grew along the years. In the spring 2001 Kurkela school in Kerava (grades



1–6) joined the project. The number of project schools increased into ten, as Kallahti school broke away from the project, but in 2002 Käpylä school (grades 1–6) in Helsinki and in 2004 Aarnivalkea school (grades 1–6) and Ruusu-torppa school (grades 1–9) in Espoo joined the project. In the final phase of the project the goal was to include day-care centres and consistent study paths in the comprehensive schools with the upper level included in the project. Kulosaaren yhteiskoulu (grades 7–9) and Käpylän yläaste (grades 7–9), Koskela school (grades 1–4) in Helsinki, a day-care centre in Kurkela, Kerava and Kaleva School (grades 1–9) joined in 2005. Thus at the conclusion of the project it included 15 schools and day-care centres. From Katrineholm, Sweden, Talla skola, Flodafors skola and Flen skola joined the project. Smithills School in Bolton participated in the project during years 2000–2004 and Matre skole in Matre, Norway during years 2004–2006. Therefore especially events which joined the schools together were considered important. To give an example, each participating school in Finland and elsewhere planted a rowan tree as a symbol of future in their school yards at the same time in 2002.

"It was stimulating to have the Russian teachers for a visit."  
(teacher)

"Interaction between the participants and sharing experiences is most important." (teacher)

"Networking between schools functioned also in the long-term." (principal)

The fourth cycle could be called *the phase of deepening the shared learning and the development of activities*. The project was lucky to get support from experts in Finland and elsewhere. Vice-principal Chris Roberts from Bolton, England, acted as a catalyst for the initiation of the project. Activities concerning futures education had been developed in the school in Bolton and during the project Bolton's ideas were modified to fit new operational cultures. Another important person supporting and deepening the work during the whole project was a Doctor of Pedagogy, Anu Haapala, who did her doctoral dissertation about futures education in Joensuu University. She guided the principals and teachers to master the methods of futures education and upbringing. Also the experts in the Finnish National Board of Education and in the Finland Futures



Research Centre brought new ideas to the project. The Finnish participants deepened their learning by making study trips to Bolton, Sotsi and Katrineholm. Correspondingly, representatives from these cities visited Finnish schools. Seeing the practical school work was significant both among schools in Finland and elsewhere. Ideas were borrowed from other schools and applied into own school. Each school gradually found its way of operating.



“What was best in the project was the training provided in the seminars. Almost each time they were of high quality and interesting.” (teacher)

“This aspect was well organized in seminars which always provided tools for school work. We applied material acquired in England into practice.” (teacher)

The project activities became a solid part of the school work in the fifth phase of the project, which could be described as *the phase of curriculum work*. The national core curriculum was renewed in the beginning of 2000 in Finland. The new national core curriculum for basic education was issued in 2004. Municipalities and schools are to draw up their own local curriculum on the basis of the national core curriculum. For the first time the core curriculum included the obligation to implement seven predetermined cross-curricular themes, which were to be included in the instruction of all subjects and other operations of the school. The schools involved in the futures education project combined the project with the drawing up of the school-specific curricula and discussed whether futures education would also be a cross-curricular theme. An idea about futures education being a natural viewpoint which would unite all other themes, almost like “the mother of all cross-curricular themes” was born. Representatives from the Finnish National Board of Education who visited the seminars considered futures education important and contributed to the fact that the outlines of futures education were included in the curricula for basic education and upper secondary education which were being drawn up. The significance of futures education was also clearly stated in the municipality-specific curriculum outlines. Curriculum work supported the analysis of futures pedagogy especially during the last years of the project in 2004–2006.

## 2 Project phases and modes of action

"The national core curriculum includes futures dimension to a sufficient extent, but the project has given concrete ideas on how to apply the abstract ideas in the curriculum into practice." (teacher)

"The cross-curricular themes and the whole curriculum-thinking opened from the future perspective." (teacher)

The sixth cycle of the project involves *spreading the ideas outside the actual project work*. As the development approach was process-like, the spreading of ideas was started already at the early phases of the project. In the futures education project this process was called diffusion and was directed both inside schools and outside, towards several cooperation partners. Futures education work started to become an established part of the schools' operational cultures. The project schools organized future-related theme days annually. Visitors from other project schools or from any school were welcome to join the theme days. Experiences and ideas could be shared also in seminars organized by other operators such as the Finnish National Board of Education and the Finnish Society for Futures Studies. Influencing the national core curriculum seemed particularly important. In terms of spreading the ideas another central achievement concerns the learning materials. Developing learning material that would suit the purposes of futures education was defined as one of the central goals already at the beginning of the project. Together with an established learning material publisher a work group consisting of project members started preparing a learning material portfolio for futures education in 2004. The project schools had the possibility to test the material and participate in its development.

"When the teacher has comprehended the futures dimension it is reflected in the work comprehensively and in many ways." (teacher)

One of the objectives set for the project was *the documentation of the work*. For this purpose web-site for the project was created. The practical updating was difficult and expensive with the resources provided in the beginning of 2000. Centralized documentation was utilized in 2000-2002 and the web-site is still available for download in [www.futures2002.fi](http://www.futures2002.fi). Since 2003 documentation was increasingly transferred into the schools' own web-pages. Pictures, brochures, video- and dvd-recordings and other



material were produced for the displays held in connection with the seminars and for the schools' own events and publications. The Finnish National Board of Education funded the project through government grants for international activities. For this reason annual project reports and a final report at the conclusion of the project were drawn up for the Finnish National Board of Education. In accordance with the municipalities' procedures the project schools drew up their own mid-term report and action plans and have stated the central activities in their school year plans. In addition, the project has been introduced in news articles and other publications, in several seminars and in a radio interview. Satu-Mari Åkerlund in the University of Joensuu wrote her thesis "Tulevaisuusprojekti oppilaiden kokemana" (Pupils' experiences on the futures project) about the project in 2002.

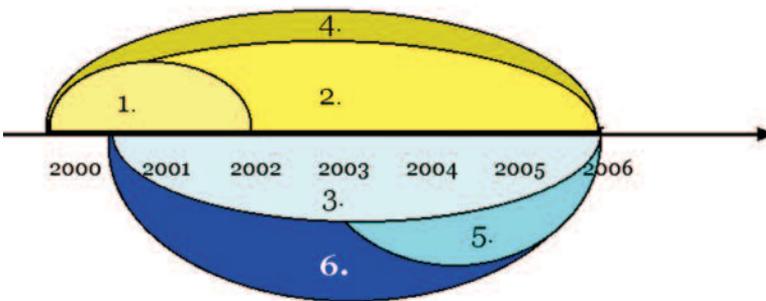


FIGURE 2. Constructing Futures Pedagogy through cycles of action

### 3 Definitions for futures education

During the project the participants learned to understand the nature of futures education more deeply and to define its dimensions. At the same time methods for strengthening the future abilities were developed. Understanding grew through the development of the methods whereas the methods were developed as understanding deepened.

#### 3.1 Central concepts in futures education

During the project *the conception of futures education* crystallized and got a concrete shape, which is described in section 1.3.

Future abilities are defined in relation to the different futures. The objective of futures education is to increase the pupils' ability to understand the past and think about the future, the ability to confront any kind of future and at the same time the ability to influence the future by the choices and activities – the future actions – they make today.

Envisioning different futures is a challenging task for the pupil which requires both imagination and knowledge. It gradually develops *future-oriented thinking*. It also involves the strengthening of the time-concept, respect for the chain of generations, increasing cultural understanding and value-oriented thinking. The value of each person's life is the basis for future-oriented thinking.

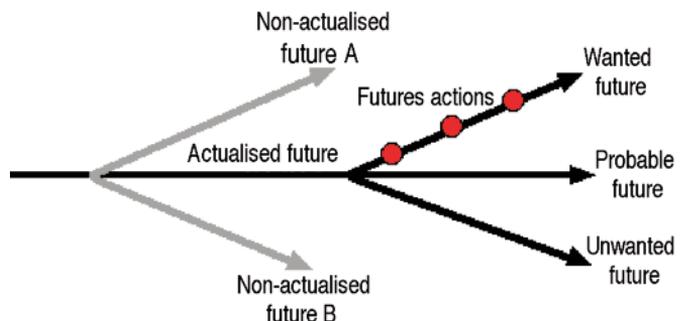


FIGURE 3. Analysing the concept of diverse futures



Thinking about the future is quite similar to studying history. Both are essential, but the direction is different. History is studied by moving from the past to the present and thus the world today is examined from the past perspective. In futures education thinking is directed into the future and from the future perspective it is discussed which things are good in the present-day and what needs to be done in order to create a good future. Therefore futures education is almost like studying history the other way round. History studies concentrate on understanding how the present is built on the decisions and actions made in the past whereas futures education helps to understand that we can build the future with the decisions and actions we make today. Future is not fate. Future is not predicted, it is made.

Thus future-oriented thinking does not only involve envisioning the future – although that is needed, too – but it involves foremost discussion on future actions and consequences and the building of future paths.

*Future abilities* include knowledge and skills which help to survive in the ever changing world and to confront different options in the future.

The participants in the project defined the following abilities as future abilities:

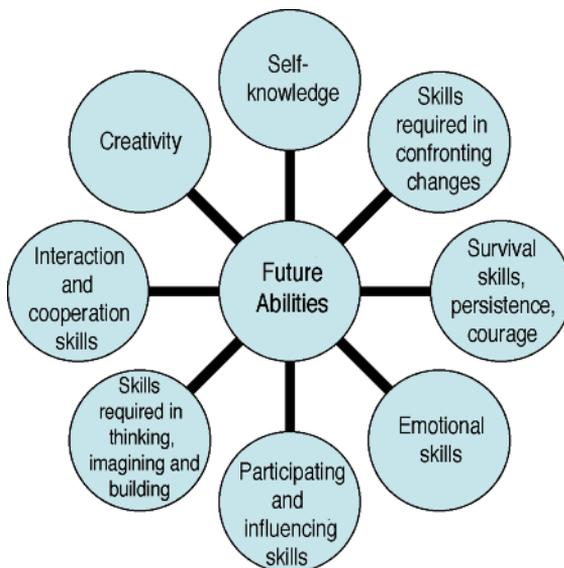


FIGURE 4. Classifying futures abilities

Future actions are actions which help to build up the desired future. All our actions affect the future and are in that sense future actions. However, in the project future actions were defined as actions that are purposeful and based on ethical consideration.

Futures education can also be described by defining didactic principles concerning it. The following principles were found appropriate during the project:

- principle of real action
- principle of having an impact
- principle of problem solving: there is not only one correct answer
- principle of child size: adult problems should not be laid on the children's shoulders
- positive attitude
- principle of integrating different subjects
- principle of creativity
- principle of including information and communications technology in instruction
- principle of working together

### 3.2 Futures education methods

**T**he methods of futures education can be divided into two groups. On one hand they concern the working methods used in instruction and on the second hand the characteristics of the school's operational culture.

The school's operational culture involves practices which can strengthen the future abilities such as the freedom of choice concerning studies or activities, real channels of influence such as the student's union, student parliament or school meeting. Opportunities for making future actions are needed, too. These can be implemented, for example, in relation to the school's own environment programme. There can be, for example, "One trash a day"-campaigns, environment agents, school environment panels etc. The school syllabus can include futures education lessons and the school events can promote the objectives of futures education.

Next some of the methods which were developed during the project and which shape the school's operational culture are introduced by presenting examples written by teachers.



\* Separate futures education lessons (subject)

"I was lucky to teach futures education for my fifth and sixth graders as a separate subject. We held a "Futures-lesson" once a week.

We found the boost for futures education in a workshop provided by the architecture school Arkki where the pupils worked in groups and prepared a future city out of recycled material. The cities could be designed either on land, under ground or on the water. Later the cities were videotaped and the pupils presented their works in English.

Classroom work took place both in writing and in concrete actions. Next some of the themes we discussed are presented. We started with examining the concept of time line, which the pupils applied in their own lives. The concept of future was examined through a Consequence Wheel. The pupils made an imaginative trip into the future going 50 years ahead and wrote a letter for their grandchildren, for example. By interviewing their parents and grandparents they got to know some experiences of earlier generations.

Sustainable future functioned as the main thread throughout the whole futures education project. The pupils had many planning tasks such as the classroom of sustainable future which also involved the parents. They designed future furniture, vehicles and houses. Many of their solutions were creative and hilarious.

The concept of change was first discussed in a brainstorming session after which each pupil examined the changes in their lives, home municipalities, countries and in the world. Finally the pupils together divided the changes into good and bad ones. Together they also selected the "Top Ten" questions concerning the future amongst 50 questions about individuals and communities.

During the last semester we dealt with larger subject areas such as the different possibilities of producing energy, greenhouse effect and water situation in the world. During these lessons we also discussed our own positive solutions, which will be reflected in the lives of the next generations."



#### \* School meeting

"In 2002 we set the integration of futures education into our environment education programme as our goal. We selected an environmental work group, which consisted of teachers, pupils and other school personnel. We drew up the objectives for the school-specific environment programme which would be organized by the whole personnel. The contents of field trips for grades 5-9 were defined. The pupils who would not attend the trips but stayed at school could enjoy a programme with a cultural emphasis. The days have consisted of assignments considering arts, films, music or media education, and the objective has been the development of future-oriented thinking. The development of teaching methods is a process. Recycled material has been utilized in crafts and e.g. chairs have been repaired. During visual arts lessons models for future chairs and bridges, for example, have been constructed."

"As a result of the development of the teaching methods, environment agent activity has been developed in Ala-Malmi comprehensive school. The work of the agents has been supported by including club activities into instruction. The school's environment education programme obligates us to take good care of our school, school yard and the surroundings. We are committed to preserve nature and life also for the generations to come. Our environment agents do an exemplary job for the sustainable future. Our school's environment education work was awarded an environment certificate in September 2004 making our school the first comprehensive school to receive the award. We also received the 'Preserver of the natural resources' award from the Helsinki Metropolitan Area Council (YTV)."

Various working methods can be utilized as a stimulus for growth in futures education. It is essential for the teacher to consciously consider which goals could be achieved by selecting certain working methods and which future abilities will be strengthened by the selected working methods.

Working methods which are suitable for the purposes of futures education in particular include the following:



CHART. Examples of working methods suited for futures pedagogy

Timelines: past, present and future	Drama and role play	What if -exercises
Film as a stimulus (Näkymätön Elina)	Life Game	Weak signals and their recognition
Exercises which strengthen self-knowledge	Innovation exercises	Letter for oneself in the future
Questions for people in the future or past	Mind maps	Writing opinions to newspapers
Own family history	Construction exercises	News broadcast in the future
Stories and tales	Survival track	Designing future spaces (installations)
Theme posters	Future images -written assignments	Future fashion future dimension in fairytales
Futures education as a subject	Scenario working Future rooms (preferable, realistic, threatening)	Future fashion Future dimension in fairytales
Futures education as a subject	Passport into the future	Planting a rowan tree
Future path	Future day	Consequency Wheel
Emotional colouring	Common future activities	

#### Film as a stimulus

"In the spring 2005 we were gathered in the Kaleva school gymnasium to watch the film Näkymätön Elina (Invisible Elina). As almost five hundred pupils sat in the same gymnasium, the impression of the movie was palpable. Already on the way back to the classroom my pupils discussed the film and made up possible continuations for the film."

#### Life Game

"Life Game is a simulation developed and tested at the lower stage of Kulosaari comprehensive school. The simulation makes it possible for the 5<sup>th</sup> and 6<sup>th</sup> graders to test in practice the making of life choices. The class that organizes the game builds a society where the pupils from the participating classes have adventures with a Life Card in hand

### 3 Definitions for futures education

for the duration of one lifetime. It is possible to study, get married, work, have children, buy and travel in the game. It is also possible to make bad choices: buying alcohol and tobacco might lead the player into using drugs and thus to the hospital or into premature death. Toy money opens possibilities for the players whereas the lack of it may prevent some dreams from coming true. Also fate has its fingers in the pie as it does in real life - it may bring the players money, illness, good job opportunities etc. Pupils enter the simulated life with a "child benefit" and the Life Card in hand. As the time runs out the only thing the pupils can take with them is the Life Card which includes different marks of the lived life.

The simulation helps the pupils to familiarize themselves with the possibilities the society and e.g. the Finnish education system offer them. For the purposes of the game the Finnish education system has been built to resemble the real system. The pupils will see to what extent it is possible to influence one's life with the choices one makes. There are no winners or losers in the game as there are not ones in the real life either, but the simulation offers the pupils the opportunity to see what the future might have in store for them and test the effect of their life philosophy in practice. What the player's life will become like in the simulation foremost depends on the chances the player takes, somewhat on the player's skills and a little on the player's social skills, if the player wishes to get married, for example.

Life Game has proved popular amongst pupils in the variety of schools which have borrowed and tested the idea during the Futures-project. It has given the incentive to discuss the fundamental issues of life in the school and offered such silent knowledge of life which would be impossible to offer with the help of instruction and discussion only."

#### Letter for oneself to the future

"A letter for oneself in which the pupil sets the learning goals for the 9th grade and the trump cards of adulthood have proved good work methods which inspire the pupils to work hard already at the beginning of the semester. Having the pupils to analyze the letter on the day the letter arrives (Thanksgiving day) was also an important idea.



We will keep developing this exercise with the careers adviser."

#### Own family history

"The project of the school number 24 emphasized how important it is for the children to know their family history – if the children do not know their history they will stop observing the future - they will be left outsiders in the world."

#### Future images

"Ala-Malmi comprehensive school joined the Futures-project already in the first phase as Anita Rubin worked on her PhD. The pupils drew and wrote about their future images. Their future images were very pessimistic and they often brought forward the environmental threats. There was not much light in the pupils' future images, and as a teacher I found them frighteningly dark. With the help of our careers adviser we included a more positive approach to future as part of our environment education. The pupils discussed about future occupations and the characteristics and skills that will be needed in them. A letter written for one-self by the 9th graders made the futures dimension concrete and brought it closer to them, and the pupils realized that one can and must affect one's own future."

#### Passport into the future

"An optional course I held in English 'Passport into the future' formed gradually. It was a project written in the pupils' geography notebooks during all three grades (7–9). During the three years we went through several futures education themes. The pupils found the passport assignments inspiring. They are also an excellent way to follow what happens in the world and a good way to cooperate with the homes.

Passport assignments are built on the following themes: one's relationship to nature, the value of beauty, the Finnish scenery, one's consumer and recycling habits, the growth to a world citizen, globalization, perceiving the world geographically, one's own and the family's visits abroad, I as Finn, I as a European, I in the global world, the development areas of the century and current events in the world. Only a very simple realization was needed: giving the young people a theme to discuss and asking for opin-



ions. They found viewpoints and a world that would not have crossed my mind. When a meaningful whole is built with different assignments, young people realize things and new connections without the teacher having to underline a certain viewpoint. In assignments which require consideration and forming opinions a teacher needs to provide perspectives and require long enough presentations from the pupils. Otherwise the matter will remain superficial as the pupils today are so busy. For three years the teacher needs to bear the future theme in his/her head in order to form a versatile whole of the passport assignments."

#### Planting a rowan tree

"The whole school gathered in the school yard to plant a rowan tree. First we listened to pupils reading a poem. Our rowan tree grows and flourishes surprisingly well. Have we really achieved something important and lasting?"

#### Future day

"The most significant of the separate events turned out to be the Future day. During the day each class worked in Futures- work shops with themes which support foremost art education. Gradually the Future day became a part of the pre-primary education in the kindergarten which functions in connection with our school."

### 3.3 Future education in the school curricula

The Finnish schools involved in the futures education project have found futures education especially well suited in dealing with the cross-curricular themes in the curriculum. It links the cross-curricular themes to each other and gives them a common direction. Espoo and Helsinki included a statement concerning the cross-curricular themes and futures dimension also in the municipality-specific curricula:

"Futures dimension is the general principle for all cross-curricular themes. Taking into consideration the learner's age and abilities the objectives are that the pupil will learn to

- observe and analyze present-day phenomena and operational environment, in terms of one's own life, home, Finland, and the rest of the world.
- present and argue opinions on the preferable future.





- consider the effects of one's own actions on what the future will be like.
- evaluate one's own lifestyle from the future-perspective.
- make choices and take action for the future considered preferable."

(Curriculum for the city of Espoo 2004)

"National cross-curricular themes defined nationwide are central emphases in the school's upbringing and education work, themes which integrate instruction. In Helsinki the cross-curricular themes are implemented in the schools' operational cultures – and in structures, instruction of different subjects and in the units where several subjects are integrated. The implementation of the cross-curricular themes during grades 1–9 is planned in cooperation with the comprehensive schools in the area and possibly with different cooperation partners. The possibilities and challenges provided by Helsinki and especially the schools' own surroundings are taken into consideration in the implementation of the cross-curricular themes. Futures dimension is emphasized in the implementation of the cross-curricular themes."

(Curriculum for the city of Helsinki 2003)

Futures education naturally combines the central topics of the seven cross-curricular themes: democracy, harmony with nature, infrastructure and other people, well-fare, innovativeness, sustainable lifestyle, sustainable development, individual choices, abilities for participation and action, media literacy, confronting changes, utilization of technology, responsibility and interaction. The futures dimension emphasizes a perspective which is ethically sustainable.

### 1) Growth as a person

A person has the right to grow by him/herself, but not in a way which infringes other people's rights. Futures education emphasizes an extensive sense of community which extends to other nations and future generations. Knowing and discussing the UN's Convention of the Rights of the Child provides a good starting point for working.

### 2) Cultural identity and internationalism

In futures education other cultures are considered richness. Violence is not approved and immigrant problems are not romanticized. Stories and tales provide a good, authentic way of coming to terms with other cultures.

### 3 Definitions for futures education

It is advisable to invite family members of immigrant pupils or experts recommended by them to join the school's theme days for different cultures.

#### 3) Media skills and communication

Children will learn to utilize media so that they are able to acquire the information they need and transmit important messages to others. Futures education emphasizes the utilization and values of media and also media criticism.

#### 4) Participatory citizenship and entrepreneurship

The starting point for futures education is citizenship education. Belief in democracy, oneself and the future is essential. Education emphasizes a responsible attitude towards one's life and the motivation to do one's best. Citizenship education is based on the right to influence, not just on adaptation. Having an impact requires placing the common interests before one's own interests. Citizens can influence through their everyday acts, e.g. by their decisions as consumers, which can reach even into global issues.

Futures education encourages into entrepreneurship, into committing to what one has started and into taking responsibility. This will manifest itself in persistence and entrepreneurship. School work guides the children to set goals for oneself and also to evaluate how well they have been achieved. Children are encouraged to be innovative and apply creative methods. The school emphasizes the importance of arts and crafts and increases the creative touch in other ways, too.

Entrepreneurs self-employ themselves and possibly become successful by their businesses. Futures education emphasizes responsibility and the ethical aspect of entrepreneurship. Futures education guides the pupil to examine one's choices as a critical consumer and encourages the children to become demanding customers.

In order for the method to be child size, entrepreneurship needs to be limited into the school level at the lower stage of comprehensive school; taking responsibility for one's school work and learning, trying, and being





persistent. If and when citizenship and entrepreneurship end up in conflict, futures education places the common interests and responsibility for the society before the profits achieved from entrepreneurship.

5) Responsibility for the environment, well-being, and a sustainable future

Futures education emphasizes the social responsibility and concern for the well-being in the future. Nature preservation has a significant absolute value, but the relationship with the nature is not romanticized in futures education. Environment is not something studied only in the museums, but we need to make it better for everyone. The credibility of nature preservation is increased if the requirements include real calculations about the benefits. We want the human race to live. The alternatives are discussed from different viewpoints. Futures education cannot approve violence even when its use is argued in favour of protecting the nature.

Globalization is a difficult issue because of the value conflicts it entails. The changing world can be discussed for example from the viewpoint of different roles: as a father and mother, citizen, representatives of different occupations, consumer etc. However, children need to be protected from the troubles of adult lives.

Taking responsibility needs to be child size: responsibility starts from one's own desk and classroom. Children are taught to make everyday choices also at home, e.g. to reclaim gift wrappings. Grim pictures are avoided. Children also need to be protected against issues that are too heavy for them. Visits to refuse dumps broaden the mind. The present and past of one's own surroundings function as the starting point.

What is required from the adults in terms of futures education is that they learn the abilities to confront changes and bear uncertainty.

6) Safety and traffic

Safety and the freedom of movement are also central values in futures education. Futures education emphasizes the importance of a safe future. The issues that need to be discussed are complex, but the children's feeling of basic security must be maintained. It shall be made clear for the children that the adults are doing

### 3 Definitions for futures education

their best in order to prevent the wars, disasters and environmental catastrophes and to minimize the damage. It makes it easier for the pupils to have faith in the future if the teacher presents news of success.

Futures education values peace education. In futures education the children will find possibilities for the new preferable future and it will strengthen their desire to have an impact on their future and on the future of the world with their actions.

In terms of traffic the focus is foremost on the forms of transport in the future.

Since futures education needs to be child size, safety always signifies safety in the immediate neighbourhood. We must see to it that bullying is forbidden. Safety also signifies mental safety. This requires that the children are taught the abilities they need in confronting changes. The starting point could be the prevention of bullying, for example.

#### 7) Technology and the individual

Future-oriented thinking helps to understand how the things we use have been produced and how technology is utilized meaningfully. Along with enthusiasm for technology futures education brings up the consequences of technology.



# Futures Education Project Futures 2002–06

Passport to the Future is a structural idea in terms of the curriculum, which was developed during the project. Pupils collect markings of the future skills in the passport.

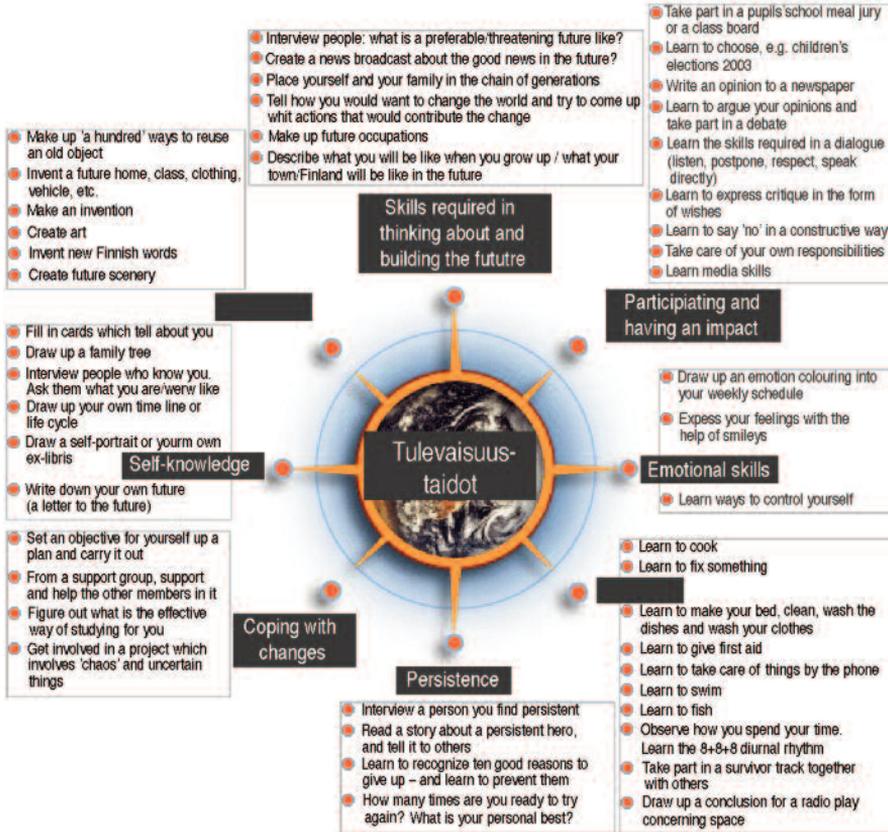


FIGURE 5. Example of the futures project

## 4 Futures education and pupils /students

**F**utures education challenges one to ponder on how the children and young people could function in active roles in which they would learn to have an influence and be responsible for their own class and school. Openness, sense of caring in the community, trust for the pupils, and respect for the pupil's rights are characteristics of a future-oriented school.

Authentic problem situations function as possibilities for growth. If dialogue, listening, negotiation and the importance of finding a solution that is relatively good for all parties are emphasized in solving everyday problem situations, the children will learn important principles and practical models for the future.

The pupils at the lower stage in Kulosaari comprehensive school were asked to write down their images of the future before and after providing them lessons on futures education. It is visible in many writings that pondering over future strongly supports the growth of the pupils.

Before futures education lessons the pupils had many fears about the future and the messages conveyed through media had painted a chaotic and threatening picture of the future:

"I am afraid of wars, violence and drug dealers. I am afraid that they will increase in the future. The sun might explode and we could all be burned to death." (pupil)

"Future is horrifying and it is frightening to think how mom will die and, like, I will die, too. Sometimes they have taught us that we should think positively about the future, like, as a possibility, but it is so much easier to say it than do it." (pupil)

After discussing the future together and practicing future abilities and future actions, the pupils' thoughts seem to have changed considerably:

"What was significant in this project was self-confidence. Now I believe in my capabilities. Sometimes it has been difficult, and after you overcome the situations, one knows that one can overcome them in the future, too."

"The project meant a lot to me. Earlier future was frightening,



but now I'm not afraid of the future any more. Future is a bright and happy thing to me. I don't need to go to the future, but instead, I can go and I want to go to the future, because this project has taught us that also my opinions and thoughts can have an impact on the future."

"Future is for all of us and it provides all kinds of opportunities. Everything is better in the future and I am going to accomplish a lot."

It also became clear during the project that the attitudes towards the future are slightly different in each country. The society surrounding them and the information conveyed through the media affect the children's minds. Sotsi, for example, was going through an era of vigorous building and improvement of the society at the time of the project. Therefore the pupils' visions of the future and expectations for the future were more positive than those of the Finnish pupils already from the start. The change in their thinking during the project was thus not that considerable than that of the Finnish pupils. However, the direction was similar.



## 5 Evaluation of the project's effect

The project was evaluated through self-evaluations, queries and theme writings by the participants. The general evaluation of the success of the project was very positive.

One sign of the project's success is the fact that all except one of the schools which joined the project from the start were committed to the project for its duration, and also many new schools wanted to join the project along the way. However, it was not always easy for the new schools to grasp the idea since the ideas were born earlier, as a result of the shared learning process. Still, as there is no ready model for futures education anyone can carry out new futures education projects by designing the project on the basis of the experiences of the participant schools or own ideas.

The project has been rather long and therefore it has offered a possibility for real pedagogic development and deepening of ideas. During the six-year futures education project its members have learned about futures education and its methods. The project was considered important and rewarding by the pupils, teachers, principals and the personnel in the local education departments. It was a shared learning experience. The most valuable accomplishments were considered to be the extent to which the pupils' skills in future-oriented thinking and their belief into future were developed. According to the participants' estimate it seems like futures education can affect the pupils' self-knowledge, emotional skills, participation, survival skills, control changes, creativity and persistence.

Futures education has taken roots in the schools' operational cultures in the Finnish schools through different methods, projects and curriculum texts. It was considered to suit especially well into the implementation of the cross-curricular themes.

The exchange of opinions and the seminars were considered productive and broadening. Visits to Sotsi and the seminars held with international guests in Helsinki were regarded as good by the participants. Especially at the early stages of the project the Russian principals were very





committed to the work. Keeping in touch with the Russian schools was somewhat hindered by the lack of lingua franca and the turnover of the personnel. Cooperation with the Swedish schools and with a Norwegian and a British school was left relatively short. In Sweden citizenship education includes the same things and the schools were looking for new ideas for this work in particular.

The Finnish schools gained a lot from the cooperation between municipalities. The teachers got familiar with other schools and teachers in the Helsinki area. Visiting other schools and their Future-days provided the opportunity for pedagogic discussion. In seminars teachers and pupils presented their products and projects with pride. The concrete and illustrative knowledge which was gained through exhibitions became shared knowledge which functioned as the basis for work as each school continued their projects with new ideas. The pedagogic discussions which took place in the seminars were considered productive and even unique.

At the final stages of the project the schools were asked to write about how they experienced the project. It was hoped that essays would be written by principals, teachers and pupils. A rough text analysis was done for the essays in order to examine the factors that were important for the writers.

#### The interrelation of the project and the curriculum

"The project was implemented in the curriculum work already during the work phase as it provided the framework of action, and it was also implemented in the outcome. Clear emphasis on future education was added into the contents in Espoo comprehensive school."

"The best thing about the project was that we got the futures dimension included in the schools' underlying principle and in the cross-curricular themes."

"The curriculum guidelines for Helsinki city emphasized the futures dimension in the cross-curricular themes. Later we got feedback on our cross-curricular themes from education advisor who told us they were among the best in the whole town. At the conclusion of the project future-orientation is still alive in our curriculum and an underlying principle. As we were planning the comprehensive school with the upper stage we also got some upper stage teachers involved."

### Concrete model is encouraging

“The high point of the project was meeting David Hicks, a researcher of European futures education in Bolton. There we also saw how futures education and dimension had become a part of the school's underlying principle and curriculum in the Smithills School. With the teachers and principals in the Swedish Katrineholm school we noted that they deal with similar issues during citizenship education than we do.”

### Ideas about methods and operational culture

“We have aimed and partially succeeded in strengthening the pupil's participation in futures actions by different theme days and by giving them the opportunities of influence (deciding how the school yard will be equipped, student parliament, student union, deciding which toys will be acquired to occupy the pupils during the breaks, plants).”

### Outlining futures-oriented thinking

“It is a central idea in our Futures-project that each pupil would understand that all actions that are made have an impact on the future. All choices are future choices.”

### From independent work to team work

“Commitment has required team work and the forming of work partners and teams. Futures education has functioned as a theme uniting the subjects in the whole school.”

### The value of futures education

“The basic idea about the orientation towards the future has been important in terms of the project. Contemporary events in the world might seem frightening, but the certainty about how necessary and beneficial it is to discuss future with the pupils brings a sense of safety for life and future. Without the past there is no future. For this reason we have taken the Oak of Finland theme, which draws its ideas from the past, as the basis for building the future. In our opinion it is important to understand one's past, the culture and differences in order to be able to understand the future.”

“I find participating in the Futures-project meaningful and useful in terms of my work and the school in many ways. In the literal sense of the word futures education is so closely connected to the basic mission of the school. Familiarizing with futures education has provided tools and a conceptual framework for the operations of the whole school.”



## 6 Ten good practices



**T**he experiences gained during six years can be summed up as the following good advice for all those inspired to develop futures education:

- 1) With an open mind familiarize yourself with the futures education project carried out all over the world. There is no need to start from scratch. Invite futures education experts to support your project. Summarize your vision: what makes futures education futures education.
- 2) Base the project on the principle of shared learning. Study the theory and try out new methods and exercises.
- 3) Arrange work seminars on a regular basis, in which you infuse enthusiasm and belief in the idea. Present the concrete ideas you have. Discuss and cooperate.
- 4) Document the work in progress. Take pictures, record videos. Collect exercises into portfolios. Keep a log book.
- 5) Integrate futures education into the other projects carried out in the school. The schools suffer from chronic lack of time. Set an official status for futures education and reserve time for it in the curriculum and in the teachers' work days.
- 6) Organization is essential but it needs to be light. The project needs a steering group. Try to acquire as many players as possible to join the project. It is advisable to found a separate project group in each school.
- 7) Spread the idea in your school emphasizing its voluntary nature. Utilize teams. Create versatile and multiple opportunities to participate either in simple activities or large scale projects.
- 8) Keep the project alive through versatile activities: seminars, study visits, familiarizing with other project schools, social evenings, lectures, fairs...

## 6 Ten good practices

- 9) Take seriously the problems the new project schools might have in committing to the project. Draw up an agenda for spreading ideas.
- 10) Aim at including ideas which support futures education into the established practices and principles of the school.

Have a good journey with the Futures!

