



FINNISH NATIONAL
BOARD OF EDUCATION

The school of opportunities

– towards every learner's
full potential



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I am balanced
and unique

I take others
into account



Knowledge
and skills are
my tools

I can express
myself in
multiple ways

Communication
skills are my
strengths

I create, take
interest and
gain insights

The whole
world is
within my
reach

I participate,
influence
and take
responsibility





Preface

This publication introduces views and deliberations into debates about the development of basic education. Finnish basic education has attracted international interest for almost ten years now, because international comparisons of learning outcomes have shown Finland to be among the best performers. We are one of the leading countries in the world in terms of education. We will do our very best to maintain the high standard of teaching and learning opportunities in the future as well. First and foremost, we want to produce well-being and opportunities for success for Finnish children and young people through education.

Social, intellectual and technological change challenges education and teaching in many ways. Finland and the Finnish education system must be ready to respond to these challenges. As part of change, the school must also continuously review its way of structuring information, understanding learning and carrying out operations.

In order to be able to determine the course for development, we need to analyse the challenges facing Finnish basic education. We have access to plenty of national and international research and assessment data, which not only highlights the strengths of our basic education, but also provides signals for current and future challenges. Meeting these challenges calls for reform of basic education.

Development work of basic education intertwines with development of the education system as a whole. The success of this work is decided by co-operation between several different stakeholders and their commitment to shared objectives. Development of

education must be seen more consistently in terms of development of the entire education system and as a continuous process.

The idea of the need for and purpose of this publication emerged through interaction with the development programme of educational management and the development network of global leadership. Views on development of Finnish basic education are thus also reflected in international debates concerning education. This publication aims to promote and support valuable development of Finnish basic education. I'd like to express my thanks to experts who contributed to the work of Basic Education 2020 – National General Objectives and Distribution of Lesson Hours. That work is the basis for this publication. This publication was edited by Director Jorma Kauppinen (Finnish National Board of Education, FNBE), Director General Sakari Karjalainen (Ministry of Education and Culture, MEC), Director Kristiina Kumpulainen (FNBE), Principal Päivi Laukkanen (City of Tampere), Deputy Mayor Aulis Pitkälä (City of Espoo), Director for Service Provision Päivi Raukko (City of Hämeenlinna), while the main responsibility for drafting rested with Senior Adviser Erja Vitikka (FNBE), and Counsellors of Education Ritva Järvinen and Irmeli Halinen (FNBE). The publication is a result of active co-operation and I would like to express my heartfelt thanks to all the partners involved.

Timo Lankinen

Director General, Finnish National Board of Education

Basic education: the cornerstone and future of Finnish competence

LEARNERS AND THE COMMUNITY

The task assigned to basic education is to support the growth and development of every learner, strengthening their operating opportunities and involvement. Learners are seen as being individuals, whose age and capabilities form the starting points for provision of education.

Learning is about growing towards an active member of the society. Learning is a holistic process, where individuals grow into the culture, values, methods and tools of their society. The comprehensive school still remains the unique environment in Finnish society where an entire age group is learning about being and doing together.

Basic education supports learners' growth into humanity and into ethically responsible members of society, and provide them knowledge and skills needed in life. Education is expected to promote civilisation and equality in society and students' opportunities to participate in education and to develop themselves during their lives.

EQUALITY AND JUSTICE

Educational equality is a key premise of Finnish basic education. A strong national vision of the importance of equal basic education enables social development and prosperity. Equality of education is equality of opportunities – no systematic differences between genders, regions or population groups may occur in terms of access to education and learning outcomes achieved.

The objective of basic education is to guarantee sufficient equality in education throughout the country. Educational equality is supported in many different ways. The basic prerequisites for students' learning are created by providing education and support and guidance as required free of charge, offering free school meals, health care, school transport, learning materials and tools, as well as student welfare and other support services. Caring for students in educational and personal terms has become one of the leading educational principles alongside a high-quality curriculum and competent teachers.

A further premise for educational equality is respect for the diversity of individuals. People's aptitudes, objectives and educational needs differ from each other. Equal opportunities for education do not mean the same education for everyone, but equal opportunities to develop one's own aptitudes and personality. The role of the education system is to support and bring out each individual's own abilities and help their development.

MOTIVATING LEARNING AND EFFECTIVE COMPETENCE

The role of basic education is to provide individuals multiple learning paths, offering them capabilities for further studies and participation in society. The most essential objective of basic education is to support lifewide and life-long learning. This means building and reinforcing learning skills, motivation for learning and school satisfaction.

The role of basic education in social and international development is highlighted constantly, as it builds the foundation for citizenship in a knowledge society. Safeguarding citizens' well-being requires retaining and improving Finnish competence in a globalising world. Competence is Finland's most important resource and it is imperative to attend to its high standard on a continuous basis. This requires setting objectives for school development that aim at supporting every learner to reach their full potential and to improve outcomes of learning for each individual student.



Why good is not enough – challenges for basic education

The necessity for change

Changes in the world challenge learning and education in the school. Changing society, work and education call for new ways of being human, doing, and mastering knowledge and skills – new citizen skills. In order for comprehensive schools to reinforce these skills in their students, they need to review and reform operations and the objectives, contents and forms of education.

New skills and competences are important for individual futures and national welfare. There is an urgency to understand the importance of preparing students to live and succeed in globalised world. There is especially need for higher order skills and skills that value creativity, originality and thinking.

Are we falling behind?

The operating culture of the school is strongly influenced by the way it defines information, knowledge and learning. The knowledge learned at school is not linked with the learners' everyday life. School education is criticised to place more emphasis on command of individual pieces of information. The amount of information and management of knowledge have become challenges. The comprehensive school has become troubled with information overload: the large amounts of curricular content have burdened lessons and there is not enough time for understanding and learning. The mismatch between the amount of content and the time available creates instructional practices that do not advance high-quality learning.

Today's schoolchildren are required to be creative, flexible and able to absorb new things quickly in the future. The role of school



Tomorrow's schoolchildren are required to:

- be able to absorb new things quickly in the future
- change and cope with uncertainty and changes
- have the ability to distinguish between essential and unessential
- practice solving problems and critical thinking
- assess their own actions as part of society and a global operating environment

is to promote students' capabilities to manage change and cope with uncertainty. They also need the ability to distinguish between essential and unessential, reliable and unreliable information, and to process information and experiences extensively. Already during basic education, students need to practise solving problems, thinking critically and assessing their own actions as part of society and a global operating environment.

Alongside basic knowledge and skills, students need more and more capabilities for effective communication, interaction and new types of work, capabilities for problem-solving, analytical and creative thinking, capabilities for participation and influence, capabilities for self-knowledge and responsibility, as well as manual and expression skills. Instead of being bound to any one subject, these skills form an essential part of any learning process. These developments set new challenges in terms of how people work at school and how to process, interpret and construct information and produce contents. There is a risk that education may fall behind development based on a new conception of knowledge and that it may not be able to provide young people with the skills that constitute tools supporting more in-depth understanding and creative use of what they have learnt. People will need these skills in the future in studies, working life and as active citizens.

Do students like school?

Well-being at school is related to school conditions, social relationships, students' health and opportunities for self-fulfilment. Students' well-being is determined by organisation of the physical school environment, teaching arrangements, breaks and meals. On the other hand, interpersonal relationships at school play a significant role in terms of well-being, including relationships between teachers and students, home and school, and school and the surrounding communities and the quality of their interaction.

School satisfaction is influenced by the types of opportunities provided for students to study in accordance with their abilities. This is closely related to students' motivation to learn. Students



Finnish students' satisfaction at school is at a lower level than the international average

who feel that they belong to the school and that teachers listen to and encourage them will also do better at school. It has been found that taking personal interest in and setting realistic expectations for students is connected to better satisfaction at school.

In international terms, the results and success of Finnish education are significant, but our education has not been able to promote students' school satisfaction. Finnish students' satisfaction at school is at a lower level than the international average, even though the majority of students are reasonably happy at school. According to the 2010 School Health Promotion Study, for instance, 5% of eighth- and ninth-graders do not like going to school at all.

Does education really make use of information and communications technology?

The opportunities provided by new technology-focused learning environments, tools and materials are significant. Some local authorities invest in educational technology. At some schools, state-of-the-art technology, such as interactive whiteboards, e-learning materials and various mobile devices, is beginning to be part of everyday life. Regardless, Finland is currently around the European average and the last of the Nordic countries in terms of educational use of information and communications technology (ICT). International and national studies have shown that the ICT is not adequately used in education.

There are major differences in terms of students' access to ICT. Some schools have modern equipment – while others cannot offer proper equipment. There are also considerable variations between schools even within municipalities. Almost 80% of schools have less than ten students per computer, but there are some schools with as many as more than 40 students per computer. Schools are different in ICT use in terms of both equipment, on the one hand, and purely with regard to practices, on the other. Individual teachers and teacher groups use ICT in education resourcefully and creatively – conversely, some teachers are quite sceptical about the benefits of using ICT in education. The dissemination of innovative pedagogical practices has turned out to be challenging.



**There are major differences
in terms of students'
access to ICT**

It is an urgent requirement for schools to introduce educational technology. Today's learners live in a society that is permeated by ICT at all levels. Students obtain skills outside school at an early stage and on their own. Today's students have excellent IT capabilities in terms of recreational use of technology. These citizens of the information society are completely adept at using technology, but not necessarily in a most productive or desirable way. ICT education at school should therefore focus on information and media literacy.

Why are there increasing differences in learning outcomes?

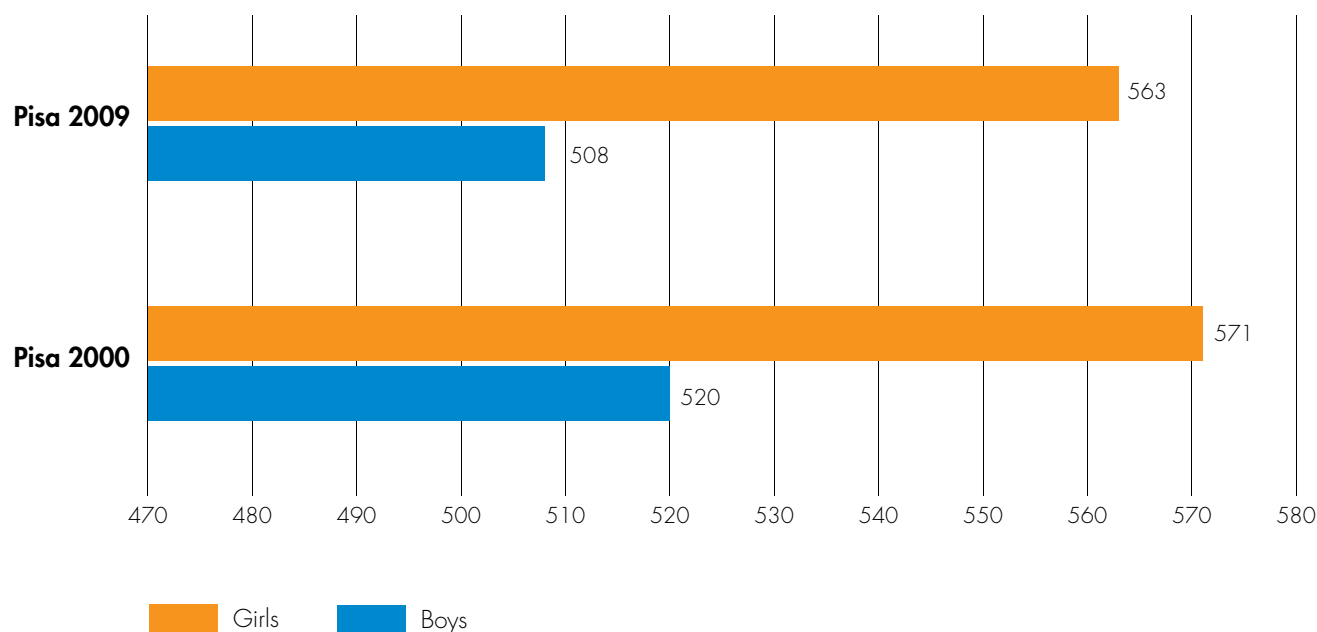
The performance of Finnish comprehensive school students has been repeatedly ranked at the top of the world in international comparisons. However, national and international assessment work has shown that there are increasing and considerable differences in performance between students and schools. For example, Finland has the highest differences between girls and boys in terms of reading literacy among OECD countries. There are also regional differences in performance: in PISA surveys, Central Finland sticks out from the rest of the country due to its poorer performance, in particular in reading literacy. Differences between rural and urban schools are usually insignificant, although these are systematically in favour of urban schools.



There are considerable differences in performance between students and schools in different areas

National assessments of learning outcomes clearly show that differences between schools are increasing significantly throughout the country. The grades awarded to students are not consistent with learning outcomes in all respects. In mother tongue, for example, differences between schools are growing faster in learning outcomes than in grades awarded to students. It must be borne in mind, however, that increasing variations between schools are not necessarily caused by schools. There is also evidence indicating that the underlying reason is student selection – i.e. the demographic structure in the areas where schools are located.

Changes in reading literacy among Finnish girls and boys according to PISA surveys.



Are schools able to relate to diverse learners?

The fact that children come to school from families that are different in terms of social, cultural and financial resources is reflected in everyday school life and teaching work. Gender differences, individual developmental differences and students' different backgrounds and learning styles must be taken into account in instruction. Students in the same classroom have varying learning abilities and competence. Instruction should provide students with appropriate challenges and experiences of success.

The majority of Finnish children are doing well. However, changes in society are also visible in those communities where children and young people are growing up and in the structures and operating methods of their own families, friends and relatives and day-care centres and schools. There are more and more families that are not able to fulfil their task of bringing up their children for one reason or another. Social problems spill over into schools as ill-being of young people, children and families.

The number of students admitted to special needs education has increased during the 21st century. In 2009, there were 47,000 students directly admitted or later transferred to special needs education, accounting for 8.5% of all students in basic education. More than 127,800 students received part-time special needs education, equating to 23% of the total number of students. The two most important grounds for part-time special needs education were dyslexia and learning difficulties in mathematics. Boys accounted for 60% of students in part-time special needs education. The most common grounds for admission or transfer to special needs education have included i.e. developmental delays, learning difficulties due to dysphasia, and varying degrees of cerebral dysfunction or physical disability.

As a whole, children's and young people's psychosocial welfare services represent a growing challenge for development of basic education. Approximately one in five young people suffers severe symptoms of a mental disorder during adolescence. Young people's mental disorders are characterised by multiple problems and concurrence of several disorders. The most common symptoms include mood, anxi-



Children's and young people's psychosocial welfare services represent a growing challenge

The number of students admitted to special needs education has increased

ety and behaviour disorders and substance-induced disorders. A significant proportion of young people showing psychological symptoms are not, however, taking advantage of any relevant services. Psychosocial ill-being accumulates and the youth population is strongly polarised in terms of many health and well-being indicators.

Do teachers cope when the work is changing?

Teachers' work is subject to diverse, increasing and also conflicting demands and expectations. Teachers ought to be facilitators of learning and builders of new learning environments. Provision of learner-centred instruction creates new types of needs for differentiation and use of various teaching and learning methods. The work is also essentially influenced by changes in the social structures and increasing multiculturalism, changes in the world of work and even the threat of violence and crisis situations. Teachers feel that their educational task has become more difficult. There are less and less opportunities to go into details without time pressures and provide students with personalized support.

Teaching and education should also take account of changes brought about by technological developments to the use of working methods, materials and tools. Communication via different media shapes the character of studying and learning, which in turn has a bearing on teaching as well.

Teaching work also involves more and more co-operation with different stakeholders and partners and pedagogical management in multidisciplinary co-operation networks. In addition, teachers are expected to play an active role in development projects, produce reports and follow effects. Teachers are not capable of meeting these demands and expectations on their own. It is absolutely necessary to develop schools collaboratively. In Finland, collective competence is not very strong as yet – our operational culture rests more on doing things alone.

The attractiveness of the teaching profession is one key challenge when aiming to secure the availability of competent and qualified teaching staff. Reinforcing teachers' well-being at work requires a per-



The attractiveness of the teaching profession is one key challenge when aiming to secure the availability of competent and qualified teaching staff

ceived balance between the inputs and outputs of work and reasonable demands on the school and teachers. Working conditions, work equipment and opportunities to receive support through continuing training, workplace supervision and working communities influence teachers' coping at work. Only half the teachers in Finland have personal computers at their disposal at work – there are also teachers who have no access to a computer at their workplace. The opportunities of teachers to participate in continuing training have varied according to teacher groups and to the educational institution where they work. Continuing training has also paid relatively little attention to changes in training needs in the different phases of teaching careers.

Principals are their schools' pedagogical leaders, developers and networkers. Principals are expected to advance development of pedagogical thinking and the school's operational culture. Their key duties also include ensuring that teachers can cope with their own work. Principals play an important role in supporting newly graduated young teachers as they start their work at the school. They are also responsible for ensuring that teachers receive support through continuing training in accordance with their needs. On the other hand, it must be borne in mind that principals also require resources and diverse support to maintain and develop their professional skills. Principals' job descriptions have been constantly expanding and they feel that there is not enough time for pedagogical management.

Is there sufficient equality in basic education throughout the country?

At present, local authorities and other education providers are quite independent operators with extensive decision-making powers. National rules and regulations leave plenty of latitude for education providers in terms of provision of education. Topical challenges relevant to development of Finnish basic education are set by the ageing population, differentiating regions and increasing immigration. Demographic changes and increasing regional differences will create debates about whether investments required for basic education are set against the needs of the ageing population, for example.



Differences in resources

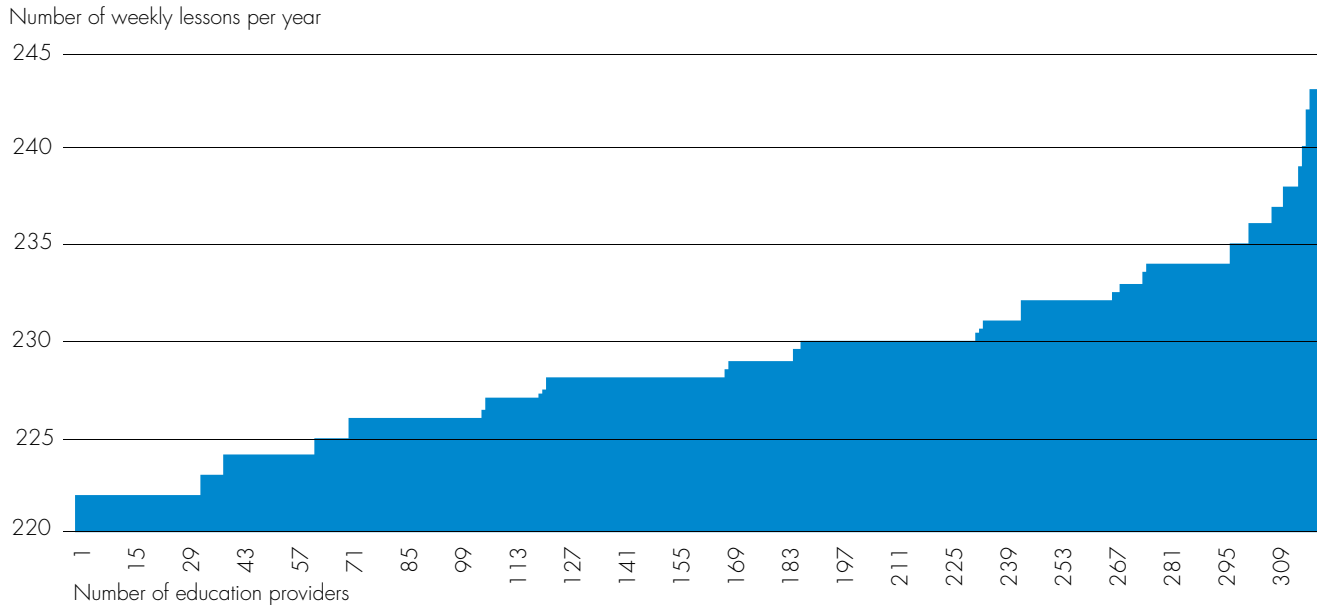
- the total number of lessons received by students
- the language programmes
- the optional courses available in basic education
- learning environment
- optional courses that students can study
- supporting measures

Recent assessment and follow-up studies have revealed growing differences in learning outcomes, student welfare services, and children’s and young people’s psychosocial welfare and health care services. There are differences between genders, regions and population groups. Based on research, it is evident that, as education providers, not all Finnish local authorities have sufficient resources or political will to provide high-quality education, which puts students in an unequal position.

A key problem relating to availability of basic education is the variation in the total number of lessons received by students. Some education providers (about 20% of local authorities) offer the minimum number of lessons specified in the Government Decree on Distribution of Lesson Hours for all grades. The majority of providers, in turn, provide 1–2 weekly lessons per year over and above the national minimum requirement for all grades. As a result, the number of lesson hours received by students during the entire period of basic education may vary by as much as 500 hours between education providers. On the whole, the time spent in instruction in Finland is less than in other OECD countries. Students’ school days are very short in the first and second grades in particular, averaging 3.8 hours.

It is difficult to safeguard regional equality in terms of the optional courses available in basic education. Students are put in an unequal position, because education providers decide on the scope, content and quality of studies. In other words, each local authority and school decides the optional courses that students can study. This

Variation in students’ total number of weekly lessons



means that students are left with a small choice from those courses or studies available from their education provider. Guaranteeing more equal options would require stronger national steering.

The language programmes offered by education providers are essentially involved in provision of options. There have been various projects aiming to diversify language studies: however, language studies have become more one-sided, which is largely due to limited provision. Some education providers have clearly cut down on the languages on offer in recent years. Only a small proportion of them offer the opportunity to start language studies in a language other than English. In 2009, more than 90% of students studied English as their first foreign language, while Swedish, French and German were each only studied as the first foreign language by 1% of students. Optional A2 language studies have been discontinued in dozens of municipalities.

Along with domestic migration and urbanisation, the number of children and young people of compulsory school age are strongly increasing in certain sub-regions, which makes it necessary to consider the adequacy of facilities and qualified teachers, for example. At the same time, sub-regions suffering from depopulation find it increasingly difficult to guarantee access to basic education and the quality of teaching for smaller numbers of students. In basic education, 90% of teachers and principals have the statutory professional qualifications, however, with the exception of special needs teachers. The proportion of special needs teachers lacking formal qualifications is clearly higher among small providers with less than a hundred students than among their larger counterparts.

Local authorities have increased their co-operation in provision of many services, such as special needs education and instruction in less common languages. Municipal mergers and the resulting stronger local authorities have improved opportunities to provide student welfare services, for example. However, availability of student welfare services is not realised equally throughout the country, as there are significant differences between locations and schools. Only one third (34%) of schools have a sufficient number of public health nurses. One fifth have no school psychologist services, while almost one fifth lack social workers and 14% do not offer any school physician services.



Premises and objectives for development

School plays a key role in building society. Only through education is it possible to create new high-level competence, which forms the foundation for society to continue to develop and prosper. Basic education will play a more and more prominent role in social development and the international race for competence, because it is expected to create the foundation for citizenship in a knowledge society. Basic education must enable learning, development and self-fulfilment for entire age groups and encourage them towards lifelong learning in various learning environments. Development of basic education calls for increasing resources and a nationally shared vision for the premises and objectives of development. In the light of current research and assessment results, the factors discussed in the following passages will emerge at the forefront of development.

Motivation and meaningful learning

Reform of basic education aim to increase the meaningfulness and motivation for learning. Students need to be helped to understand the necessity of learning which is related to the extensive skills required in life, solving real-life questions and being able to function in various situations.

Our way of life, society and business life require creativity, inventiveness, flexible thinking and new ideas, technologies and materials. Education is expected to encourage students' entrepreneurship, creativity and innovativeness. The significance of education providing individual support, encouragement and support for multiple talents is increasing. Education should support and bring out each individual's own abilities and help their development.



Reform of basic education aims to increase the meaningfulness of studies and motivation for learning

Students' expertise may only develop if they have a genuine role as participants in teaching situations. The learning process is at its best when students and teachers work together to seek information, explore things and create new knowledge, skills and visions.

Instructional practices must be developed to support students' equal learning opportunities. All students must be provided with equal opportunities to acquire the knowledge and skills required in society and working life. Girls and boys must be supported through teaching and guidance counselling so as to allow them to make subject, educational and career choices based on their individual qualities, strengths and motivations. This is partially influenced by choices of learning environments, working methods, learning materials, tools and assessment practices.

Citizen skills as objectives of teaching and learning

The key task of basic education is to educate balanced and skilled citizens. Citizens of the future need skills that help them function in a changing world, work together with others and distinguish the essential knowledge from the unessential.

Our views of knowledge and learning have tended more and more towards a practical approach. Skills acquired by doing things and individual experiences are understood as constituting the most essential premises of learning. A modern society and the working life require new skills in being human, information management and interaction. The key is to learn strong basic knowledge and skills, complete with learning how to apply knowledge and competence to various situations and assignments.

Future society is approached in terms of competencies: extensive citizen skills required in a society of the future. Skills have become one of the key ways of structuring education in different countries. Extensive international projects have aimed to define the key capabilities that individuals need in order to be able to take an active part in working life and a democratic society.

Objectives are the primary premises of implementing education. The objectives of education need to be set so as to open them up for each teacher as clear guidelines of teaching work.



A modern society and the world of work require new skills in being human, information management and interaction

The objectives of basic education may be framed in concrete terms as citizen skills that cover all subjects. Citizen skills refer to extensive functional capabilities, which combine knowledge, skills, attitudes and values with the ability to apply what has been learnt. Citizen skills are structured to support the construction and maturity of the learner's identity. The citizen skills required in society may be structured into five skills groups as follows:

THINKING SKILLS

- problem solving, reasoning, argumentation and making conclusions
- critical, analytic and systemic thinking
- creative and innovative thinking

CRAFTS AND EXPRESSIVE SKILLS

- physical coordination
- skills for expression and manifestation and courage
- planning and production skills
- inventiveness, experimentality ja use of imagination

WAYS OF WORKING AND INTERACTION

- skills for acquiring, managing and utilizing knowledge
- skills for communication, collaboration and negotiation
- skills for conducting independent, long-term work
- time-management and flexibility
- entrepreneurship and management of change
- usability of ICT and technology

SELF-AWARENESS AND PERSONAL RESPONSIBILITY

- self-knowledge and self-reflection
- concern about personal health and safety
- ethicalness, responsibility and function as a member of community
- good behaviour and empathy

PARTICIPATION AND INITIATIVE

- perceiving of the society and community
- initiative and management skills
- skill for acting constructively
- acknowledgement of difference and different view-points
- media skills
- skills for thinking and building the future

Integration of contents

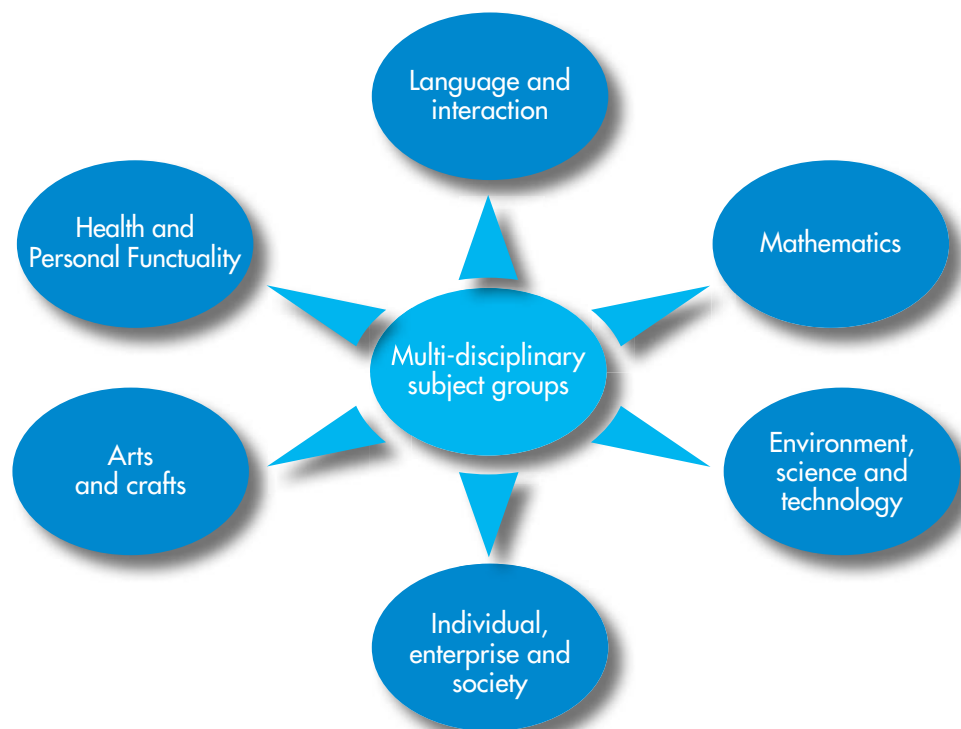
The task of basic education is to help students perceive the relationships between different branches of knowledge and build their own understanding of the world. In order to succeed in this respect, the subject matter needs to be selected and shaped to be closer to students' everyday lives and spheres of life. This involves the challenge of identifying the essential objectives and contents of education and integration of subject contents.

The quality of Finnish basic education is based on a high standard of pedagogical expertise, solid subject management and the combination of these two aspects. All subjects serve the common objectives of basic education, in addition to which each subject has objectives relating to its own branch of knowledge. When aiming at the integrity of basic education, it would be sensible to group subjects into more closely interrelated curricular modules with their own specific objectives. Grouping would reinforce synergies between subjects falling within the same group and students' opportunities to learn more integrated wholes of knowledge and skills.



The subject matter needs to be selected and shaped to be closer to students' everyday lives and spheres of life

Studies included in the basic education curriculum could be defined in terms of multi-disciplinary subject-groups and their constituent subjects, for example. Based on different branches of knowledge, it would be possible to define the following six subject-groups:



Priorities of future learning

The priorities of basic education reform are determined on the basis of both current development needs and the competence required in the future. The priorities for development of education include:

- **strengthening of reading and writing literacy, languages and communication.** This means highlighting the significance of comprehensive reading skills, writing skills, and diverse communication, interaction and expressive skills. Requirements of proficiency in foreign languages are increasing.
- **increasing scientific, technological and mathematical competence.** Competence in these fields forms the basis for the development and well-being of Finnish society, while more and more occupations require high-quality skills relating to these areas. Competencies relating to logical thinking and technology are also needed in everyday life, as is the ability to apply scientific and mathematical knowledge. On the other hand, there is growing concern about climate change, the sufficiency of natural resources and sustainable development and solving these problems requires scientific understanding and utilisation of technology.
- **increasing civic competencies, participation and initiative skills.** The prerequisite for civic competencies, participation and influence is a better understanding of one's own community and society and the resulting interest in societal phenomena. In the future, people will need more and more competencies relating to changes and a more entrepreneurial attitude.
- **strengthening artistic expression and production skills.** The aim is to strengthen those areas of competence that are related to self-expression and interaction, aesthetic structuring of the environment, artistic production and planning processes.



The priorities for development of education include:

- strengthening of reading and writing literacy, languages and communication
- increasing scientific, technological and mathematical competence
- increasing civic competencies, participation and influencing skills.
- strengthening artistic expression and production skills
- strengthening health and functional capacity

- **strengthening health and functional capacity.** The aim is for schools to provide students with the skills and capabilities to look after their own health and well-being. The aim is to strengthen competencies relating to health, physical education, nutrition, economic thinking and life management. This in turn will create a good foundation for strengthening the population's well-being. A healthy and functioning population and a health-promoting environment are key resources that make it possible to build well-being and lifelong learning.

Deepening of competence and optionality

The basic education curriculum consists of obligatory studies and optional studies. The majority of each student's studies are made up of obligatory studies, which have been assigned common objectives concerning all students. Obligatory studies form the basis for capabilities for further studies. The purpose of optional studies included in basic education is to enrich students' studies and to strengthen their capabilities for further study in accordance with their individual needs and interests.

Optional studies should be seen as applied studies that integrate different subjects and make it possible to create enriching learning experiences for students. From the perspective of individual education providers, teachers and students, optional studies constitute an additional resource that allows more flexibility to be brought to the learning process. Flexibility, consideration for individual interests and diversity of learning experiences are key elements of learner-centred pedagogy.

At the same time, it is imperative to ensure students' equality in terms of eligibility for further studies. Students' equality in options can be realised by creating a clearer structure for optional studies both in the distribution of lesson hours that specifies the time available for instruction and within the National Core Curriculum. This means that optional studies should systematically support curricular objectives. It is advisable to specify optional studies and their lesson hours more clearly from the student's perspective. For students, these are compulsory studies that are included in the basic



The purpose of basic education is to enrich students' studies and to strengthen their capabilities for further study in accordance with their individual needs and interests

Optional studies should systematically support students' personal objectives

education curriculum. Their objectives and key themes should therefore be determined at a national level.

Assessment of learning

Student assessment is one of the most essential issues when developing basic education – assessment is a tool to guide teaching and the learning process. Student assessment may be perceived in too narrow terms as being about examining the outputs of learning and awarding report grades. However, the primary role of student assessment is to guide students' learning process and to support motivation for learning. Students construct their perceptions of themselves as learners through feedback received as part of assessment. Experiences of success and finding the joy of learning are important for every student. At the same time, students must also be guaranteed equal treatment in terms of assessment; students showing an equivalent level of competence must be awarded the same grade regardless of location, school and class.

Assessment should support the development of students' learning skills and better highlight the skills-related objectives for different areas of competence. This requires the development of both the methods of and criteria for student assessment. If the criteria do not sufficiently support the pedagogical task of assessment, it will only indicate what can be measured by a test or written work, for example. It is necessary to ensure, in particular, that assessment criteria and specified objectives are consistently linked to each other. The objectives, in turn, must be formulated in such a way that makes it possible to assess them. Schools need new assessment practices that support the learning process and make use of information and communications technology. These must be consistently supported through national guidance.



Student assessment is one of the most essential issues when developing basic education – assessment is a tool to guide teaching and the learning process diversely

School leadership matters

Principals play a significant role in implementing national education policies and their local education providers' policies and decisions. They bear overall responsibility for school operations as pedagogical and administrative leaders. Principals are required to possess in-depth knowledge and expertise relating to several functions and relationships.

Educational leaders are the enablers or disablers of progress and development. Therefore educational leadership matters. Educational leadership issues need much more attention. The dimensions affecting the work of leaders in education have widened. The decision-making in education is largely decentralised, meaning that leaders carry a huge responsibility for developing education.

Leaders need to be able to cope with a constantly changing world – not only do policies and priorities change, but also the concepts of knowledge and learning keep evolving. The growing autonomy and professionalism of teachers and staff has meant that recognizing and managing competence have become success factors in modern learning organizations. Further, the leaders have a decisive role in nurturing organisational expertise and empowering the organization.

The leaders of today and tomorrow need to have a development-positive way of working to be able to lead their organisations into the future. A world of education will become more and more difficult to control, ie. with the numerous ways of learning, new learning environments, increased attention to the individual needs and their autonomy. In order to be able to manage and control the widening world of education, educational leaders will need an increasingly holistic perception and flexible turn of mind.

Educational leadership needs to be maintained as an attractive career option and good leaders to be retained to ensure continuity. Central are also the initial and continuing training of educational leaders. Efficient training programs are needed for educational leaders, but also more attention to training based on mentoring, peer learning and professional reflection.

Educational leaders are the enablers or disablers of progress and development

Finnish educational steering is based on trust – trust on professionalism in education. Trust also means responsibility. We are looking for ways of supporting the education leaders and ways of easing their burden. Fundamental issues are the training opportunities for leaders as well as the question of learning organizations and collegiality. We should increasingly support the development of school organizations, whose culture is based on collegiality and sharing. Collegiality means that the members of the community are positively dependent on the other members, that they have shared goals, that the members are in constant dialogue with each other and that they all use their teamwork and human skills to learn more and to promote a positive working culture. Collaborative cultures ease the burden of all the individuals of the community. A collaborative culture also means that facing and adapting to change is easier.

The new way of thinking that change is a continuous process requires flexible school organizations and working cultures that are based on trust and professionalism. Such working cultures are challenging for both leaders and staff. The changes in the surrounding world require changes also in the valuations, conception of the human being, operations, management and staff policies. There is a need for a more democratic and more effective model of leadership. Such leadership builds communities, and creates shared responsibility. It deepens individual and collective capacity generating real development and growth.

Teacher as a facilitator of learning

Teachers' work is not limited to teaching knowledge and skills; instead, a significant part of their work is bound to the social, educational and cultural values. The ethical and social dimensions of the teaching profession are playing a more and more pronounced role as the cultural, economic and social structures of society and the media environment change.

Being a teacher entails creating conditions for meaningful and inspiring learning and for the student group's positive co-existence. From the perspective of good learning, it is important for students

Students' different learning styles and differences in temperament require differentiation of teaching and use of diverse working methods and tools

to find studies to be meaningful and be ready to commit to school-work. The prerequisite for goal-oriented and suitably challenging studies is for teachers to master the subject matter that they teach and the pedagogical know-how related to teaching the subject. It is just as important for teachers to know their students and be capable of supporting every individual's learning process.

It is important for students to be able to feel that they are involved in matters concerning their studies and learning environment. Involvement can be supported by respect for students' experiences and open interaction practices. Students' active participation and motivation can be promoted by providing them with opportunities to influence selection of contents and to produce contents themselves. Diverse working methods foster learning among both individual students and the whole group. Students' different learning styles and differences in temperament require differentiation of teaching and use of diverse working methods and tools.

Teachers are versatile and networked professional knowledge workers. Teacher identity means readiness to participate in and influence the development of school's operational culture and pedagogy. Teacher identity is also about the ability to co-operate with all stakeholders who are able to support and promote learners' learning and growth. In addition to ensuring opportunities for continuing in-service training, this also requires teachers' self-motivated readiness and motivation for developing themselves.



**Teachers are versatile and
networked professional
knowledge workers**

Learning environments and ICT as promoters of learning

A school and its facilities constitute the key learning environment for students. Curricular objectives cannot be achieved solely by working in a classroom. In the future, schools must engage in more and more active interaction with the surrounding society. Students need diverse learning experiences in nature, in their local environment, at museums, workplaces, libraries and art institutions, which offer different types of contact with society's reality. Instruction must be implemented making systematic use of informal environments and expertise provided by various co-operation networks.

Information and communications technology plays a distinct role in uniting informal environments. Learning, studying and teaching are less and less dependent on time and place. As they study in virtual environments, mostly by means of social media, children and young people build and even produce knowledge that is more complex than the actual content they are studying. Use of ICT in education increases students' interaction and, subsequently, learning together. Individuals are provided with new kinds of opportunities to learn and build their competence according to their own aptitudes and abilities. While new learning environments emphasise technology and digital formats, the issue here is not merely a change of tools, but a change in the cultural conception of learning and knowledge, its understanding and application to education.

The multimedia character of learning environments will inevitably lead to a situation where children and young people process information in a different way from previous generations. Students' competencies and skills should be consistently utilised in education, thus enabling their active involvement. Students must be provided with information society skills required for further studies and working life during basic education. ICT is used to support students' growth and promote their citizen skills. In order for Finland to retain its position as a top country in education, diverse use of ICT at schools is required.

Use of different learning environments and ICT to promote learning requires stronger national steering. Every school should have



Curricular objectives cannot be achieved solely by working in a classroom

In the future, schools must open up to engage in more and more active interaction with the surrounding society

clear policies and guidelines concerning how to make use of different learning environments in everyday schoolwork. Education providers, in turn, must support and steer schools in the use of learning environments. In order to use technology in support of teaching and learning in a sensible manner, every school must have an adequate level of IT equipment and pedagogical know-how.

Collective capacity as a resource

Principals and teachers

Change in the collaborative culture is a cornerstone of reform of basic education. Co-operation is not an end in itself. It should be planned and systematic and promote achievement of goals and reinforcement of common capacity. A decisive factor in terms of school operations is whether teachers will be able to work together to create a professional community of learners, where people support each other and learn from each other, from other schools, from administration and research. School management plays a particularly significant role in creating and establishing effective structures for collaboration.

Co-operation is a key additional resource in planning and implementing education. Planning and teaching alone are not enough – nor is it enough to build new elements in the curriculum text or to change its contents. The curriculum should provide teachers with tools to change their way of thinking and develop teaching practices. Co-operation should be extended across subjects.

Information and communications technology contributes significantly to educational co-operation. It is more and more common for teachers to share the learning materials that they have produced via open networks or learning platforms. Co-operation stems from a natural starting point: when pedagogical ideas move freely and can be quickly utilised, this saves time and effort. If the educational administration and school management succeed in organising co-operation and supporting structures for sharing competence, it is possible to expand the educational use of ICT rapidly and cost-efficiently.



Co-operation is a key additional resource in planning and implementing education

Home and school

Home and school are working for the same cause: they are promoting children's learning and wellbeing. In order to succeed, parents or other guardians must have the opportunity to take part in their children's schooling and teachers must have the opportunity to receive support from parents for their work. Parents' expertise concerning their own children is an indispensable resource for work carried out at school. Parental support has a decisive bearing on a child's school attainment. Parental support means more than just a positive attitude towards the child's schooling. It involves discussions with the child about school-related matters, the child's experiences, homework, tests and other school assignments. It is also about taking an interest in the school's operations and participating in discussions about school development and in planning schoolwork.

Schooling has changed significantly over the last few decades, but parents may still mirror their children's schooling against their own school experiences. The school should therefore open its doors and make the classroom and learning visible to parents. The school and teachers are in a position to disseminate their pedagogical expertise to homes. It is advisable to communicate clearly about study methods, school practices and educational principles. A mutual understanding of the purpose and principles of the work being carried out will improve parents' possibilities to support their children's learning in an appropriate manner.

Parents' obligation to support their children's schooling and promote learning needs to be articulated more explicitly. There should be clear structures in place for co-operation between home and school. School management plays a particularly significant role in creating and establishing effective structures. In addition to those forms of co-operation concerning the entire school, efforts should be made to increase parents' involvement in everyday schoolwork.



**The school should open its doors
and make the classroom and
learning visible to parents**

School community

The ways of operating at school and the way in which people relate to each other in the school community may have more influence on students than the topics being studied. A school's operational culture is most clearly manifested in the way in which people relate to each other. A school is a community where interaction between teachers and students and between adults is reflected in the well-being of the entire school community. Good interpersonal relationships at school encourage participation, tolerance and responsibility. Ultimately, schools set an example of operating in a world based on interaction and networking for children and young people.

A school's management, teaching practices, working methods and operational culture have a bearing on the success of the educational task, on learning processes and outcomes. The school's operational culture is shaped by all members of the school community. All members of the community must be provided with opportunities to influence their own working environment. It is necessary for every school to discuss and form a shared vision of the objectives of learning and teaching and development of these.

Development of the school community is essentially linked to co-operation with different school units and other stakeholders. It would be advisable to make network co-operation a natural part of the strategies, curriculum and procedures of the school and the education provider. Development of effective co-operation calls for common objectives, ground rules and will.

A school's operational culture is most clearly manifested in the way in which people relate to each other

Holistic development of basic education

The entity of basic education is made up of three key elements: objectives of education, contents of education, and the principles concerning provision and implementation of education. These elements steer development of basic education – a key aspiration of development work is to strike a balance between these elements. Consequently, development of basic should be based consistently on all elements.

Objectives constitute the primary starting point for implementation and development of education: objectives decide how contents and implementation will be constructed. Objectives present the core of school education, i.e. how development of key skills areas is used to meet needs for development of an individual's overall personality and growth as a person, on the one hand, and society's skills needs, on the other. Objectives cover all subjects and concern every teacher and student. The current understanding of the goals of basic education raises extensive citizen skills as being the most essential objectives of education.

The subject matter of basic education covers branches of knowledge considered important in social and cultural terms and the underlying elements that construct the view of the world. Subject matter can be defined in many different ways, such as in terms of subjects, themes, subject groups or phenomena. Subject matter is a means to achieve the objectives set for education. The objectives defined in terms of skills and the subject matter of individual subjects need to be tied together in a coherent manner.

The principles guiding the provision and implementation of education must be in harmony with the objectives and contents of education. Implementation defines how objectives are achieved. The principles of implementing basic education describe pedagogical implementation opportunities, without specifying teaching methods and limiting teachers' pedagogical freedom. The key areas involved in the implementation of basic education include factors relating to provision of education, provision of guidance and support, co-operation with different stakeholders, utilisation of learning environments, selection of working methods and

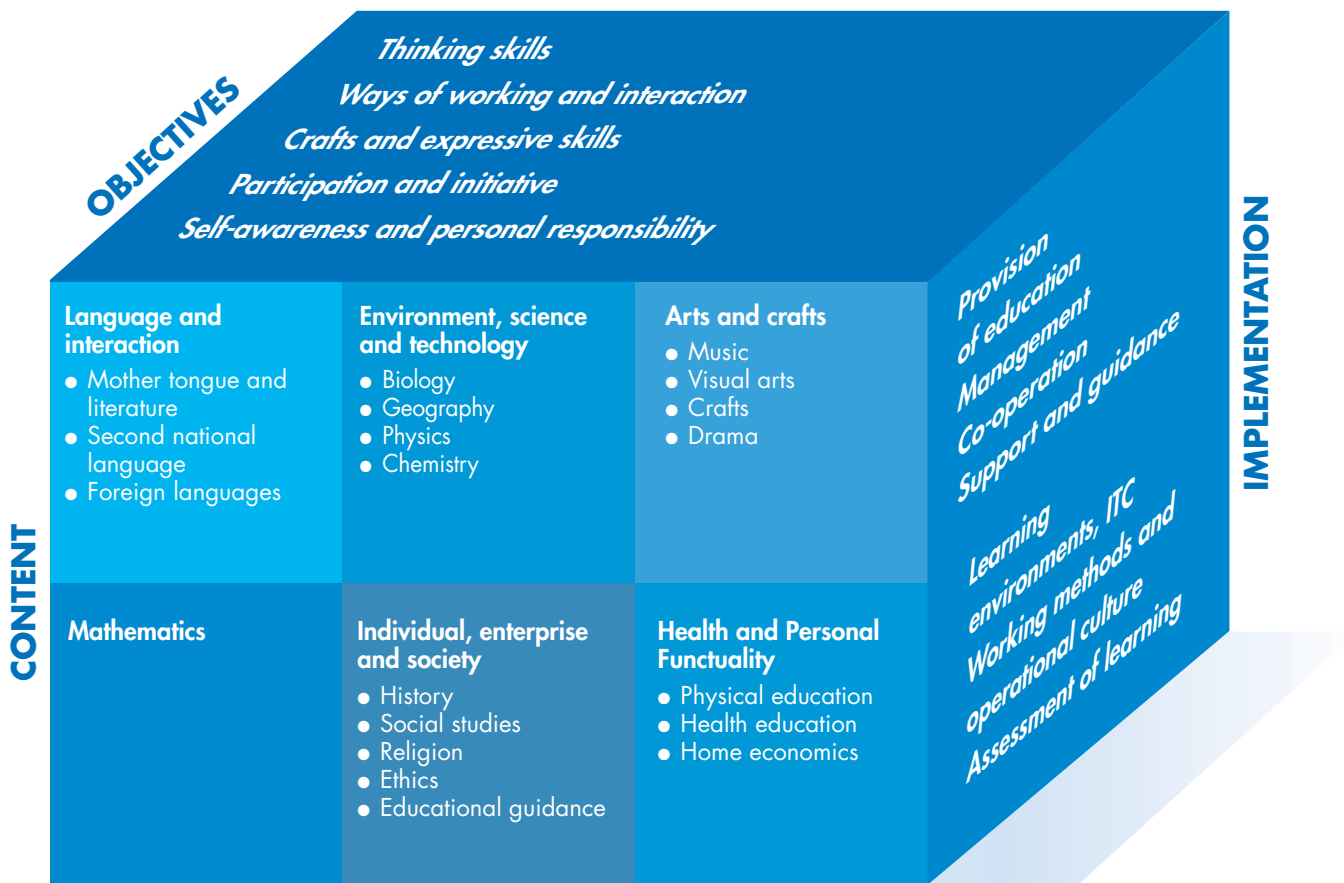


Basic education should be perceived as an extensive goal-oriented, thematic and pedagogical entity

implementation of student assessment. Clarification of operational principles guiding implementation of basic education reinforces equality in basic education throughout the country.

Basic education should therefore be perceived as being an extensive goal-oriented, thematic and pedagogical entity. Consistent organisation of these areas enables the internal and external integrity of school education and its systematic development.

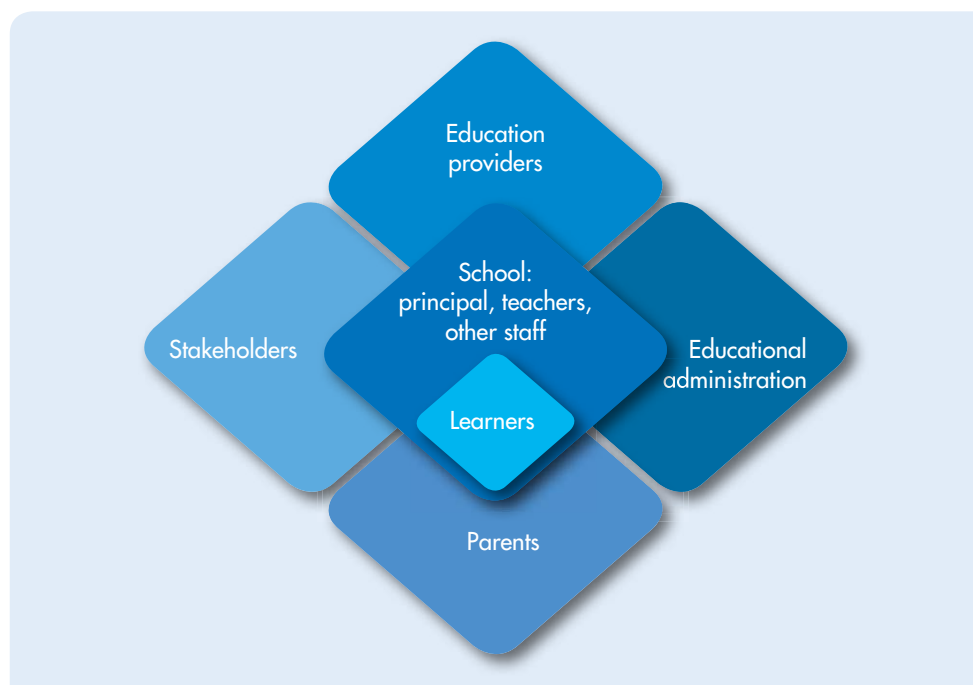
Holistic development of basic education



National partnership for systemic change

Development of the best comprehensive school in the world to become even better calls for a nationally shared vision of the goal of basic education, its objectives and implementation of development work. It requires securing resources for maintaining and developing the availability and quality of basic education. Success entails determined and persistent leadership and good co-operation at all levels from national administration to local level and through to students' parents.

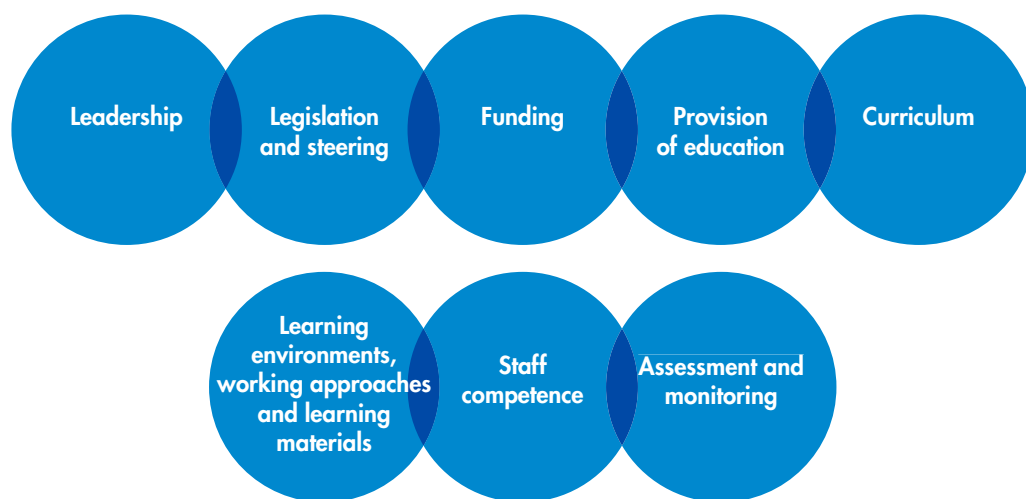
National partnership requires all stakeholders



The success of development is mediated by the nature and level of co-operation between all relevant stakeholders and their commitment and motivation – a national partnership. It is about building collaboration and interaction among administration, schools, working life, organisations, enterprises and associations involved in teaching and educational work. This partnership aims to develop new nationally important learning solutions and procedures. At the same time, this involves creating new competencies, new products,

services and overall solutions. The partnership aims to support and promote learning and competence such that schooling becomes more meaningful for every student. The quality of interaction between the stakeholders involved manifests itself as the ability to match different objectives, exchange and refine information, as well as develop staff learning and competence.

Development of education should be seen consistently as a development task of the entire education system and as a continuous process. It is not solely determined by degrees on the national distribution of lesson hours and the National Core Curricula. It forms a natural part of everyday operations within administration, local educational services and schools.



It is essential to determine a few key development targets for the education system, which are pursued through each element of the education system. To increase the integrity of learning, this should be visible throughout the system: in policy decisions (legislation, distribution of lesson-hours), steering documents (National Core Curriculum), funding, teacher education and training, provision of education and school operations – to selection of learning environments, use of various teaching and learning methods, and forms of guidance and support measures.

Ensuring the performance of learning outcomes requires stability from the national steering system when pursuing the targets. Legislation, funding and other national steering need to support and steer education providers to carry out statutory and education policy objectives. We need a systemic change, where the entire education system is built to meet the objectives set for it.

Steps forward

Questions relating to the future of Finnish basic education cannot only be solved on the basis of the present day. We must be able to look ahead – years into the future. By outlining the success factors of the education system, development measures can be targeted at key areas.

The prerequisite of high-quality basic education is resolute multi-level leadership, high expectations for all students, improved motivation and meaningfulness of learning through taking into account individual needs of diverse and multiple learners, systemic change and system-wide development, equity in basic education provision throughout all providers, high quality curriculum highlighting citizen skills, innovative use of ICT and learning environments, professional teachers as facilitators of learning, improved school leadership and collective capacity staff competence and sufficient support services. The development measures presented below are necessary in order for us to maintain the high standard of our basic education in the future as well.

High expectations for all – setting high objectives for skills and competencies

The curriculum is the key instrument for developing and reforming basic education. It is the cornerstone of the whole system, through which objectives are refined into steps that guide schoolwork. The National Core Curriculum is the key instrument for guaranteeing equality and equitable education. Local curricula contribute to fitting the specific needs and characteristics of municipalities and schools into the national framework.

We need an inspiring national development programme that sets high and challenging learning objectives for basic education. Schools



should especially emphasise and develop the skills expected from future citizens in all respects. Skills development requires all subjects, which raises curricular development as the key issue. Demanding objectives and expectations for all students should be the ultimate driver. Contents should be focused in order to highlight higher order skills and deeper learning goals. Contents should be integrated into multidisciplinary subject groups with focus in citizen skills. Learners should be given possibilities to more diversified development. More versatile learning environments and methods should highlight innovation and creativity and engage students.

Curriculum development should be focused on strengthening and focusing objectives for education. The objectives of education should be defined as citizen skills, which include the most important knowledge, skills, attitudes and values in terms of the future. It is also necessary to specify the implementation and assessment of citizen skills in the National Core Curriculum. National Core Curriculum should be presented to its users as an easy tool and guideline in a digital format.

Promotion of educational use of ICT

Development of basic education must contribute to the aspiration of re-establishing Finland as a leading country in terms of the educational use of ICT. We have good basic capabilities and competent teachers for this endeavour. We have an opportunity to show what the inspiring learning environments and operational culture of the future may be like at their best.

Inspiring examples of educational use of ICT can be found in different parts of Finland. The task is to disseminate these innovative solutions to the entire country and to establish procedures at all schools. For this purpose, we need a national action programme and consistent guidance and support for implementation of the programme.

Strengthening teachers' competences and school leadership

Teaching personnel are the key to the future of developing educational services. The success of schools rests on utilisation of information and on consequent readiness for change, competence, creativity



By outlining the success factors of the education system, development measures can be targeted at key areas

and innovation abilities. Special attention must be paid to the well-being and coping of staff and school communities. Well-being must be seen as being the prerequisite for good learning outcomes. In order to develop basic education, we need a strong programme aiming to strengthen competencies among teaching personnel and principals.

Better efforts must be made to attend to continuing teacher training. Teachers must be provided with opportunities for professional development throughout their careers. The contents of continuing training programmes need to be harmonised and access to training must be guaranteed for everyone.

Specific attention should be devoted to strengthen school principals capacity and the collective capacity of schools. Leadership of a developing and reforming school focuses on building up community spirit, providing strong support for pedagogical co-operation, promoting interaction skills and creating conditions for specialised and individual competencies and personal skills for the benefit of the whole school community. The role of management is to help staff to construct a shared vision of the opportunities for school development and its course in line with the objectives set.

The task of knowledge-based management is to create, build and offer means, tools, channels and forums that allow exchange of information in a way that is rewarding, desirable and inspiring. There is a need to create an atmosphere of trust and openness. The role of management is to support and encourage creative work and to promote interaction between individuals, groups, teams and stakeholders. Management needs to create opportunities and conditions for using new technologies and means to acquire, share and interpret information. The principal's work is a profession in its own right, which requires specific training.



Consideration for the needs and aptitudes of diverse learners

One of the key questions for the development of basic education is how to safeguard encouraging and motivating education for all students. The development of basic education is premised on giving due consideration to students' age and abilities, individual growth and development, and their different needs. Any possible difficulties should be identified at the earliest possible stage and all students should be supported in a socially empowering way. Student welfare services, social services focusing on supporting families and mental health services should form an effective whole. School health care needs assistance from an effective adolescent psychiatric service system, which provides support for children and young people requiring treatment.

Schools are also expected to motivate and support students more clearly, so as to provide them with opportunities to make the most of their potential as individuals. This objective is pursued by creating increasingly flexible learning pathways in keeping with different learning styles, needs and talents.

Students' right to systematic, early and preventive support for learning and schooling was reinforced by a 2010 amendment to the Basic Education Act. Education providers need national guidance in carrying out reforms, in order to establish procedures in a consistent manner throughout the country.

Systemic change and system-wide development

This publication outlines views on the objectives and guidelines of reforming and developing basic education. It has highlighted the most essential challenges concerning Finnish basic education and the efforts and measures required to meet these challenges. The key objectives of development of basic education include high expectations for all, increasing motivation and meaningfulness of learning, improving school leadership, improving teachers' capacity as facilitators of learning, promoting educational use of diverse learning environments and ICT, harnessing collective capacity as a resource for a culture of collaboration. All this needs systemic change and system-wide development with resolute leadership and multilevel shared leadership.

The development of basic education needs to be primarily based on students' needs primarily based on students, increasing the meaningfulness of their learning pathways and, subsequently, strengthening their learning motivation. This requires taking the needs and aptitudes of diverse learners into account more effectively. The most essential objective of development is to promote learning and maximise learning outcomes for every student. An equally important role in development of basic education is played by teachers and principals; competence relating to teaching and management should be constantly supported and consolidated. Building a collaborative culture and development of collaborative competence require attention and effort.

Strengthening the educational use of ICT is a cornerstone in development of basic education. ICT must be utilised in the support of learning in all operations. It is also crucial to make more and more diverse use of various learning environments and to co-operate with different stakeholders. It is important that schools also appreciate and provide students with opportunities to make use of knowledge and skills acquired in non-school learning environments.

Basic education must be developed through partnership and shared leadership. The need for change and objectives of reform should be understood throughout the system. The prerequisite of achieving the objectives is commitment from all participants in the education system, national and local administration, schools and teachers. Successful reform calls for all stakeholders to work as partners towards the common goal.

Basic education must also always be developed and reformed as a whole. It is crucial to identify the success factors of the education system, in order to target development measures at key areas. Consistent development of the whole will achieve education and competence, which form the most important resource of Finnish society.

- Finnish goal: from good to great
- From good education to great basic education
- Through more engaging studies with high expectations for all.

High expectations for all

Setting high objectives for skills and competencies

Motivation and meaningful learning

Individual needs of diverse and multiple learners

Improved school leadership

Developing skills for effective school leadership and collective capacity

Teachers as a facilitators of learning

Strengthening teachers' competencies

Learning environments and ICT

Promoting educational use of ICT

Collective capacity as a resource

Towards a culture of collaboration

Systemic change and system-wide development

Resolute and multilevel leadership

References

Beane, J. (1997). Curriculum integration. Designing the core of democratic education. New York: Teachers College Press.

Currie, C., Gabhainn, S. N., Godeau, E., Roberts, C., Smith, R. & Currie, D. (eds.) (2008). Inequalities in young people's health: HBSC international report from the 2005/2006 Survey. Health Policy for Children and Adolescents, No. 5. Copenhagen: World Health Organization.

Currie, C., Roberts, C., Morgan, A., Smith, R., Settertobulte, W., Samdal, O. & Barnekow Rasmussen, V. (eds.) (2004). Young people's health in context: international report from the HBSC 2001/02 survey. Health Policy for Children and Adolescents, No. 4. Copenhagen: World Health Organization.

Elinkeinoelämän keskusliitto (2005). Työelämän murros heijastuu osaamistarpeisiin: Osaavaa henkilöstöä yrityksiin. Elinkeinoelämän keskusliiton julkaisuja (2005). Julkaistu verkossa: http://www.ek.fi/ek_suomeksi/ajankohtaista/tutkimukset_ja_julkaisut/ek_julkaisuarkisto/191005_TyoelamanMurros.pdf

[Confederation of Finnish Industries (2005). The upheaval of the world of work reflects on skills needs: Skilled personnel for enterprises. Publications of the Confederation of Finnish Industries (2005). Published online. In Finnish.]

Recommendation of the European Parliament and of the Council on key competences for lifelong learning (2006/962/EC). Retrieved on 21st April 2011 from: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=L:2006:394:0010:0018:en:PDF>.

Hakkarainen, K., Lonka, K. & Lipponen, L. (2004). Tutkiva oppiminen. Järki, tunteet ja kulttuuri oppimisen sytyttäjänä. Porvoo: WSOY.

[Progressive inquiry learning. Sense, sensibility and culture as stimuli for learning. In Finnish.]

Kämppi, Katariina, Välimaa, Raili, Tynjälä, Jorma, Haapasalo, Ilona, Villberg, Jari ja Kannas, Lasse. (2008). Peruskoulun 5., 7. ja 9. luokan oppilaiden koulukokemukset ja koettu terveys. WHO-koulaistutkimuksen trendejä vuosina 1994–2006. Opetushallitus.

[The school experiences and experienced health among students in the 5th, 7th and 9th grades of comprehensive school. Trends in the WHO Health Behaviour in School-Aged Children Study 1994–2006. Finnish National Board of Education. In Finnish.]

Kansallinen tieto- ja viestintätekniikan opetuskäytön suunnitelma. Noudettu 15.3.2011 osoitteesta [http://www.arjentietoyhteiskunta.fi/files/313/TVT_opetuskayton_suunnitelma_011210_\(2\).pdf](http://www.arjentietoyhteiskunta.fi/files/313/TVT_opetuskayton_suunnitelma_011210_(2).pdf)

[National plan for educational use of information and communications technology. In Finnish.]

Korkeakoski, E. & Siekkinen, T. (toim.) (2011). Esi- ja perusopetuksen opetussuunnitelmajärjestelmän toimivuus. Puheenvuoroja sekä arviointi- ja tutkimustuloksia. Koulutuksen arviointineuvoston julkaisuja 53. Jyväskylä: Bookwell Oy.

[Korkeakoski, E. & Siekkinen, T. (eds.) (2011). The functionality of the Finnish pre-primary and basic education curriculum system. Discussion, evaluation and research results. Publications by the Finnish Education Evaluation Council 53. In Finnish.]

Krajik, J., McNeill, K. & Reiser, B. J. (2008). Learning-Goals-Driven Design Model: Developing Curriculum Materials That Align With National Standards and Incorporate Project-Based Pedagogy. *Science Education*, January 2008, Vol. 92, Issue 1, 1–32.

Kumpulainen, K., Krokfors, L., Lipponen, L., Tissari, V., Hilppö, J. & Rajala, A. (2010). *Oppimisen sillat – kohti osallistavia oppimisympäristöjä*. CICERO Learning. Helsingin yliopisto. Helsinki: yliopistopaino.

[Learning Bridges – Towards Participatory Learning Environments. CICERO Learning. University of Helsinki. Available in English at: <https://helda.helsinki.fi/handle/10138/15631>.]

Kumpulainen, Timo (toim.) (2011). *Opettajat Suomessa 2010. Koulutuksen seurantaraportit 2011: 6*. Opetushallitus. Tampere: Tammerprint Oy.

[Kumpulainen, Timo (ed.) (2011). *Teachers in Finland 2010. Education monitoring reports 2011:6*. Finnish National Board of Education. In Finnish.]

Kumpulainen, Timo (toim.) (2010). *Koulutuksen määrälliset indikaattorit 2010. Koulutuksen seurantaraportit 2010:4*. Opetushallitus. Tampere: Tammerprint Oy.

[Kumpulainen, Timo (ed.) (2010). *Qualitative Indicators of Education 2010. Education monitoring reports 2010:4*. Finnish National Board of Education. In Finnish; preface and one chapter available in English at: http://www.oph.fi/download/130716_Koulutuksen_maaralliset_indikaattorit_2010.pdf.]

Kuusela, J. (2006). Temaattisia näkökulmia perusopetuksen tasa-arvoon. Opetushallitus: Oppimistulosten arviointi 6/2006.

[Thematic approaches to equality and equity in education. Finnish National Board of Education: Assessment of learning results 6/2006. In Finnish; summary available in English at: http://www.oph.fi/download/47684_thematic_approaches_to_equality_and_equity_in_basic_education.pdf]

Kysilka, M. L. (1998). Understanding Integrated Curriculum. *The Curriculum Journal*, Vol. 9, No 2, 197–207.

Liinamo, A & Kannas, L. (1995). Viihdyntö, pärjääntö, selviääntö turvallisesti: koulunkäynti oppilaiden kokemana. Teoksessa Kannas, L. (toim.) *Koululaisten kokema terveys, hyvinvointi ja kouluviihtyvyys*. WHO-Koululaistutkimus. Helsinki: Opetushallitus, 109–130.

[Do I like school, do I get on, am I safe: school as students perceive it. In Kannas, L. (ed.): *Health, well-being and school satisfaction as perceived by schoolchildren*. WHO Health Behaviour in School-Aged Children Study. Finnish National Board of Education. In Finnish.]

Linnakylä, P. (1993). Miten oppilaat viihtyvät peruskoulun yläasteella? Kouluelämän laadun kansallinen ja kansainvälinen arviointi. Teoksessa V. Brunell & P. Kupari (toim.) *Peruskoulu oppimisympäristönä*. Peruskoulun arviointi 90 tutkimuksen tuloksia. Kasvatustieteiden tutkimuslaitos. Jyväskylä: Jyväskylän yliopisto, 39–56.

[School satisfaction in the upper level of comprehensive school? National and international assessment of the quality of school life. In V. Brunell & P. Kupari (eds.): *The comprehensive school as a learning environment. Results of the Assessment of the comprehensive school 90 study*. University of Jyväskylä Institute for Educational Research. In Finnish.]

Luukka, M. R. et al. (2008). *Maailma muuttuu – mitä tekee koulu? Äidinkielen ja vieraiden kielten tekstikäytänteet koulussa ja vapaa-ajalla*. Jyväskylän yliopisto. Soveltavan kielentutkimuksen keskus. Jyväskylä: yliopistopaino.

[The world changes – how do schools respond? Mother tongue and foreign language literacy practices at school and in free-time. University of Jyväskylä: Centre for Applied Language Studies. In Finnish.]

Luukkainen, O. (2005). Opettajan matkakirja tulevaan. Jyväskylä: PS-Kustannus.

[Teacher's travelbook to the future. In Finnish.]

Metsämuuronen, J. (2006). Oppimistulosten ja asenteiden muuttuminen perusopetuksen ylimpien luokkien aikana. Kahden oppiaineen (Äidinkielen ja kirjallisuuden sekä Modersmål och litteraturin) näkökulma, Opetushallitus.

[Changes in learning results and attitudes during the last three grades of basic education. Perspective of two subjects (Finnish and Swedish mother tongue and literature). Finnish National Board of Education. In Finnish; abstract available in English.]

Nyyssölä, K. & Jakku-Sihvonen, R. (toim.) (2009). Alueellinen vaihtelu koulutuksessa. Temaattinen tarkastelu alueellisen tasa-arvon näkökulmasta. Opetushallitus. Helsinki: Edita Prima OY.

[Nyyssölä, K. & Jakku-Sihvonen, R. (eds.) (2009). Regional variations in education. Thematic analysis from the perspective of regional equality. Finnish National Board of Education. In Finnish; abstract available in English.]

OECD (2008). Trends Shaping Education - 2008 Edition. Retrieved on 8th March 2010 from: http://www.oecd.org/document/58/0,3343,en_2649_35845581_41208186_1_1_1_37455,00.html.

OECD (2009). 21st Century skills and competences for New Millennium Learners in OECD-countries. Retrieved on 15th April 2010 from: [http://www.ois.oecd.org/ois/2009doc.nsf/linkto/edu-wkp\(2009\)20](http://www.ois.oecd.org/ois/2009doc.nsf/linkto/edu-wkp(2009)20) http://www.oecd.org/LongAbstract/0,3425,en_2649_33723_44303186_119684_1_1_1,00.html.

OECD (2009). Centre for Educational Research and Innovation (CERI) - Schooling for Tomorrow. Retrieved on 5th March 2010 from: http://www.oecd.org/document/6/0,3343,en_2649_35845581_31420934_1_1_1_1,00.html

OECD (2009). Definition and Selection of Competencies (DeSeCo). Retrieved on 16th April 2010 from: http://www.oecd.org/document/17/0,3343,en_2649_39263238_2669073_1_1_1_1,00.html

OECD (2009). Education at a Glance 2009: OECD Indicators. Retrieved on 18th April 2010 from: http://www.oecd.org/document/24/0,3343,en_2649_39263238_43586328_1_1_1_1,00.html

Onnismaa, J. (2010). Opettajien työhyvinvointi. Katsaus opettajien työhyvinvointitutkimuksiin 2004-2009. Opetushallitus. Raportit ja selvitykset 2010: 1.

[Teachers' well-being at work. A review of research into teachers' well-being at work 2004-2009. Finnish National Board of Education. Reports 2010:1. In Finnish.]

Opetus- ja kulttuuriministeriö (2010). Perusopetuksen ryhmäkokoo 2010. http://www.minedu.fi/export/sites/default/OPM/Koulutus/koulutuspolitiikka/Hankkeet/pop/liitteet/Perusopetuksen_ryhmakoko_2010.pdf

[Ministry of Education and Culture (2010). Basic education group sizes in 2010. In Finnish.]

Opetus- ja kulttuuriministeriö (2010). Perusopetus 2020 – yleiset valtakunnalliset tavoitteet ja tuntijako. Opetus- ja kulttuuriministeriön työryhmämuistioita ja selvityksiä 2010: 1.

[Ministry of Education and Culture (2010). Basic education 2020 – the national general objectives and distribution of lesson hours. Reports of the Ministry of Education and Culture 2010:1. In Finnish; summary available in English.]

Opetushallitus (2004). Perusopetuksen opetussuunnitelman perusteet. Määräys 1/011/2004. Opetushallitus. Vammalan Kirjapaino Oy.

[Finnish National Board of Education (2004). National Core Curriculum for Basic Education. Regulation 1/011/2004. Finnish National Board of Education. Available in English at: http://www.oph.fi/english/publications/2009/national_core_curricula_for_basic_education.]

Opetushallitus (2010a). Tieto- ja viestintätekniikan hyödyt opetuskäytössä. Raporttiluonnos.

[Finnish National Board of Education (2010a). Benefits of the educational use of information and communications technology. Draft report. In Finnish.]

Opetushallitus (2010b). Koulu 3.0. Vammalan kirjapaino Oy.

[Finnish National Board of Education (2010b). School 3.0. In Finnish.]

Opetusministeriö, Opetushallitus (2010). Lähdeniemi, T., Jauhiainen, J. Tulevaisuuden koulu. Verkkohaastattelun raportit. 30.3.2010. Julkaistu verkossa: http://www.oph.fi/download/122685_Tulevaisuuden_Koulu100330.pdf

[Ministry of Education, Finnish National Board of Education (2010). Lähdeniemi, T., Jauhiainen, J. The school of the future. Online interview reports. 30th March 2010. Published online. In Finnish.]

Opetusministeriö (2008). Koulutus ja tutkimus 2007–2012. Kehittämissuunnitelma.

[Ministry of Education (2008). Education and research 2007–2012. Development Plan. Available in English at: <http://www.minedu.fi/export/sites/default/OPM/Julkaisut/2008/liitteet/opm11.pdf>]

Reid, W. A. & Scott, W. (2005). Cross-Curricularity in the National Curriculum: reflections on metaphor and pedagogy in citizen education through school geography. *Pedagogy, Culture & Society*, Vol. 13, Issue 2, 181–204.

Rimpelä, Arja (2010): Suomalaisnuorten terveys. Julkaisussa: Suomalainen lääkäriseura Duodecim ja Suomen Akatemia: Nuorten hyvin- ja pahoinvointi. Konsensuskokouksen 2010 artikkelikirja. Vammalan kirjapaino.

[Finnish adolescents' health. In: Finnish Medical Society Duodecim and Finnish Academy: Young people's well- and ill-being. Proceedings of the 2010 Consensus Meeting. In Finnish.]

Rimpelä, Matti, Fröjd, Sari ja Peltonen, Heidi (toim. 2010). Hyvinvoinnin ja terveyden edistäminen perusopetuksessa 2009. Perusraportti. Koulutuksen seurantaraportit 2010:1. Opetushallitus (yhteistyössä Terveyden ja hyvinvoinnin laitoksen kanssa), Helsinki.

[Rimpelä, Matti, Fröjd, Sari and Peltonen, Heidi (eds. 2010). Promotion of welfare and health in basic education 2009. Basic report. Education monitoring reports 2010:1. Finnish National Board of Education (in co-operation with the National Institute for Health and Welfare) In Finnish; abstract available in English at: http://www.oph.fi/download/124847_Hyvinvoinnin_ja_terveyden_edistaminen_perusopetuksessa_2009.pdf.]

Sulonen, K. ym. (toim.) (2010). Esi- ja perusopetuksen opetussuunnitelmajärjestelmän toimivuus. Koulutuksen arviointineuvoston julkaisuja 52. Jyväskylä: Bookwell Oy.

[Sulonen, K. et al. (eds.) (2010). The functionality of the Finnish pre-primary and basic education curriculum system. Publications by the Finnish Education Evaluation Council 52. In Finnish; abstract available in English at: http://www.edev.fi/img/portal/19/Julkaistu_nro_52.pdf?cs=1298445675.]

Säljö, R. (2004). Oppimiskäytännöt. Sosiokulttuurinen näkökulma. Helsinki: WSOY.

[Learning practices. A socio-cultural viewpoint. In Finnish.]

Samdal, O., Nutbeam, D., Wold, B. & Kannas, L. (1998). Achieving health and educational goals through schools – a study of the importance of the school climate and the students' satisfaction with school. *Health Education Research*, 13(3), 383–397.

Smeds, R. ym. (toim.) (2010). *InnoSchool – välittävä koulu. Oppimisen verkostot, ympäristöt ja pedagogiikka*. Simlab Report Series 31. Aalto-yliopiston teknillinen korkeakoulu. Espoo: Painotalo Casper Oy.

[Smeds, R. et al. (eds.) (2010). *InnoSchool – the caring school. Learning networks, environments and pedagogy*. Simlab Report Series 31. Aalto University School of Science and Technology. In Finnish.]

Ståhle, P. & Wilenius, M. (2006). *Luova tietopääoma – tulevaisuuden kestävä kilpailuetu*. Helsinki: Edita Prima Oy.

[Creative Knowledge Capital – Competitive Advantage for Sustainable Future. In Finnish.]

Sulkunen, S., Välijärvi, J., Arffman, I., Harju-Luukkainen, H., Kupari, P., Nissinen, K., Puhakka, E., Reinikainen, P. (2010). PISA 2009 ensituloksia. 15-vuotiaiden nuorten lukutaito sekä matematiikan ja luonnontieteen osaaminen. Opetus- ja kulttuuriministeriön julkaisuja 2010:21.

[PISA 2009 first results. Reading literacy and mathematics and science skills among 15-year-olds. Publications of the Ministry of Education and Culture 2010:21. In Finnish.]

THL (2010). *Kouluterveyskysely 2010-kyselyn taulukot*. Noudettu 15.3.2011 osoitteesta <http://info.stakes.fi/kouluterveyskysely/FI/tulokset/taulukot2010/index.htm>

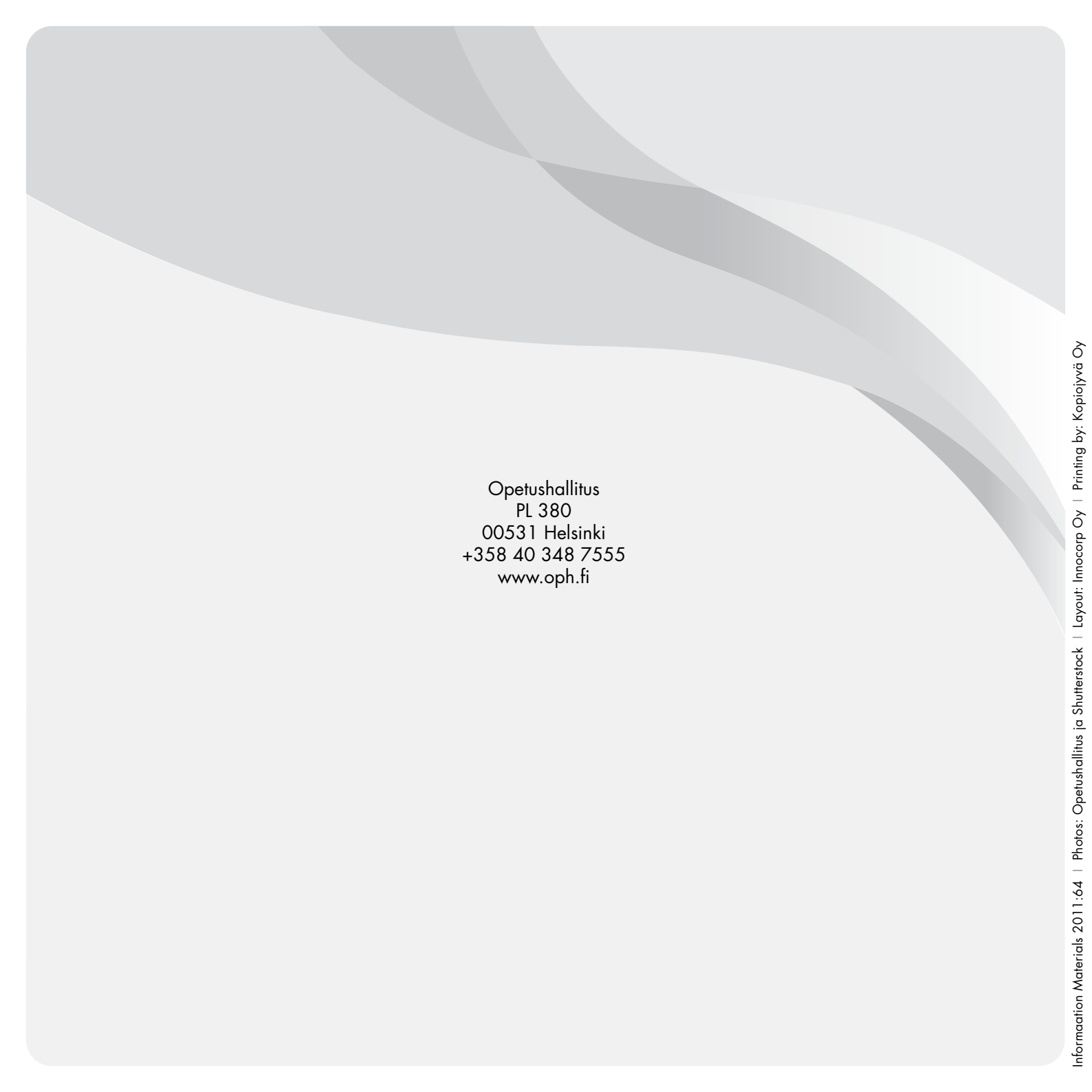
[National Institute for Health and Welfare (2010). *Charts of the School Health Promotion Study 2010*. Retrieved on 15th March 2011. In Finnish.]

Valtiovarainministeriö (2009). *Valtioneuvoston selonteko kunta- ja palvelurakenneuudistuksesta*. Helsinki.

[Ministry of Finance (2009). *Government report on municipal and service structure reform*. In Finnish.]

Vitikka, E. (2009). Opetussuunnitelman mallin jäsenitys – sisältö ja pedagogiikka kokonaisuuden rakentajina. *Suomen kasvatustieteellinen seura. Kasvatusalan tutkimuksia* 44. Jyväskylä: yliopistopaino.

[Structuring of the Curriculum Design: Content and Pedagogy Constructing the Whole. Finnish Educational Research Association, *Studies in Education* 44. In Finnish; abstract available in English at: <http://urn.fi/URN:ISBN:978-952-5401-46-2>.]



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