#uusikoulutus, sitra.fi/en/future/new-education

© Sitra 2015

A land of people who love to learn

ISBN 978-951-563-930-1 (paperback) ISBN 978-951-563-931-8 (PDF) www.sitra.fi

For enquiries concerning this publication, please contact: publications@sitra.fi or phone: +358 294 618 991.

Cover photo by Joanna Moorhouse

Printed by Erweko Oy, Helsinki 2015

Preface

Education is a source of pride in Finnish society. However, the transformation of working life, digitisation, growing inequality multiculturalism, and globalisation pose challenges for the future of the education sector. How might education and training respond to changing skill needs in the working life of the future? How can we foster educational equality and equal opportunities for all in education and training, in an increasingly polarised society? How can education be reformed in a student-oriented manner, while taking advantage of technology and setting our sights on the future? Instead of the traditional division into subjects, should the education system be based on a phenomenon-oriented approach? Will the education business be a future competitive advantage for Finland?

This publication outlines the answers to the above questions, provided by Sitra's New Education Forum. This publication summarises the forum's 31 participants' views on how to develop the Finnish education sector and build a vision for it. The forum examined learning from the perspective of all levels of education, from babies to grandparents.

During its six-month term, the forum held countless discussions, carried out short-term practical trials and debated fiercely about the future of the Finnish education sector. The core group's 31 forum participants were not the only ones who contributed to the forum's work; other experts were also consulted, inspiration was sought on an excursion to the United States and everyone willing to participate in the forum's discussions was invited to do so via the open Facebook group of nearly 2,000 people.

The New Education Forum's messages were not aimed at painting an overall picture of everything that reforming the education sector might entail; they are suggestions for themes that deserve to be given centre stage more in open and critical discussion. The aim was to stimulate the readers' thoughts and passions and encourage more open and constructive dialogue on the change in learning – not to put the minds of those content with the status quo at ease.

Text of this publication was compiled on the basis of the forum's materials by one of the forum participants, journalist Anna-Sofia Berner. A great number of blogs, articles and online discussions also emerged during the New Education Forum. These are all linked to the forum's website at www.sitra.fi/en/future/new-education.

New Education Forum

Contents

Fore	eword	1
Introduction: Finnish education, focusing on meeting yesterday's standards?		
1	Stupid is not really stupid	5
2	Grades do not represent the full scope of learning	6
3	Teachers must not work alone	7
4	Tear the school down, build a village	8
5	Focus on competencies, not degrees	9
6	More development, less red tape	10
7	Fairness replaces equality	11
8	Technology is about humans, not devices	12
9	Education is worth taking to places where it does not exist	13
10	Love cannot be measured but it can be seen	14
The	participants and enablers of the New Education Forum	15



A land of people who love to learn

Introduction

Finnish education, focusing on meeting yesterday's standards?

Having an education used to be a guarantee for getting ahead in life, of moving up the ladder. This promise no longer holds. Studying hard and getting a diploma does not automatically guarantee that you will get a permanent job and lead a better life because of it. It is harder these days to answer pupils when they ask, "What do I need this for?" or "why do I have to learn this?"

The gap between life and education has widened due to the world changing more rapidly than the education system. The amount and availability of information has exploded; new professions emerge and vanish at an ever-increasing pace; learning happens everywhere. It may well be that a person benefits more from playing a mobile game than from learning the peculiarities of Finnish grammar.

We need to make more changes than just slightly adjusting the distribution of lesson hours by adding more maths or reducing religious education. Learning needs to take a holistic approach and deal with questions for which there are no correct or ready-made answers. It is not the teacher's task to tell the students who Kekkonen was, but to guide them to find out for themselves. The target of education must change from storing information in our heads, because most of us are carrying it in our pockets. Learning to assess, interpret and use data is a necessary skill.

Knowledge and learning are not as tied to a specific school or educational institution as they used to be.

The English language is not learned by memorising lists of words, but by using it to play online video games or by reading fantasy novels. The risk is that without change education will become irrelevant, an institution detached from the rest of society. That would be a waste

We insist that education must not settle for adapting to change, but also act as a driver. To raise brave, compassionate citizens capable of independent thought and bearing the responsibility for themselves and for others; curious people, capable of finding things out for themselves and assessing the reliability of whatever information they come across. People with a tolerance of uncertainty, the courage to implement their ideas in practice and even break a few rules, if necessary.

It does not matter whether one remembers the names of the rivers in Ostrobothnia, recognises the common plantain or has beautiful handwriting. What matters is having a thirst for learning. We want Finland to be a land of people who love to learn.

"We have long ridden the wave of Pisa hysteria, telling ourselves that our schools are good.

And they are excellent – by yesterday's standards. Our schools do not meet current or future needs."

Tiina Silander, Head of the Teacher Education Department at the University of Jyväskylä

NEW EDU(ATION FORUM

The New Education Forum is part of Sitra's training activities aimed at helping Finnish decision-makers and game-changers to join forces in tackling the key social challenges and opportunities of the future. The series of Synergise Finland forums, including the New Education Forum, brings together groups of opinion formers from all sectors of the society, ranging from grass-roots actors to political decision-makers. While learning from one another, they explore the structural and cultural changes required in Finland. These forums involve practical experiments and action aimed at solving the social problems identified. The New Education Forum was launched in December 2014 and closed in June 2015.

Stupid is not really stupid

Were you good at school? This is a common question here in Finland. The question is very revealing. It suggests that we live in a world where some of us are good at school, while others are not.

We take an opposite view: school treats some of us badly. The school system was once created for picking people for different tasks and positions in society. In the 2010s, the school system is best equipped to identify academic skills. Those without academic skills are left feeling stupid. That is a huge issue. To hear every day, directly or indirectly, that you are not so clever, that you did not know something or how you have failed – again. What kind of skills in life does this type of education provide?

It is actually the school that is stupid, for its inability to see individuals' strengths and skills.

Working with one's hands, social skills and various passions and targets of interest are rated secondary by the school system. However, in the end, these are precisely the skills that may be the most relevant to the learner's future. There are tens of thousands of young people in Finland who are at the risk of being excluded from education and working life. They are people whose strengths and skills have gone unnoticed.

The national core curriculum already recommends recognising broad competences. It is a good recommendation that must be put into practice at all levels of education. We want every young person who completes their basic education to know what they are good at and also be able to tell it to others. Knowing our own strengths gives us the courage to work on our weaknesses, i.e. to do things we find difficult.

We still ask children and young people what their favourite subject in school is, even though the world cannot be defined by school subjects. The starting point of learning should not be meticulously defined general knowledge, but each of our personal interests. By this we do not mean only doing the fun stuff. As a rule, children are curious about the world, and the purpose of education should be to safeguard that curiosity. Phenomenon-based learning is one tool for doing this. The approach is based on reality rather than what is specified in the curriculum.

Ultimately, education should only be teaching us one thing, and that is learning. In a world that is changing rapidly, the need to learn never ends. Believing we are stupid will only make learning harder.

WHERE DO WE GO FROM HERE?

- The main task of schools is to identify learners' strengths and teach them how to develop their learning skills.
- Working with one's hands, social skills and own interests must be given a higher priority.
- Phenomenon-based and project-based learning must be widely introduced at all levels of education.

"Learning is not like broccoli, which needs to be coated in chocolate to make it more palatable. Learning is a delicious three-Michelin-star meal."

Lauri Järvilehto, Philosopher

EXPERIMENTS

Ritaharju School in Oulu has been systematically managing its operating culture towards open co-operation. Ritaharju's teachers brainstorm together and then test the new approaches quickly in practice. In spring 2015, Ritaharju School organised a joint **phenomenon-based learning week** that covered the whole secondary school and involved removing all the boundaries between classes and subjects.

Dream Club was an experiment based on the idea of showcasing the students' individual strengths, while making it easier for them to identify their dreams and use them as inspiration for their careers in the future. The experiment was implemented in the form of two workshops in co-operation with students from the University of Helsinki.

Grades do not represent the full scope of learning

The existing assessment system often makes students focus on getting good grades rather than learning. The Finnish upper secondary school is an example of such behaviour. Many candidates for the matriculation examination choose easy subjects at which they are good.

Assessment must be changed to individual and continuous feedback, provided at all education levels. The key is to provide information on the personal development of individuals, not how well they did compared to others. In addition to a minimum level of learning, there is also a maximum limit. What is there to do for a learner who has already attained the highest mark (on a scale of four to ten)?

The new assessment model is borrowed from video games. It comprises multiple skill levels. Once you have mastered a skill, you can move on to the next level. In the existing system, it is possible to move from one level (class year) to another without having learned anything. A student who gets a poor grade gets to move on even though he has only learned little of what is required of him, while other students are stuck at a skill level they have already attained. The earlier method was to stop students from moving on to the next class year; we want to abolish the strict boundaries between classes.

Educational institutions must also learn to identify and recognise competencies other than academic skills during the assessment process. Each teacher should find something in all their students for which they deserve to be given the highest mark. The assessment process should include consulting other parties in addition to teachers, such as people who coach extra-curricular activities. This practice is already applied to employers in vocational training.

The founder of the web-based Khan Academy, Salman Khan, believes that in the future, school-leaving certificates should include a portfolio of the learner's achievements. The portfolio could comprise anything created by the learner, such as robots, paintings or software. The certificate would also comprise an assessment of leadership, communication and empathy skills from the person's peers and community. These aspects are already of interest to employers, for example, but they have not yet been formally introduced as part of school-leaving certificates.

Changes to the assessment system will also affect the student selection process for further education. Average numbers should not prevent anyone from continuing their studies after completing basic education. Different kinds of skills must be better taken into consideration with regards to the opportunities for further education. In our opinion, more demonstrations of skills and interviews should be used alongside entrance exams and average numbers when selecting students for secondary education, and vocational training in particular.

The amount of higher education entrance exams should be pared down. The existing entrance exam system is huge and a waste of time and resources. A separate entrance exam does not have to be organised for each study programme; universities could apply their student selection process to wider study modules. The key is to demonstrate that you are motivated and have the necessary study and learning skills.

WHERE DO WE GO FROM HERE?

- Shift from a number-based grading system to a competency-based assessment model.
- · Add more demonstrations of skills to learning assessments and entrance exams.
- Renew the entrance exam system for higher education institutions.

"Individuals who are skilled with their hands will never be admitted to study in their field of expertise if only judged by their GPA. If I want a skilfully crafted wooden boat, why should I care if the person who makes it got a six in Finnish and five in Environmental Studies?"

WHEN ASSESMENT TAKES OVER

Maarit Korhonen,

Class Teacher

The global trend is towards more detailed assessment of learning. In the United States, for example, the standard tests for assessing performance in basic education are a source of frustration and concern about whether learning is being assessed correctly. Despite the increasing pressure for comparability, the Finnish education system must hold on to the importance of competency-based assessment.

3 Teachers must not work alone

If the working methods of teachers will not change, neither will education. An independent, motivated and highly educated teacher is the hero of Pisa-Finland. Finnish teachers have great autonomy and decision-making power over what and how to teach. Some teachers have a passion for learning. They are not afraid of developing the ways of teaching and learning.

But the autonomy of teachers also makes it possible to close the classroom door and pretend that nothing in the world has changed. This leads to huge differences between schools and classes. Some teachers make use of technology, try out new assessment practices and remove desks from the classroom. Others stick with the old way of doing things.

The operating culture of educational institutions is still often based on a hierarchical model in which learners are below teachers and teachers are below the head teacher. This needs to change. In the future, teachers will be more like coaches, tasked with helping each learner find their own path.

The work of teachers should be done in teams, co-teaching and joining forces to study new phenomena. More systematic development is required to make this happen. The role of head teachers needs to change from an administrative leader to a pedagogical and Human Resources manager. A window of opportunity exists now that most head teachers in Finland are close to retirement age.

Work is becoming increasingly less dependent on time and place. The effectiveness of a work community is not based on monitoring the hours worked, but what is achieved. This also applies to teachers. The current working times of teachers need adjusting for the change to become a reality. According to the Trade Union of Education in Finland (OAJ), most teachers want to develop new working time models that promote the development of teaching and learning. The annual working time of teachers is currently being developed throughout the education sector. This development work needs to continue.

Breaking the barriers between age groups and school subjects means that teachers will need to step up their co-operation. The education system is rigid in many places due to teacher education and the job description of teachers. Why is teachers' salary determined on the basis of the age of the children that they teach (younger = lower)? Why does the system not support a network-based working model? The existing subject-teacher system prevents the transition to phenomenon-based and project-based learning because everyone is protecting their own subject. In our opinion, the same level of flexibility that day-care centres have should be applied in educational institutions. Teachers need to have the opportunity to apply interdisciplinary and co-teaching methods, where necessary, and also to invite professionals from other sectors to contribute.

Teacher education must be reformed in order to make it better meet the requirements of digitisation and internationalisation. Teachers should be provided with a development plan that their employer is required to support. The continuing education of teachers is difficult to arrange due to the high cost of hiring a substitute teacher. Teachers, above all, should be riding the wave of new and forward-looking approaches.

"Only teachers who ignore the rules can adopt new approaches."

Teemu Leinonen, Professor

WHERE DO WE GO FROM HERE?

- Switch from working alone to teamwork and a culture of sharing.
- Develop the flexibility of teachers' working times.
- Ensure that continuing education offered to teachers is forward-looking.

EXPERIMENTS

How do we provide teachers interested in developing their schools with the space, tools and opportunities they need to do so from the inside? School teachers' roles as developers was a was an experiment that involved four class teachers trying out which developer-teacher models could work in practice in Finland. There are many effective models to choose from, depending on the size of the school and the municipality and their development needs. Targets for improvement included the inclusion of various co-ordination tasks in teaching duties, co-teaching, reviewing the use of common planning time and checking the criteria for assessing the level of difficulty of tasks.

Tear the school down, build a village

"The message of the maker culture and the story of the Finnish game industry is that if the official system is not working for you, find what you need to learn from outside the system."

Nuppu Stenros, Founder of Wärkfest

EXPERIMENT

A maker day was organised in

Pielavesi with the goal of planting the seed of the maker culture in Finland. These kinds of DIY events and spaces are being established around the world to bring together people who are interested in building, handicrafts, science, new technologies and art and who are eager to share their insights and skills with others. Maker spaces and maker-themed events are for showcasing competencies that would otherwise be hidden in people's garages, workshops or inner circles.

It was not until the mid-1800s that the construction of school buildings began in the Finnish countryside and towns. Now, we want to integrate schools to the rest of society also in terms of space. Instead of new educational institutions, we should be building learning villages that interact closely with the surrounding world.

One source of inspiration is the maker culture in which "Do it yourself" projects help people learn problem-solving skills in a common creative network. All the information is already available on the internet. In physical places, people gather together to apply and further develop that information. The walls between educational institutions and the rest of the world must become porous, enabling a constant two-way transfer of thoughts and skills. This would also give learners the opportunity to become active citizens and members of society.

In addition to educational institutions, we want learning villages also to open their doors to businesses, communities and organisations. Learners have opportunities to test their knowledge and skills in practice if the school shares premises with for example, an auto repair shop, a think tank or a care home. Some learning villages could also include universities. Learning villages would act as meeting places for people of all ages and from different backgrounds.

Social welfare and educational services can also work together in a learning village.

During the current term of government, the funding allocated to repairing and renovating schools should be directed to building learning villages. Local partners would also bear some of the construction costs. The building of learning villages should be also supported through urban planning policy.

The learning village concept can also be implemented in existing buildings. The learning village approach is based on venturing outside, tearing down internal boundaries. The school needs to become the neighbourhood hub. Learning is not tied to age, group or place. Architecture can help change the way of thinking. The Ritaharju School in Oulu has an extension with no hallways – what effect does that have on learning? The students of the Nurmijärvi Upper Secondary School decided to try out the use of the school cafeteria for quiet studying.

Making the change a reality also requires policymakers to take pragmatic decisions. A school teacher from Helsinki recently rejoiced at the news of the city council's recommendation to let groups of schoolchildren travel free of charge on public transport during the day. At present, a class from a school situated on the outskirts of the Helsinki metropolitan area can afford to make three return trips on the metro per school year.

WHERE DO WE GO FROM HERE?

- Learning environments should be more effectively opened up to the surrounding society and community.
- Introduce the maker culture and learning-by-doing to Finnish education.
- Redirect funds allocated to renovation and new construction to build learning villages.
- Improve the flow of information between schools and social services.

Focus on competencies, not degrees

There are more than 300,000 people unemployed in Finland, and 1.4 million people over the age of 15 in Finland have completed only compulsory basic education. This group of people holds a huge amount of untapped human resources. On the other hand, at the other end of the education spectrum, university graduates feel they have done everything right and are still not sure about their future. Someone with less education, self-acquired skills and a winning persona can get ahead of them.

While the importance of competency is ever increasing, the value of degrees and a formal education is crumbling. Degrees were effective in the world of the industrial age, where competency could be easily compartmentalised. There used to be common, simpler identification methods for skills and knowledge. Now, the need for interdisciplinary approaches and the continuous learning of new skills outweighs neatly compartmentalised competencies.

Cuts are being made to education funding, regardless of the value that education brings to individuals and society. We see a conflict here. The education policy has also become more difficult. How can we know what skills and knowledge are needed in the future?

Not so long ago, in the early 2000s, Finland wanted more Nokia engineers and paper workers. That prediction went wrong. It is predicted that many professions will disappear and new ones will emerge at an ever-increasing pace. This means that decisions relating to education will rapidly become outdated. Even having a university degree will not guarantee a job. Instead of monitoring when students graduate, higher education institutions should be monitoring when and how they find employment. According to Pasi Sahlberg, who is an active promoter of educational change in Finland and internationally, the key working life skill of the future will be the individual's ability to create a job for themselves.

We talk about lifelong learning, but there are also other dimensions; learning happens year after year, around the clock. Formal education represents only a small slice in the pie chart of what we learn during a lifetime. People need more flexible options for finding a new profession and supplementing their competencies. Not all education has to lead to a degree; the value of liberal education and web-based studies, for example, needs to be recognised more clearly. We should bravely get ride of the silos within education for example between general upper secondary schools and vocational training. It is not important where you studied – what matters is what you learned there.

WHERE DO WE GO FROM HERE?

- Shift from higher education degree programmes with a narrow focus towards more broad-based study modules.
- Replace the education pipeline with flexible and personalised study paths.
- Find new solutions for making hobbies and competencies more visible.

AN IDEA

Digital Competence Badges provide a way of showcasing all kinds of competencies. The idea is that learning is not restricted to an education institution or place of domicile: online, learning is a global phenomenon, and badges can be granted from across the world on the basis of the principles of peer learning. In Finland, badges are granted and earned via the www.oppiminenonline.com website, for example.

"We live in a world where your professional skills are becoming increasingly linked to your hobbies. Maintaining your personal competency level is based on passionately tracking what happens in your own field of expertise and absorbing new skills before your school or employer has even heard of them."

Jari-Pekka Kaleva, Senior Policy Analyst at Neogames

More development, less red tape

"When ten units are removed from basic operations due to savings, five of them will return as five separate projects. That means five applications, five decisions, and five project monitoring and reporting systems."

Esa Suominen, State Secretary

WHERE DO WE GO FROM HERE?

- Transition from projects to experimentation and national impact – it is recommended that project funds be channelled to ground-level reforms.
- Increase the use of research and evidence-based models when making decisions on education.
- Establish a This Works Centre under the Finnish Board of Education.

EXPERIMENTS

Education Model Canvas is a design tool for new education innovations. It is a visual map that aids in asking the right questions and gaining a deeper understanding of the model during the design process. The purpose of the tool is to help developers display their ideas and projects, ask the right questions and find the right partners for co-operation.

At least 3,000 education-related project applications are drafted in Finnish municipalities each year. Processing those applications takes up 30 person-years at the Finnish National Board of Education alone. Municipalities have employed people whose sole task is to hunt for project funding.

All eyes are on the applications. No one has time to monitor what the outcomes of the projects are and what has been learned from them. As it stands, the projects are often merely keeping the old activities going instead of creating something new. In the world of projects, even the failures are reported in a non-negative way. This does not generate more information on which ideas work and which do not. Good ideas of course are also generated constantly; however, they are not getting disseminated. Despite this, more than 200 million euros of public funds are spent on projects every year.

In our opinion, this makes no sense. Instead of annually channelling the funds to more than a thousand different projects, the money should be given to twenty projects. These twenty projects should be aimed at a profound reform of education and learning and presenting the results to every operator in the education system. How do we stop distributing people into groups by age? What if the learners decided what to study? What might the Finnish upper secondary school be like now if it was created from scratch?

Researchers, organisations and businesses should be invited to join the projects. The results, including failures, must be thoroughly analysed and communicated openly. Not all new ideas are good, you might also need to go back to the drawing board at the implementation phase. Failing teaches us to avoid the same pitfalls next time round.

The education sector is in need of decision making based on evidence and research. This is particularly important in a country where 70 per cent of municipal decision-makers are over 55-years-old. They have not gone to comprehensive school themselves and do not have school-aged children, currently attending basic education. Decisions cannot be based on a gut feeling and outmoded perceptions of what constitutes a good-quality education.

Small sums should be allowed to be allocated without any bureaucracy. Such allocations would be open to application from teachers, head teachers and learners, who need funding for their ideas. This would help build an agile culture of experimentation in which words are put into action rather than time wasted on planning. Anyone can do it; children can also play a role in the change. Experimentation and practical trials will help them learn how to make an impact in their own lives and take responsibility for the world around them.

We should form a network of people who have head teacher qualifications to be used for sharing competencies and ideas. For the Finnish Board of Education, we want to establish a This Works Centre, following the model of the UK-based What Works Centre. The centre would be tasked with disseminating best practices proven by testing.

7Fairness replaces equality

Equality is among the key values of Finnish education – perhaps even the most important one. No-body is questioning the importance of providing everyone an equal opportunity to learn, obtain an education and get ahead in life. Nevertheless, Pisa results show that boys from eastern Finland are two years behind girls from northern Finland in the development of reading skills.

The differences within cities have also grown. According to Researcher Venla Bernelius from the University of Helsinki, the differences between the city districts of Helsinki are greater than the differences between Finnish municipalities. Based on several indicators, the school area of the Helsinki Capital Region with the weakest student material falls below that of the weakest of all Finnish municipalities. The differentiation of schools based on the competency of students increased continuously from the 1990s. Despite the ideal of equality, the educational outcomes of schools within a single city vary significantly.

"For Finland to succeed in the future, we need to identify the personal talent in each young person and help them develop it. Every guy hanging around at the shopping centre doing nothing has huge potential in him."

Aleksej Fedotov, Founder of the Muutosvoima coaching programme

And yet, the differentiation of Finnish schools based on educational outcomes has started only recently. In Sweden, regional differentiation started earlier and the risks were not identified soon enough. Our neighbouring country is presenting us with a warning example worth taking to heart. By taking an active role in policymaking, we can still steer it along the right track. The schools of the most challenging areas might be the most innovative of all. Schools with the weakest educational outcomes are in urgent need of new approaches and practices.

One example is presented by the city of Turku, where teacher education is organised in Varissuo. Why is that special? Because Varissuo is a city district with the highest ratio of non-Finnish speaking residents in Finland.

Free education alone does not guarantee that everyone has the same opportunities in life. "100 opportunities for Finland and the world", a publication from the Committee for the Future of the Finnish Parliament, states that in the current mode of teaching, the teacher has very little individual time for each student, and the students often do not have the possibility to choose a learning method that suits their style of learning. Equality must not be synonymous with giving the same thing to everyone. Education requires personalisation and diversification.

Learners come from various backgrounds and nationalities. They have different interests. Instead of equality, we should be talking about fairness. The education system must become more flexible in order to see learners as separate individuals rather than a single mass. Learning is influenced by where we live: in the city or the countryside, in a poor suburb or a wealthy area of single-family homes. And of course by the language that we use as our native tongue. These differences must first be identified and then used as a basis for tailoring education, pedagogy and educational materials. Schools need to help learners identify what opportunities are available and how to create contacts outside their own life spheres. The opportunity for motivational learning must not be dependent on postal codes. Local schools must be good schools.

WHERE DO WE GO FROM HERE?

- Continue the fight against the differentiation trend – active policymaking can help maintain the quality of local schools.
- Shift from equality to fairness and replace a single model with personalised solutions.



Technology is about humans, not devices

"Anything that can will be digitised. What will happen to schools?"

Sami Honkonen, Director at Reaktor

EXPERIMENTS

Opetalks.com is a low-threshold way of sharing best learning practices. The aim is to promote the sharing culture and disseminate best practices for everyone to use.

Education Innovation Hackathon

brought together education, coding and business experts for two days to develop new solutions for learning and teaching. The experiment was organised with the Oulu University of Applied Sciences. The outcomes included a button that makes peer learning in classrooms easier.

WHERE DO WE GO FROM HERE?

- Increase co-operation between technology developers and educators.
- Speed up the introduction of digital educational materials.
- Promote people's utilisation of data that are related to their own learning.
- Increase distance education systematically, for example by providing upper secondary school courses that are more online.

Basic education schools in Finland have the lowest utilisation rate of information technology in Europe. Nearly one third of Finnish pupils never or hardly ever use a computer at school. And meanwhile, digitisation is gaining momentum, not slowing down. Digital services will become as commonplace as electricity and water.

Children who start school now will still be working in the 2070s. They have to learn to use technology as fluently as they use pavements, power plugs and water taps. Internet skills, media literacy and new writing, and information security skills are essential. We need to do more than just introduce technology to schools. This is not about giving pupils tablets instead of books and the teacher using a video projector instead of an overhead projector: this is about what they do with the tools they have. Technology must be used to change how we do and learn things. This is about pedagogy, not the equipment. We need a fun learning revolution.

Large-scale software projects led by the state or municipalities are no longer necessary. All we need to do is give the pupils access to the internet and make sure there is plenty of Finnish-language learning content available to them. It is the educators' task to make, find and use such content. The offering is much wider than before when there were only a few series of books to choose from. What a huge opportunity this is. The creation of new learning materials must involve seamless co-operation between educators and technology developers. We want to see the outcome of co-operation between the Finnish gaming industry and Finnish teachers.

The tools for creating an individual learning environment are already available to everyone. In addition to digital learning materials and games, it can include open digital archives, social media and libraries. Formal education and old institutions need to improve the way they steer people towards existing information sources and use that information to create new data. More than before, libraries need to act as places where people of different ages can get together and share their know-how with each other. Learners in formal education are also increasingly engaging in teaching each other and their teachers.

Digitalisation is challenging us to reinvent our traditional degree structures and hierarchies. Competition within the education market is becoming ever more global as anyone can attend a top university lecture for free while sitting on his/her sofa at home. The relationship between attendance and distance learning is one of the key questions of new education. More thought than before needs to be put into deciding when people benefit more from physically attending a lesson or course, and when using a virtual link to connect them is enough.

People need to be able to gather data related to their own learning in one place. They must also have ownership and user rights to the data. The world is talking about the quantified learning approach in which people can improve themselves in the same way as they improve their personal well-being through health data. Technology can be used to access personalised tasks, progress at one's own pace and constantly find new and interesting things to learn.

Education is worth taking to places where it does not exist

Why stop with a land of people who love to learn – we want a world of people who love to learn. Finland must create a new set of standards for learning which will be pursued by other countries. The emphasis of exporting education should be on learning.

So far, Finnish education exports have not reached the expected level. Saku Tuominen, an entrepreneur, says that education is a global business worth seven trillion euros, of which Finland's share is a modest 30 million, despite the fact that the Finnish education system is the world's best brand. Our education exports are scattered all over the place and we still do not know what it is that we should be selling.

Meanwhile, there is a huge demand for education and training in the world. There are millions and millions of people who could use knowledge and skills, starting with reading skills.

Finnish vocational training and the related innovations have the potential to provide millions of unemployed young people around the world with skills that will help them create jobs. We need to think big – or in this case, bigger. Selling to hundreds of people for a few thousand is not a good strategy – selling to tens of millions of people is. Exporting should be about products and services rather than the education system.

The tradition division of commercial education exports and development aid must be abolished. They share the same market. Joining forces will also help better succeed during large-scale calls for tender. More close-knit co-operation must be encouraged between educators, technology developers and sales professionals.

Development aid must genuinely be based on co-operation. Places that currently have a deficient education system or none at all have the opportunity to move directly to using the new education approach. The scarcity of resources can be the best source of innovation. The lack of desks and books in the schools of developing countries is horrifying to us, while foreign visitors are coming to the University of Helsinki's Playful Learning Centre to look at a modern classroom with no desks and books.

Education export has fallen victim to the same confidence in its own excellence as the whole Finnish education system. We no longer have the privilege of thinking that we are the best and no one measures up to us, and wait for the rest of the world to come and admire how we do things in our schools. New ideas keep emerging in all corners of the world and we need to make sure we are up to date, no shame in stolen with pride. Education needs to be imported as well as exported.

WHERE DO WE GO FROM HERE?

- Demand-driven productisation of Finnish learning solutions for export.
- New types of operating models for education exporters and a single education export strategy for Finland.
- Education becomes the core of development co-operation.
- Vocational education model becomes a profitable export product.

"The question is what solutions can education offer? There is an urgent demand in the world for skills and faith in the future. That is where the markets are."

Laura Vanhanen, Advisor on education for Finn Church Aid

EXPERIMENT

Interdisciplinary co-operation for exporting vocational training was an

experiment aimed at serving as a discussion opener and highlighting the boundaries that need to be removed in order to promote the export of vocational training. Examples of such boundaries include legislation, lack of market information and business skills, and limited co-operation among various players. The workshop focused on building a mutual understanding of the key issues that need solving and establishing partnerships for the future.

Love cannot be measured but it can be seen

How does change begin and spread? Do we need radical restructuring or a cultural change? Do we take huge leaps or baby steps? We must do all this simultaneously. Sometimes structures can prevent cultural change. On the other hand, organisation charts and playing with mystery boxes will not make the changes happen. Often the way is to start doing things differently.

There is no single solution for building new education: a combination of changes is needed that will reshape the operating culture as a whole. We need pioneers and missionaries, rule-breakers and designers of new rules. Saying "we already tried this" often kills the conversation. That is wrong. On the contrary, it should bring the conversation to life. Oh, where was that? What did they do? Did it work? Why aren't we doing it?

A top-down approach can also be used to encourage change in society. We need to compile an all-in-one piece of learning-related legislation and then make an easy-to-read version of it. And then do the same for the national core curriculum. The outcome should be a simple user-driven online version. The laws and the national core curriculum should be assessed based on how well they serve learning. Norms should be replaced with goals.

New education is centred around the learner and his/her experiences. Love may not be easily quantifiable, but it is perceptible. The learner's experience is the key indicator of success at all levels of education, from early childhood to adult education. All assessments must primarily be carried out from the perspective of the learner, not the teacher or the administration. It is the director's task to create conditions in which learners will be able to identify their passions and strengths and find ways to use them. He or she coaches and serves a community of learners in which everyone learns from each other. Openness, listening to feedback and the inclusion of learners are essential in creating such a community. Learners are the heart of the community. Learning goals will be set together with the learners.

The New Education forum reforms will never be finished as education must keep changing. The change must involve more than writing a 500-page national core curriculum or reforming degree programmes. By the time they are complete, the world has already moved on. We cannot afford to wait for top-down or bottom-up changes to begin. We need a simultaneous, all-encompassing change.

WHERE DO WE GO FROM HERE?

- Learner-centred decision-making concerning education and how to develop it, not according to the organisation's needs.
- Shift from management by norms to performance management.
- A more user-friendly online guide on the national core curriculum.

"We must bravely leave our silos and start moving towards the change together."

Pertti Parpala, Head Teacher of Ritaharju School

EXPERIMENTS

The Upper Secondary School Living

Lab was an experiment based on an operating model that breaks traditional hierarchies so that the head teacher, staff and students are all involved in planning the instruction. The experiment was organised at the Nurmijärvi Coeducational Upper Secondary School and is based on Edukata, a participatory design model from Aalto University. The upper secondary school students at Nurmijärvi attended workshops at which they came up with ideas on how to develop their school through quick practical experiments.

Co-ordinated by the Finnish National Board of Education, **Majakka is a network of development schools** with a membership of more than 170 primary schools. Majakka and the New Education Forum jointly conducted a practical experiment to test how a web-based solution could support their work. How can a simple, agile and inexpensive tool be used to increase co-operation, co-development and the dissemination of new innovations?

The participants and enablers of the New Education Forum

Anna-Sofia Berner, Helsingin Sanomat

Aleksej Fedotov, National Union of Vocational Students in Finland SAKKI

Kirsi Harra-Vauhkonen, Sanoma Pro Oy

Sami Honkonen, Reaktor Oy

Jan-Markus Holm, EduCluster Finland Oy

Mervi Jansson, Omnia

Laura Juvonen, Technology Industries of Finland Centennial Foundation

Lauri Järvilehto, Academy of Philosophy

Jari-Pekka Kaleva, Neogames Finland ry

Bob Karlsson, Finnish National Board of Education

Maarit Korhonen, City of Turku

Tapio Kujala, Finnish Lifelong Learning Foundation

Kristiina Kumpulainen, University of Helsinki

Mikko Kutvonen, Design Driven City

Nina Lahtinen, Trade Union of Education in Finland

Jarkko Lahtinen, Association of Finnish Local and Regional Authorities

Maisa Lehtovuori, Finnish News Agency STT-Lehtikuva

Teemu Leinonen, Aalto University

Petri Lempinen, Finnish Confederation of Professionals STTK*

Ulla Nord, Helsinki Deaconess Institute

Pertti Parpala, Ritaharju School

Leena Pöntynen, Town of Ylöjärvi

Immo Salo, Ivorio Oy

Tiina Silander, University of Jyväskylä

Mika Sivula, Municipality of Pielavesi

Nuppu Stenros, WÄRK ry

Esa Suominen, Ministry of Finance*

Heikki Toivanen, Partus Oy

Anu Urpalainen, Parliament*

Laura Vanhanen, Finn Church Aid

Milma Arola, Finnish Innovation Fund Sitra

At Sitra, the work of the forum was guided by the following people:

Hannele Laaksolahti, Päivi Hirvola, Riina Kopola, Kalle Nieminen, Jonna Aakkula, Heli Nissinen and Tapio Anttila.

*Organisation at the beginning of the forum in December 2014.

We would like to thank all the participants of Sitra's New Education Forum.



Finnish Innovation Fund, Sitra Itämerenkatu 11–13, P.O. Box 160, FI-00181 Helsinki, Finland

Telephone +358 294 618 991 sitra.fi



