

THE FINNISH EDUCATION SYSTEM



My Learning
Time is NOT
Free!



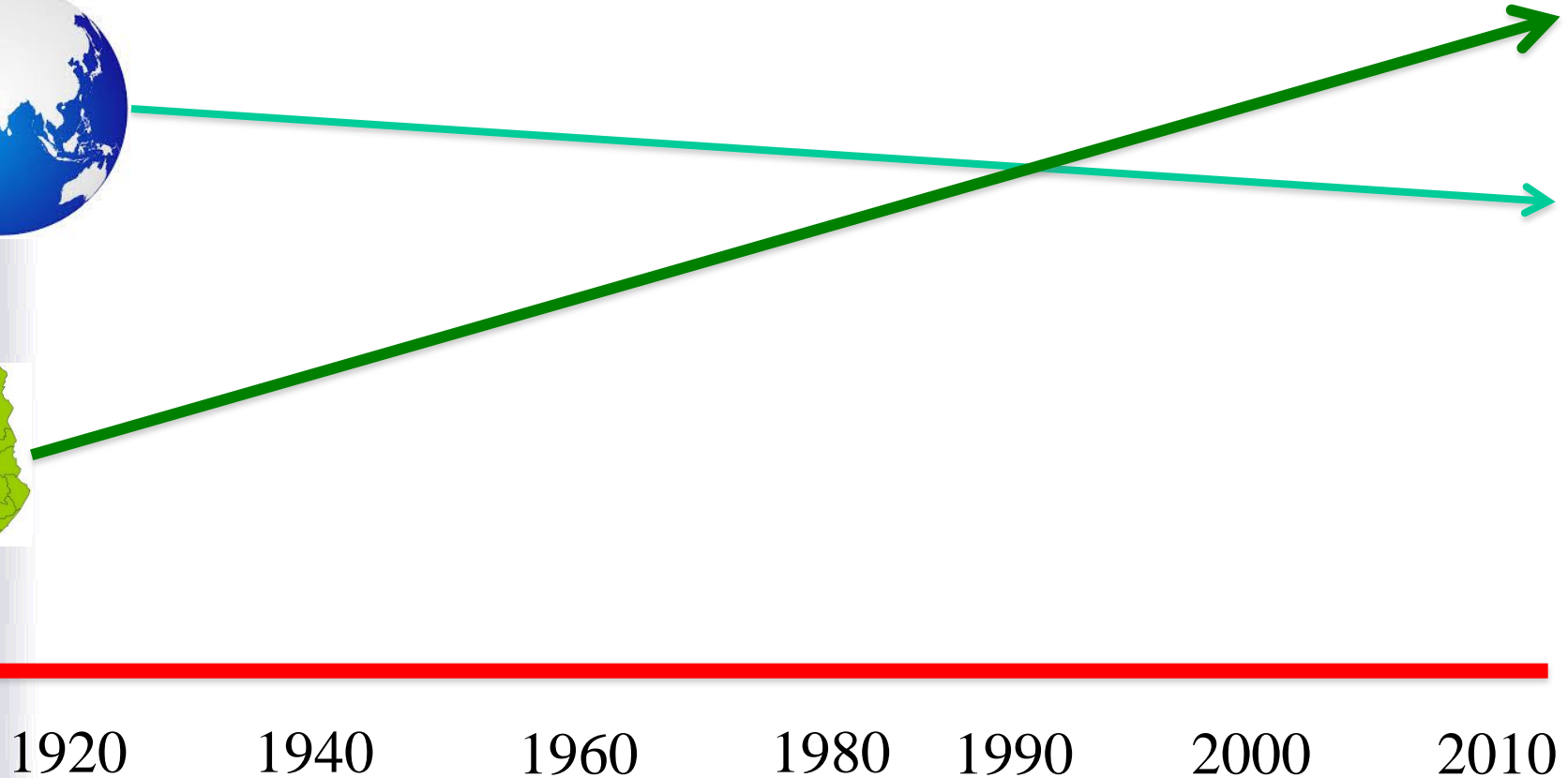
Petri Lounaskorpi

Senior pedagogical consultant, researcher

Didactec Oy Ltd

petri.lounaskorpi@gmail.com

The Finnish way



Our strengths



- Planning and Building the educational system
 - Equality
 - “social engineers”
 - No big well known educational innovation
- Model of secondary education
 - Classless upper secondary school and matriculation examination (**The only nation wide test**)
 - Personally tailored learning plans (Finnish innovation)
 - 150 years old model
 - The popularity of the vocational and professional training
- Mediation and solving the educational problems
 - “The Peace Keeping Troops of education”

Our strengths

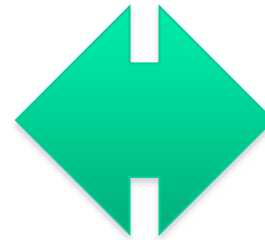


The world trend



The Finnish way

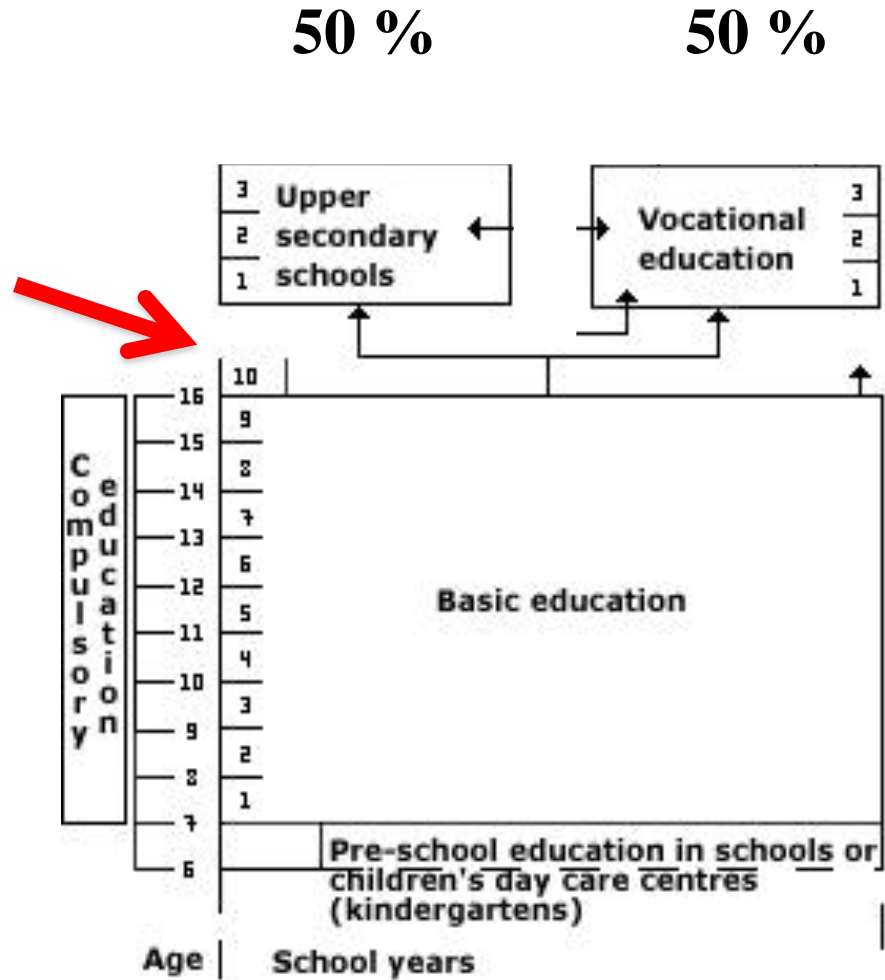
- 1 Competition
- 2 Standardisation
- 3 Accountability relying on testing
- 4 Free choice of schools
- 5 Technology



- 1 Competition
- 2 Creativity
- 3 Trust based responsibility
- 4 Equality
- 5 Pedagogy

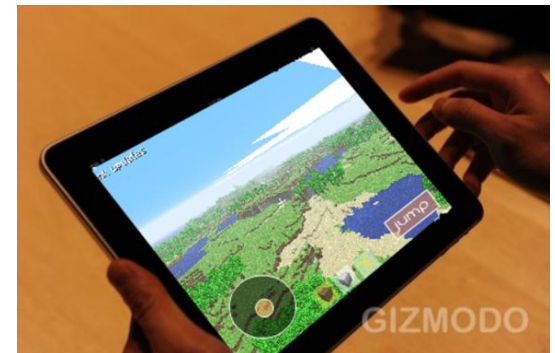
The Education System

Education System Chart



Basic education

- The Finnish school system does not have any actual pre-schools, but pre-school teaching is provided at schools and day-care (Kindergarten) centres. Pre-school teaching means education provided in the year before children start comprehensive school.
- The aim is to improve children's capacity for learning. In practice, children are taught new facts and new skills through play. participation in such teaching is voluntary. Most six-year-olds now go to pre-school.



Compulsory education

- Compulsory education in Finland really starts with comprehensive school, which generally starts in the year children turn seven. Comprehensive school is a nine-year system providing education for all children of compulsory school age.
- Every Finnish citizen is required to complete this education. Comprehensive school lasts for nine years and ends once a young person has completed the curriculum of the comprehensive school or when ten years have passed since the start of their compulsory education.



The Compulsory tests

matriculation examination

- The compulsory tests are in the mother tongue (either Finnish or Swedish), the second official language, a foreign language, and either mathematics or general studies.
- There are two levels of examinations in mathematics, in the second official language and in foreign languages; in at least one of the compulsory examinations the more demanding level must be chosen.



The general upper secondary school (High School)

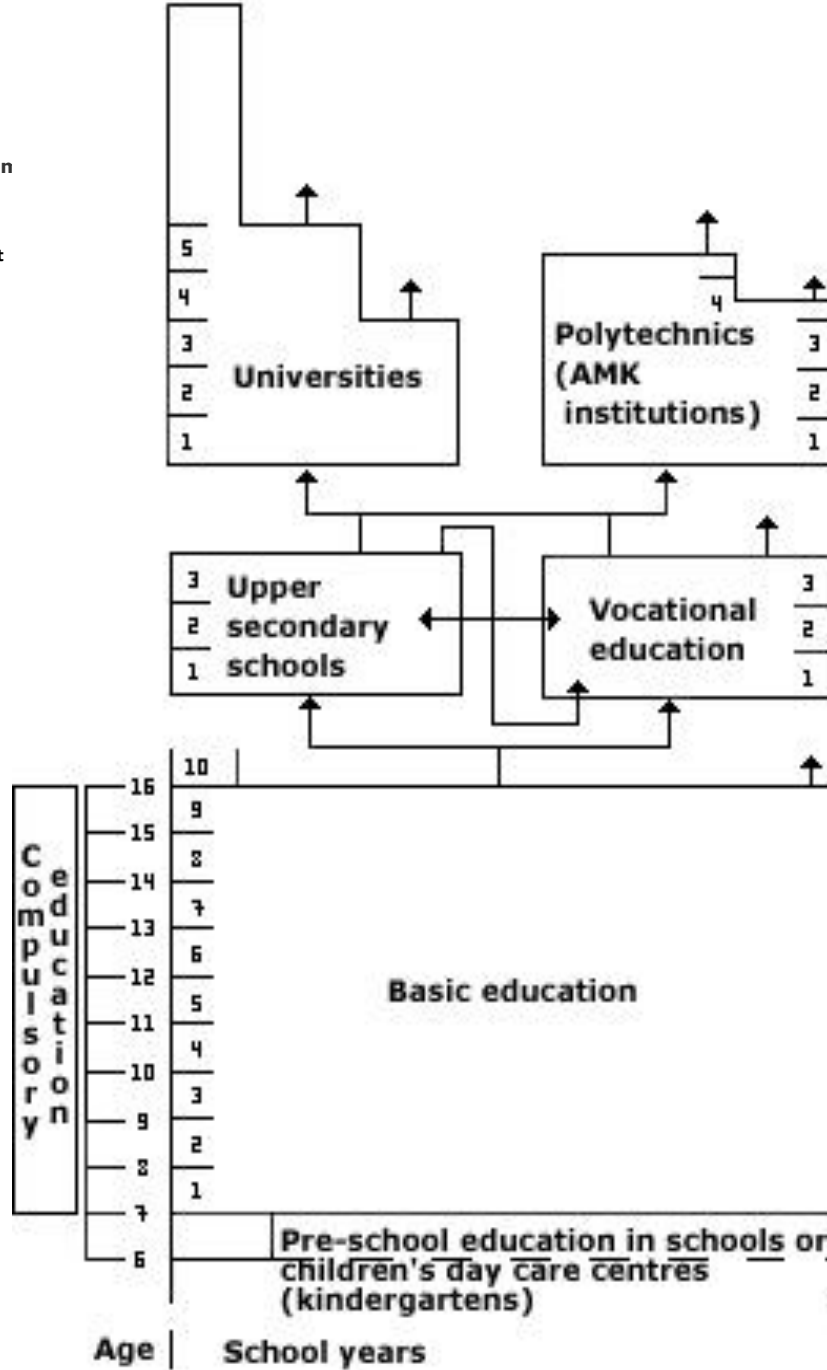
- The general upper secondary school network covers the entire country. The schools follow a national core curriculum, but recently the range of choice has been widened.
- Individual schools can cultivate a more distinct image; some upper secondary have a specialized curriculum, giving emphasis to the arts or some other field.
- Upper secondary school has traditionally constituted the main channel to university education.

Vocational education

- Finnish vocational education and training is institution-based to a very large extent. Taught courses form the core of the programmes.
- In order to create closer cooperation between vocational education and training and the world of work, efforts are being made to increase the proportion of apprenticeship training to some 10 % of all entrants.

The Education System

Education System Chart



Higher education

- Higher education system consists of universities and polytechnics. The Finnish higher education system is made up of two parallel sectors: universities and polytechnics.
- The universities (20) rely on the connection between research and teaching. Their basic purpose is to perform scientific research and to provide higher education connected with it.
- Students at universities may take a lower (Bachelor's) or higher (Master's) academic degree and also academic further education, consisting of licentiate and doctoral degree.

The polytechnics

- The polytechnics are usually regional higher education institutions which provide instruction in subjects from several sectors, and which emphasize a connection with working life.
- There are all together 29 permanent polytechnics. Most of these institutions are multisector establishments. The polytechnics provide instruction in the following sectors: technology and transport, business and administration, health and social services, culture, tourism, catering and institutional management, natural resources, the humanities and education.

More general information

- In Finland, 99.7 % of the age group complete compulsory schooling, which means that Finland has one of the lowest dropout rates in the world.
- There is no school fee in Finland. The government contributes to the financing of all of the schools. For children, the teaching and educational equipment are free of charge. In addition, pupils get one free warm meal a day. This tradition of free school meals goes back eighty years.



More general information

- Statutes determine the core subjects which all pupils study. The government determines the national objectives for education and the number of classroom hours allocated to each subject.
- The school year is divided into the autumn and spring terms, totalling **190** school days



Teachers

From the first to the sixth year class, pupils are mainly taught by class teachers and for the remaining three years by specialist subject teachers.

- As a rule, both comprehensive and upper secondary school teachers have university degrees, which take 5-6 years to complete. The qualifications required from teachers are set down in fairly great detail in statutes.



Special-needs education

- Pupils with learning difficulties get remedial teaching in addition to normal classes. Since 1997, educational authorities have been responsible for the education of all children, including those with profound developmental disability.
- The aim is to integrate special-needs education as far as possible into ordinary schools, but there are those who benefit more from separate special-needs education.



GRADUAL SUPPORT A “THREE-STEPPED- MODEL FOR SUPPORT”

National intervention model followed by all schools

- **GENEGRAL / UNIVERSAL SUPPORT:** Short time support for any reason at very early stage, in order to avoid the “worsening” of the situation; for students with temporary and/or mild learning barriers. E.g. student guidance, additional teaching
- **INTENSIFIED SUPPORT:** “Strengthen support” for students with more persistent challenges in learning. E.g. student participates part time education in support class. Compulsory to draw up en ILP = Individual Learning Plan
- **SPECIFIED SUPPORT** for students with severe learning barriers.
 - Administrative decision.
 - IEP = Individual Education Plan is compulsory

All decisions monitored and assessed regularly.

Specified Support also assed officially; at least **2nd & 6th grade**

The Finnish Approach: Nordic Openness

Open for Ideas and Innovation



Open Pedagogies and Curricula

Society open for teachers' appreciation



Education open for anyone (schools, universities, adult education)



Strategic approach

- national strategies



Finnish national strategys

- **First 1995 – 2000**
 - basic skills for teachers (government money for training)
 - every school connected (government money 50 %)
 - skills for the pupils
- **2001 – 2004**
 - specific skills for teachers = 3 levels (government money for training)
 - teachers in-service training based
 - every **community and school** makes their own strategy in teaching ICT
- **2005 – 2006**
 - Broadband in every school
 - 75 % of teachers on level 2
 - Pedagogic support for teachers
- **2006 – 2010**
 - Equipments for all
 - Online teaching methods and pedagogies
 - Social media tools

2011 -2014

New National goals:

- Concentrating to the students future skills
- Pedagogical models and practises
- E-learning material and learning solutions
- Development of the infrastructure and support services
- New vision of teachers, teacher training and pedagogical expertise
- New working culture of the schools and leadership
- Co-operation model with industry and network co-operation

The Post-PC world

- Pcs have dominated our desktops for last 40 years
- Our need for on-demanded information is rapidly changing the types of devices we use and the way we work
- We are entering the Post-PC world, where BYOD (Bring your own device), mobile devices, cloud storage and social networks creates the challenge



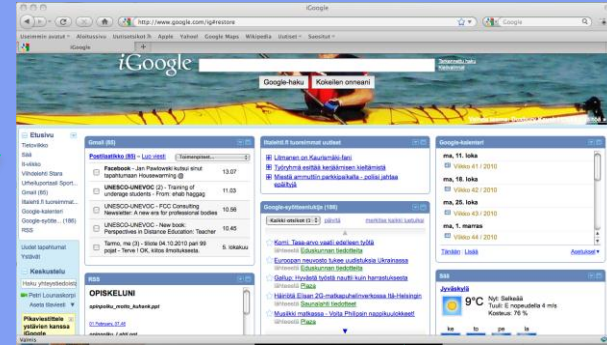
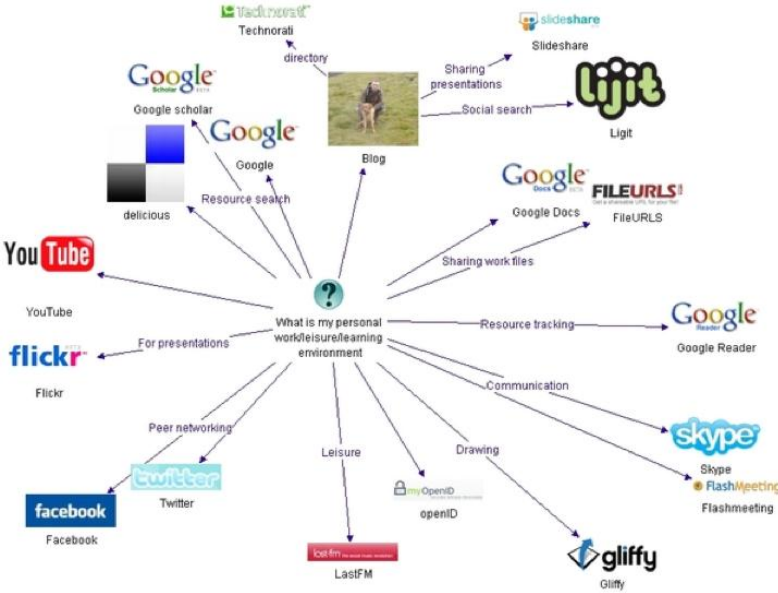
The dawn of the SOCIAL AGE

- Change
- New tools
- New economy
- Control of the Information flood



PedaNet since 1998

INTERNET



PERSONAL INTERFACE IN THE CLOUD

EQUIPMENTS

CLOUD SERVICES

WORKING IN THE CLOUD



e-Learning Definition

Electronic learning (or *E-Learning* or *eLearning*) is a term for all types of technology-enhanced learning (TEL), where technology is used to support the learning process.

"Pedagogy empowered by digital technology"



Source: <http://en.wikipedia.org/wiki/E-learning>

The challenge of BYOD

- Vision of 1 to 1 future in schools
 - One device per student
 - Need for content, procedures, skills, outcomes...
 - Funding?
 - The one question: Why?

The challenge of BYOD

- The real need and the curriculum
 - What are the ICT skills which need to be learned?
 - What content is available?
 - Is the wireless network working?
- The level of teachers skills
 - How are the teachers trained?
 - What equipment they can adapt in their work?
 - How the support is executed?
- What about the infra structure in schools?

What Does All This Mean?



**My Learning
Time is NOT
Free!**

Our challenges towards the new teachers

The basics for our teacher's in-service
training strategy

”Teachers are
teaching
like they have
learned”

Challenge I

Finding the **RIGHT** algorithm(s)

**Learning
Outcomes
Requirements
Needs**



**Learning
Tools
Content
Assessment**



Challenge II

Mindset Change!



Challenge III

Sharing & Reusing Content

Time Table

The screenshot shows a weekly schedule for a course. The header indicates 'Time-Table 1 - 18:15:00 - 19:45:00'. The schedule is organized by days of the week (MON, TUE, WED, THU, FRI, SAT, SUN) and includes columns for 'COURSE', 'Lecturer', and 'Lecture'. The content is partially obscured by a redacted area.

Course Outline

The screenshot displays course details for 'Introduction to Pharmacology'. It includes sections for 'Lectures', 'People', 'Activities', and 'Course Objectives'. A 'Course Synopsis' section provides a brief overview of the course content.

Teaching and Learning Methods

| Method | Weighting (%) |
|----------------------------|---------------|
| Lectures | 10 |
| Practicals | 0 |
| Tutorials | 0 |
| On-line | 0 |
| TOTAL CONTACT HOURS | 10 |

Learning Outcomes

| Learning Outcome | Weighting (%) |
|----------------------------|---------------|
| Learning Outcome 1 | 10 |
| Learning Outcome 2 | 0 |
| Learning Outcome 3 | 0 |
| Learning Outcome 4 | 0 |
| Learning Outcome 5 | 0 |
| TOTAL CONTACT HOURS | 10 |

Assessment

| Assessment | Weighting (%) |
|----------------------------|---------------|
| Coursework | 10 |
| Lab reports | 0 |
| Self-reflection | 0 |
| Written examination | 0 |
| MCQ (end of course) | 10 |
| MCQ (end of 1st semester) | 0 |
| MCQ (end of 2nd semester) | 0 |
| TOTAL CONTACT HOURS | 10 |

Challenge IV

Online Interactivity

Forums

Quizzes

Chat

i-Lectures

3D Virtual Spaces

Web Conferencing

Wikis

Blogs

Games

Assignments

Video Conferencing

Challenge V



**Strong
ICT Support Team**



**Innovative
E-Learning Team**



Inspired Educators



Involving teachers in games and virtual learning environments with SEN pupils and gifted learners

Learning games and virtual environments in education,
the LEVI-coordination project



Background

- Even though the Finnish school has proved to be successful in international assessments of school achievements (PISA, OECD 2010), the virtual game-based learning environments are not widely experimented and exploited in schools.

Challenges:

- Inability of new environments to pervade into the curriculum
- Teachers' attitudes and suspicions
- Lack of technological resources
- Lack of knowledge about potential games
- Lack of training and support (principal, teacher networks)
- Lack of time

The goals of LEVI

Learning games and virtual environments in education



LEVI's aim is to enhance the pedagogical use of virtual learning environments and game based learning solutions.



The coordination project guides the use of learning games and virtual worlds in schools and also collects good practices and spreads them to teachers.



LEVI also manages testing and piloting in schools with teachers and students.

Objectives



- **To develop a teacher- and curriculum-friendly programme to involve teachers in virtual game-based teaching and learning environments in order to renew pedagogy and, finally, to enhance students' motivation as well as experimental knowledge building, problem solving and collaborative ways of learning.**



What project LEVI offers to teachers?

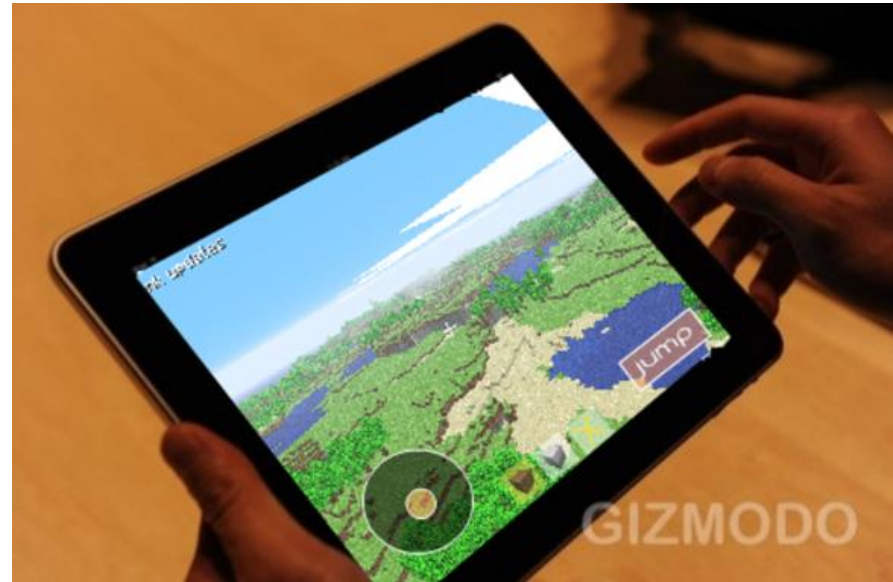
- Links to learning games which are categorized by subjects and class levels
- Ideas from other teachers and experts to schools.
- Information of new learning environments and practices related to them
- The possibility to take part on the progress of games and virtual environments



New kind of learning?

In Finland:

”Pupils, (boys) who play more than 15 h/week, are getting much better degrees in English comparing to those who doesn't play at all.”



New Skills of Participatory Culture: Media Education for the 21st Century (Henry Jenkins 2007)



- **Play** — the capacity to experiment with one's surroundings as a form of problem-solving
- **Performance** — the ability to adopt alternative identities for the purpose of improvisation and discovery
- **Simulation** — the ability to interpret and construct dynamic models of real-world processes
- **Appropriation** — the ability to meaningfully sample and remix media content
- **Multitasking** — the ability to scan one's environment and shift focus as needed to salient details.
- **Distributed Cognition** — the ability to interact meaningfully with tools that expand mental capacities
- **Collective Intelligence** — the ability to pool knowledge and compare notes with others toward a common goal
- **Judgment** — the ability to evaluate the reliability and credibility of different information sources
- **Transmedia Navigation** — the ability to follow the flow of stories and information across multiple modalities
- **Networking** — the ability to search for, synthesize, and disseminate information
- **Negotiation** — the ability to travel across diverse communities, discerning and respecting multiple perspectives, and grasping and following alternative norms.

Potential of games for learning

- motivating and engaging
- motivation often linked to learning new skills and contents
- Suitable challenges → Flow

- How could this be coupled with learning the subjects of the curriculum?

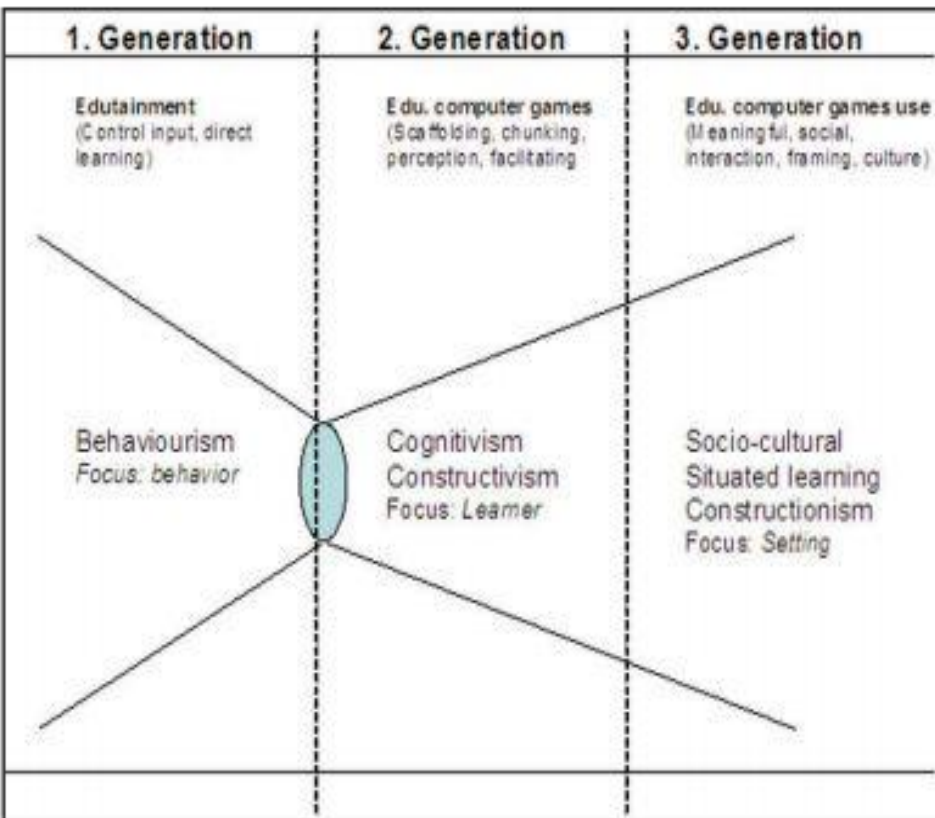


Possibilities of games



- It has been proven in many studies that games **motivate** (Gee, Prensky) and that is in many cases based on the learning of new subjects.
- Gamer can achieve a **flow-state**, when she struggles to find a suitable challenge. The sense of time disappears and the gamer **is fully concentrated** on the activity.
- If this game experience, the flow-state could be harnessed to the use of learning according to the curriculum, it could open completely **new possibilities**.

The generations of learning games and the theory



Focus in Action

Focus On Learner

Focus In Environment, Situation and Usage

1. Generation: Edutainment

Stimulus-reaction, the training of single skills

Behaviorism

2. Generation : Learning games

Fractioning of information, giving an combining according to capabilities of the learner

Cognitive constructivism

3. Generation : Game environments and Game like usage

Social interaction, connections to meaning, situation and culture.

Sosiciocultural learning concept

Egenfeldt-Nielsen (2007)

How and why the games should be used in education?

- Digital opportunities for the use of games has not yet been fully understood.
- The teachers are interest in the games, but are struggling to find good games for their own needs
- Also the latest research, techniques, and materials are not always accessible to teachers
- Teachers have always used games in teaching !
- Games are typical in informal education – the formal education still often uses games as a snack, but not very useful part of the teaching

Learning games and virtual worlds

- Games can teach communication, teamwork, critical thinking, the virtual world and reality, fusion and separation.
- Activates students as players, data collectors and producers.
- Games can provide a multi-disciplinary learning environment that provides opportunities for cooperation in the best case, learning new things, and knowledge construction.
- Games can also be used for example in entrepreneurship education and leadership skills lessons.

Reasons for using learning games

Support

Reward



Motivation

Integration

Games are motivating

- Variation of Games is large
 - > Different games for different learners
- Activates players
 - > Flow
- Playing together
 - > learning together
- Problem solving
- Seeking for information



Games are rewarding

as well for SEN students as talented pupils

1. Own progress -> self worth
Speed, skills, levels...
2. Teacher appreciation
Positive feedback,
better degrees
3. Friends appreciation
"He's good opponent in games."
"I want to be in his team. "



Games in Integration

- Integration between different school subjects
 - Angry Birds – Physics
 - Against All Odds – Geograpy, Religion, Social studies, 12 different languages...
- Games in foreign language
 - Case in Finland:
 - *”Pupils, who play more than 15 h/week, are getting 1,5 numbers better degrees in english, comparing to those who doesn’t play at all.”*
- Integration between different ages
 - Older <—> Younger
 - SEN pupils <—> Ordinary learners



Games in SEN

- Variation of Games is very large
 - Different games for different learners
- Many games are adaptive
 - Level is suitable
 - Learning brick by brick
- Motivating as a homework
 - questions get harder as students progress
 - Next levels, coins, tasks makes you to work harder



Usage of games

- Pedagogical Entities
 - Example. Vesikoulu (KE) tai Kovat kertoimet (Hi, YHT, UE, kielet)
- As part of the curated content
 - TULUVAT -hanke
- Differentiation tool
 - Example. Luki-Luukas (AI)
- Self-directed material
 - Example. mathematics learning programs
 - Ekapeli, Sumdog, Timez Attack tai Manga High



Can learning games achieve?

- Ignite learning?
 - A sense of self-efficacy?
 - Understanding of issues and information processing?
 - Genuine teamwork and participation?
 - Deep processing?
 - Genuine effort?
 - Compassion ability?
- Or are the games just a small snack and technical trickery?



LEVI project offers teachers

- Links to learning games
- http://peda.net/polku/ovi_en
- The games are divided by subject and titled class levels
- Curriculum -correlation in the Finnish curriculum
- Articles and research findings of learning games

http://peda.net/polku/ovi_en

“Wise teachers create an environment that encourages students to teach themselves”.

Leonard Roy Frank

Thank you !

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