Digitizing the school -
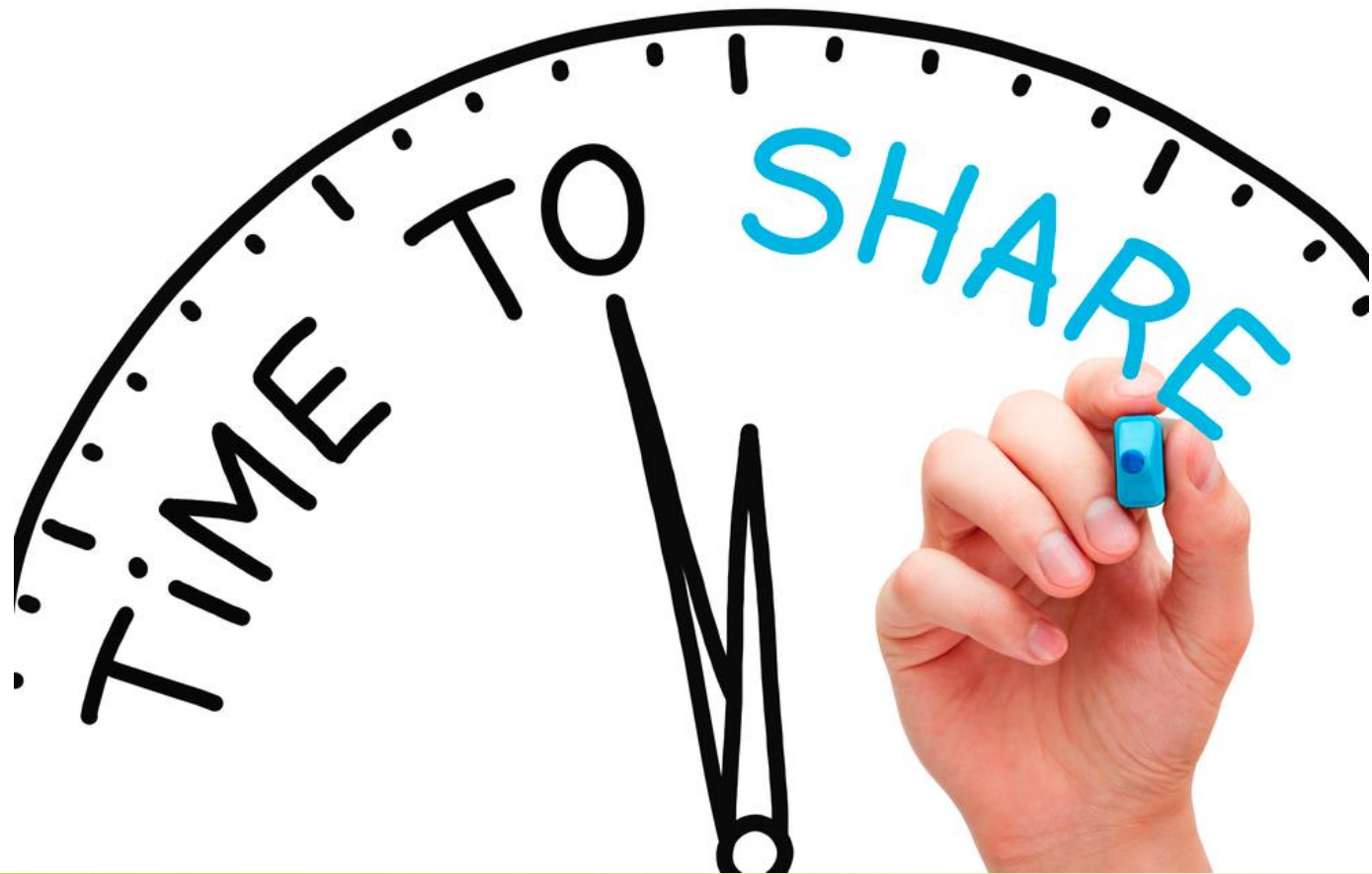
by Performance management, Collaborative learning & Research

SOLLENTUNA KOMMUN
Barn- och utbildningskontoret

SKOL RESAN
SVERIGES BÄSTA SKOLA

The schools in Sollentuna

- Aprox 9000 students (age 6-16)
- 17 public schools (77 %) / 16 charter schools/independent schools (23 %)
- Preschools Private (80 %), Public (20 %)

- 1:1 and politics – Why spend this kind of money on ICT?
- Democracy
- Higher achievements

Accumulated results

4
2014

6
2013

18
2009

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- All students shall reach the national goals in the curriculum

- Sollentuna shall have the nations highest merit rating

- All students are supposed to feel secure (no bullying)

Working together!
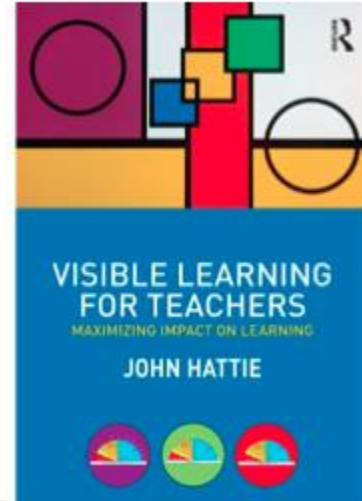
What can we gain from cooperation?

Strategic work together with principals

Working on four different levels

Politics, Departement, principals, teachers

Transformation

From Visible Learning to Challenging learning

A learning organisation…

Sharing good examples
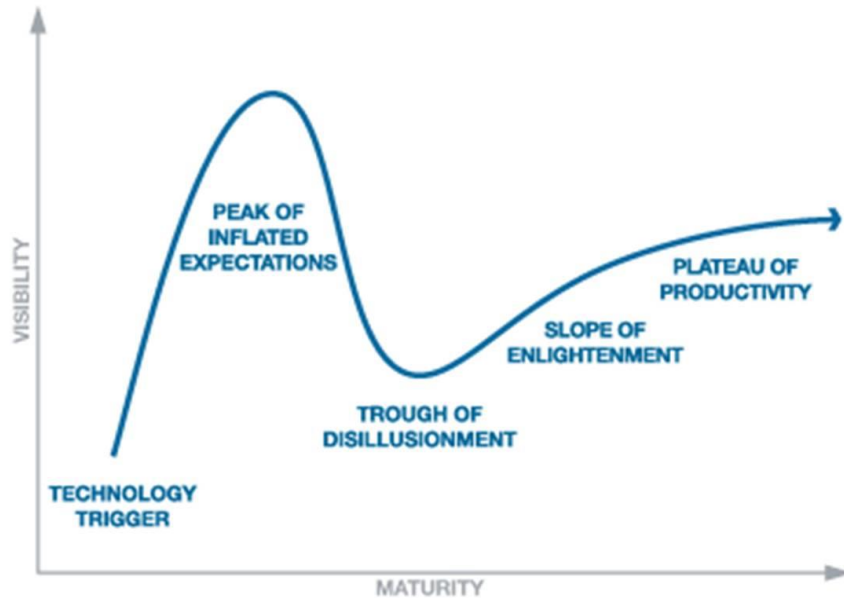
Developing new ideas. They should be based on research

Methodological development and high-quality professional development

Integration of ICT and pedagogics, 1:1

It is OK to fail!

Gartner´s Hype cycle - five key phases of a technology's life cycle

Technology Trigger: A potential technology breakthrough kicks things off. Early proof-of-concept stories and media interest trigger significant publicity. Often no usable products exist and commercial viability is unproven.

Peak of Inflated Expectations: Early publicity produces a number of success stories — often accompanied by scores of failures. Some companies take action; many do not.

Trough of Disillusionment: Interest wanes as experiments and implementations fail to deliver. Producers of the technology shake out or fail. Investments continue only if the surviving providers improve their products to the satisfaction of early adopters.

Slope of Enlightenment: More instances of how the technology can benefit the enterprise start to crystallize and become more widely understood. Second- and third-generation products appear from technology providers. More enterprises fund pilots; conservative companies remain cautious.

Plateau of Productivity: Mainstream adoption starts to take off. Criteria for assessing provider viability are more clearly defined. The technology's broad market applicability and relevance are clearly paying off.

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Harper´s cycle applied to Sollentunas ICT journey
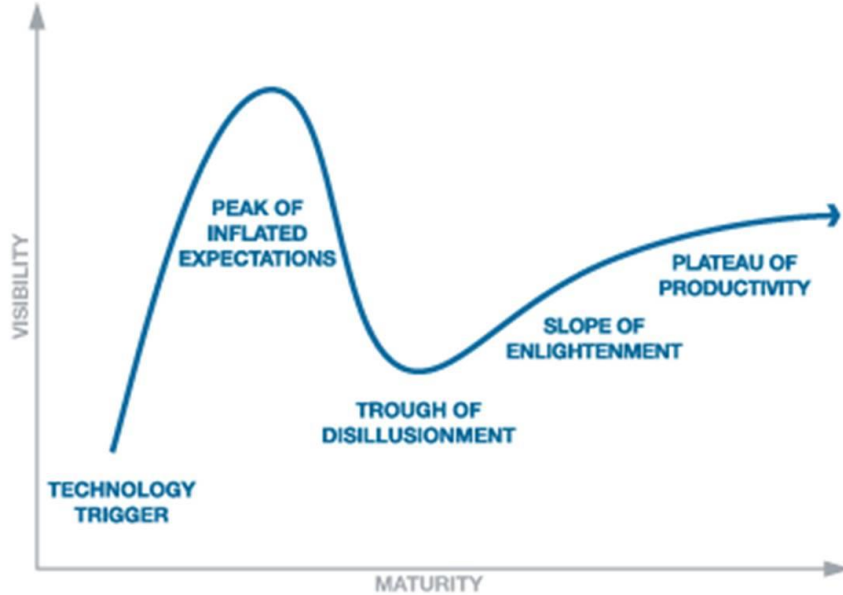
Phase 1 - 1:1 by 2013 - political goal in all schools
Phase 2 - Infrastructure is in place, the expectations are on top, teacher training of implementing ICT by the WTL course begins and the culture of sharing starts
Phase 3 - The wifi crashes, many teachers do not know *how* to use the technology, the costs and benefits of the 1:1 initiative is being questioned, Google Apps is being questioned by the Data Inspectorate...
Phase 4 - The wifi is expanded, the administration management in Sollentuna and the politics are supporting and consistent in leading the implementation of ICT in the schools of Sollentuna, More teachers are attending the WTL course, Sollentuna receives visits from different municipalities and other countries concerning the implementation of ICT
Phase 5 - The implementation project has reached some kind of maturity, ICT has become a solidarity among principals, administrators, educational developers and teachers

Challenge? Getting ALL teachers to dare challenge themselves and integrate new pedagogical ideas supported by ICT

VISIBILITY

PEAK OF INFLATED EXPECTATIONS

PLATEAU OF PRODUCTIVITY

SLOPE OF ENLIGHTENMENT

TROUGH OF DISILLUSIONMENT

TECHNOLOGY TRIGGER

MATURITY

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No longer a question *if* we should digitize the school - but rather of *how* to get all our teachers to use technology in an effective way

Fig. 1.1b: Students per computer
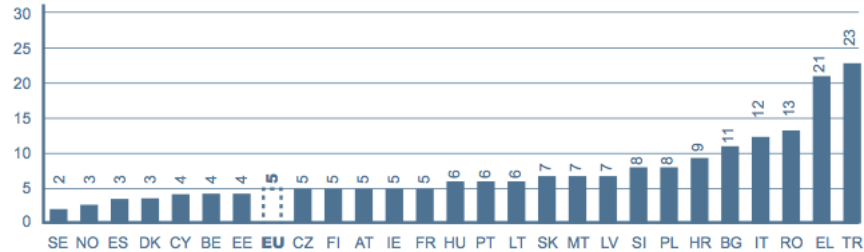(Grade 8, country and EU level, 2011-12)

Fig 1. Students per computer
(Grade 4, country and EU level, 2011-2012

- About 20 % of the teachers in Sweden thought that ICT was interfering with their teaching
- About 30% of the teachers in Sweden was positive of integrating ICT
- Few teachers use ICT to give feedback or assess their students
- 60-85% of the students had teachers that never or almost never participated in activities of giving feedback or student assessment through the use of ICT

Write to Learn (WTL)
-a model developed in Sollentuna for integrating researched-based key factors for learning with ICT

Students giving written formative feedback to each other

Teachers training course

- During almost one academic year

- Lectures once a month

- Implementation of the WTL model in the classrooms

- Analysis in Google Sites

- Tutoring and formative feedback between teachers, mentors and course leaders

- During 5 years, 200 teachers and about 5000 students

A follow up study of the WTL
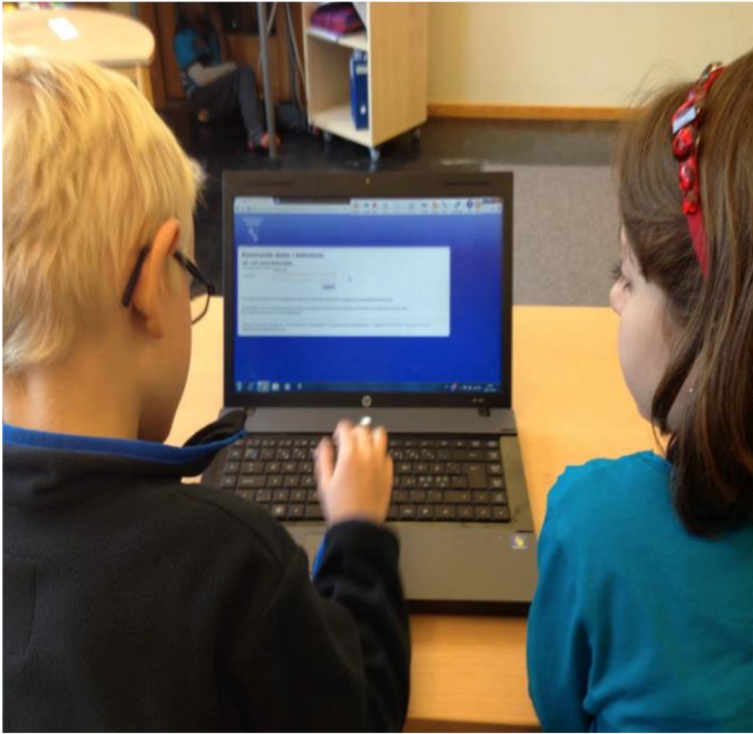
- Quantitative study

- Aiming to compare the results of literacy and mathematics in grade 3

- Methods compared: WTL, Traditional method and the ITU (Individual Technology use) method

- Use of the national tests

- Taking into account the socio-economic factors of the schools participating in the study

Research studies of the WTL

Results of a pilot study, published in Computers & Education, 2013:

- Aim - to see if the WTL resulted in higher or lower results after one year of use
- literacy
- 90 students
- grade 1
- two methods compared; a traditional using pen and paper and the WTL method
- Slightly higher read speed
- Significantly higher quality of the written texts
- Significantly higher confidence
- Indications of higher results also in mathematics

Results of the WTL-model, students grade 3

National test of Literacy — iWTR, Traditional, ITU

Boys: 89,92 / 71,64 / 68,83
Girls: 94,92 / 86,89 / 90
Boys & Girls: 92,31 / 78,91 / 77,17

National tests of Mathematics — iWTR, Traditional, ITU

Boys: 81,4 / 59,7 / 51,95
Girls: 81,36 / 75,41 / 62
Boys & Girls: 81,38 / 67,19 / 55,91

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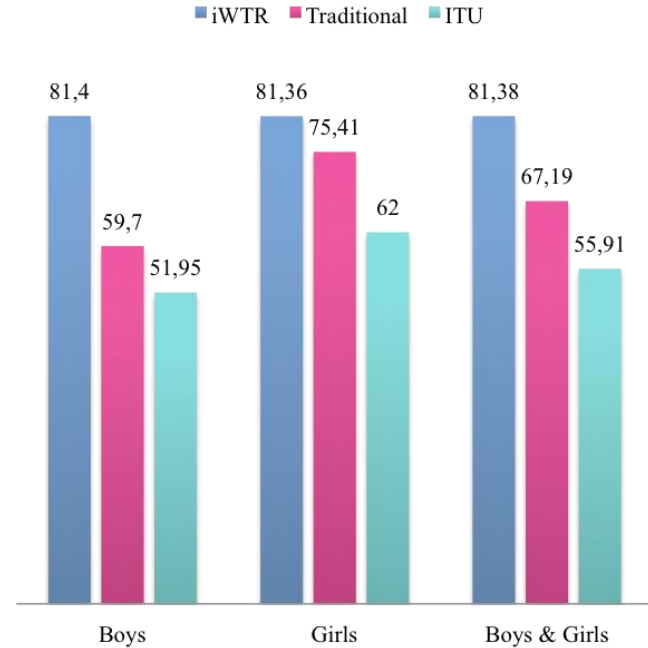
Results of the WTL-model, students grade 3

Literacy and Mathematics

Legend: ■ iWTR ■ Traditional ■ ITU

Boys: iWTR 76,74; Traditional 47,76; ITU 45,45
Girls: iWTR 79,66; Traditional 72,13; ITU 58
Boys & Girls: iWTR 78,14; Traditional 59,38; ITU 50,39
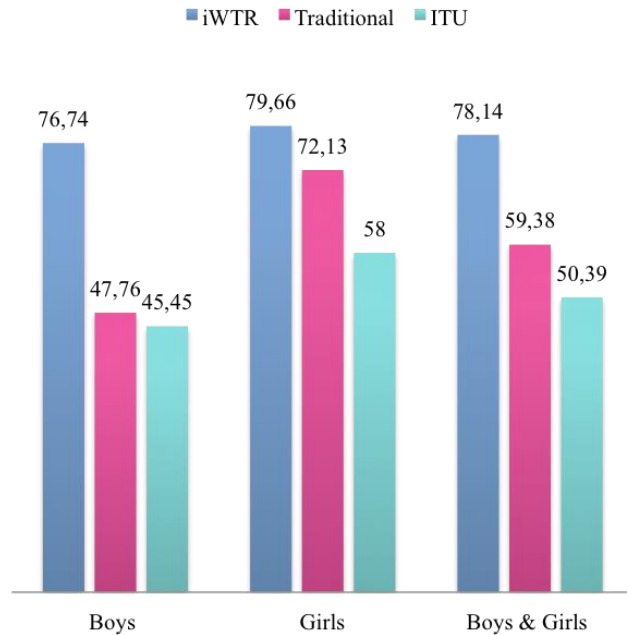
·   WTL leads to higher student achievement in literacy as well and in mathematics than both other methods – the difference is 19 percentage points compared to the traditional method and 28 compared to the ITU method.

·   WTL leads to better performance among low performers than both other methods– the results of the lowest performers are improved by 80 % compared to the worst performing method.

·   WTL leads to a lower gender gap in performance than both other methods – in mathematics boys improved their performance up to the level of girls, and overall boys performed almost 30 percentage points better using WTL compared to both other methods.

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RUNBACKA SKOLOR

- 580 students: Preschool, K-9
- 90 staff members including 45 teachers
- Built in 1989 with an architecture to provide an environment designed for Education and Afternoon programs
- Profile: foreign languages and Sports
- Olweus certified school
- ICT

School Vision

- High performed education that challenge students for academic improvement and creativity

- High and positive expectations

- A safe and respectful environment

- Excellent academic performance

- Students prepared for future studies and professional life with 21st Century Competencies

- Education based on educational research with teaching in the forefront

Runbackas digital improvement 2011-2015

1. Computers to staff & wireless network
2. 1:1 grades 7-9 computers
3. 1:1 grades 4-6 computers
4. 1:2 K-3 iPads and computers
5. 1:1 K-9 mix iPads and computers
6. iPads in Preschool
7. Green-screens in all classrooms
8. Apple-TV

- Continuous Staff training on different levels
- Teachmeets
- ICT-strategies and Curriculum for digital learning
- Highlight good examples
- OK to fail = *there is nothing like failure - either you succeed or you learn something new*

Current state

- Digital tools a natural part in education
- The culture of sharing is strong among both teachers and students
- Cooperative learning
- Preschool, K-9 and afternoon programs working towards the same goals
- Students developing creativity with digital material - computer science and code

Digital tools a natural part in education

- Bloggs for assignments, information
  http://runbackaskolor.se/bloggar/
- Flipped classroom
- Feedback for formative assessments
- Assignments and Presentations
- Social networking f ex Twitter & Facebook

Feedback in Google Drive

Starta eget företag - företagsekonomi

Mitt företag

Mitt företag heter QuotesLH och vi säljer tavlor med olika quotes på. Quotesen är skrivna på olika sätt. På vissa tavlor är de skrivana med korstygn och ibland är de tryckta med en fin text i olika färger. Min tanke med den här produkten är att alla kan ha den i sitt hem. Hemmet måste inte vara det modernaste eller det färggladaste. Det funkar på alla sortest stil. Jag riktar mig inte till en speciell sorts människa eller ålder. Förstår man quotsen så kan man tycka att tavlan har en mening och det är det jag stävar efter. Produkten är för alla men quotesen är skrivna med motivation för skolan, livet, att göra det som finns i ens drömmar, osv.

Produkterna från QuotesLH kan du köpa i vår Internetbutik www.quoteslh.se, där alla runt i hela värden kan beställa produkten, eller i vår egna butik på Stureplan. Dit kan du lätt ta dig med hjälp av kolektivtrafiken däremot är det svårare att åka bil dit. Du kan också köpa dem i butikerna Cervera och akademibokhandeln

LOVE LAUGHTER and really strong COFFEE

The best WINE is the cure we attack with FRIENDS

A party without a CAKE is just a meeting

Carolin...
14:59 Idag
Markera som löst

Det jag kan se att du inte har med är en förklaring på vilken marknad/målgrupp du har. Även om du skriver att det inte är en speciell målgrupp så kanske det är mer vuxna än barn som köper och kanske mer kvinnor än män?
Det betyder mycket om man vet det så att man kan rikta in reklamen till exakta målgupper.
Visa mindre

Caroline Lindfors
14:59 Idag

Skriv någonting mer om vart ni har reklam och vilken sorts reklam.

Svara...

Feedback in movenote

http://youtu.be/ftwYPEz-9NA

Examples from student presentations

- [Climate and weather, grade 6](#)
- [Runbacka nyheter](#)

Students developing creativity with digital material - computer science and code

FROM DIGITAL CONSUMERS...
… TO CREATIVE INNOVATORS

Future...

Makerspace - Code/Digital material a natural part of subjects as craft, art and music, mathematics, technology

Big data - advanced methods to extract value from data

Write To Learn (WTL)

Introduction for new teachers

Thank you!

Annika Holmgren, Principal Runbacka skolor
annho_s@edu.sollentuna.se
Twitter: @Annikaprincipal

Students leading the meeting about their own developement.

Then, now and in the future.

Contents

- Kärrdalsskolan, a short presentation
- Before
- The 1:1 idea
- Now
- *Individual development plan,* the IUP-work
- Student examples from year 2 and year 5
- Opinions from student and parents
- The future
- Questions

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www.kärrdalsskolan.se

Kärrdalsskolan

- Situated in Sjöberg, Sollentuna
- Students are 6-12 years old.
- 2 pre-school classes (1-5 years old)
- International class (9-12 years old)
- 450 students
- *"Fritids"*= after school activities

Before

- Different documents
- Not efficient. Took a great deal of the teachers' time.
- A lot of paperwork.
- The meeting was between the teatcher and the parents. The student was passive.
- Meetings in the evening, after school.

The 1:1 idea.

- Students with their own computer/i-pad
- Google Apps as a plattform
- *Individual development plan* (IUP) in digital form
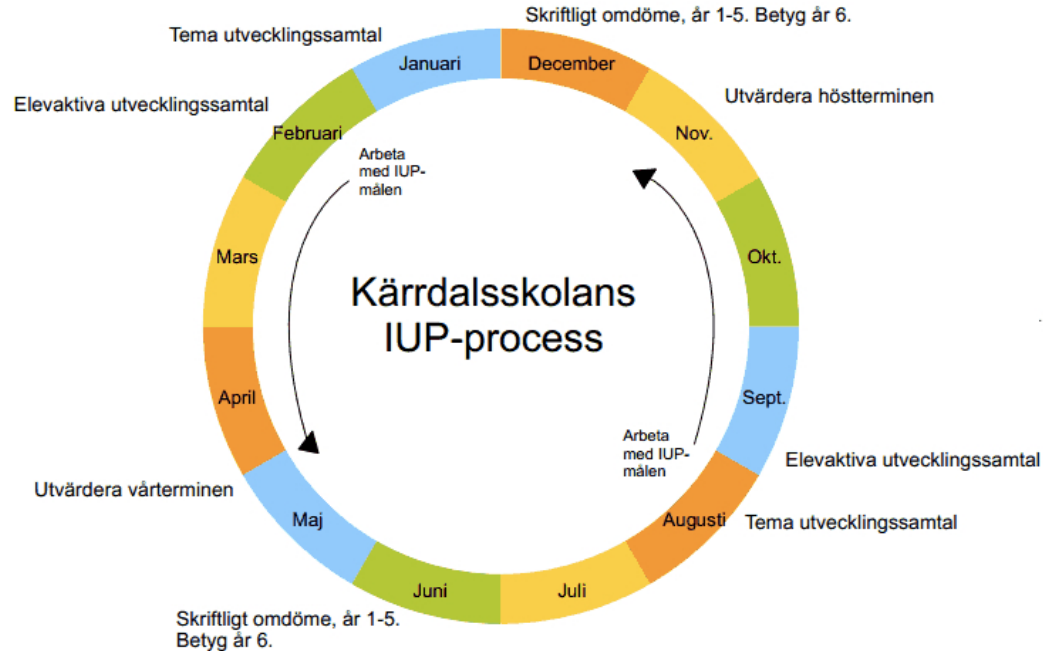- Digital portfolio

Now

- One document
- Efficiency
- Engagement
- In daytime, when the students feel fit
- The students' results/grades *in* the document as a base for their new goals

Participation!

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IUP-processen

An example from grade 2 (8 years)

Social development:
I am good at: listening to the teachers and to the other children. Show that I want to answer questions.

I need to practise: Concentrating the whole lesson. I want to be better at answering questions.

The most fun thing to do: To do gymnastics and to play with marbles

In the breaks I usually: Play with marbles and play hide and seek
I can concentrate best when: ... it is quiet around me.

Teaching of Swedish
I am good at: Writing on i-pads and to be the reporter of the week

I need to practise: To write with pencil and to understand what I read

The most interesting is: Reading

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Barn- och utbildningskontoret

www.kärrdalsskolan.se

An example from grade 5 (11 years)

Mathematics

I am good at: multiplication table, fractions and area.
I need to practise: Calculating in different scales, but I have already improved in area calculations.

I want to show you: My knowledge of multiplication. I have improved a lot in that.

Biology, Fysics and chemistry

I am good at: molecules, atoms, astronomy and water.

I need to practise: Nothing that I can think of.

I want to show you: My books in biology and chemistry, because I am very interested in these two subjects.

Comments from students in year 2 and 5

The parents opinions?

According to the result of an inquiry we have done among half of our parents, 70% of the parents experienced a great achievement since the change in the process of IUP and students leading the meeting
The other 30% are not so fond of leaving their jobs during daytime.

Quotes from parents
"Good structure of the talk where the pupil is responsible for the talk with the help of the teacher. Becomes a good dialogue where I as a parent ask questions and become curious. The pupil grows from taking responsibility for leading the discussion and being in the centre. You realized that XX was well prepared and a little nervous."

"I prefer the old way of conducting the development-talks. You sit alone with the teacher and can discuss both positive and negative things about the child. Now you don't really find out about things the teacher has seen that the pupil needs to work with."

"What a WONDERFUL document! I would like to collect the answers and print them in a book!"

"Lack of participation of the parents in the talks"

The future

- Further development
- Grasp new possibilities
- Involve teachers in practical subjects.
- Increase participation of parents
- Several ongoing discussions

Thanks! Questions?

Contact me if you have questions!

Principal Jan Eriksson: jaeri_s@edu.sollentuna.se
Teacher: Milla Mankiewicz: caman_s@edu.sollentuna.se