A research circle
Teachers improving their skills in educating the highly able students

Elisabet Mellroth, City of Karlstad, Sweden
PhL, Licentiate in philosophy
Elisabet Mellroth

I like to learn and want to help those who likes to learn…

• Two university exams, 1997

• ECHA-diploma, 2009

• Some extra mathematics, 2010

• Research, 2012-2014

• Continue in research combining with school development 2015 –
  Swedish national correspondent in ECHA (European Council for High
  Abilities)
This hour

• Giftedness

• Gifted students

• Gifted education

• The Research Circle as Professional Development or school development or …

• Experience from an ongoing research circle

• Planning your own research circle
Giftedness
There are many definitions...

- Agreement that a combination of several factors is needed.
- For giftedness in academic areas factors often mentioned as important; motivation, creativity and intelligence.
- Some common (in the western societies) definitions
  - Renzulli – the three ring conception
  - Gagné – The Differentiated Model for Giftedness and Talent (DMGT)
Connecting to SD and yesterday

*Riel Miller* - Common denominator erase the uniqueness! Erases most of the richness most of the uniqueness in everyone!

Gifted individuals are non-normal therefore more unique then others

*Martin Fitzgerald* - I do enough, I have enough, I am enough

Do I offer the student enough, do I have enough knowledge of the student, I am enough and the student is also enough

*Susanne Müller-Using* – Innovation, The potential of the human being must come out to create innovation. We also need to accept and acknowledge what is in the child – then innovation can happen!
Highly able students

who are they?
The gifted child/student

- The gifted child/student surprise you over and over again with his or hers exceptionally ability or abilities. (s. 50, Persson, 1997)

It can go wrong – they most often can’t make it on their own

A girl – In Sweden, unfortunately a typical case in the beginning and unfortunately not a typical case in the end

**Beginning, grade 1 - 10**
Reading, Writing, Calculation, Biology
Feeling different
Began to cut herself

**Start of the end, grade 11-12**
Got challenge in university math
Was seen
Was feeling happy to finally get to learn something in school

**Now** – university math. Loves to see solutions she didn’t foresee.
Highly able vs High achieving students

Highly able students:
• Ask questions
• Very curious
• Crazy (silly) ideas
• Discusses in detail - develop
• Strong passionate interest, strong opinions
• Know already
• Prefer adults
• Propose projects and tasks
• Create new things
• Love to learn
• Draw conclusions of knowledge
• Enjoy complexity
• Very observant
• Very self-critical
• Good insightful guesses

High achieving students:
• Know the answers
• Interested
• Good ideas
• Answers questions
• Listen with interest
• Learn easily
• Thrive with peers in same age
• Do their homework
• Copy
• Enjoy school
• Understands concepts
• Prefer a simple step by step procedure
• Is "awake", eager.
• Satisfied by their own learning
• Good memory

Gifted education
Sweden

• In Sweden, focus on reaching a passing level
  – little interest, if any, has been given students capable to excel (Persson, 2014)

• Theory of giftedness is rare in teacher education (Pettersson, 2011; Mattsson, 2013)

• The Swedish Educational Act of 2010 (SFS 2010:800) now stipulates each pupil’s right to be supported also in developing his or her knowledge as far as possible.

• Now guidelines from the Swedish Agency of Education – spring 2015.

• A three year school development project, about giftedness, has just started in Karlstad, (Funded by Ljungbergsfonden).

The education should offer

- Help and support to think both wide and in depth
- A community/Belonging
- Inside and outside the classroom
- Academical challenges
- Academic competence
- Freedom
- Responsibility and space to do own choices

The research circle
What is a research circle

A method to work with research in school development,

History – organize meetings between science based and experienced based knowledge – mutual understanding,

Deeper knowledge for all participants, scientists and practitioners

New knowledge can improve practise and provide new research projects.

The research circle

Is a place of reflection – of – action

Closely related to action research.
The research circle – a mediating arena

Figure adapted from, Persson, S. (2008). Forskningscirklar – en vägledning. Resurscentrum för mångfaldens skola, Malmö: Malmö stad.
The research circle – provides

The participants; teachers, school leaders, … are given tools to:

• Analyse pedagogical situations in a holistic view,

• Use scientific concepts to better understand pedagogical activities,

• Use knowledge from processes in research to investigate pedagogical activities,

• Read and understand research relevant for the area of interest,

• Present knowledge in a suitable way,

• Use the knowledge
  – To develop their own pedagogical practise
  – In development processes on pre-schools and schools

The research circle – needs

- A research educated leader with experience from the same field as the participants, for example a research educated teacher,
- Participants, 5 – 8,
- A problem to investigate,
- Time.

This

Research circle

Pre-defined topic:
How to support students
gifted in mathematics
What is giftedness

Giftedness in mathematics

What to explore in our classrooms

Investigation of challenging tasks (Sheffield)
Student identification? Does the task work in the classroom? Is the task really challenging? Does the task challenge the gifted student?
Research experience helps to...

What has been done earlier?
What does research say?
How can we work? Method/Data/Analysis
Where to find information?
Using an established network!
Student identification? A List, Peer nomination, Teacher observation

Is the task really challenging? Collaborative analyse before and after implementation

Teacher observations

Interviews with selected students

Does the task work in the classroom?

Does the task challenge the gifted student?
Collaborative Analyse

This is where we are now in the project!

We have two more meetings to analyse the data.
Results – so far...

- The teachers have learned about giftedness and giftedness in mathematics and challenging tasks,
- The researcher has increased her knowledge for example of difficulties in observations in practice,
- We have increased our knowledge of challenging tasks, obstacles and possibilities within the mathematical task.
Research experience helps to...

Communicate the results!
Transfer new knowledge to others!
The start of you own research circle

Pre-defined topic: Improvement of Gifted education

Hopefully 30 min left of this Workshop 😊
We come from different countries and cultures

2: Australia  2: Poland
1: Belgium  2: Portugal
1: Bosnia and Herzegovina  1: Singapore
7: Croatia  7: Slovenia
1: Canada
4: Denmark  19: The Netherlands
7: Finland  1: Ukraine
3: Germany  1: UNESCO
2: Ireland  2: United Kingdom
2: Italy
1: Latvia  2: USA
2: Nepal/Norway
5 groups, at least three countries should be represented

- Take 10 min to fill in the questionnaire individually,
- If you agree, I would like to collect the questionnaire afterwards as a pilot for my research, if not don’t give the paper back 😊,
In your group:

- 10 min discussion,
- Compare your answers,
- Discuss similarities and differences,
- Try to define something you want to explore about gifted education in your own practice,
- Take advantage of the knowledge in your group, bring the inputs back home,
- Don’t forget to share contact information with the one you think can help you!
- The last 10 min – each group have 2 min to tell the others one example of something they want to investigate further at home.
Thank you for participating in this Work Shop!

Elisabet Mellroth
Elisabet.mellroth@karlstad.se