
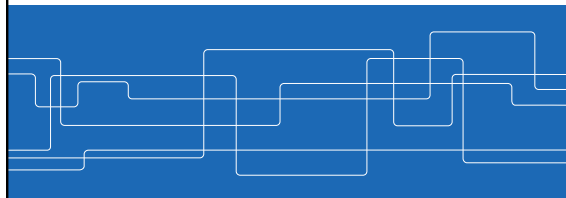


Share -version! Some things are added and some things are removed

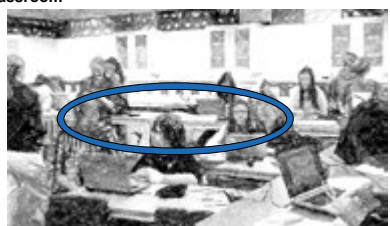
Comparative judgment
 - unpacking teachers' assessment practices

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 Nieuwegein, Jan 12th, 2019

 @EvaHartell #EDNed



My interest: Develop education where it matters the most - in the classroom



Key words
 formative assessment, self-efficacy, assessment literacy, sTEM-education

On-going projects


1. Embedding formative assessment in schools in Haninge
2. Comparative judgments and digital portfolios e.g. international collaborative study investigating teachers' assessment practices in USA, UK and Sweden w Purdue university
3. Teachers' self-efficacy in assessment in technology. Springer International Handbook of Technology Education
4. Programming with pupils w reading challenges
5. Nordiska projekt Beyond technology: bring your own device, use (and not use) of mobile phones and iPads in instruction in Nordic countries Denmark, Finland and Sweden

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Classroom formative assessment

1. Pupils don't learn everything they are taught
2. Good teaching starts from where the pupils are

One big idea!
Use evidence about learning to adapt what happens in classrooms to better meet learners needs. William (2009)




"Three legs" 1. feedback to pupils, 2. feedback to teacher and 3. subject specific

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Five key strategies for formative assessment (William & Leahy, 2015)

	Where the learner is going	Where the learner is right now	How to get there
Teacher	1. Clarifying, sharing and understanding learning intentions and criteria for success	2. Engineering effective classroom discussions and other learning tasks that elicit evidence of student understanding	3. Providing feedback that moves learners forward
Peer			4. Activating students as learning resources for one another
Learner		5. Activating students as owners of their own learning	



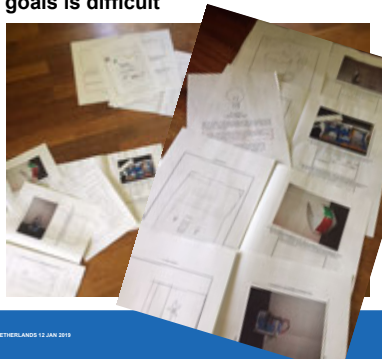
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But first

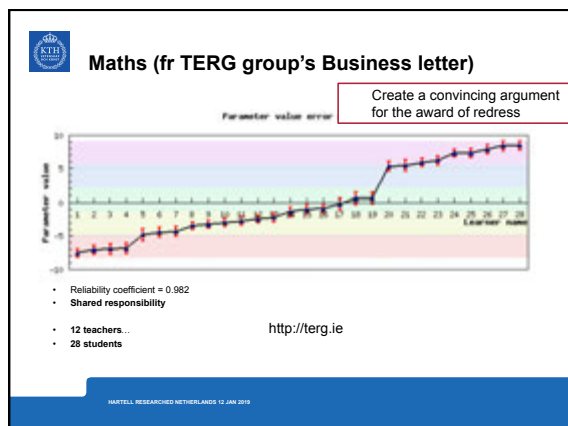
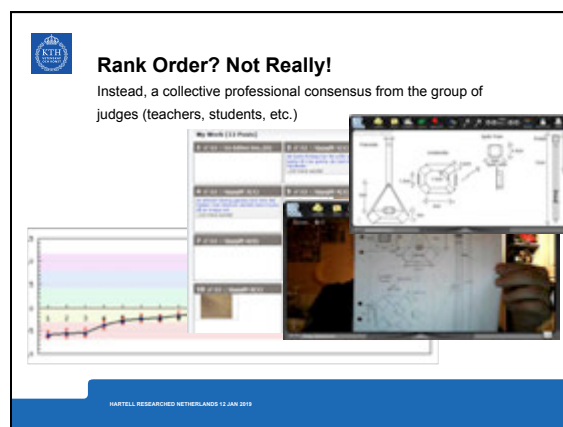
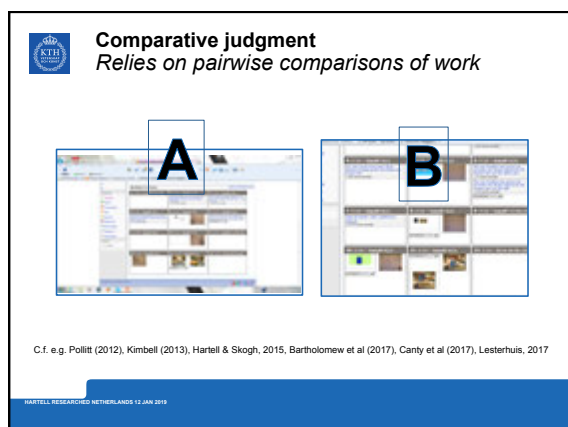


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Assessing open-ended tasks w big hairy audacious goals is difficult



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Teacher's name	Counted pair judgments	Total time hours:mins:sec	Average time	Projections	Weighted mean see Z
Anne	30	01:04:20	00:02:08	194	0.91
Evelyn	30	01:15:16	00:02:30	141	1.9
Sara	30	01:01:22	00:02:02	205	0.44
Melou	30	01:11:58	00:02:23	170	1.41
Mary	16	1:21:23	00:05:05	78	0.99
	136	05:54:17	00:02:34	808	

The power of the collective

Many Applications of Comparative Judgment in education *But what is in it for you?*

1	25	25.12.1911	140	HA
2	30	25.12.1910	150	HA
3	38	25.12.1979	279	HA
4	38	25.12.2001	209	HA
5	37	27.12.1958	258	HA
6	38	25.12.1909	209	HA
7	35	25.12.1992	182	HA
8	34	25.12.1982	168	HA
9	33	23.12.1956	156	HA
10	32	23.12.1964	264	HA
11	31	23.12.1960	36	HA
12	30	25.12.1927	27	HA
13	9	8.12.1925	36	HA
14	8	8.12.1940	40	HA
15	7	7.12.1911	231	HA
16	6	8.12.1929	29	HA
17	5	3.12.1945	142	HA
18	4	4.12.1977	277	HA
19	3	3.12.1937	137	HA
20	2	2.12.1944	284	HA
21	1	1.12.1992	199	HA

- Both summative and formative assessment purposes
- Track progress
- Peer and self-assessment
- Teacher training!
- Moderation (yourself / peer)
- Building assessment literacy and self-efficacy
- Connoisseurship
- Ranking schools
- Research method

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CJ as a research method to unpack teachers' assessment practices

Example 1 & 2

	Where the learner is going	Where the learner is right now	How to get there
Teacher	1. Clarifying, bringing and understanding learning intentions and criteria for success	2. Engineering effective classroom discussions and other learning tasks that elicit evidence of student understanding	3. Providing feedback that moves learners forward
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Learner			5. Activating students as owners of their own learning

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Example [1]

Criteria for success: A study of primary teachers' assessment of e-portfolios

Flobot's Friend

Flobot is so busy helping lots of children with their learning. Flobot needs a friend to help you around your own house.

In this task, we are going to design a friend for Flobot. This friend will help you with all the things you need to do.



Hartell, E. & Skogh, IB. (2015). Criteria for success: A study of primary technology teachers' assessment of digital portfolios. Published in *Australasian Journal of Technology Education*

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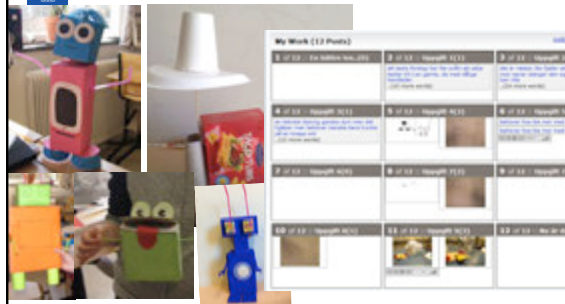
[1] Data collection

In classroom during regular classroom activities by pupils.

Ipads used for data collection

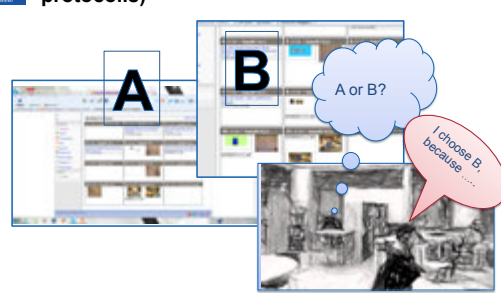
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[1] Examples of student work




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[1] Data collection (ACJ + think-aloud protocols)



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 **[1] Outcomes**

What criteria for success were these teachers looking for?

Three strands Consensus within this group of educated teachers

1. Whole- (narrative/story)
2. Particular but also the importance of finishing the task, which *Highlights the importance of task design*
3. Other –"it felt better" *time and opportunity to learn*
Must not leave pupils in their own unreflective "doing/making", which is fairly common according to Swedish School Inspectorate

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 **[1] Outcomes What did the teachers think of CJ?**

Fun! A bit insecure in the beginning, but I felt more confident after a short while.

It was amusing/fun and I learnt a lot. It is easier to assess this way. Compare two at a time.

I like the idea that we are more who co-assess

Interesting. Different.


Fun!! But tiny internet connection problems...

This was really interesting! Took a while to see and understand what I was supposed to look for. Purpose got more explicit on what qualities I were looking for.

Nice to see other than my own students' work

"I found the assessment work through the portal gave me the strength to see students' work in a new way."



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 **Example [2] International comparisons**


Adaptive Comparative Judgment in Open-Ended Design Scenarios

Eva Hartell^{1,2}, Greg Strimel³, Scott Bartholomew³ & Emily Yoshikawa³

¹KTH Royal Institute of Technology, Stockholm, Sweden
²Haninge municipality, Sweden
³Purdue University, USA


 




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 **[2] Purpose: To dig deeper than documents**

1. Explore the possible use of ACJ to investigate and explicate criteria for success in open-ended design tasks in an effort to inform formative assessment practices.
2. Tie literature together and provide an overview of possible use of ACJ to inform future work within the field of assessment.


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 **[2] Curriculum Differences**

		
Manual Training Manual Arts Industrial Arts Technology Education	Sloyd (Slöjd) Science (natural/ social) Teknik	Design & Technology
Technology & Engineering Education	Teknik Technology	

Different assessment practices!

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 **[2] "Chaps"**

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[2] Training Session with Judges

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**[2] Data collection
760 students**

Bartholomew, S. R. (2016). A Mixed-Method Study of Mobile Devices and Student Self-Directed Learning and Achievement During a Middle-School STEM Academy (Doctoral dissertation, Utah State University).

PURDUE
POLYTECHNIC

[2] Results Top Ranked Prototype – Sweden

Swedish Comment	Translation	Code
a verkar enkel och funktionell.	a seems simple and functional	usability
A is smaller	A is smaller	size
B har en spännande formgivning	B has an exciting design	design
A är en enkel idé och har en kompakt form. Bra i väskan.	A is a simple idea and has a compact design/shape. Good to have in purse/bag	design, size

[2] Results Top Ranked Prototype – United States

Comment	Code
Looks easier to use	usability
More compact user-friendly	size; usability
love the idea looks like it can hold all the days etc.	design

[2] Conclusion

We see many possible use of CJ on larger scale to find out **and explicate criteria for success** in open-ended design tasks to inform formative assessment practices.

Task design is very important

See e.g.:

- Bartholomew, Yoshikawa, Hartell & Strimel (2018)
- Hartell & Isaksson- Persson (2018)

Example [1, 2, (& 3, 4, ..] Conclusion

Comparative Judgment can:

- be useful for international comparisons in open ended design scenarios (Task design is very important)
- serve as a useful tool to
 - *unpack teachers' assessment practices and uncover design values*
 - *dig deeper than documents*
- **explicate criteria for success**
- **serve as a catalyst for discussion**

Five key strategies for formative assessment
(William & Leahy, 2015)

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Why is Clarifying, sharing and understanding learning intentions and criteria for success important?

- A. Benefits mainly low-achievers
- B. Benefits all students
- C. Reduces my workload
- D. Because the school principal says so


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How? Compare w connoisseurs of wine!




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Cannot drink wine during classes, so... Which one is better and why?




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Which one is better and why? Subject specific!



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Building assessment literacy and self-efficacy? Connoisseur of wine-STEM?



ICT as a servant instead of the driver


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The potential of comparative judgments in open-ended tasks

- Data is collected during "ordinary" lesson activities
- Students collect evidence of learning (validity & teachers work load)
- Decision driven data collection instead of data driven decision making (task design)
- Reliable results
- Judge consistency
- Inviting other professionals to your classroom and you get to visit theirs "without too much trouble" (cloud-based)

• *The power of the collective & profession*

• *ICT as servant instead of the driver*



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Why is this important?

A teacher who fails to assess what the students do, cannot decide whether or not she is contributing to or impeding their progress. (Lindström, 2006)

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Please remember

Every teacher needs to improve, not because they are not good enough but because they can be even better. William

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Please remember why every teacher needs to improve

Peanuts
I wonder what teachers make
A difference Peppermint Patty, they make a difference

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Welcome to

#rEDHan in Haninge, February 9th, 2019

Sold out
But there is a waiting list


researchED
HANINGE 2019

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Thank you! Tack!
Good luck and please keep in touch

Haninge kommun

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