

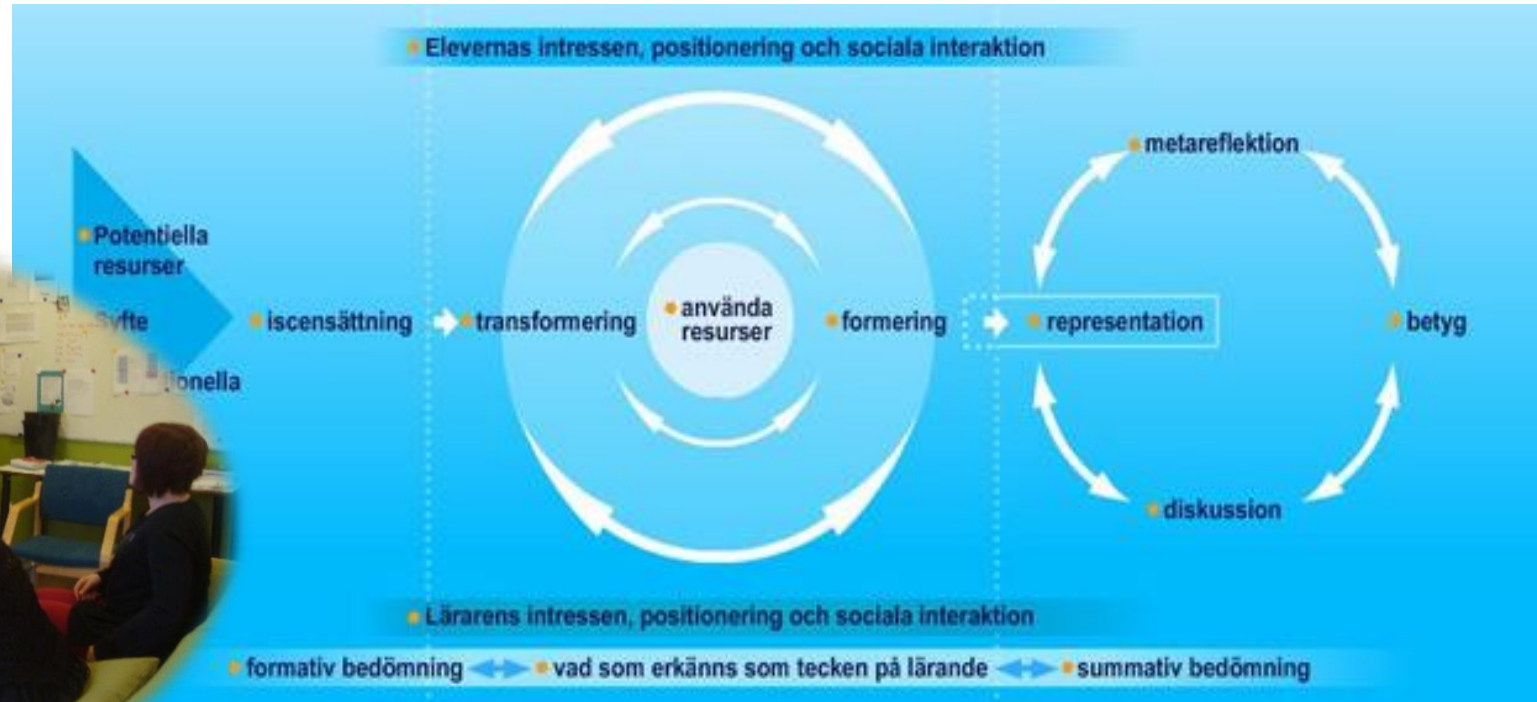
# A research perspective: Young children's learning and digital competence with tablets

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# SOCIAL SEMIOTIC, MULTIMODAL PERSPECTIVE

## “Designs for Learning”

- Ethics:
  - “informed consent”
  - staged images

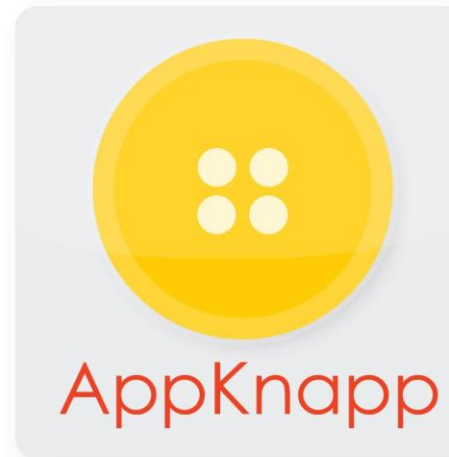
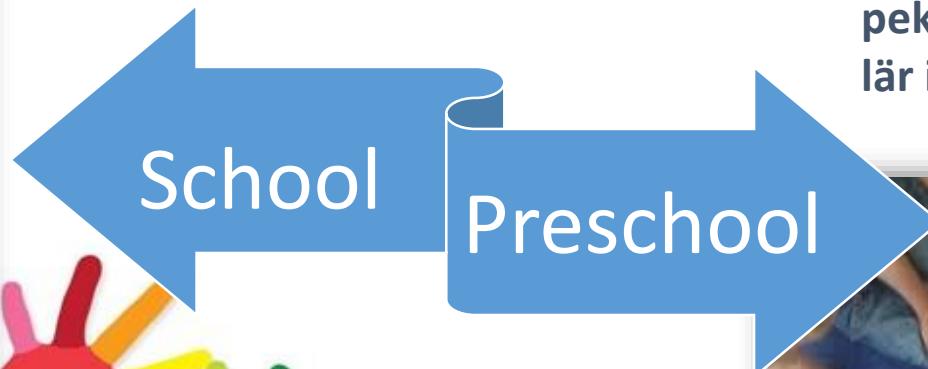


## Digitala lärresurser och Learning Design Sequences i svensk skola – brukarperspektiv



Entreprenörskap,  
Uppsala och framtiden  
– slutkonferens för Gnistan

Gnistan –  
entreprenörskap  
i utbildning



AppKnapp

AppKnapp –  
peka, lek och  
lär i förskolan



Hjärnvägar i förskolan



Plattan i mattan – didaktisk design och  
digitala pekplattor i förskolan





- Varför går alla ungarna och håller  
spadarna mot örat?  
- De leker mobilpratande för-  
äldrar.

- Men Kalle håller spaden rätt.  
- Ja, han kollar Facebook på smart-  
phonen.

Ake Eckman

Preschoolers' agency, when using tablets, are highlighted long before they can walk or talk... (Kjällander, 2015).













## Slaget vid Brunkeberg

Det tog plats på Brunkebergsåsen ★ ← OBS!

den 10:e okt 1471. ←

Det var mellan Sten Sture d. 2 och den danska kungen Christian d. 1:a. Kristian blev träffad av en kula i ansiktet och tappade några tänder och var tvungen och fly med sitt folk till båtarna i kajen.

Sten Sture vann och blev hjälte.

Slaget hade svenskar på båda sidorna men var ett slags befrielsekrig från danskarna ändå.

★ Idag är det Norrmalm

Flytt  
dit!



# DIGITAL LITERACY

- Write and think simultaneously
- Lots of signs/modality
- Affordances

Print is, literally, being  
pushed off the page

(Kress, 2003, s 2).

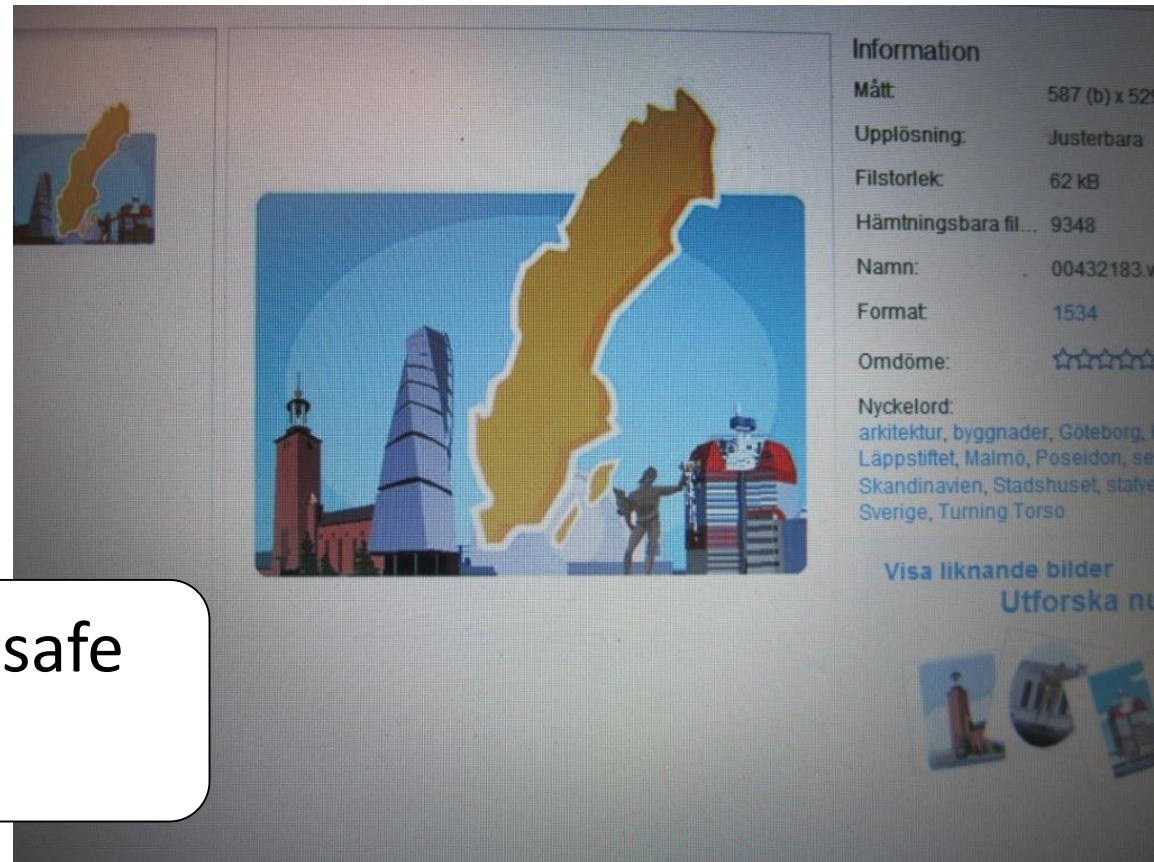
- Non linear reading
- Hypertext
- Multimodal
- Prompts



# MULTIMODAL LITERACY

Teacher: This work  
is about  
challenging or  
confirming myths  
about Sweden...

Sweden is a safe  
country!





Adress <http://www.google.se/images?hl=sv&tbs=isch:1&q=sverige+och+trygg&sa=N&start=126&ndsp=18>

[Nätet](#) [Bilder](#) [Videor](#) [Kartor](#) [Nyheter](#) [Översätt](#) [Gmail](#) [mer](#)



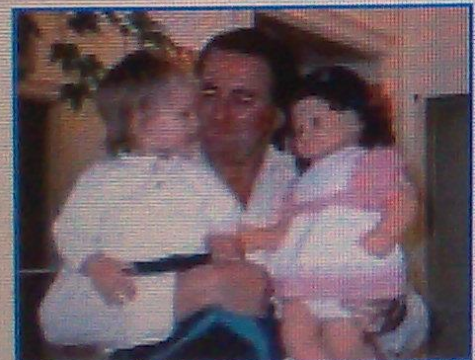
sverige trygg

Sök

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My dads VOLVO is safe!





Vår myt: Sverige är ett tryggt land.

J A!

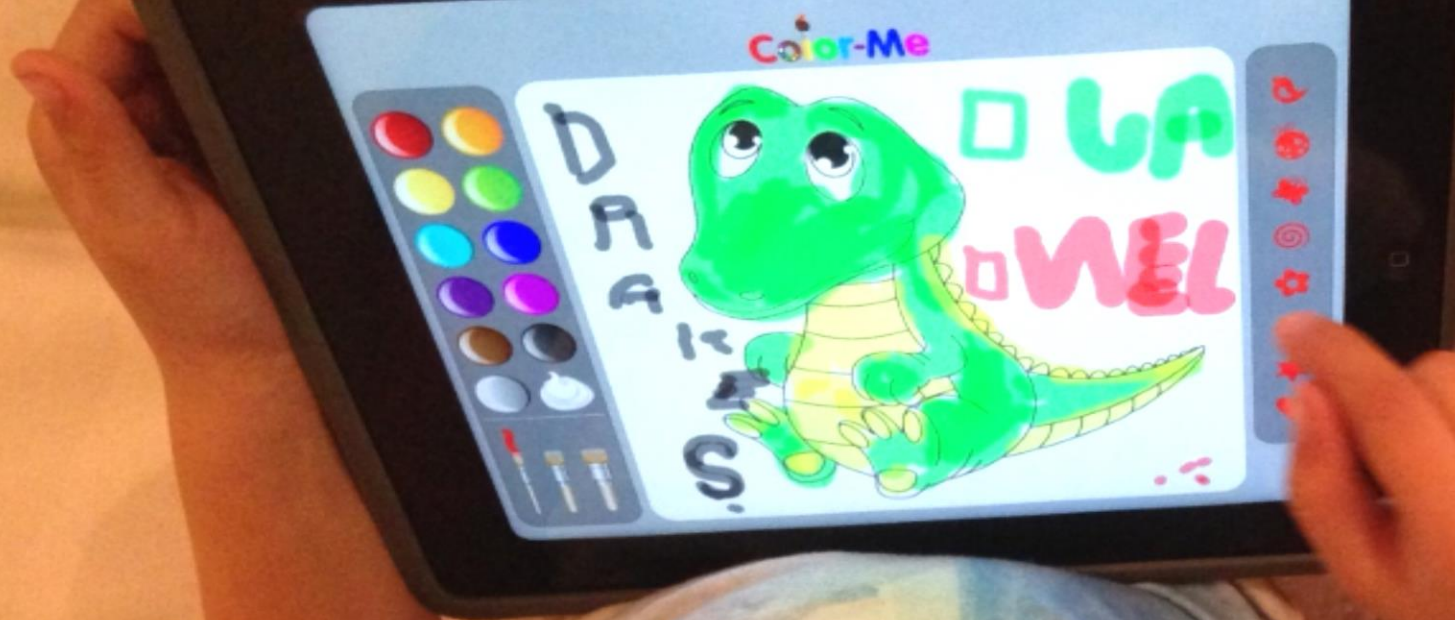
Vi har sökt information på internet. Vi har sökt på Google. Det är ett lugnt land. Det är inte krig och inte så mycket.



Och VOLVO är en trygg bil. Vi har kommit fram till att Sverige är ett tryggt land.

**COINCIDENTIAL  
CONSUMPTION  
BUT  
INTENTIONAL  
PRODUCTION**







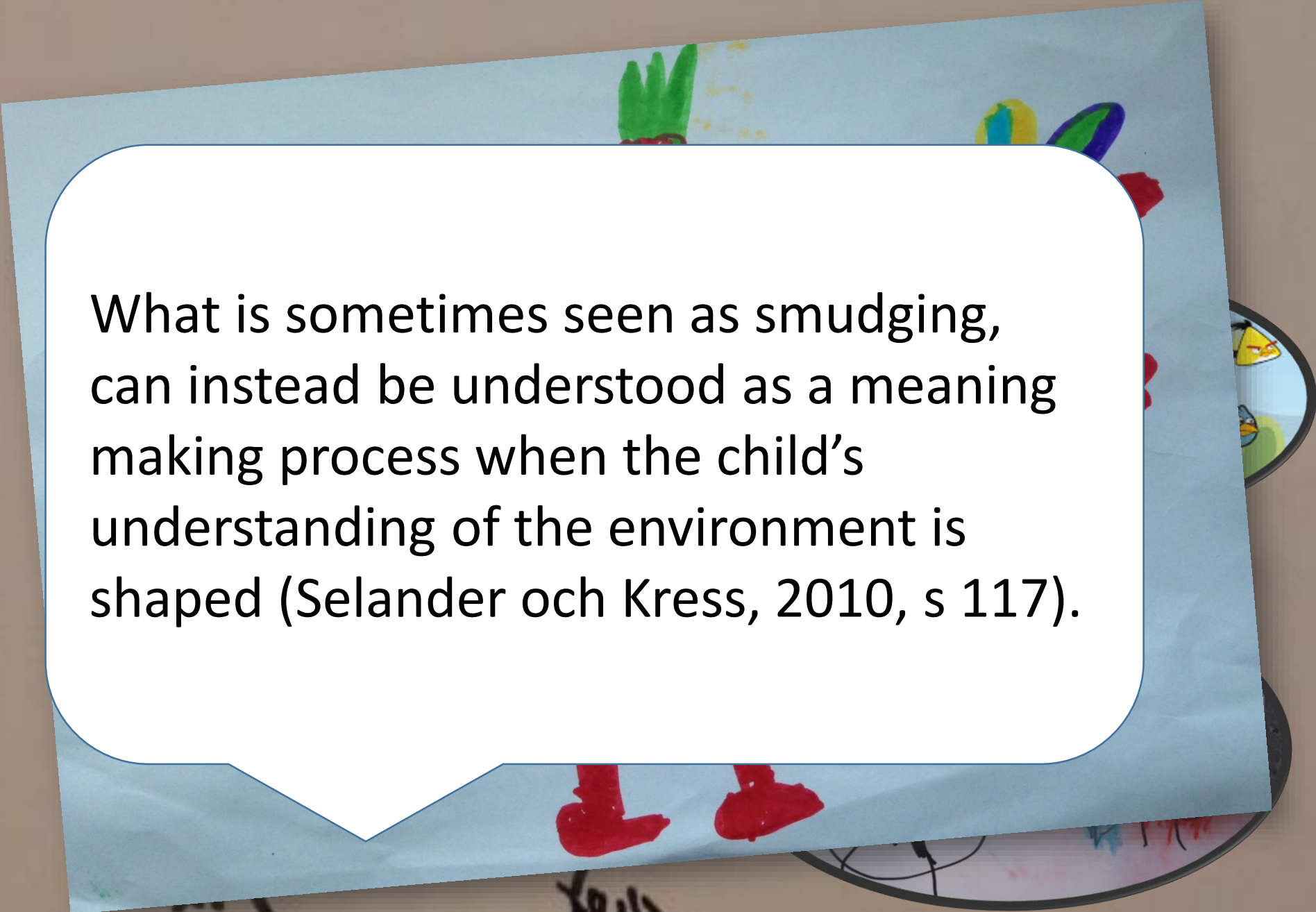
**PRODUCERS, NOT CONSUMERS**

## *Producing* digital storytelling and stop-motion-films



- instead of **consuming** film





What is sometimes seen as smudging, can instead be understood as a meaning making process when the child's understanding of the environment is shaped (Selander och Kress, 2010, s 117).



# COMMUNICATION RATHER THAN CONVENTION

Filibonka!



Use the pistol! Take  
the sword!

NOOOO, NOT that  
sprayer, not that  
cutter, take that  
bomber!



# PRESCHOOLERS CHALLENGE DIDACTIC DESIGN





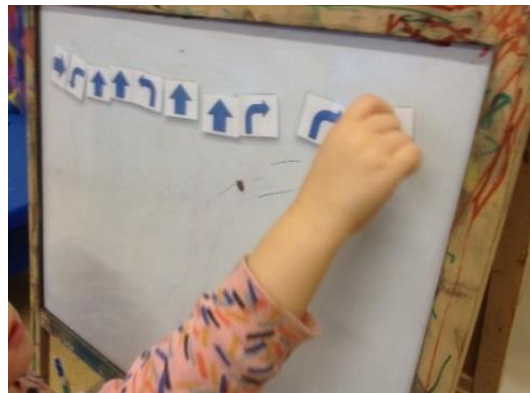
# PLAY

A collage of photographs showing children engaged in various activities. The top row features four photos: a child with clay, a child with a purple shirt, a child in a red shirt, and a child with a white top. The bottom row shows a child in a striped shirt, a child with a green object, and a child with a white top. The photos are arranged in a slightly overlapping, artistic manner.

...a transformative design activity in which children are designing their own process by way of interpreting, negotiating and trying out different identities while making sense of affordances provided by the digital resource, within the frames of reference of their own experience and present interest (Kjällander & Moinian, 2014, p 27).

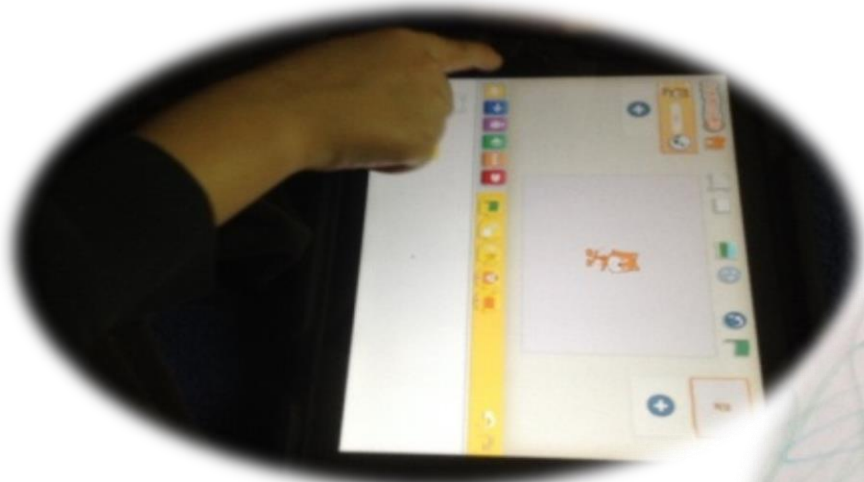
# TODDLERS' COMPUTATIONAL THINKING IN PLAY

The aim with computational thinking (Wing 2006) is not that toddlers shall tap code per se, instead, programming tasks create new insights. Computational thinking is trained in play and staged in coding apps for children, but also in the extended digital interface where children, for example, program plastic robots and pretend to program each other with physical commands such as printed arrows... (Kjällander, forthcoming).





# PROGRAMMING WITH THE AIM TO DEVELOP COMPUTATIONAL THINKING



Teacher: All children shall have the opportunity to develop an understanding of that humans lies behind the computers, mashines and robots actions.



# EU DIGITAL COMPETENCE

- the confident and critical use of Information Society Technologies for work, leisure and communication. These competences are related to logical and critical thinking, to high-level information management skills and to well-developed communication skills. **At the most basic level, ICT skills comprise the use of multi-media technology to retrieve, assess, store, produce, present and exchange information, and to communicate and participate in networks via the Internet.** (European Commission, 2006, p. 14)



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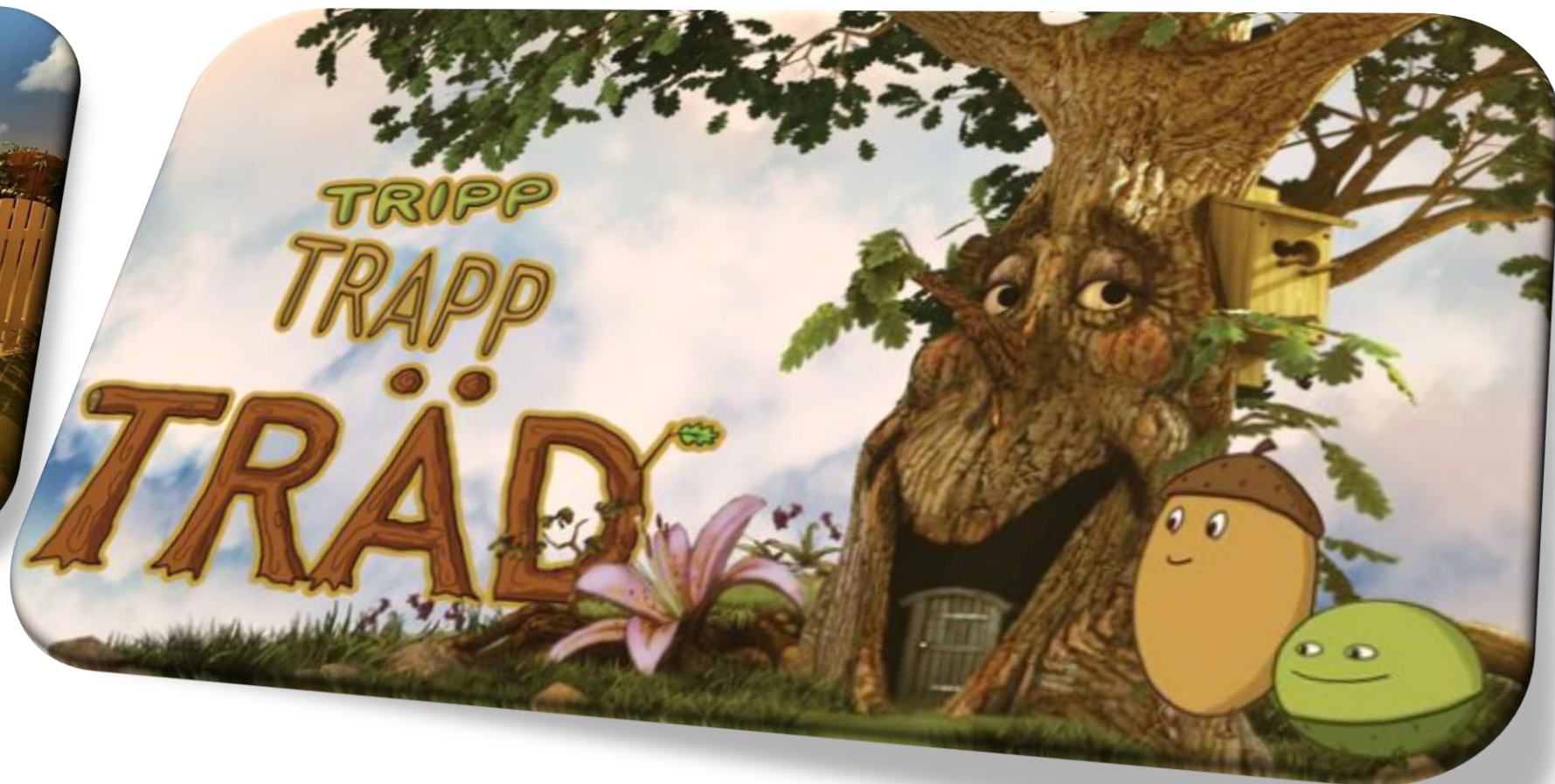
# DIGITAL COMPETENCE IN PRESCHOOL: A QUESTION OF DIGITAL SKILLS?

- Write letters and sentences
- Paint and draw
- Photographs and manipulate photos
- Make videos
- Make music
- Construct games
- Program
- Create stories, books, photo albums
- Document their own learning
- And so on...





# TRANSFORMED RESEARCH



# DIGITAL COMPETENCE IN PRESCHOOL: A QUESTION OF SOURCE CRITISISM?

- Oral information search
- Watch photos and video clips (instructional videos)
- Listen to music and books





Are mermaids real?

Are sea-horses real?



# DIGITAL COMPETENCE IN PRESCHOOL: A QUESTION OF ETHICS?

- Consent on photos and film
- How to present a person in digital images
- The balance between fun and teasing
- The balance between play and learn





A photograph showing a teacher and a student sitting at a table. The teacher, wearing a dark shirt, is pointing at a tablet. The student, wearing a red patterned shirt, is also looking at the tablet. The tablet screen displays a 3D model of a camera or similar device. A white speech bubble with a black border is overlaid on the image, containing text.

Teacher: How does a story begin?

Ali: Once upon a time...

The photo of the teacher turns up in the photo gallery and suddenly she is invited into the story... and they give her a funny male body which they laugh wildly at. Then they ask her if she wants another, more suitable, body.

# DIGITAL COMPETENCE IN PRESCHOOL: A QUESTION OF EQUITY?

- Democracy/App-gap
- Mother tongue
- Settings and specific needs





# INCLUSIVE SETTINGS

Teacher: It is fantastic to be able to "read" a story with a child's mother tongue on a digital tablet!

Teacher:

"Att ganska små barn uttrycker sig med engelska ord som man gör till svenska. Alltså dom pratar om **scora**, alltså att man får poäng."

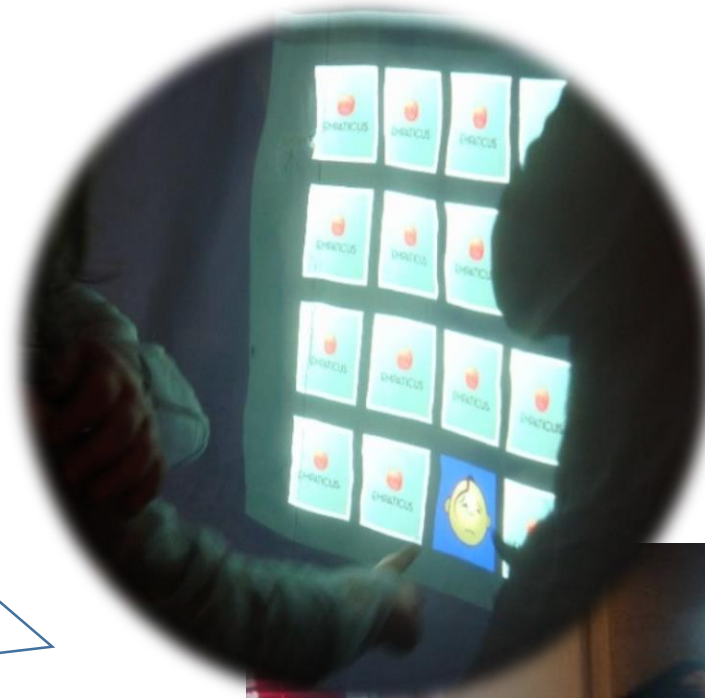
"Mm, ja just det."

"Mmmm."

"Man **failar**."

"Ja, just det faila är ju något sånt där väldigt tydligt."

"**Levla**. (Skratt)"



# APP GAP

Preschool shall bridge the digital gap by inviting all children to a digital environment with quality.





# DIGITAL COMPETENCE IN PRESCHOOL CAN BE ABOUT:

Equity

Digital skills

Ethics

