



# Digitala verktyg för lärande?

Stefan Hrastinski  
Enheten för digitalt lärande, KTH

# Överföring

# Deltagande

Sfard, A. (1998). On two metaphors for learning and the dangers of choosing just one. *Educational researcher*, 27(2), 4-13.



Överföring

**Material**  **Medium**  **Mottagare**

Jonassen, D. H., & Land, S. M. (2000). Preface. In D. H. Jonassen & S. M. Land (Eds.),  
Theoretical Foundations of Learning Environments (pp. iii-ix). New Jersey: Lawrence Erlbaum.





A Model of entrepreneurship

By Hank Feeser  
ESV@Purdue University 2012

**A Model of Entrepreneurship**  
By Hank Feeser, Esq.

00:00 16:28



Slide 1 [00:00]



Slide 2 [00:38]

**93% Lärplattform**

**68% Video (inspelad)**

**63% Video (live)**

**57% Mobil teknik**

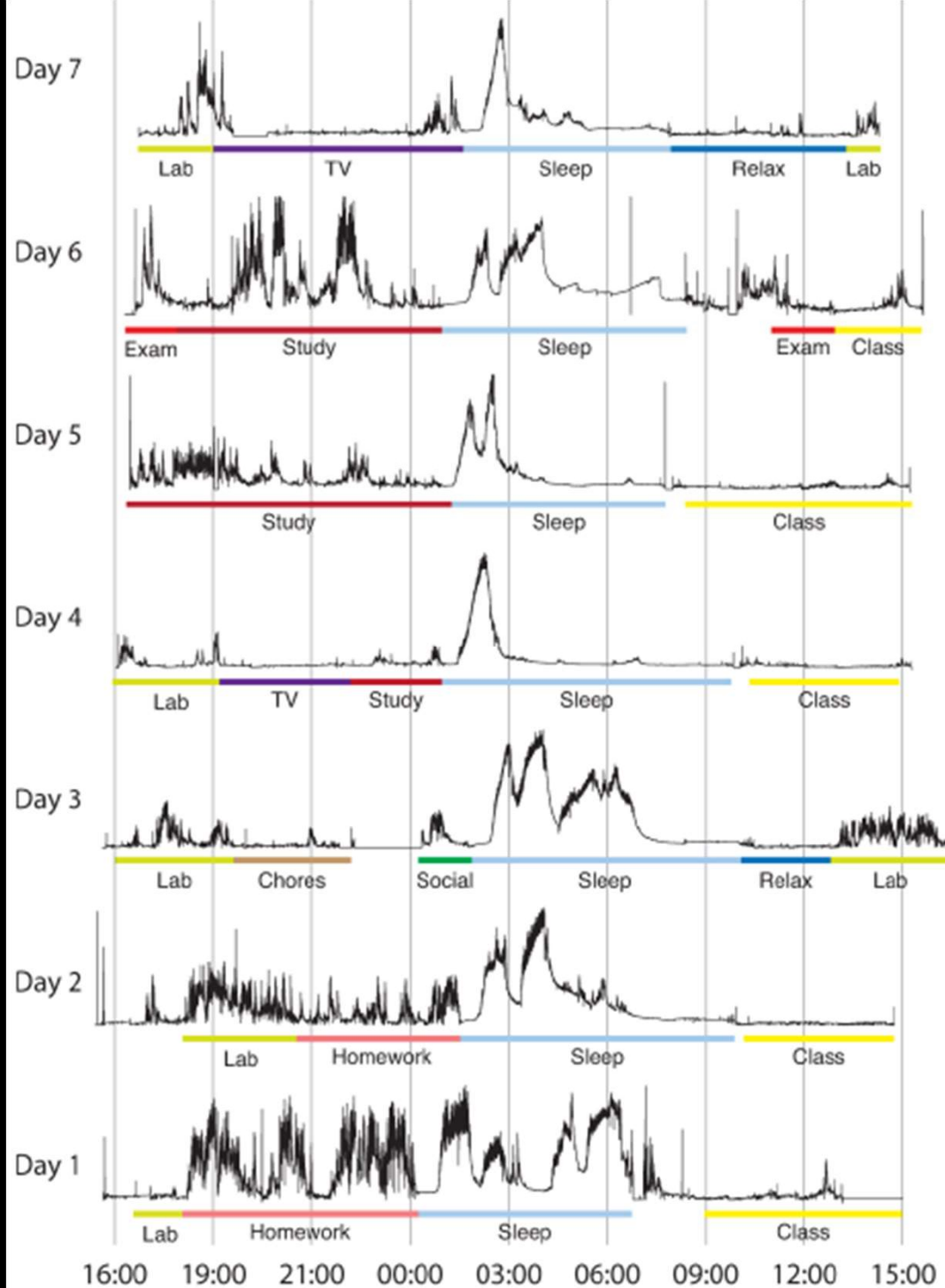
- **Fokus på överföring av information.**
- **Studenter lär sig mindre när de inte interagerar med lärare, varandra och kursmaterial.**
- **Drar inte nytta av mediets styrkor.**
- **Ensidigt fokus på video.**

# A Wearable Sensor for Unobtrusive, Long-Term Assessment of Electrodermal Activity

Ming-Zher Poh, *Student Member, IEEE*, Nicholas C. Swenson, and Rosalind W. Picard\*, *Fellow, IEEE*







Poh, M. Z., Swenson, N. C., & Picard, R. W. (2010). A wearable sensor for unobtrusive, long-term assessment of electrodermal activity. *IEEE Transactions on Biomedical Engineering*, 57(5), 1243-1252.

# DIGITALISERING AV HÖGRE UTBILDNING

 Studentlitteratur

STEFAN HRASTINSKI (RED.)





# Lärarpoddar i kriminologi

Christel Backman, Sara Uhnöo och Mattias Wahlström  
Göteborgs universitet

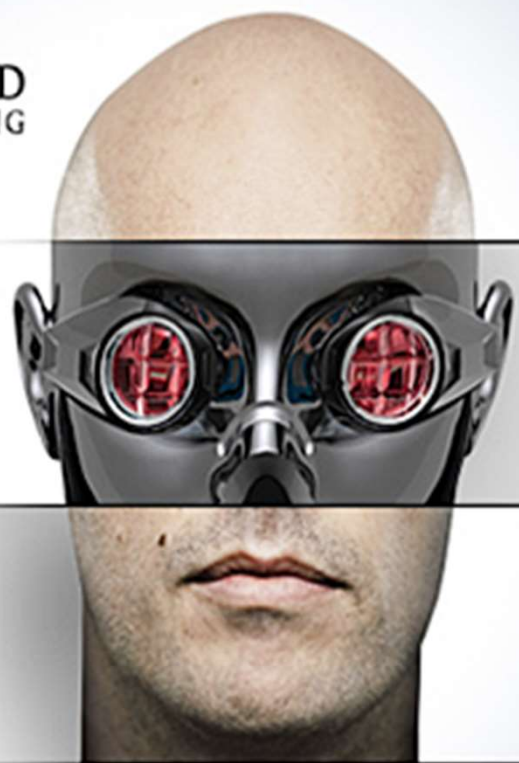
Photo by Blaz Photo on Unsplash



Jonassen, D. H., & Land, S. M. (2000). Preface. In D. H. Jonassen & S. M. Land (Eds.), *Theoretical Foundations of Learning Environments* (pp. iii-ix). New Jersey: Lawrence Erlbaum.



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UW Department of Communication

# Transaktionell distans

Struktur

Dialog

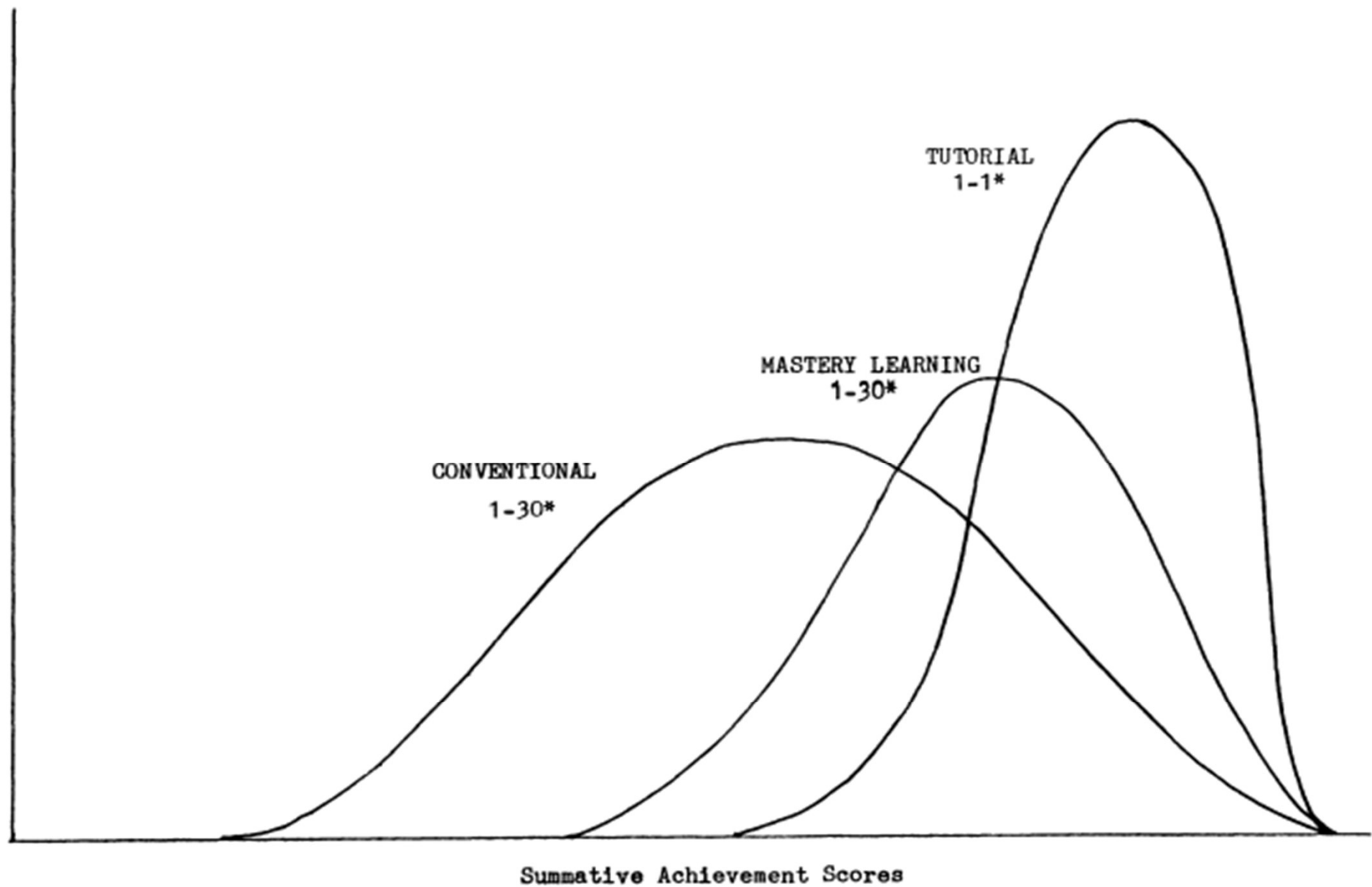
Autonomi



# **Digitala kunskapstest i hälsovetenskap**

**Anna Andersson, Högskolan Väst**

Photo by Gery Wibowo on Unsplash



Bloom, B. S. (1984). The 2 sigma problem: The search for methods of group instruction as effective as one-to-one tutoring. *Educational Researcher*, 13(6), 4-16.






## Börja chatta!

Öppet mån-tors 17:00 - 20:00


  ?

  ?

  ▾ ?

  ▾ ?

[Användarvillkor](#) ☐ Kom ihåg mig ?

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# Welcome!

TalkMath is a **real-time** communication tool  
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SMARTERA AB





# Deltagande

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**“The study [of 73 courses] found that three general factors – *clarity of design, interaction with instructors, and active discussion among course participants* – significantly influenced students’ satisfaction and perceived learning.”**



40 hours

40,000 km



Is it true that you can fit about 1 million Earth's inside the Sun?

  • 31 Votes   • Flag

about a year ago by  Mramsoer

Circumference of Sun is 109 times the Earth's.

Circumference =  $2 \cdot \pi \cdot R$ . If  $R$  is Sun's radius, and  $r$  is Earth's,

$2 \cdot \pi \cdot R = 109 \cdot 2 \cdot \pi \cdot r$ , and  $R = 109 \cdot r$ .

Volume =  $\frac{4 \cdot \pi \cdot R^3}{3}$

If  $V$  is Sun's volume, and  $v$  is Earth's,

$V = \frac{4 \cdot \pi \cdot R^3}{3}$

$v = \frac{4 \cdot \pi \cdot r^3}{3}$

$V = \frac{4 \cdot \pi \cdot (109 \cdot r)^3}{3} = 109^3 \cdot \frac{4 \cdot \pi \cdot r^3}{3}$

$V = 109^3 \cdot v = 1,295,029 \cdot v$

My colleagues above are right, Sun's volume is approximately 1,300,000 times the Earth's volume, or approximately 1.3 million Earths can fit within the Sun.

   • 60 Votes   • Flag

about a year ago by  Wilson Casado

[Show all 37 answers](#)



Google Drive Background and theories - C X

https://docs.google.com/a/kth.se/document/d/

## Background and theories

File Edit View Insert Help Comment only

gamification, that all can be interesting in combination with mobile learning. Finally we will go through theories for designing a mobile application.

### 2.1 E-learning

This report mainly focuses on mobile learning, also called m-learning. In order to understand this term one must have basic knowledge about e-learning as well since many definitions of m-learning include comparison to e-learning.

E-learning is an American term which has been used for about 20 years, the phenomena itself is much older though (Boström 2011). E-learning comprises all forms of electronically supported interactive learning and teaching, both with and without access to the Internet. It includes all learning supported by PCs, laptops, CDROMs and so forth.

According to Traxler (2005) some of the core characteristics of e-learning are that it is: media-rich, structured, massive, intelligent and/or interactive. This is relevant in order to compare with the main characteristics of m-learning.

### 2.2 Mobile learning

Even though mobile learning today is a widespread concept it still lacks an exact definition.

In John Traxler's *Learning in a mobile age* (2009) he discusses several different definitions made by himself and others in the field. Eg. Desmond Keegan (2005) argues that m-learning should be restricted to "learning on devices which a lady can carry in her handbag or a gentleman can carry in his pocket" focusing on the device used for learning

De är väl bra med lite meta, men jag håller med Axel. Tycker rubrikerna ger bra inblick i vad som komma skall.

Resolve  
6:16 PM Mar 13  
Det här gillar jag, det leder liksom in läsaren direkt, typ "okej, det här kommer att hända". Det känns tryggt!

10:07 AM Mar 14  
Jepp, bra att ni kort och koncist förklarar varför det ni skriver är relevant i rapporten!  
[Edit](#) [Delete](#)

Reply to this comment...

10:21 PM Mar 13  
Här kanske det kan tilläggas lite förklarande text. Vad menas med hyper-linked t.ex.?

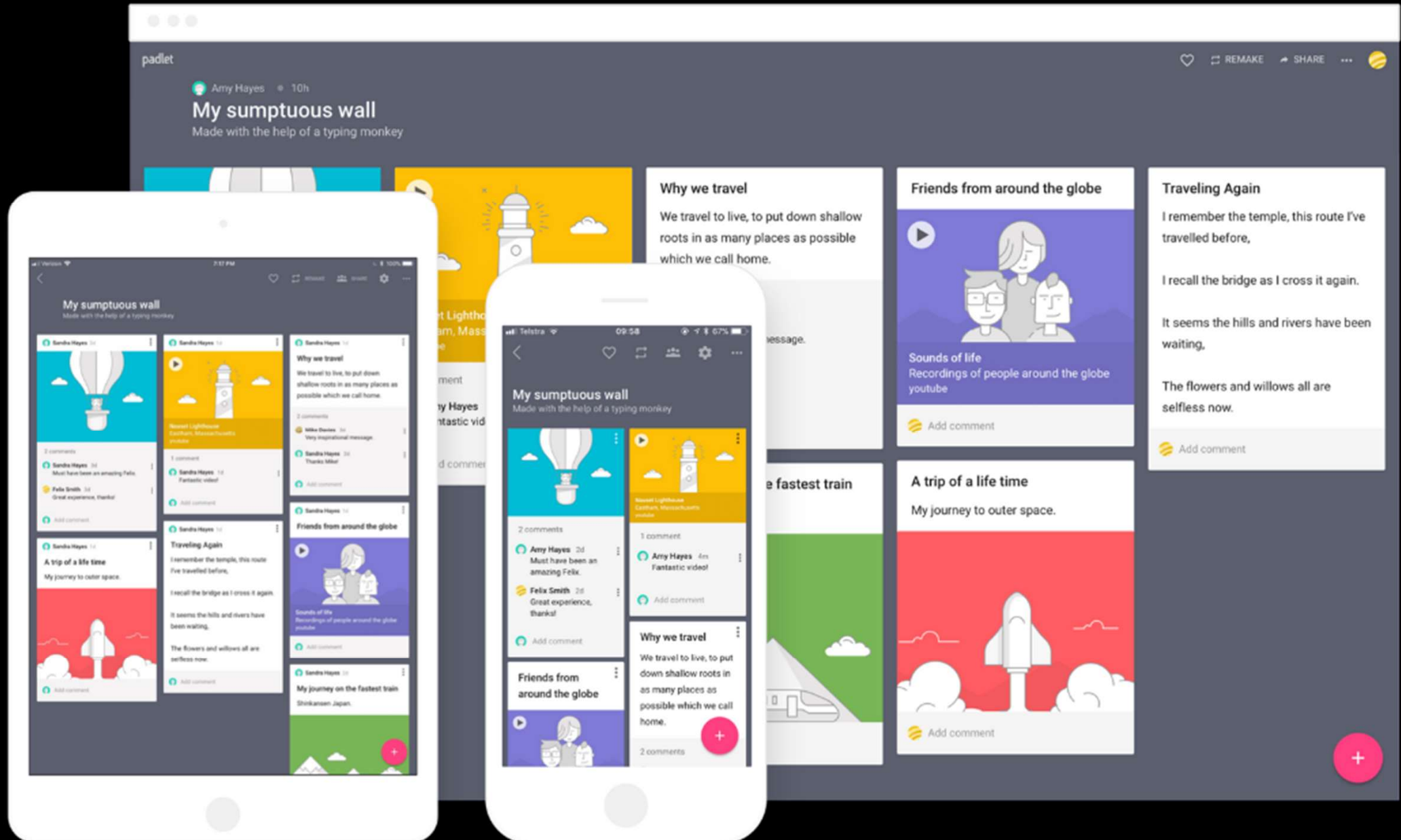
11:05 AM Mar 13

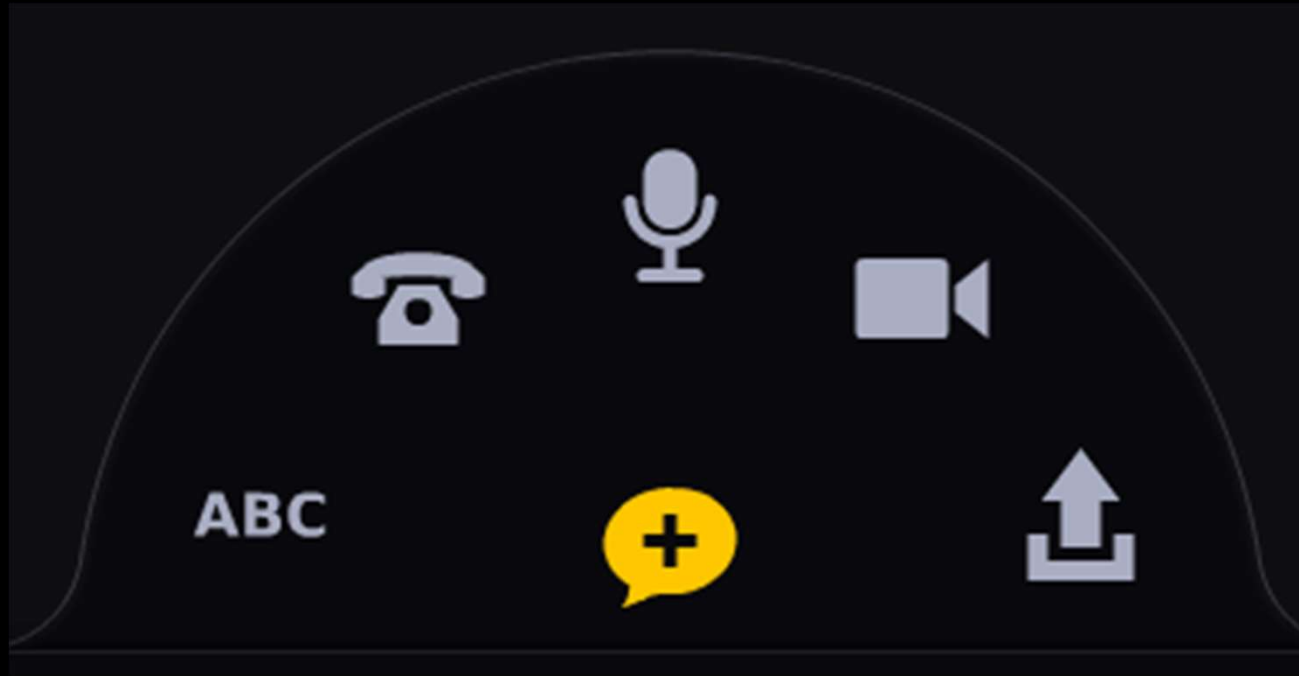
Pargman, D., Hedin, B. & Hrastinski, S. (2013). Using group supervision and social annotation systems to support students' academic writing. *Högre utbildning*, 3(2), 129-134.

**“On average, frequent posting by instructors did not lead to more student postings, and the more the instructors posted, the shorter were the lengths of the discussions overall.”**

# Gemensam anslagstavla i idéhistoria

Jenny Eklöf, Umeå universitet

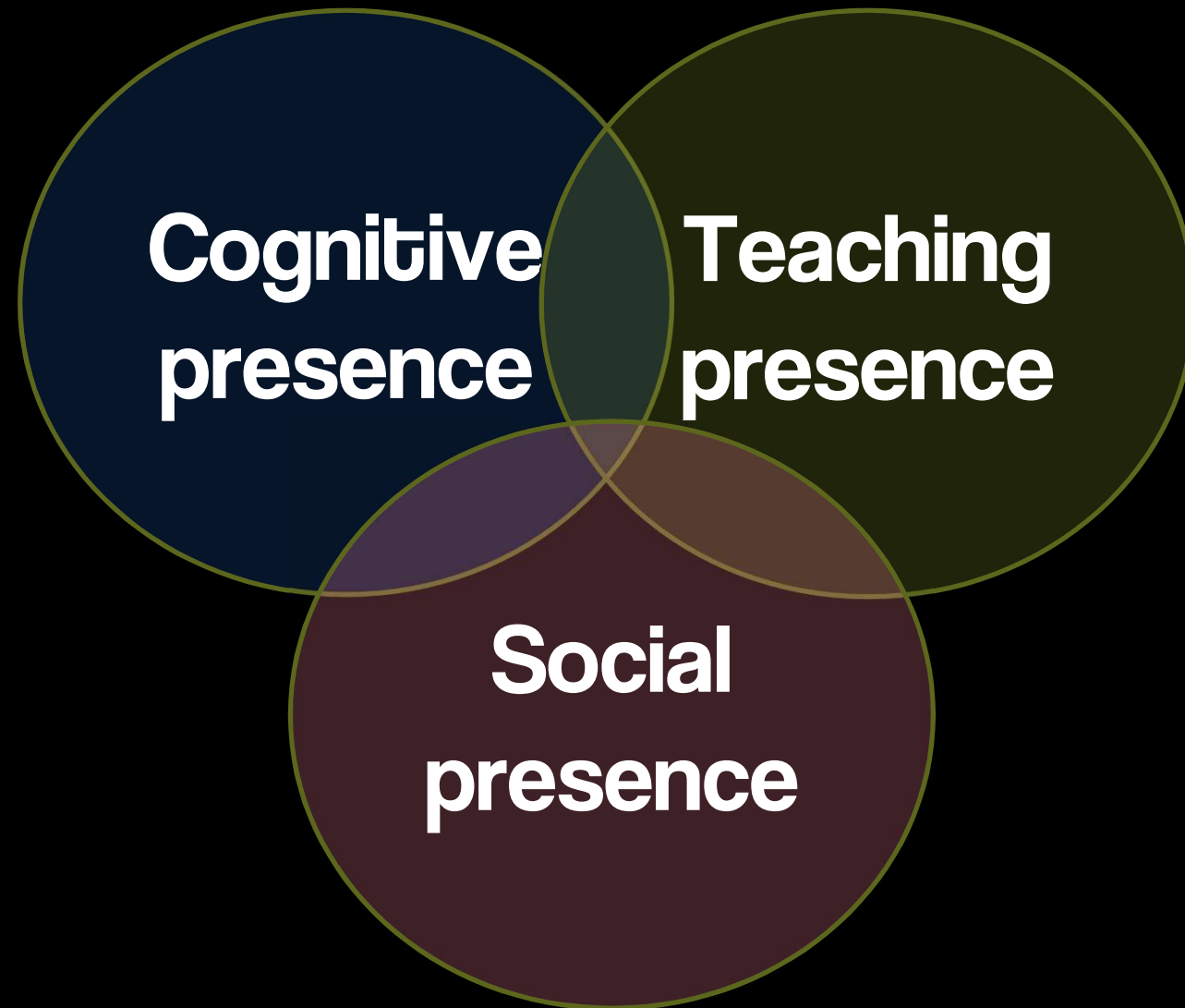




# **Audiovisuellt diskussionsforum i spansk grammatik**

**Linda Flores Ohlson, Göteborgs universitet**

# Community of inquiry






Garrison, D. R., Anderson, T., & Archer, W. (2000). Critical inquiry in a text-based environment: Computer conferencing in higher education. *The Internet and Higher Education*, 2(2-3), 87-105.





iPad 5:16 PM 49%

Video



Rocky Mitarai Nicholas Marchi Alano Xavier Brant Strand Minh

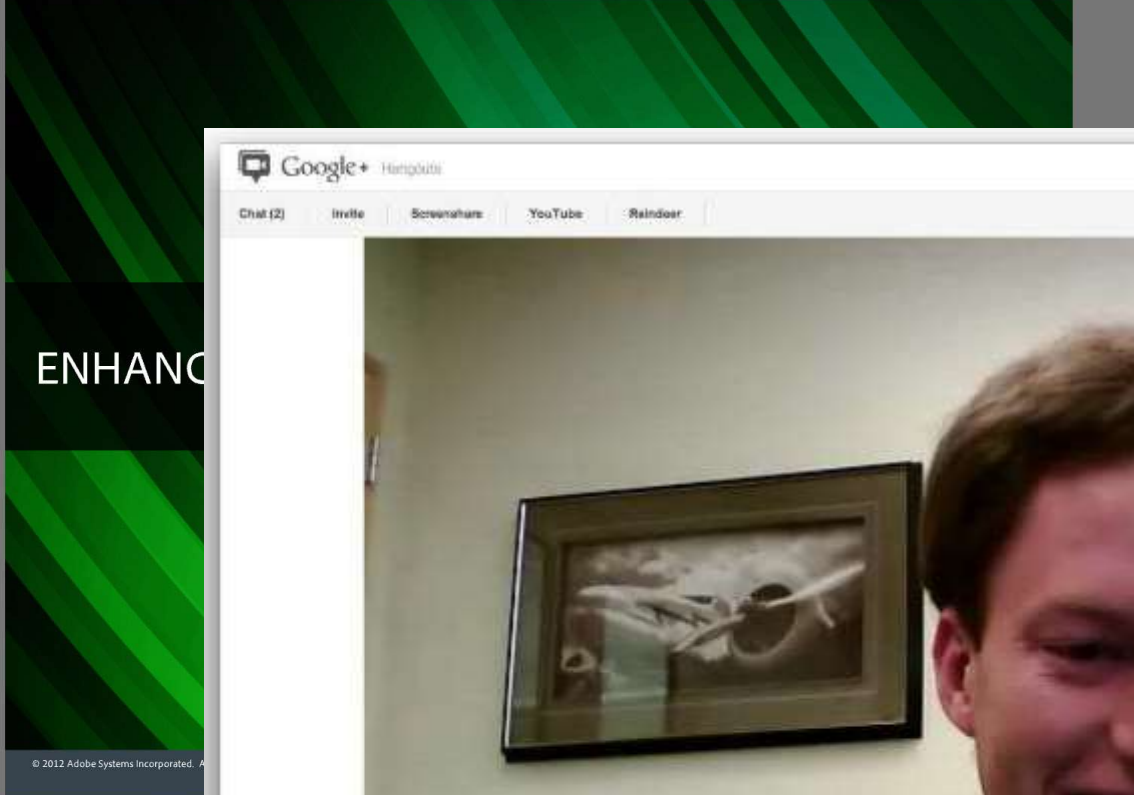
Attendee List (5)

 Alano Xavier  
 Minh  
 Nicholas Marchi  
 Rocky Mitarai  
 Brant Strand

Chat

**Peter iPad:** hello  
**Anna:** we have many mobile users joining us on our adobe connect trainings.

9-1.pptx



ENHANC

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Chat (2) Intelligence Screenshare YouTube Raindoor





# **Direkt (synkron) kommunikation**

**Svar direkt – motivation för discussion**

**Kan kännas mer socialt och bra för planering**

**Videokonferens, ansikte-mot-ansikte**

# **Fördröjd (asynkron) kommunikation**

**Behöver inte svara direkt - mer tid för reflection**

**Potential för djuplärande eller icke-lärande**

**Diskussionsforum, blogg, wiki, inspelad video**



# **Studentpoddar i nutrition**

**Frode Slinde, Göteborgs universitet**

**Photo by Blaz Photo on Unsplash**

# **Studentpresentationer i pedagogik**

**Elinor Adenling och Monica Liljeström  
Umeå universitet**



Photo by freddie marriage on Unsplash





# **Vetenskaplig teori och metod i ett omvänt klassrum**

**Malin Berghammer och Åsa Rejnö, Högskolan Väst**



# Omvänt klassrum på distans i kärnreaktormodellering

**Christophe Demazière, Elisabeth Saalman,  
Christian Stöhr och Tom Adawi, Chalmers tekniska högskola**

- **Liten effekt på studieresultat (n=114).**
- **Ingen effekt på studenters nöjdhet (n=22).**
- **Signifikant förbättrade studieresultat när andelen tid i klassrum inte reducerades.**
- **Signifikant förbättrade studieresultat när quizzar användes som ett komplement.**



# Fjärrundervisning – lärare och handledare



SKOL  
FORSKNINGS  
INSTITUTET

## Individanpassad vuxenutbildning

– med fokus på digitala verktyg

SYSTEMATISK ÖVERSIKT 2019:03



# Nätbaserad utbildning

En introduktion



Studentlitteratur

Stefan Hrastinski

# DIGITALISERING AV HÖGRE UTBILDNING

STEFAN HRASTINSKI (RED.)



Studentlitteratur





# Digitala verktyg för aktivt lärande?

Stefan Hrastinski  
Enheten för digitalt lärande, KTH