

Grab your mobile device to discover new ways for motivational learning



RESULTS OF AN EDUCATIONAL DEVELOPMENT PROJECT ON THE USE OF MOBILE TECHNOLOGY IN FLEMISH HIGHER EDUCATION



Acknowledgements



Project team

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(Thomas More)
- Martine Peetermans
(KU Leuven)
- Marnik Lenaerts
(UCLL)
- Lieven Jacobs
(UCLL)

And all participating lecturers
and students

SITUATION



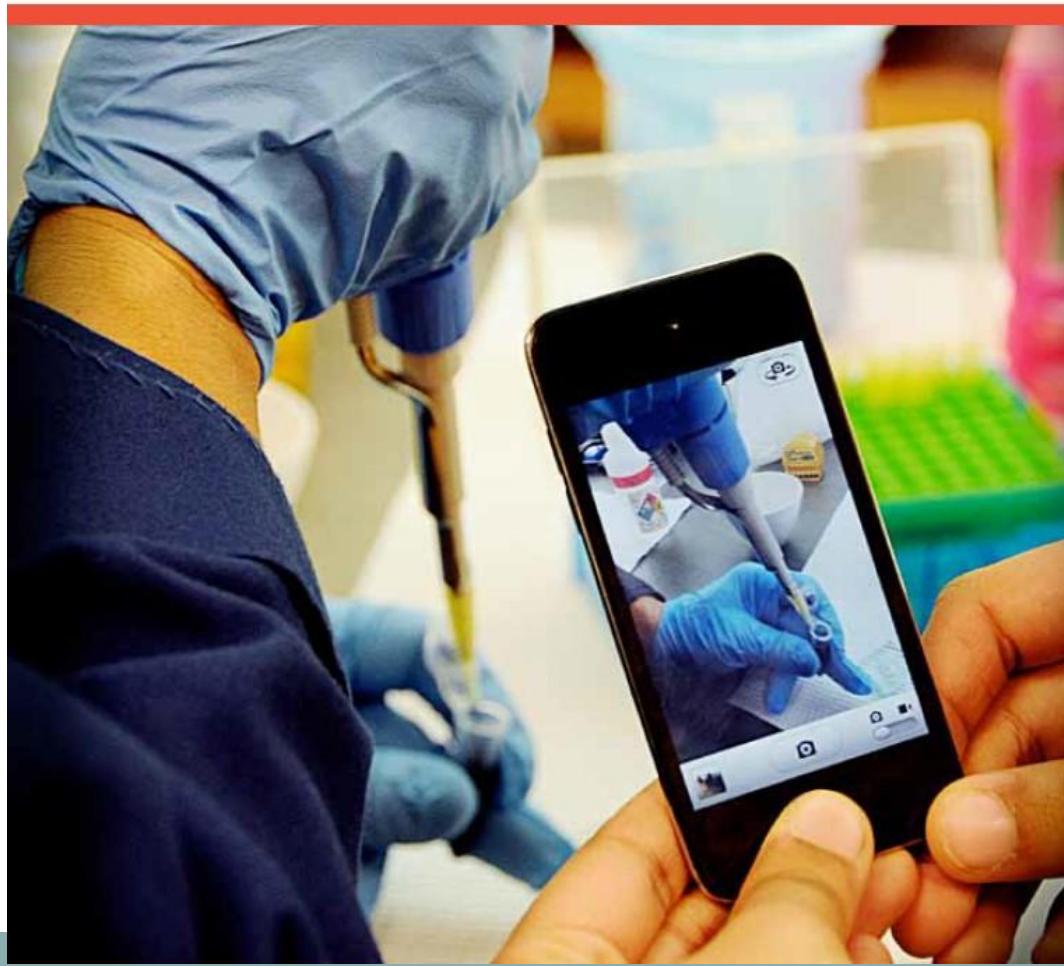


A close-up, slightly blurred view of a Facebook logo on a screen. The logo consists of the word "facebook" in a lowercase sans-serif font, with each letter having a thin blue outline. The letters are white with a subtle gradient, appearing lightest in the center and darker at the edges. The background is a dark, out-of-focus image of what appears to be a person's face, with visible features like eyes, nose, and mouth. The overall composition is circular, suggesting it might be a camera lens or a framed picture.

facebook

NMC

Horizon Report > 2012 Higher Education Edition



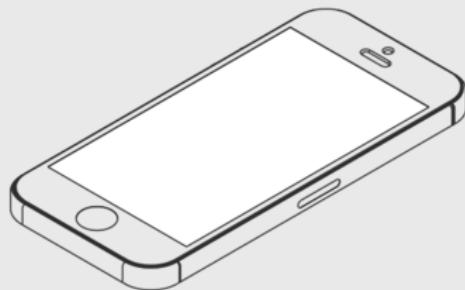
MM1: Did you already use mobile devices in your lessons?



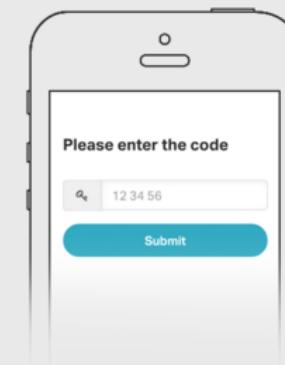
Go to **www.govote.at** and use the code **10 56 76**

Did you already use mobile devices in your lessons?

Mentimeter



www.govote.at



1 Grab your phone

0
2 Go to www.govote.at 0
No

3 Enter the code
10 56 76 and vote!

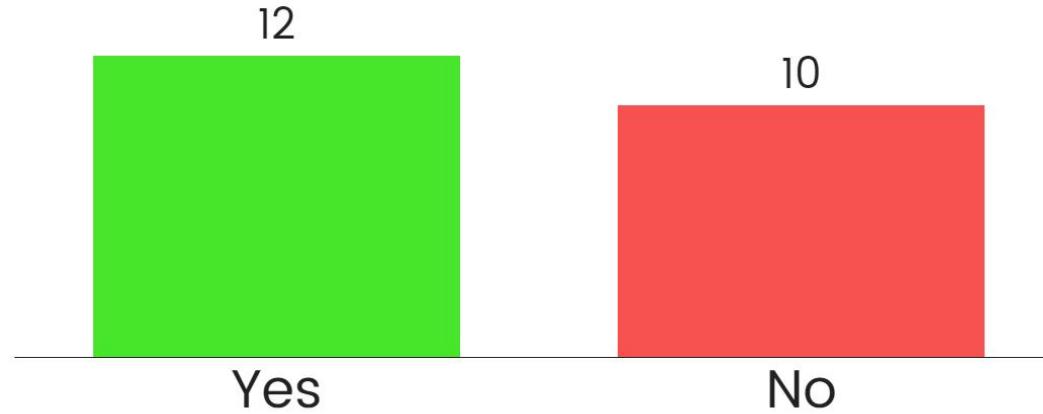
MM2: If so, what was your goal? What did you want to achieve?

Results MM1



Did you already use mobile devices in your lessons?

Mentimeter



>

Votes: 22

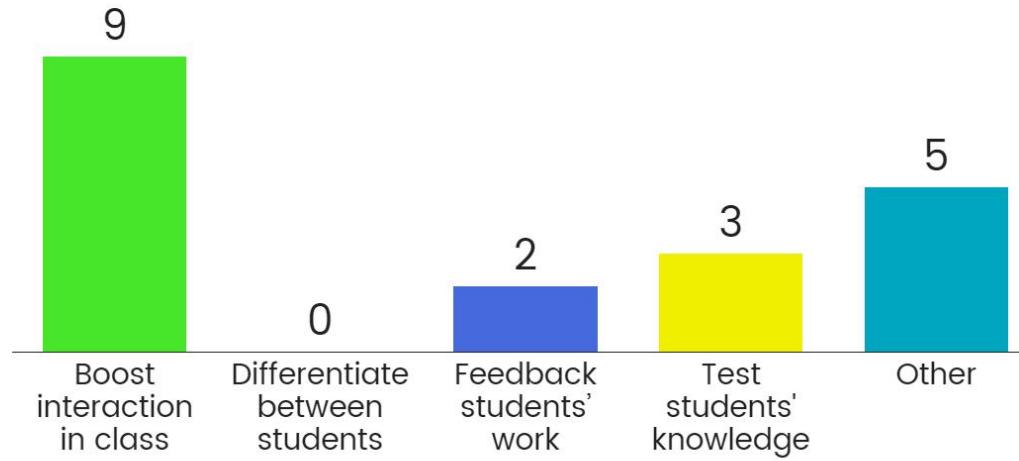


Results MM2



If so, what did you want to achieve?

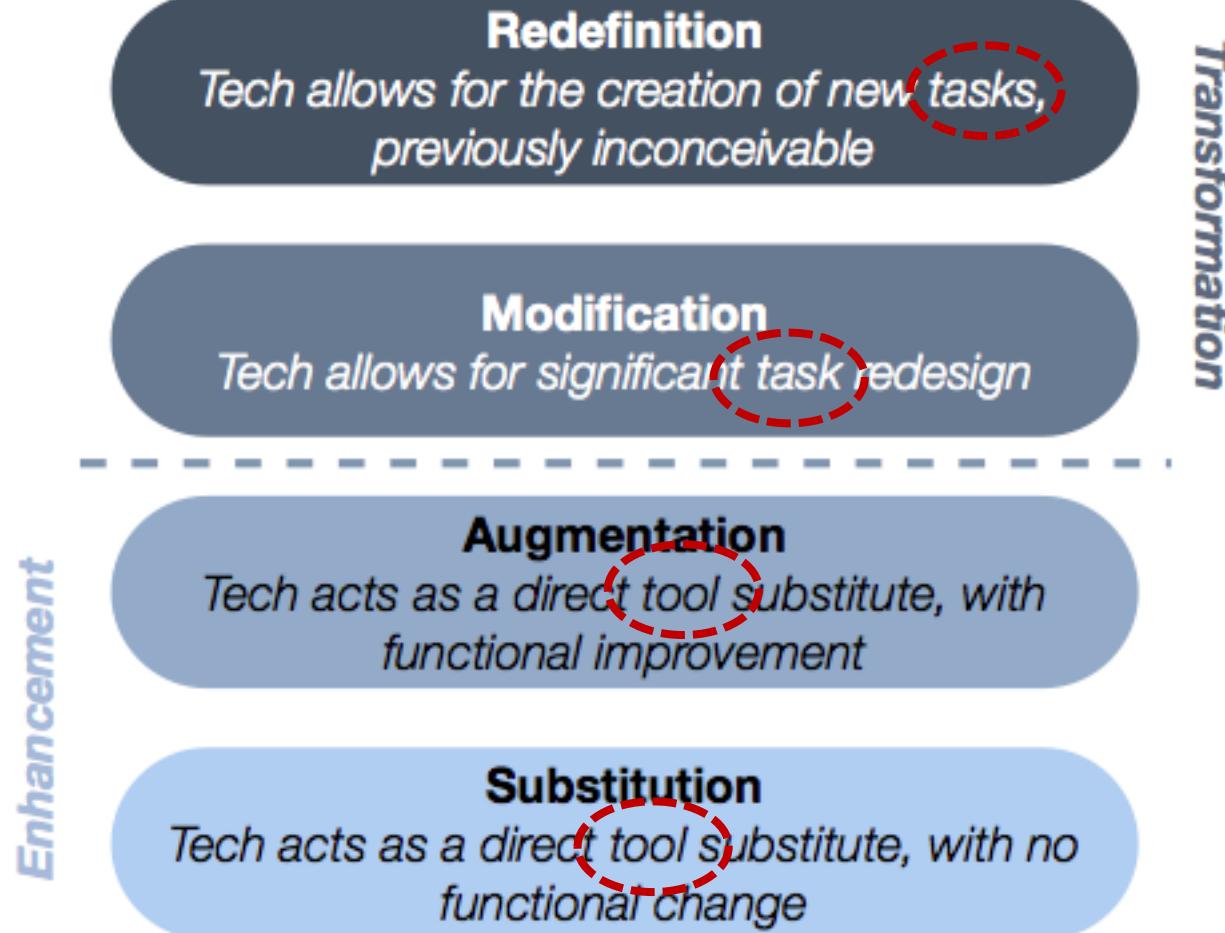
Mentimeter



Votes: 19

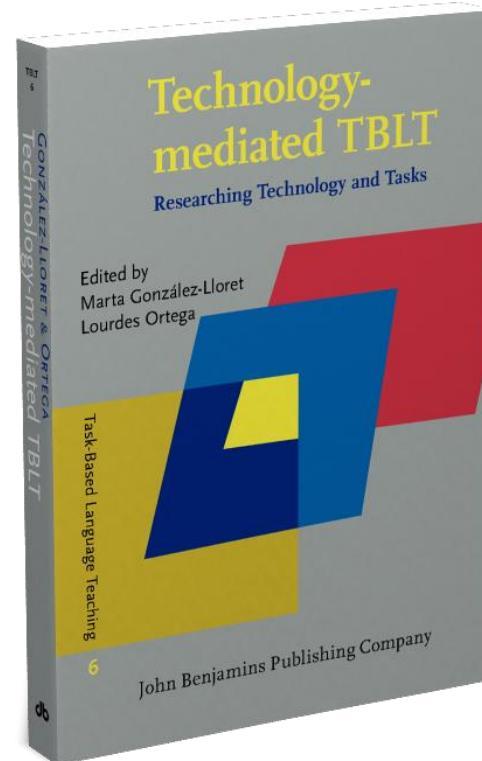
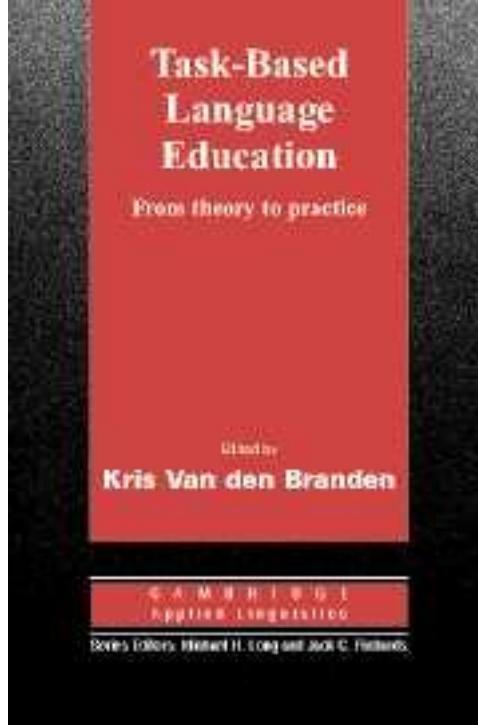


SAMR (Puentedura)

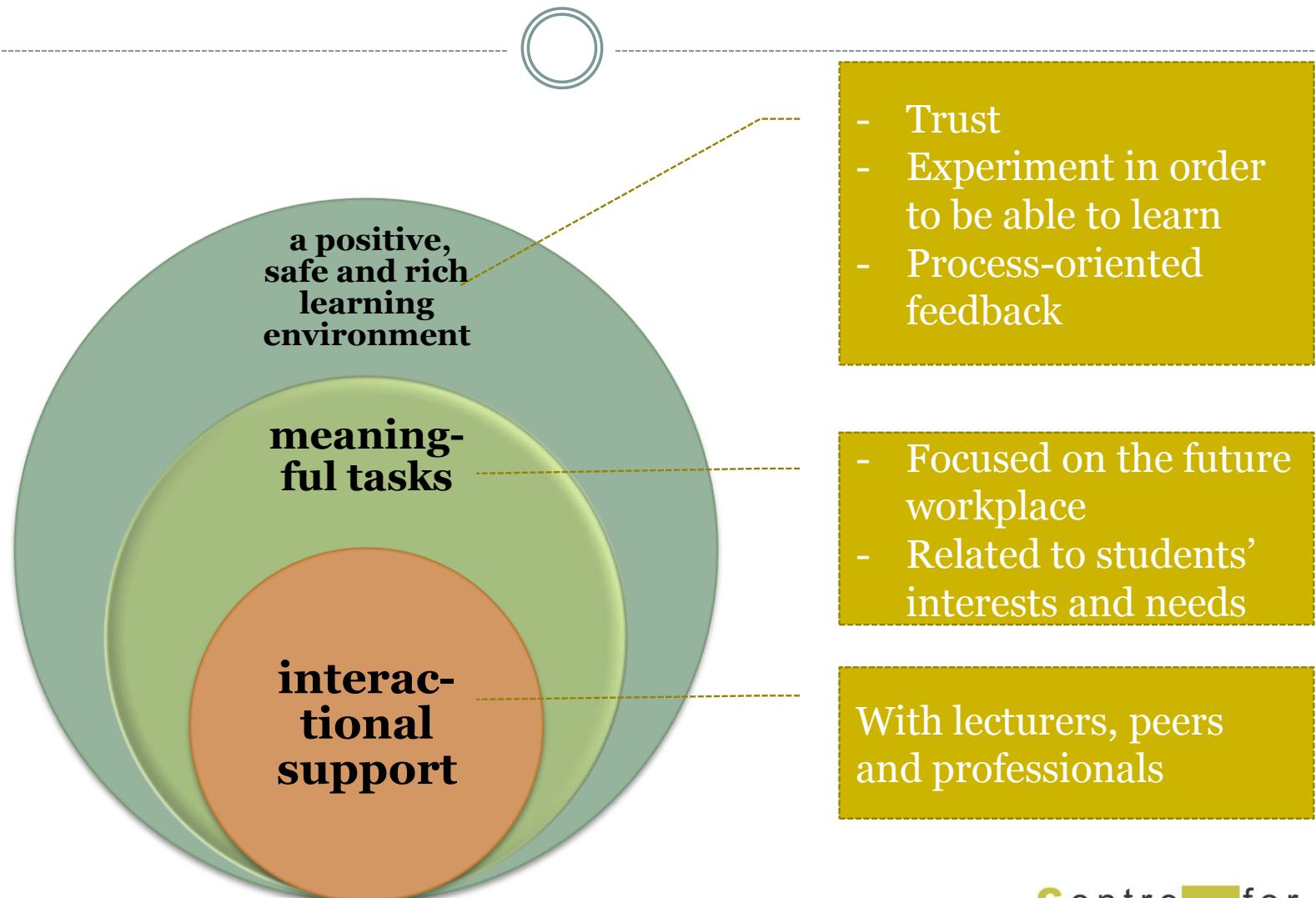


TASK =

“an activity in which a person engages in order to attain an objective, and which necessitates the use of language” (Van den Branden 2006: p. 4)



Framework: task-based (language) learning

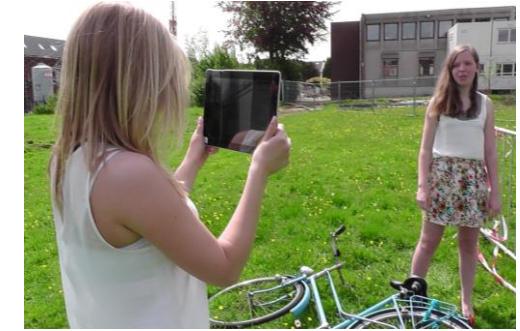


Research Question



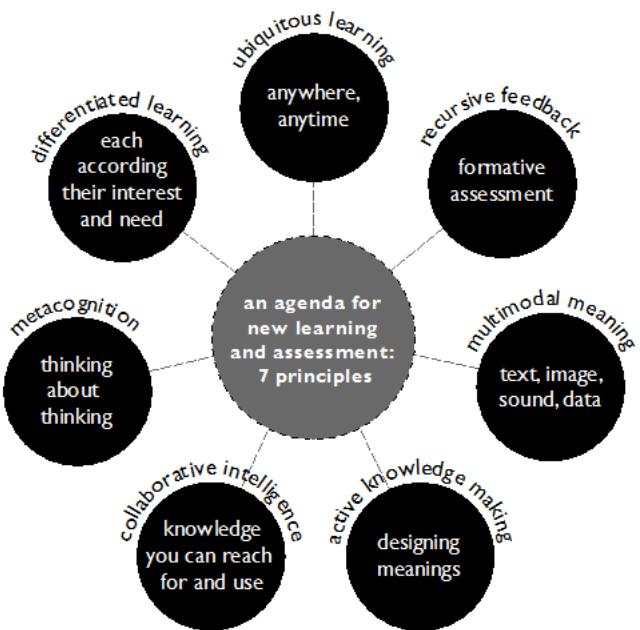
Touch2Learn

two-year educational
development project in HE
in Flanders



- Can the use of mobile technology transform the current learning environment into a more (inter)active one, facilitating motivational learning?

OBJECTIVES



(Cope & Kalantzis, 2000)



explore and chart didactic affordances

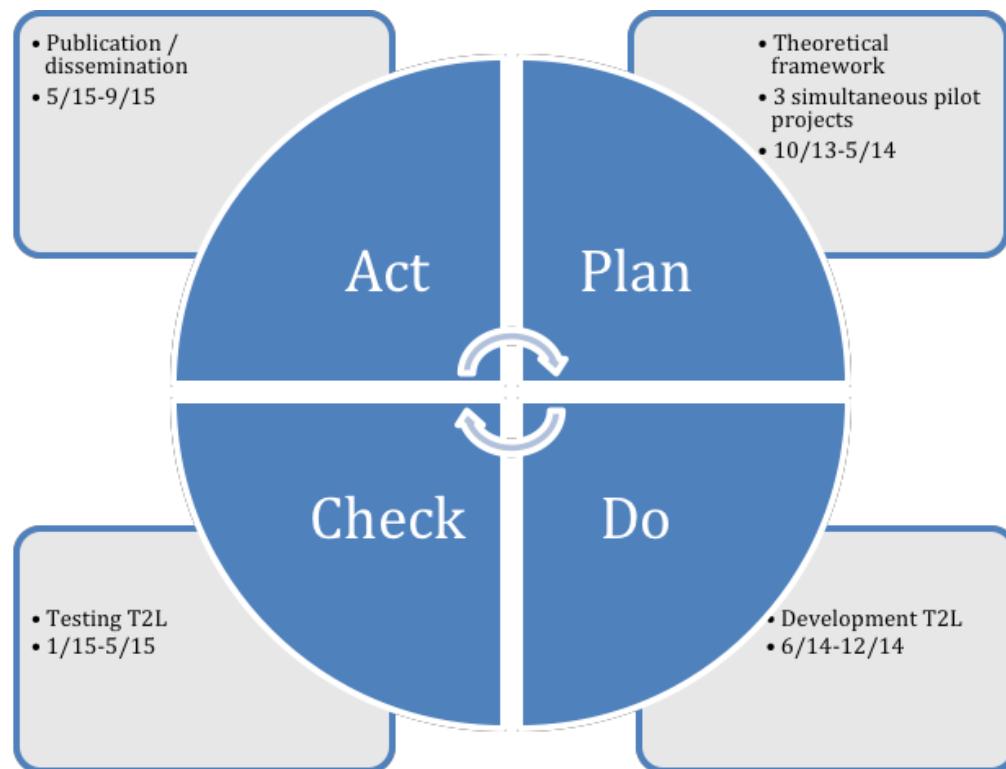


develop user-friendly interface to make affordances available

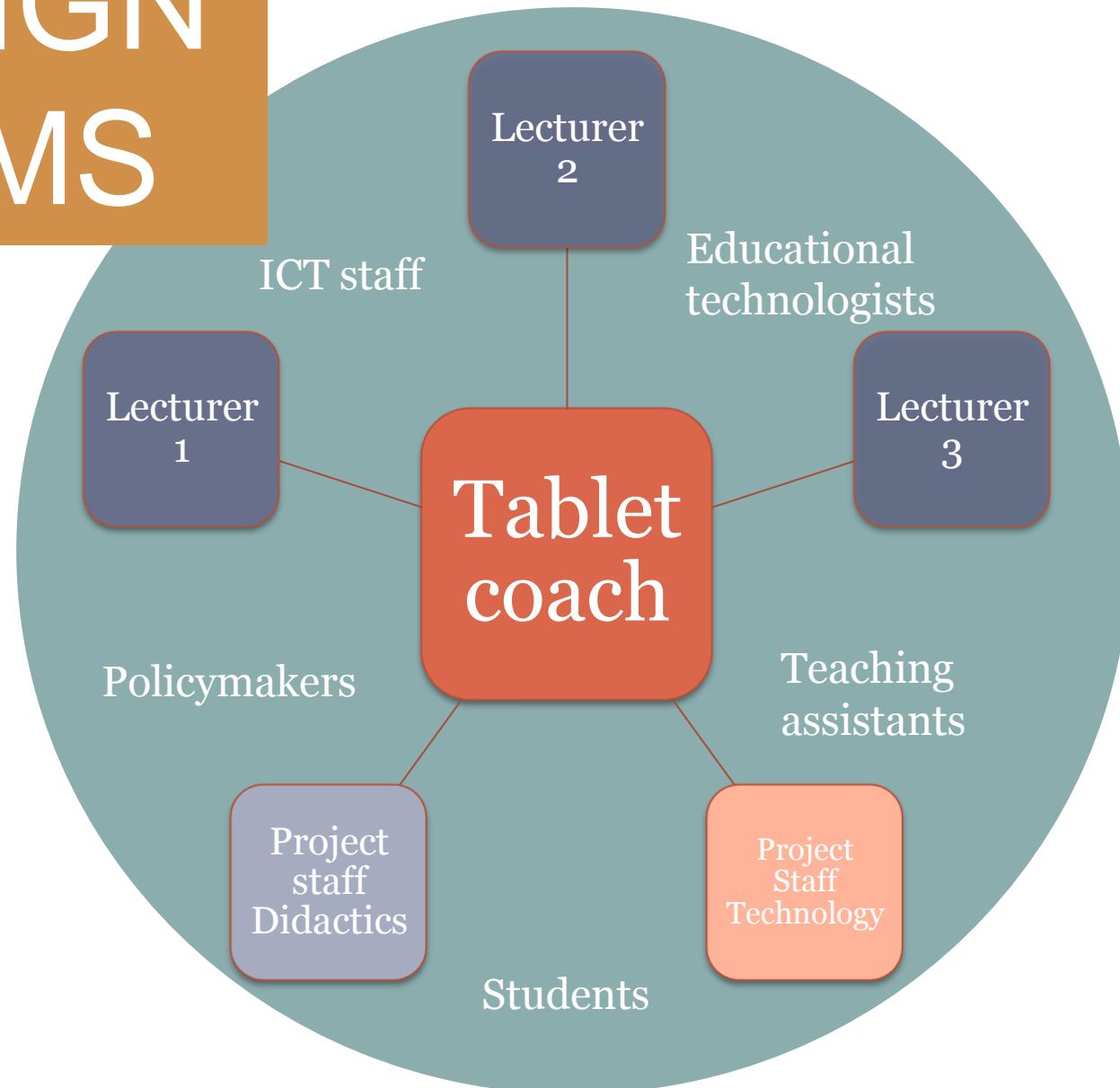


design implementation trajectory for policy makers and ICT personnel

APPROACH



DESIGN TEAMS



PILOTS



Industrial engineering
// Lab Microbiology

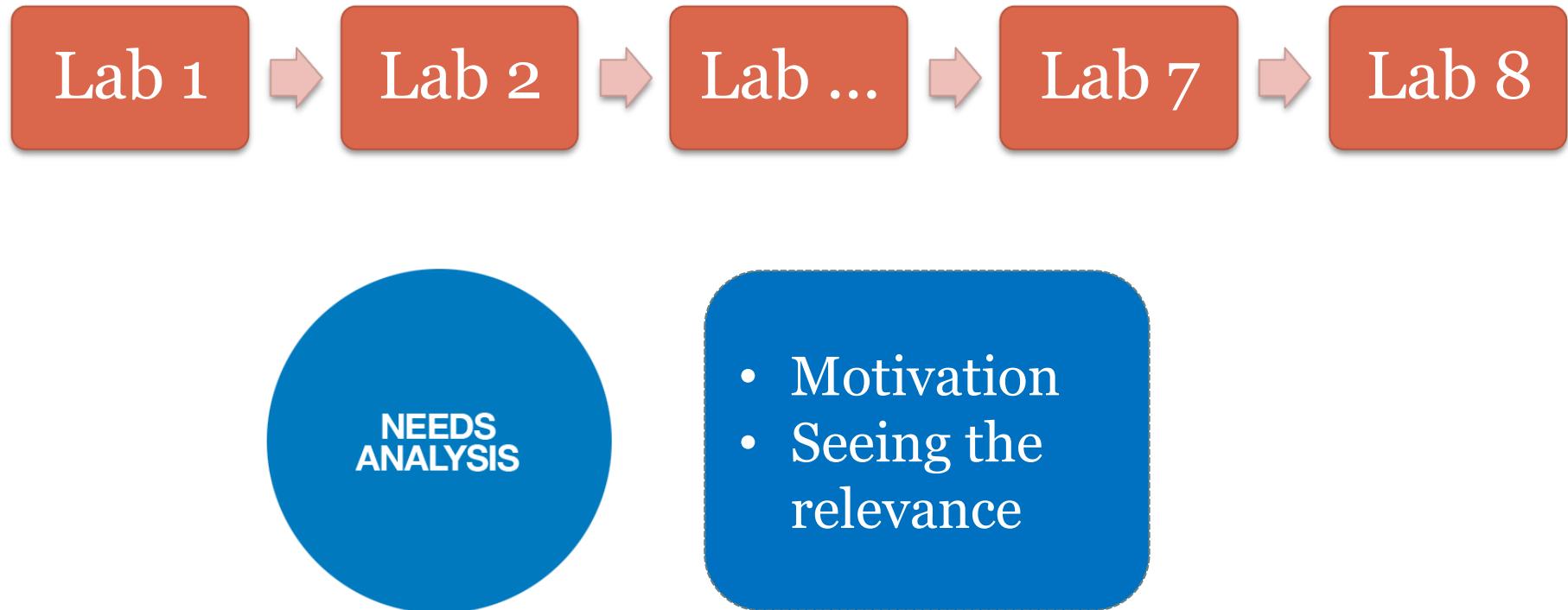


Teacher training
// Internship



Applied Psychology
// Large enrollment
lecture

PILOT 1: ENG



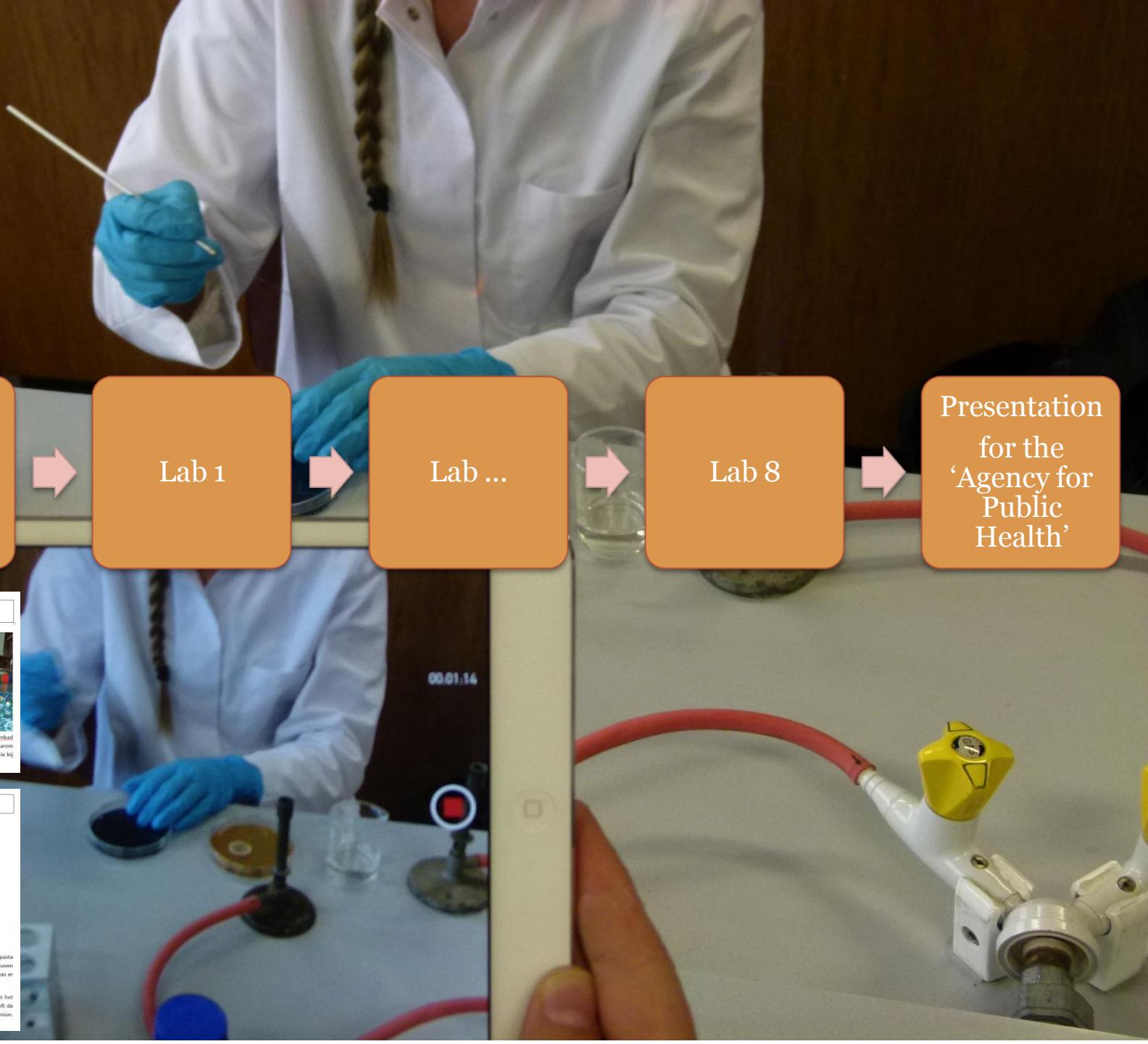
Case

Lab 1

Lab ...

Lab 8

Presentation
for the
'Agency for
Public
Health'



Method



- **Participants**
 - 15 bachelor students and 7 bridging/transfer students with work experience
 - 2 lecturers
- **Instruments:**
 - Tablet pc's (iPad): higher education institution + BYOD
 - Apps: Splice Editor (iOS), Android Video Editor (Android) and Explain Everything (iOS)
- **Measures:**
 - A self-developed **online survey**
 - **Focus groups** with students and lecturers
 - Non-participant observations
- **Analysis:** descriptive statistics (SPSS), qualitative content analyses
(Mortelmans, 2007; Neuendorf, 2002)

Results



- Online survey: rather neutral appreciation of the intervention
- Focus groups with students show a more complex picture
 - Real-tasks: are found to be more motivating than isolated exercises; prepare for the real lab work outside HE
 - But:
 - ✖ Practical limitations, e.g. time
 - ✖ Doubts about teachers' expectations towards the innovation

PILOT 2: TEA

Internships at schools



Teacher training

One or two visits
by the teacher trainer

(Why) is this a problem?



- A single school visit: an undependable indication of students' teaching competences
- Studies on (technology-mediated) task-based and collaborative learning have shown (pre-service teachers') learning is accelerated by doing meaningful tasks in interaction with others

(Alvarez, Brown & Nussbaum, 2011; Devlieger & Goossens, 2007; González-Lloret & Ortega, 2014; Van den Branden, 2006; Verhelst, Jaspaert & Van den Branden, 2002)

Teacher Education



Method



- **Participants**
 - 18 students
 - 2 teacher trainers + 4 assessors
- **Instruments:**
 - Tablet pc's (iPad): higher education institution + BYOD
 - Apps: Splice Editor (iOS), Android Video Editor (Android) and Explain Everything (iOS)
 - 4 private Facebook-groups
- **Measures:**
 - **Focus groups** with students and lecturers
 - Non-participant observations
- **Analysis:** qualitative content analyses (Mortelmans, 2007; Neuendorf, 2002)

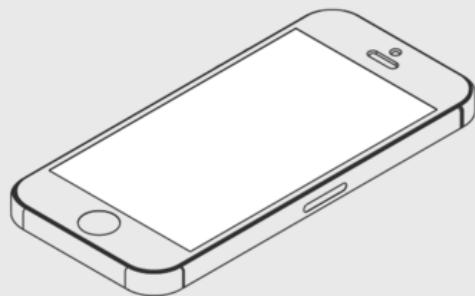
Let's guess: what will affect (inter)active learning most (on the basis of this pilot)?



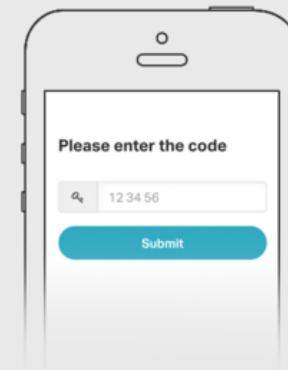
Go to **www.govote.at** and use the code **58 92 46**

What will affect (inter)active learning most?

Mentimeter



www.govote.at



- 1 Grab your phone

The lecturers' feedback

- 2 Go to www.govote.at

The readiness for mobile technology

The choice for a popular platform like Facebook

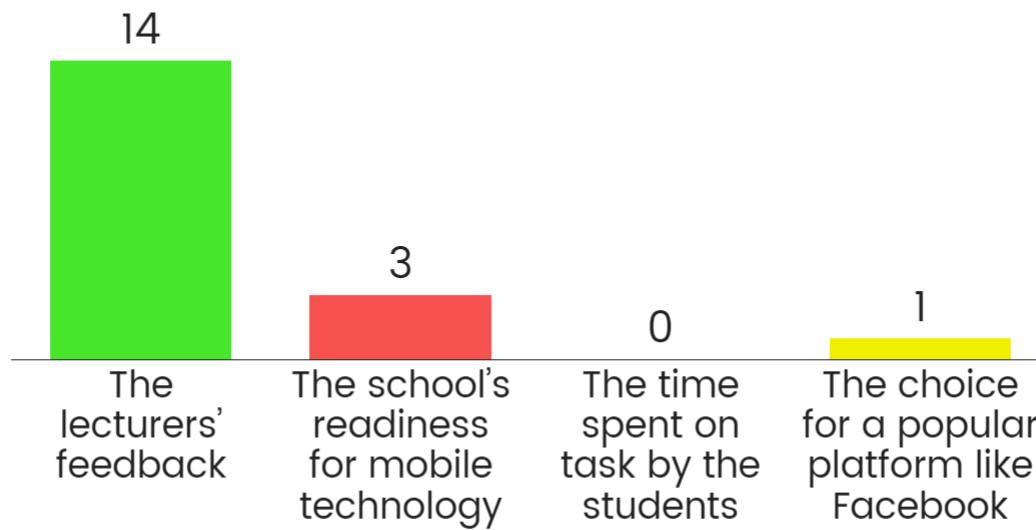
- 3 Enter the code **58 92 46** and vote!

Results MM3



What will affect (inter)active learning most?

Mentimeter



Votes: 18

Results focus groups



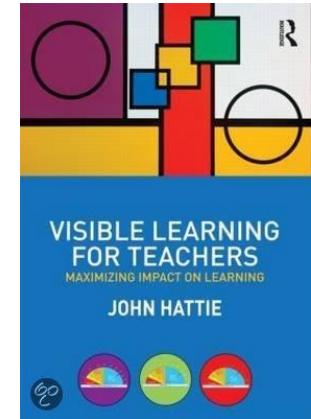
- Students: More reflection on classroom practices, e.g.
“I was always angry with the same boy.”
- Lecturers: More complete and concrete idea of students' daily classroom practices, e.g.
“You can tell what you do but you can also show what you do. The latter creates openness.”
- Both: Online interaction lowers barriers for peer and teacher feedback.
- But: differences in quality of teacher feedback!

(Frijns, 2015; Lievens & Van Daele, 2015)

Feedback



- Hattie (2012): impact of feedback on learning
- Evaluative feedback: “Good job.”
- Descriptive feedback: “Good job. You have included all important elements.”
- Feed forward: “Good job. You have included all important elements. You could improve the third element by...”



PILOT 3: PSY

Go to www.govote.at and use the code 29 09 68

GP4 CM - hoe overgewicht bij kinderen aanpakken

Mentimeter

Ouders Sensibiliseren.

Sportstuleren

Door de hele omgeving in te werken
werken aan het probleem.
Verschillende aspecten bij het kind in
kaart brengen en daarop inspelen.

Middelen aanbieden om frequent te
sporten

Schoolbeleid

Interactieve-lessen-over-oorzaak-
en-gevolgen-overgewicht-op-school

InfoavondenOpSchoolOrganiserenOver-
GevolgenVanOngezondeVoedingEn
Alternatieven

advertentiesinsupermarktenzelf

Vettax, verplicht sportkamp

Gezonde voeding op school

Weekmenu-met-gezonde-gerechten

Sportkampen-
gezondegroepsmaaltijden

Meer terugtrekken van diëtiste

Votes: 30



Method



- **Participants:**
 - 185 students
 - 3 lecturers
- **Instruments:**
 - BYOD
 - App: Mentimeter
- **Measures:**
 - A self-developed **online survey**
 - **Focus groups** with students and lecturers
 - Non-participant observations
- **Analysis:** descriptive statistics (SPSS) and qualitative content analyses
(Mortelmans, 2007; Neuendorf, 2002)

Results survey



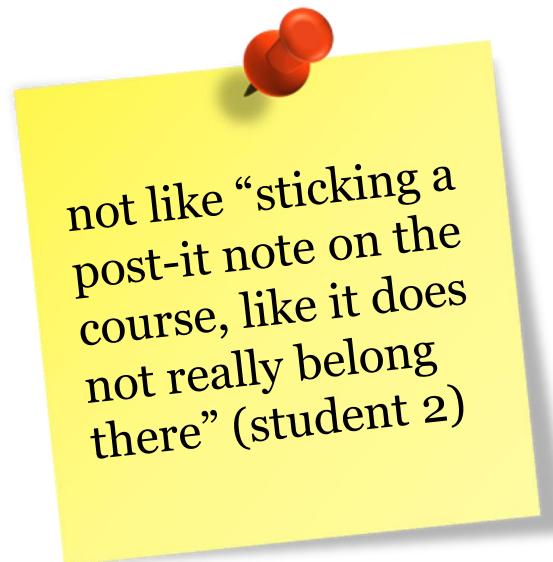
- Increased interaction and involvement
- Increased processing of course content
- Favorable attitude towards using handheld technology in large group lectures

(Van Daele, Frijns & Lievens, submitted)

Results focus groups



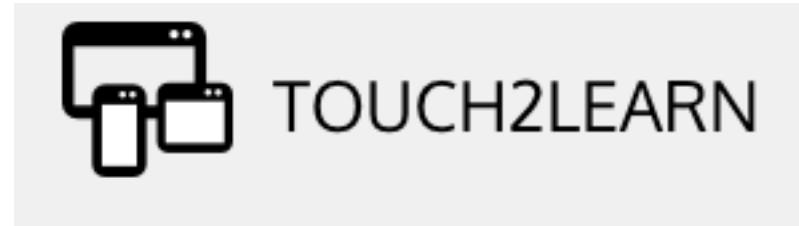
Focus group interviews with students confirm these findings under the condition that the used technology is integrated functionally in the lecture.



“It is also nice because you often see graphics but now it is a graphic in which you are represented as well.” (student 5)

(Van Daele, Frijns & Lievens, submitted)

PROJECT RESULTS



Website & app for

- Teachers, lecturers
- Students
- Policy makers

Experienced staff

- Lecturers
- Tablet coaches in 3 HE institutions in Flanders

Training



TOUCH2LEARN.BE



TOUCH2LEARN

Mobiele technologie in het hoger onderwijs



Docenten

Vind krachtige werkvormen voor het inzetten van mobiele technologie in je onderwijs

Studenten

Ontdek hoe je smartphone of tablet optimaal voor je opleiding kunt gebruiken

Ondersteuners

Leer hoe je mobiele technologie in het hoger onderwijs implementeert

APP

The screenshot shows the Google Play Store interface. At the top, there is a search bar with the word "Zoeken" and a magnifying glass icon. Below the search bar, the navigation menu includes "Categorieën" (dropdown), "Startpagina", "Populairste items", and "Nieuwe releases". On the left, a sidebar menu is open under the "Winkelen" section, listing "Mijn apps", "Games", "Familie", and "Keuze van de redactie". Below this, under "Mijn account", are links for "Mijn Play-activiteit", "Mijn verlanglijstje", "Tegoed inwisselen", and "Gids voor ouders". The main content area displays the "Touch2Learn" app page. The app's logo features a smartphone icon next to a stylized blue 'T' shape. The title "Touch2Learn" is displayed in large letters. Below the title, it says "Irutten Onderwijs" and has a PEGI 3 rating. A warning message "⚠ Je hebt geen apparaten" is shown. Two buttons are present: "Toevoegen aan verlanglijstje" with a plus sign and "Installeeren" in a green button. To the right of the app page, there is a large orange arrow pointing to the right. Below the app page, three screenshots of the app's interface are shown: "Selectie", "Werkvormen", and "App". The "Selectie" screen lists various interaction types like "Interactie verhogen", "Differentiëren", and "Evaluieren". The "Werkvormen" screen shows a list of activities such as "Vraag naar de mening van studenten en bekijk de respons in realtime", "Activeren voorkennis en ervaringen van studenten en bekijk de respons in realtime", and "Laat studenten online informatie opzoeken". The "App" screen contains a heading "Laat studenten een opdracht uitvoeren en projecteren in realtime" and a detailed description of how it can be used for teaching. A "Praktijkvoorbeeld" section provides a specific scenario involving a teacher discussing BMI with students.

Google Play

Zoeken

Apps

Categorieën

Startpagina

Populairste items

Nieuwe releases

Mijn apps

Winkel

Games

Familie

Keuze van de redactie

Mijn account

Mijn Play-activiteit

Mijn verlanglijstje

Tegoed inwisselen

Gids voor ouders

Touch2Learn

Irutten Onderwijs

PEGI 3

⚠ Je hebt geen apparaten

Toevoegen aan verlanglijstje

Installeeren

Selectie

Werkvormen

App

Intenties

- Interactie verhogen (23)
- Differentiëren (18)
- Evaluieren (11)
- Feedbacken (7)
- Overall en altijd (laten) leren (8)
- Begeleiding
- Hoorcollege (17)
- Labo (20)
- Werkcollege (25)

Werkvormen

- Vraag naar de mening van studenten en bekijk de respons in realtime
- Activeren voorkennis en ervaringen van studenten en bekijk de respons in realtime
- Laat studenten online informatie opzoeken
- Laat studenten in realtime individuele vragen stellen via mobiele technologie
- Laat studenten een opdracht uitvoeren en projecteren in realtime
- Laat studenten samen een activiteit uitvoeren

App

Laat studenten een opdracht uitvoeren en projecteren in realtime

Je kunt via mobiele technologie aan een student vragen om tijdens een hoor- of werkcollege een opdracht op een smartphone of tablet uit te voeren terwijl de medestudenten via projectie meevolgen. Dat is vooral handig in een werkcollege met veel studenten of een hoorcollege, waarin interactie met studenten doorgaans beperkt is.

Praktijkvoorbeeld

Een docente wil het concept body mass index (BMI) bespreken in een les waarin wordt stilgestaan bij de motiverende rol van psychologisch consulenteren in de aanpak van overgewicht en obesitas. Als introductie vraagt ze aan de studenten of er vrijwilligers zijn om hun

Conclusion



Boosting students' active learning is about

- Aiming for practices *above* the dotted line:
tasks, not tools, in a safe and interactive learning environment
- Team work





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Touch2Learn Materials



- **App Touch2Learn** for Android (in Dutch):
<https://play.google.com/store/apps/details?id=be.touch2learn.app#details-reviews>
- **Papers** (in English):
 - [Frijns, 2015](#) (login required for full paper download)
 - [Lievens & Van Daele, 2015](#) (login required for full paper download)
 - Van Daele, Frijns & Lievens, submitted
- **Practice-oriented article** (in Dutch):
Frijns, C., Lievens, J. (2016). [Mobiele technologie, exclusief extraatje of inclusief ieders stem? Fons, 1 \(2\), 18-19.](#)
- **Website Touch2Learn** (in Dutch): <http://touch2learn.be/>
- **YouTube Channel** (in Dutch): [3 ideas and practical examples](#)
- App (webbased) used during this paper presentation: [Mentimeter](#)

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