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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And all participating lecturers and students
MM1: Did you already use mobile devices in your lessons?

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

MM2: If so, what was your goal? What did you want to achieve?
Results MM1

Did you already use mobile devices in your lessons?

- Yes: 12 votes
- No: 10 votes

Votes: 22
Results MM2

If so, what did you want to achieve?

Votes: 19
SAMR (Puenteedura)

**Redefinition**
Tech allows for the creation of new tasks, previously inconceivable

**Modification**
Tech allows for significant task redesign

**Augmentation**
Tech acts as a direct tool substitute, with functional improvement

**Substitution**
Tech acts as a direct tool substitute, with no functional change
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

- Trust
- Experiment in order to be able to learn
- Process-oriented feedback
- Focused on the future workplace
- Related to students’ interests and needs

With lecturers, peers and professionals

- a positive, safe and rich learning environment
- meaningful tasks
- interactional support
Research Question

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

Touch2Learn
two-year educational development project in HE in Flanders
OBJECTIVES

explore and chart didactic affordances

develop user-friendly interface to make affordances available

design implementation trajectory for policy makers and ICT personnel

(Cope & Kalantzis, 2000)
Industrial engineering // Lab Microbiology

Teacher training // Internship

Applied Psychology // Large enrollment lecture
PILOT 1: ENG

- Motivation
- Seeing the relevance
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; Gónzalez-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**

1. **Grab your phone**
2. **Go to www.govote.at**
3. **Enter the code 58 92 46 and vote!**
Results MM3

What will affect (inter)active learning most?

- The lecturers’ feedback: 14
- The school’s readiness for mobile technology: 3
- The time spent on task by the students: 0
- The choice for a popular platform like Facebook: 1

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
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

Mobiele technologie in het hoger onderwijs

STUDENTEN
Ik wil weten hoe ik mijn smartphone of tablet kan inzetten voor onderwijsactiviteiten.

Docenten
Vind krachtige werkwijzen voor het inzetten van mobiele technologie in je onderwijs

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

Ondersteuners
Leer hoe je mobiele technologie in het hoger onderwijs implementeert
Touch2Learn

Klassen Onderwijs

PEGI 3

Toevoegen aan verlanglijstje
Installeren

Laat studenten een opdracht uitvoeren en projecteren in realtime

- Vraag naar de mening van studenten en bekijk de reacties in realtime
- Activeer voorkeuren en ervaringen van studenten en bekijk de reacties in realtime
- Laat studenten online informatie opstrijken

Praktijkvoorbeeld

Een discours over "The concept body mass index (BMI)" begint in een leraar, waarbij hij de rol van een psycholoog in de aanpak van overgewicht en obesitas. Als een onderdeel van de discussie wordt bedoeld dat studenten al dan niet van gewicht zijn.
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
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):

- **Website Touch2Learn** (in Dutch): http://touch2learn.be/

- **YouTube Channel** (in Dutch): 3 ideas and practical examples

- **App (webbased) used during this paper presentation:** Mentimeter
References (1)

References (2)