Will the future of Higher Education be evidence-based?

FRANCESCA POZZI – *ISTITUTO TECNOLOGIE DIDATTICHE, CNR, ITALY*

EMAIL: POZZI@ITD.CNR.IT

Evidence Based Education (EBE): concept

There are several definitions, some of which are quite 'radical'.

For example, according to Slavin (2004) EBE implies the use of randomized experiments in controlled conditions, with the aim to:

➢Reduce complexity
➢'Isolate' variables
➢Allow replicability
➢Allow generalization of results.

Exp. 1 - Evaluating online collaborative learning activities in CSCL contexts
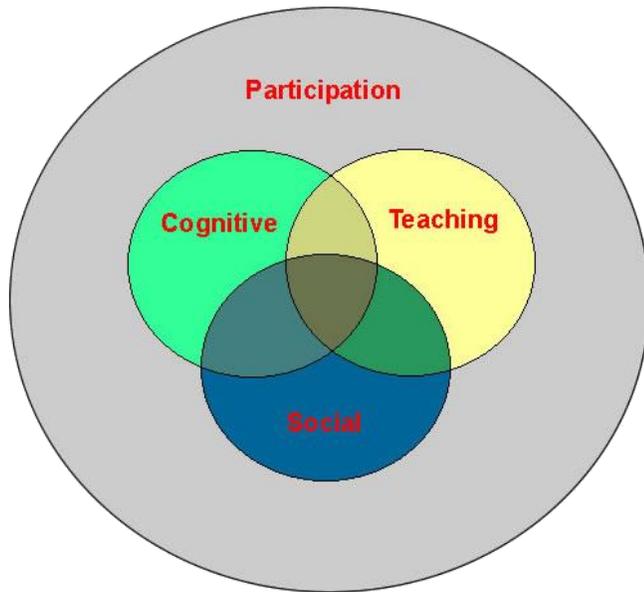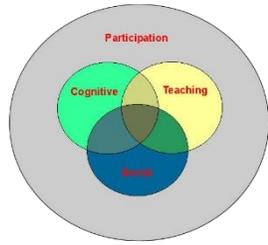
What to observe? -> The collaborative learning process in its complexity, i.e.:

❖ The participative dimension (n. of words, n. of messages, etc.)
❖ The cognitive dimension (expressions oriented to individual knowledge building, group knowledge building, meta-reflection, etc.)
❖ The social dimension (expressions oriented to self-disclosure, in terms of emotions and affection, group cohesion, etc.)
❖ The teaching dimension (expressions oriented to organizational support, discussion facilitation, etc.)

✓ Persico D., Pozzi F., Sarti L. (2010), Monitoring collaborative activities in CSCL: a quantitative and qualitative approach, Distance Education, 31(1), 5-22.
✓ Persico D., Pozzi F., Sarti L. (2009), Design Patterns for monitoring and evaluating CSCL processes, *Computers in Human Behaviour*, 25(5), 1020-1027, Elsevier.
✓ Pozzi F., Manca S., Persico D., Sarti L. (2007), A general framework for tracking and analysing learning processes in CSCL environments, *Innovations in Education & Teaching International (IETI) Journal*, 44(2), 169-179.
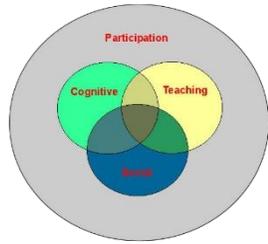
Juxtaposing two approaches to evaluation

Context 1 (ITD-CNR study)
Online course for student teachers.

Why
- Evaluation of a CSCL approach

What -> Process
- Real context
- Course (whole duration)

Who
- Around 150 students (no representative sample, no C/T groups)
- Teachers /tutors

How – Mixed approach
- Quantitative data tracked by the system
- Content analysis of messages
- Students' learning outcomes (grades)

Context 2 (German study)
Blended course for students.

Why
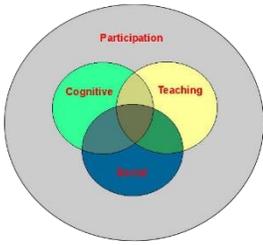- Evaluation of a CSCL tool

What -> Process
- 'Artificial' context
- One session (80 mins.)

Who
- 120 students (representative sample, C/T groups)

How -> Quantitative approach
- Quantitative data tracked by the system
- Pre-post test

Juxtaposing two approaches to evaluation

❑ Natural context *vs.* Artificial context

❑ Complex reality with several variables *vs.* 'Simplified' reality with less variables

❑ Replicability: what can we replicate?

❑ Generalization of results: what can we generalize?

❑ Significance of the study:

▪ which of the studies take into the due account the **context**? (environment, culture, organization, etc.)?

▪ which of the studies take into the due account all the **actors** involved in the process?

▪ which of the studies allows a **real understanding** of the collaborative process?
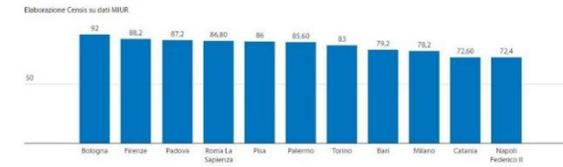
Exp. 2 - Ranking HE institutions

❖CODUR project – "Creating an Online Dimension for University Rankings"

❖ERASMUS+ project

❖Partners: UOC, OUUK, ITD-CNR

❖Main aim: to define and validate a set of criteria and indicators to measure the online dimension of Higher Education institutions

What to observe? -> The online dimension of the HEIs in its complexity.

http://in3.uoc.edu/opencms_in3/opencms/webs/projectes/codur/en/index.html
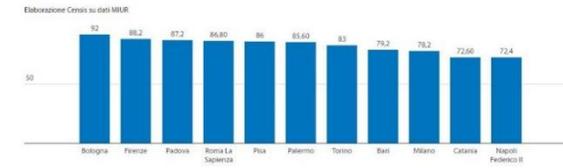
Juxtaposing two approaches to ranking

Context 1 (CODUR project)
Ranking online HEIs

Why
- Ranking

What -> Outcome / Impact
- Institution

Who
- Students
- Teachers /tutors
- Administrative staff….

How – Quantitative approach
- quantitative data provided by either the institution or other official sources of info/data (government, etc.)
- 'descriptive' data provided by the institution
- opinions by users collected through surveys.

Context 2 (Other existing ranking systems)
Ranking HEIs

Why
- Ranking
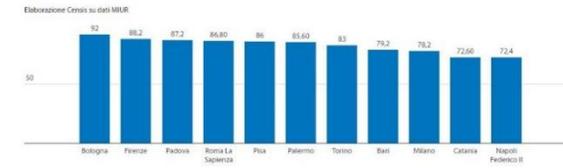
What -> Outcome / Impact
- Institution

Who
- Mainly students

How – Quantitative approach
- quantitative data provided by either the institution or other official sources of info/data (government, etc.)

Juxtaposing two approaches to ranking

In the CODUR project we are trying to:

- ❑ 'enhance' a purely quantitative approach with info about the context through descriptive data (for example about the pedagogical approaches proposed, etc.)

- ❑ take a participative approach, by taking in the due consideration all the stakeholders involved, along with their opinions

- ❑ avoid being biased by considering only what it is easier to be captured.

Will the future of HE be evidence-based?

- Monitoring/tutoring
- Prediction
- Evaluation
- Assessment
- Self-regulation/
  self-assessment
- Personalization/
  recommendation
- Ranking …

- Process
- Product
- Impact

- Granularity
  - student
  - course
  - programme
  - …

Why to observe | **What** to observe

OBSERVATION

How to observe | **Who /for whom**

- Qualitative approaches
- Quantitative approaches
- Mixed methods
- Learning analytics
- Surveys
- Content analysis
- Meta-Analyses…

- Institution
- Learners
- Teachers
- Tutors
- ….

ITD CNR
Istituto per le Tecnologie Didattiche
Consiglio Nazionale delle Ricerche

Conclusions

It is true that educational activities are often inadequately evaluated and developing evidence-based education can bring a number of advantages:

- It can help adopting sounder evaluation approaches
- It can help raising the level of attention on the quality of education
- It can helps decreasing the distance between teachers and researchers
- It can help increasing the 'cumulative' character of the research I the educational sector, while decreasing its scattered 'nature'…

Recommendation: the specific «context/ecosystem» should be under the lens in all its aspects:

- All the 'dimensions' (educational, organizational, technological, …)
- All the stakeholders (not only learners, but also teaching staff, tutors, administrative staff, etc.)
- All the 'diversities' (cultural, individual, social, …).

THANKS!

Francesca Pozzi

Istituto Tecnologie Didattiche – CNR, Italy

Email: pozzi@itd.cnr.it