PhD Mentors panel:
Yet another PhD thesis project

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Elements to take into account in my PhD thesis

■ Relevance
  – Is my project relevant enough for a research community?

■ Originality
  – Are there any original contributions?

■ Feasibility
  – Can I carry out my doctoral project?
A “non-fictitious” PhD project
Group formation in MOOCs

Relevance

- **Massive On-line Open Courses (MOOCs)** have a high potential and are spread all over the world.
- Introducing **active pedagogies** (such as Collaborative Learning) is a challenge for all Technology Enhanced Learning (TEL) environments.
- **Group formation** is critical for effective Computer-Supported Collaborative Learning (CSCL).
A “non-fictitious” PhD project
Group formation in MOOCs

- **Originality**
  - MOOCs are characterized by **massive and variable scale**
  - “Classical” group formation solutions cannot be directly applied to MOOCs
  - **Low support to designers-teachers** provided by current platforms and research proposals
  - **Learning Design and Orchestration is complex**, especially in MOOCs
A “non-fictitious” PhD project:  
Group formation in MOOCs

■ Feasibility

– My group has **various funded projects** related to my PhD project
– My advisor (and my research team) has **experience in all related topics** (Learning Design, Computer Supported Collaborative Learning and orchestration)
– I can **build on previous results and systems** proposed by our research team
– The topic **fits my interests** (intrinsic motivation)
Some important elements
Generate a thesis schema

TFM Schema IX - Luisa Sanz

**CONTEXT**

- Computer-supported collaborative learning in MOOCs
  - Big scale and its variability makes difficult orchestration tasks for instructors
- Design Principles in Networks
  - Is it possible to apply this scalable principles in CSCL?

**Group Formation Problem in MOOCs**
- Difficulties for creating groups with teacher’s criteria with big scale
- Groups degrade because of dropout and lack of participation, it is necessary to manage this problem

**Main Goal:** To provide some help to MOOCs’ teachers on grouping and regrouping students for CSCL

**OBJECTIVES**

- To synthesize the potential dimensions and aspects that can be considered in the group formation problem in MOOCs context

- To develop a conceptual framework that describes MOOCs context and grouping and regrouping strategies for CSCL in this context

- To develop a technological framework that helps teachers orchestrating group formation and transformation for CSCL in MOOCs’

**CONTRIBUTIONS**

- A classification of potential grouping aspects and dimensions in MOOCs’ context
- A set of guidelines for MOOCs’ teachers to help them orchestrating CSCL
- A conceptual framework describing MOOCs context and possible grouping strategies
- A set of tools for MOOCs teachers to help them orchestrating CSCL

**EVALUATION**

- Experts opinions
- Analysis in terms of orchestration facilities
- Teachers surveys
- Experiments results analysis (observation)
Use an appropriate methodology
(Design Science Research Method)
Generate a framework based on literature survey
Generate experimental data to test proposals

- Iterative interventions in different MOOCs to explore the problem and to evaluate previous contributions
  - **Design phase**: helping teachers in the design of group activities
  - **Enactment phase**: helping teachers in the management of groups
A few lessons learnt to consider

- Define short-term goals
- Be in contact with the research community
- Participate in training courses
- Have at least an international research stay
- Submit and eventually publish papers in competitive fora
- Be (self-)critical, learn from colleagues
- Evaluate using prototypes (proofs of concept) and synthetic or real-world data