Learning Analytics in Project Management teaching

Félix Buendía García, José Vte. Benlloch Dualde

Universidad Politécnica de Valencia

Introduction

- Learning Analytics for practical activities:
  - Information usually gathered from LMS (Learning Management System) platforms
  - A big part of the academic activity is performed outside them
- Main issues
  - Need to define indicators of the academic practice activities
  - Linking of such indicators with analytical data sources
- Proposal
  - Concept of *edumarker*
    - as indicator of "healthy" academic progress
  - Similar to the notion of *biomarkers* in health contexts

Introduction

- ## Activity *Edumarkers*
  - ### Practice context items
    - #### Guides
      - □ When practice guides are accessed?
        - □ "55% of accesses happened during the current session"
    - #### Resources
      - □ How many support materials are used during the practice?
        - □ "An average of three technical documents are read by students"
    - #### Deliverables
      - □ What type of tasks are performed and when?
        - □ "About four exercises are delivered by group every two weeks"
    - #### Lab notebooks
      - □ How many entries are annotated?
        - □ "The total number of project charts varies between 2 and 5"

Introduction

- **Proposal of *Edumarkers***
  - Practice Guides
    - #addressed_goals / #read_instructions / #accomplished_tasks
  - Auxiliary resources
    - #number_accesses (presentation handouts) / #selected_data (technical specifications)
  - Delivery documents
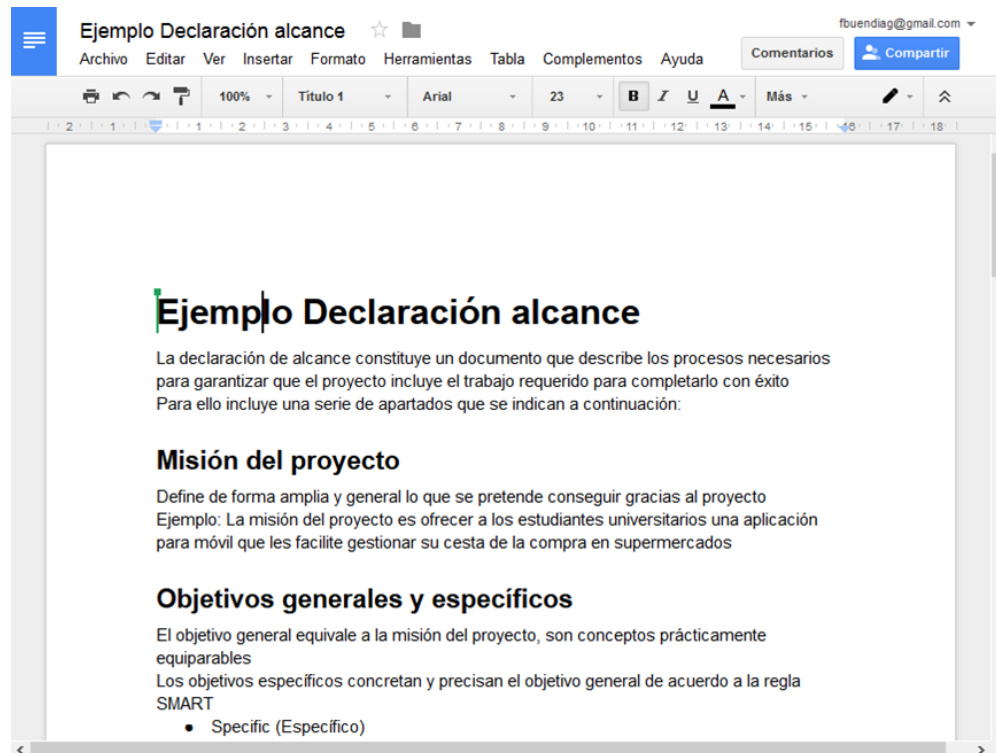   - #author_contributions (written report) / #wrong/correct_answers (quizzes) / #solved_exercises (assignments)
  - Lab notebook
    - #type_experiences (laboratory record) / #obtained_charts (experiment results)

Case study

- Project Management course
  - Sound theoretical contents (PMBOK Guide)
  - Practical activities depend on the target discipline

Case study

- *Poliformat* platform
  - Statistics tool
  - Report generation
    - What?
    - When?
    - Who?
    - How?

Case study

▸ ## Google Drive

  ▸ ### Activity Stream

Results

▸ Statistics comparison
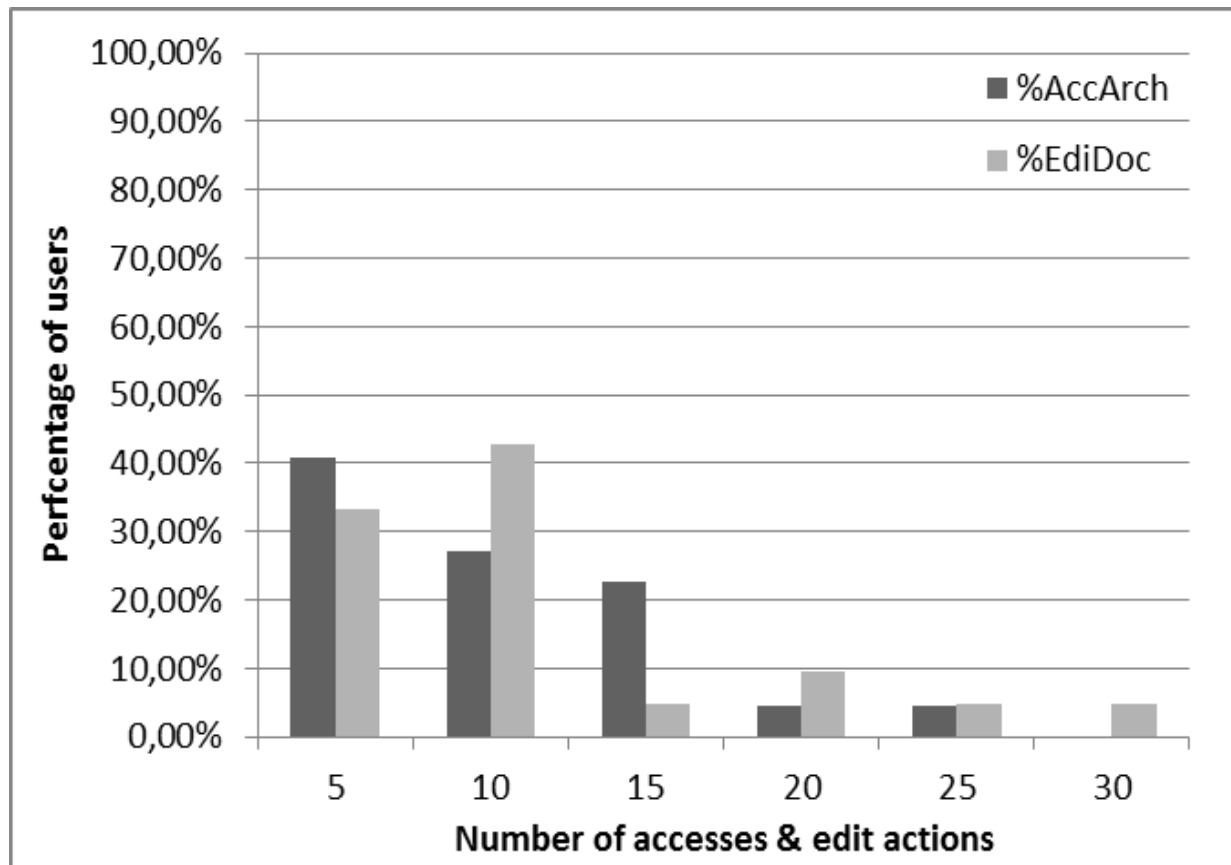
Conclusions

- There is a high number and diversity of academic information sources
- The concept of *Edumarker* can help to
  - structure this huge amount of information
  - link it to analytical purposes
- A preliminary case study to show how to
  - combine data from LMS environments and other frameworks
  - perform statistics comparisons
- A lot of research is needed
  - Systematic definition of *edumarkers*
  - Tools to manage these indicators

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Any question?