Reinventing Evaluations with Competency Based Assessments: a Practical Experiment with Future Computer Science Engineers

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Context and Motivations

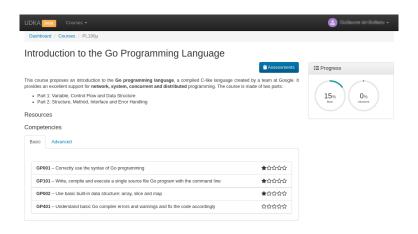
- Propose more fair and better evaluations to students
 - Reconcile students with the idea of assessment
 - Evaluations better adapted to students' learning profile
 - Possibility to take into account personal student's projects
- Better real-time data collection tool for instructors
 - Help teachers to adapt their teaching
 - Possibility to individualise/personalise the learning experience

Competency Based Assessment

- Course defined with basic and advanced competencies
 Basic are mandatory to succeed the course
- List of assessments to cover all the competencies
 - Students choose the ones better fitting their learning profile
 - Several types of assessments: MCQ, quiz, project, interview...
- Students prove they master competencies with evaluations
 Do not fail anymore, may just miss an opportunity to grab a star

The Stars System

The proposed approach is supported by an online tool
 Students can track their progress, teachers can get statistics



Experiment

- Pedagogical device has been tested on nine courses
 Future computer engineers students (bachelor and master)
- Adaptations since run in current school settings
 - No more exams nor revision break, continuous work
 - 0/20 is not all basic competencies, 10 + 2x/n otherwise
- Short survey on n = 38 students
 - Students globally happy to control their learning and evaluation
 - Organisational and logistics issues have been highlighted

Conclusion and Future Work

- Bring competency based assessment in higher education
 In a pragmatic and concrete way, supported by a tool
- Several improvements to the pedagogical device as future work
 - Improvements and new features for the "stars system"
 - Deeper analyses of collected data and students' perception
 - Propose better design of competency based courses
 - Integrate with other tools for better logistics