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Collecting Badges - teaching with flexible, modular and structured 'achievements'

Over the last 2 years we honed the concept of teaching with Badges (inspired by Scouts' achievements) - small and well defined units of content (each taking 1-2h to complete).

Flexibility, compartmentalisation and empowering the learner were our core principles.

Each badge is built around a **Threshold Concept,** a core step or skill (a 'eureka' moment) that opens the doors to further learning. Using a clear name and symbol, each badge signposts students' takeaways and how it fits within the top level learning journey.
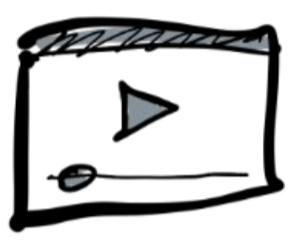
Each badge follows the same micro-structure, a pipeline of learning techniques (content, skill, insight, challenge) and modalities (videos, notes, exercises).
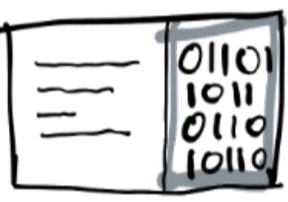
Badges build on top of each other, forming branches and enabling optional, further learning.

Modular micro-structure, enables easier switching between platforms or teaching modes (eg. videos vs slides) and multiplies the benefits of improvements. Badges proved to be a promising format for delivering teaching, especially in times of change, disruption and pivoting.

Badge micro-pattern: content, skill, insight, challenge

Content Video - 15 minutes
- 15 minutes of us talking through slides, introducing some concepts and theory. Here we focus on rationale, history, context, and anchoring learning in metaphors familiar to the students.

Worksheet with Applications - 15 minutes
- Interactive worksheet (eg. code notebook) with practical applications of concepts from the video. It shows good practices and explains everything again, using concrete examples and problems.

Simple Exercises - 10 minutes
- Interactive worksheet focusing on applying the new skills to very simple problems. Students solve simple problems very similar to those in the worksheet and get automatically generated feedback.

Mini-Diary ('three stars and a wish') - 5 minutes
- Throughout the badge content, students are encouraged to take notes. At the end of each badge everybody shares online 4 bullet-points: three things they learned, and one thing they wish they understood better.

Badge Micro-Pattern: Video + Worksheet + Exercises + Diary
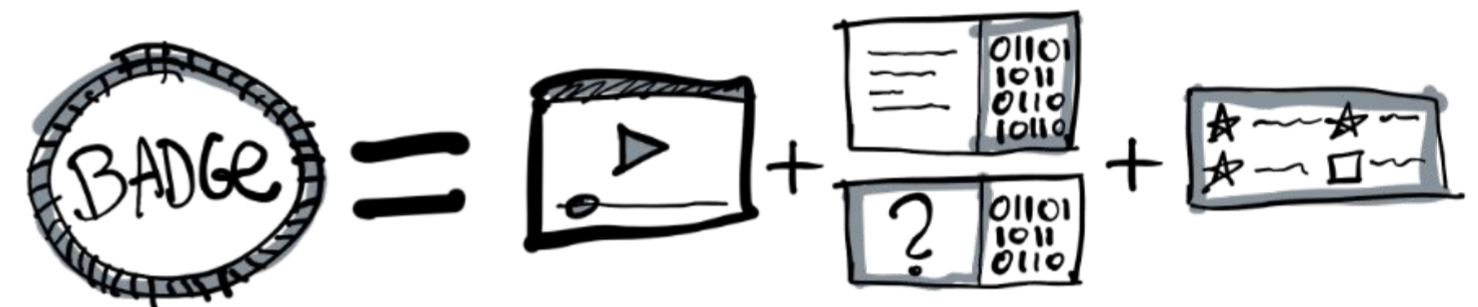
Pair Programming Lab with Challenges - 2 hours
- Students in pairs work through a set of more challenging exercises and get automatically generated feedback. Exercises increase in difficulty, combine content with previous badges and expand on it.

Practical Assignment - 3 hours (small) or 10 hours (final)
Students work on challenges similar to those in programming lab. They also write a reflective paragraph (mid-semester) or report (final) explaining how they applied concepts to solve the problem.
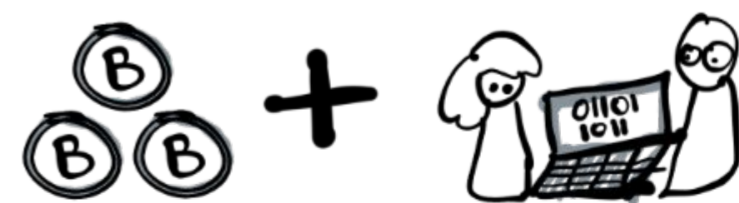
Courses We Used Badges on

Business School, UG & PG, Intro to Python Programming,
- 1 year in person, 1 year online; 4 x 70 students, 20/10 credits

EFI, PG & External, Text Mining for Social Sciences Bootcamp
- two iterations of 3-day Bootcamp (online), 2 x 30 students

Learning Week: 4-5 Badges + Lab with Challenges

Learning Day: 2-3 Badges + Lab with Challenges

3-Week Block: 2 Learning Weeks + 1 Week with Assignment

3-Day Bootcamp: 3 Learning days + Final Assignment

Semester: 3 Blocks + Final Assignment