Continuous Competency-Based Assessment: Impact of Regular Student Involvement on their Performances and Success

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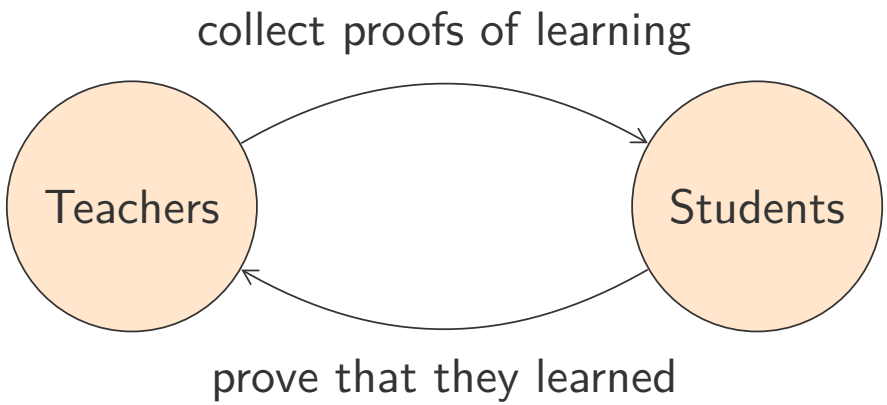
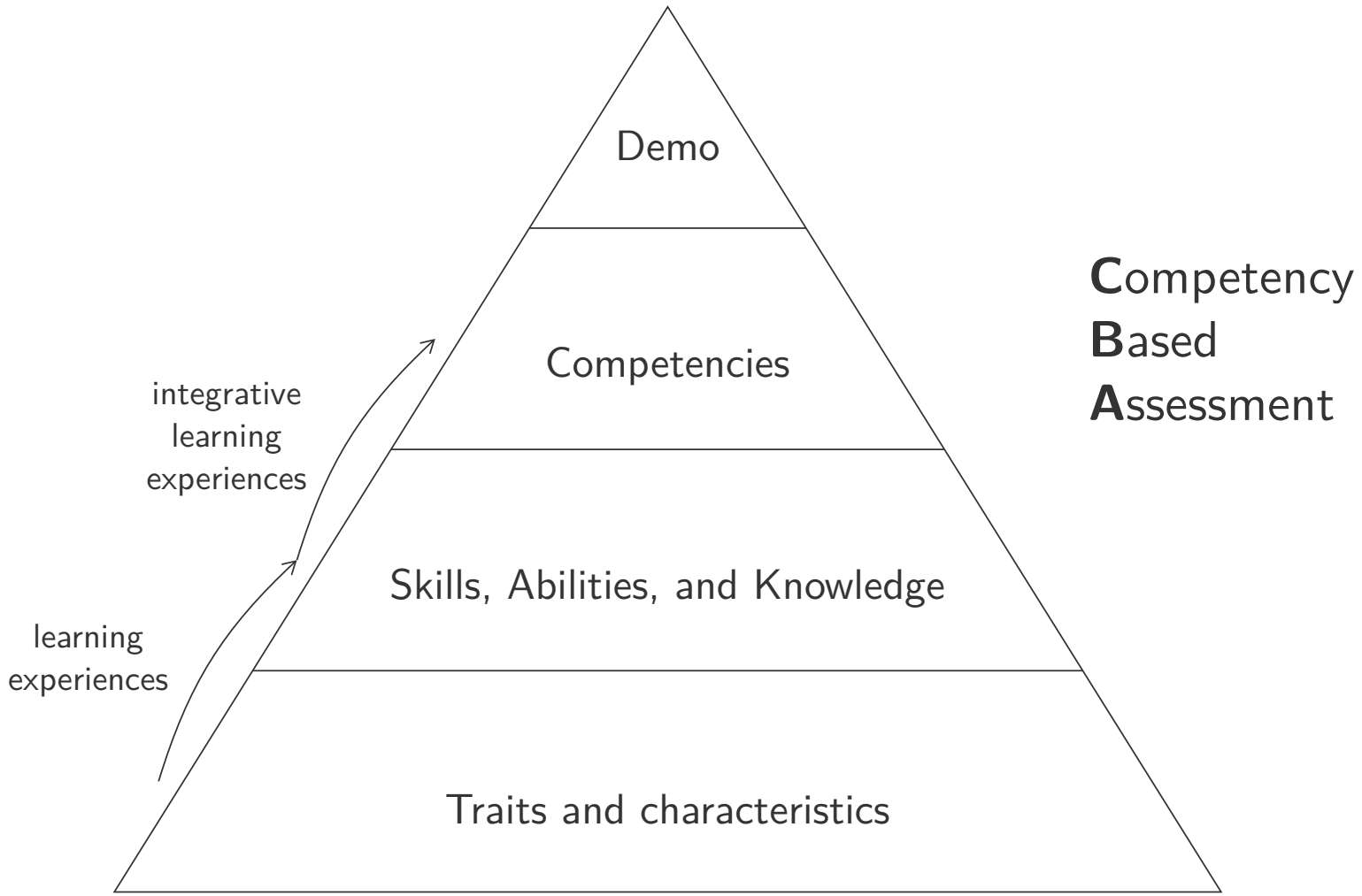
Context and Motivations

- Moving towards a better assessment process of students
  - Integrating evaluation as a part of the learning process
  - Better fitting with different students' learning profiles
  - Making it possible to take into account students' existing work
- Reversing the "traditional" assessment logic



Conceptual Learning Model



R. A. Voorhees, "Competency-based learning models: A necessary future," New directions for institutional research, vol. 2001, no. 110, pp. 5?13, 2011.

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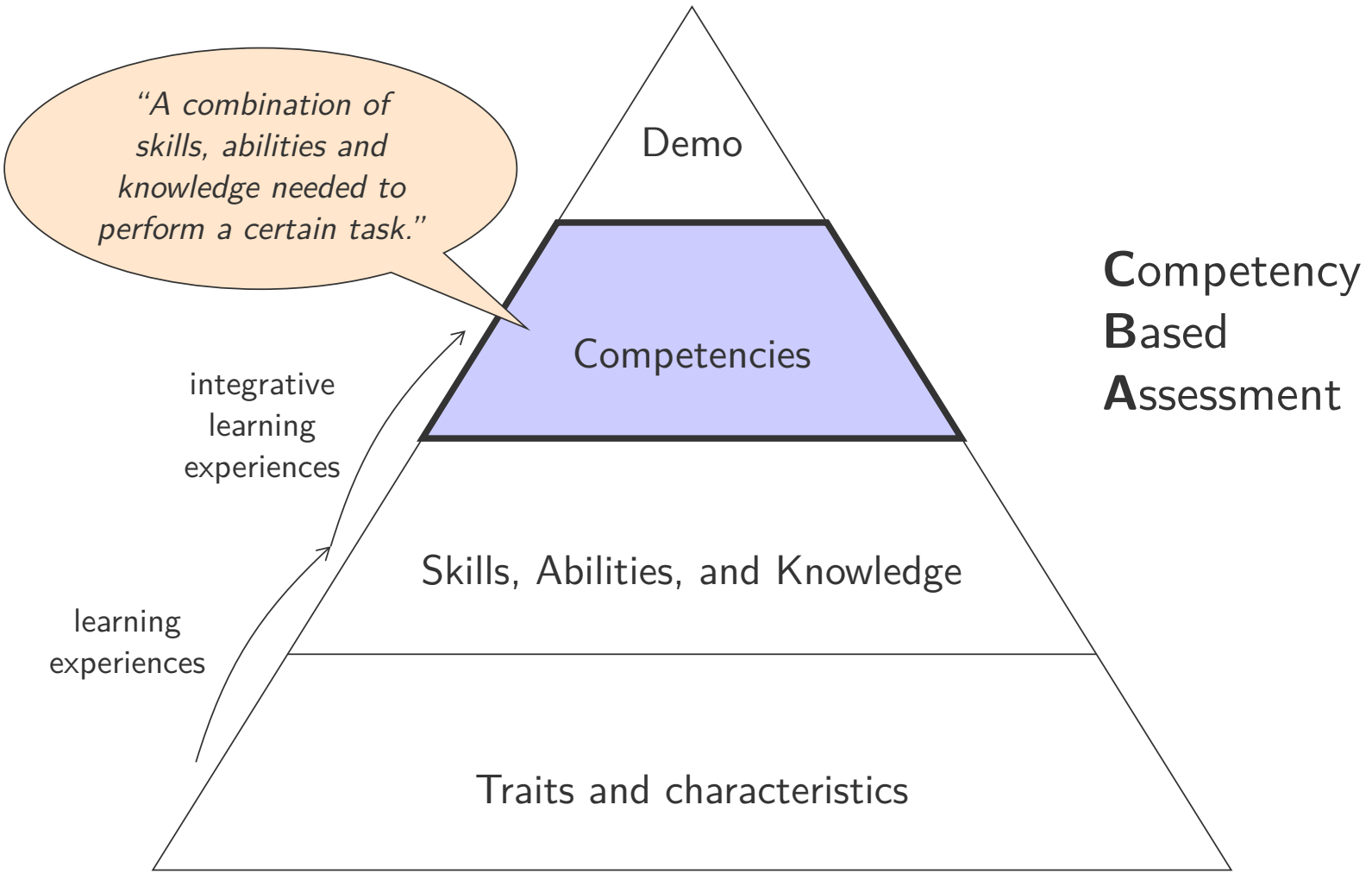

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Proposed Approach

- Development of a pragmatic continuous CBA approach

  With benefits for both teachers and students

- Assessment with tasks inspired by future professional ones

  The evaluation process must make sense to students

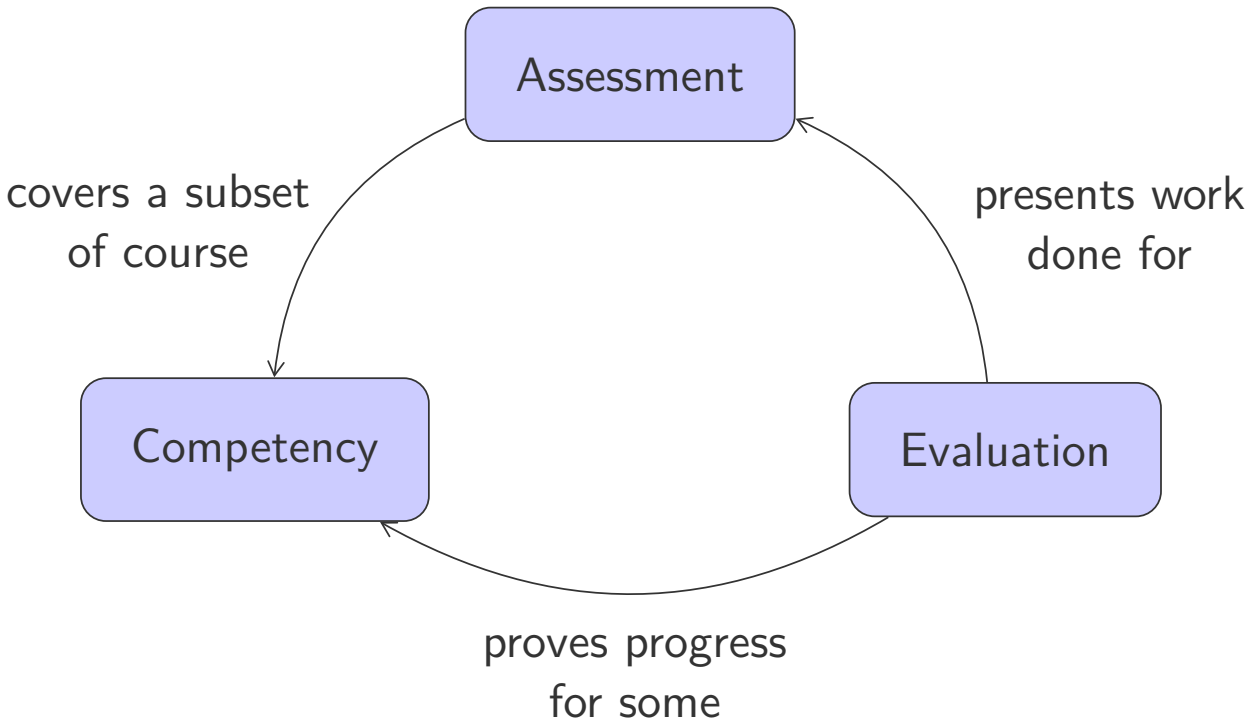
- Trade numerical grades for competency stars

  Measure whether competencies have been acquired and how well

Key Concepts (1)

- Combination of three key concepts in the proposed approach

  Defining competencies and assessments, then taking evaluations



Key Concepts (2)

- Course objectives defined with basic/advanced competencies

  Acquiring basic ones is 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...

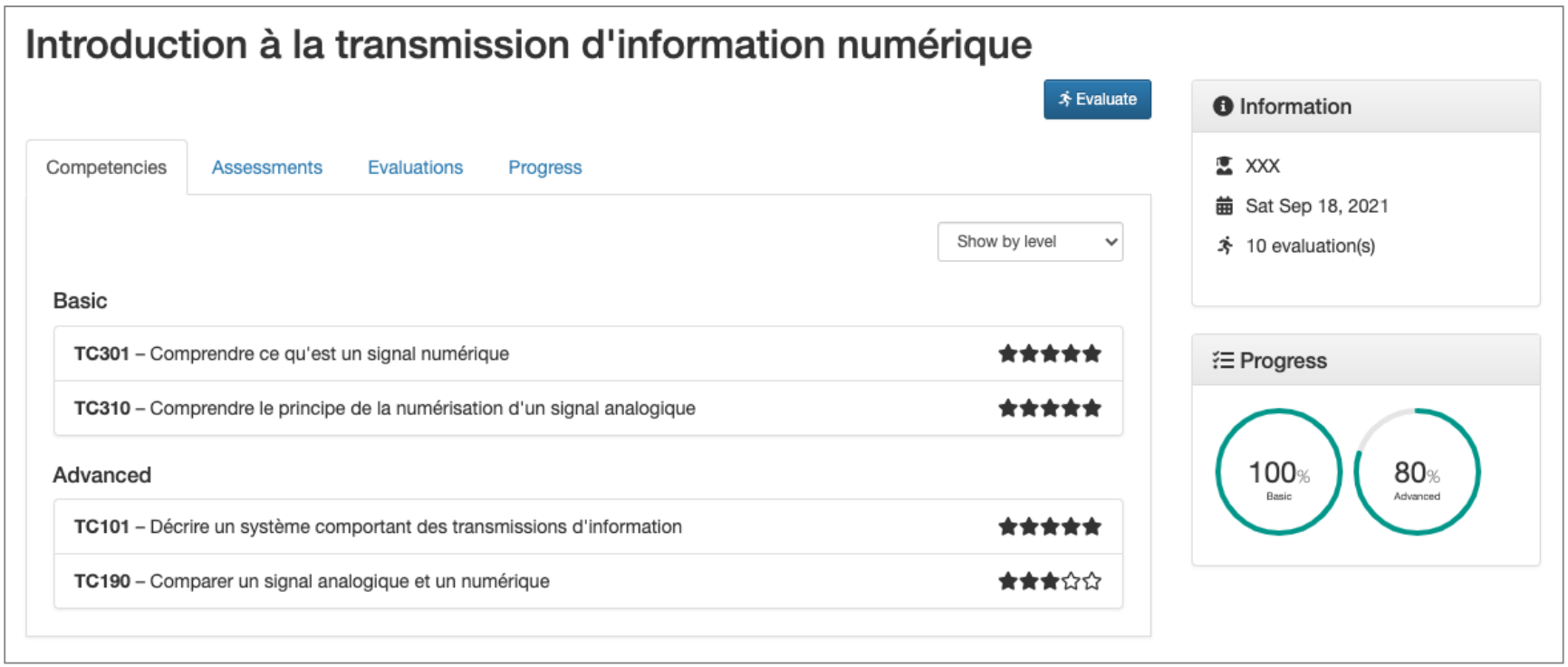
- Students prove they master competencies with evaluations

  Do not fail anymore, may just miss an opportunity to improve

TLCA Platform (1)

- Development of a dedicated platform to support the approach

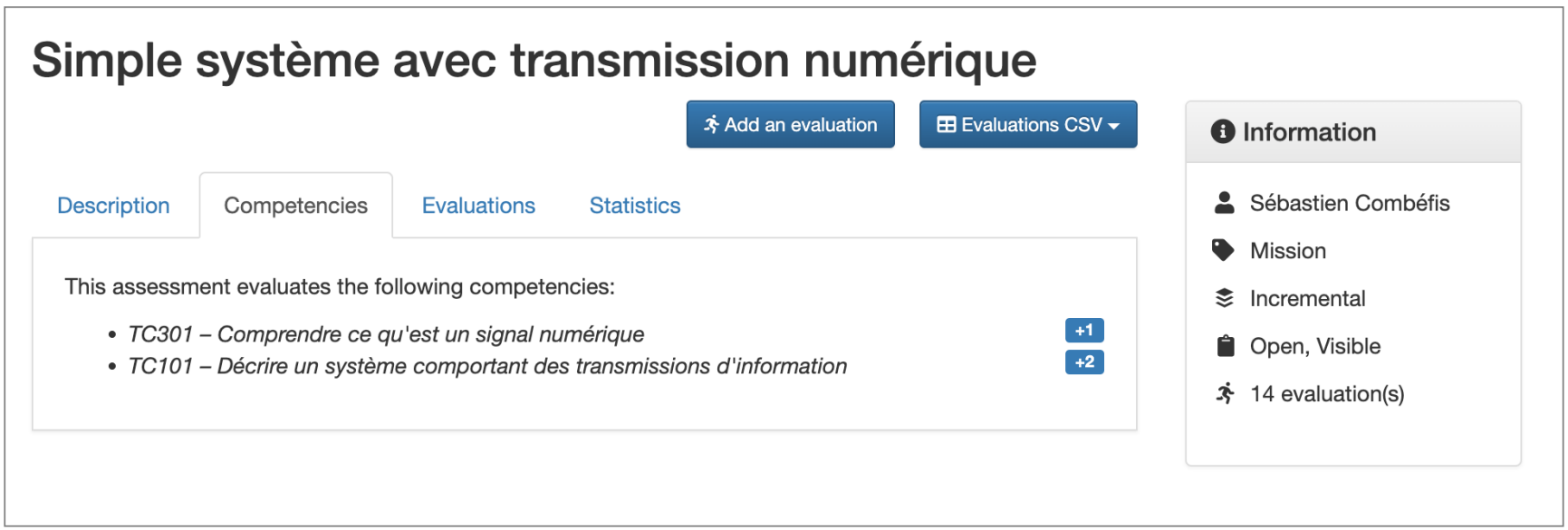
  Teachers and students can follow the progress all over the year



TLCA Platform (2)

- Each assessment covers a subset of the course competencies

  Several kinds of assessments: single take, incremental, phased...



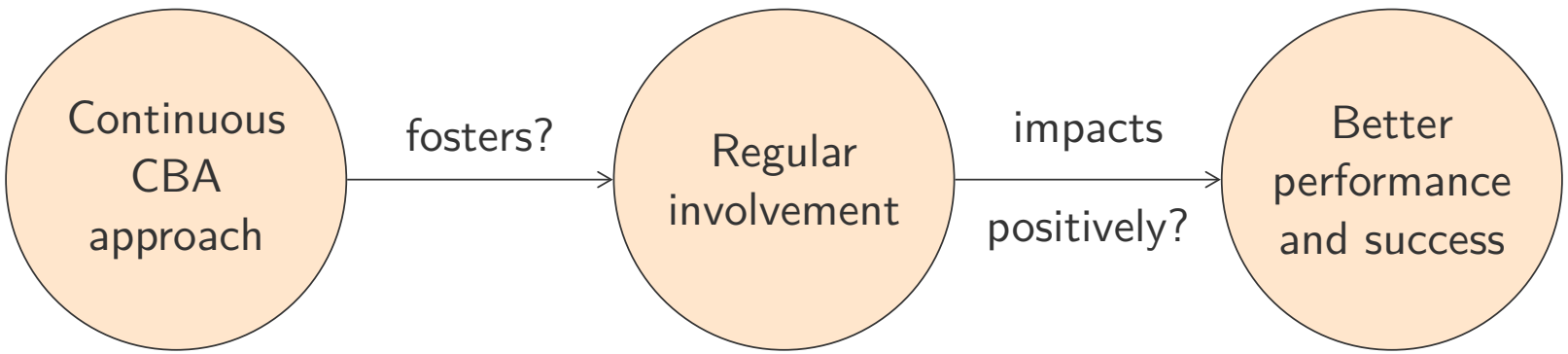
Research Questions

RQ1

Does the proposed approach foster a regular involvement of learners?

RQ2

Does a regular involvement have a positive impact on learners' performance and success in a course with the proposed approach?



Data Collected

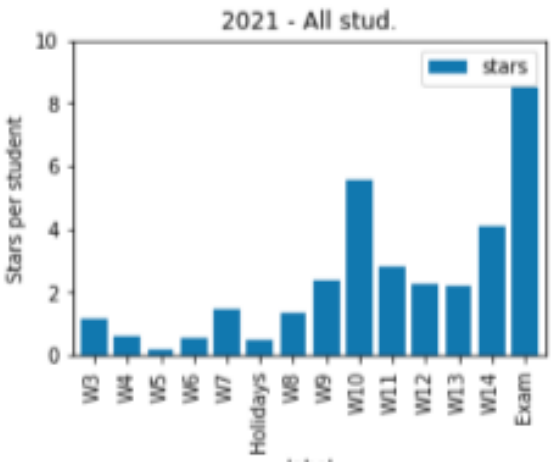
- Qualitative and quantitative data collected on several runs

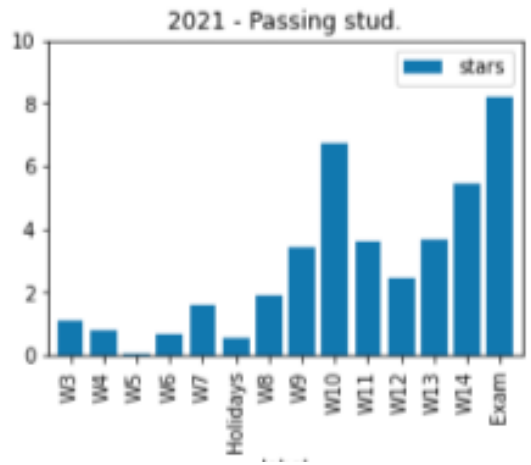
  Courses taught by different teachers in different institutions

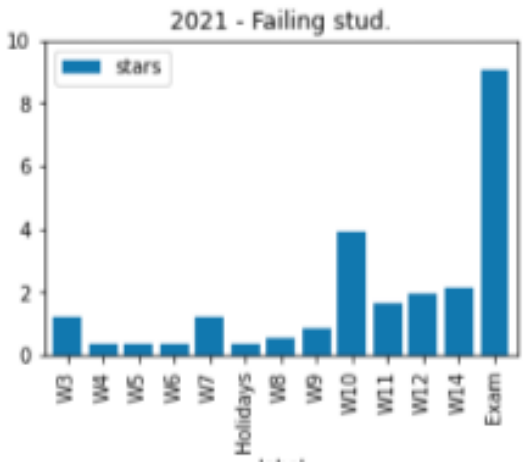
- Two sources of data have been used
  - Surveys conducted at the end of the semester
  - Evaluations data encoded by teachers on the TLCA platform

RQ1 – Fostering Regular Involvement

	C1 – I have the feeling that I spent more time working (during the year, the revision break and the exam session)	**F1** – I regularly checked my progress on the platform to find out where I was
IT Dev. (2020)		
IT Dev. (2021)		
Dig. Trans. (2020)		
All students		







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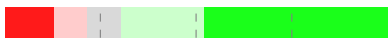
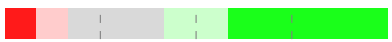
IT Dev. (2021)		
Dig. Trans. (2020)		
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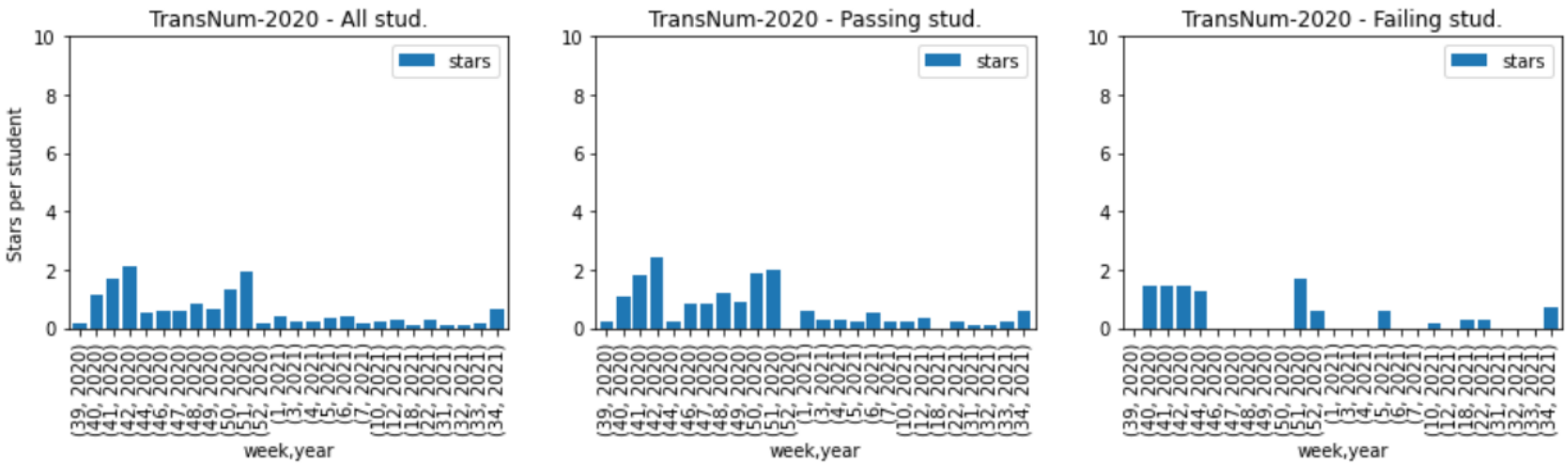

RQ2 – Impact of Regular Involvement on Success

- Succeeding students worked more regularly than failing ones

  Observed on the evaluations rhythm plots

- Success correlated with regular involvement perception

Course succeeded?	**Involvement level**	**Encouraged to work more regularly**
Yes	3.42	2.75
No, but I only miss a few stars	2.75	2
No, I only succeeded a few evaluations	1.8	0.6
No, I passed no or very few evaluations	0.5	0

Conclusion and Future Work

- Encouraging results but no strong conclusions

  Need to foster regular involvement while preserving autonomy

- Autonomy used to spend time working on other courses

  Or neglecting them to obtain competency stars

- Several directions for future work are on their way
  - Propose a reference progress guideline to students
  - Add soft or hard deadlines on some assessments
  - Compute indicators to identify struggling students