



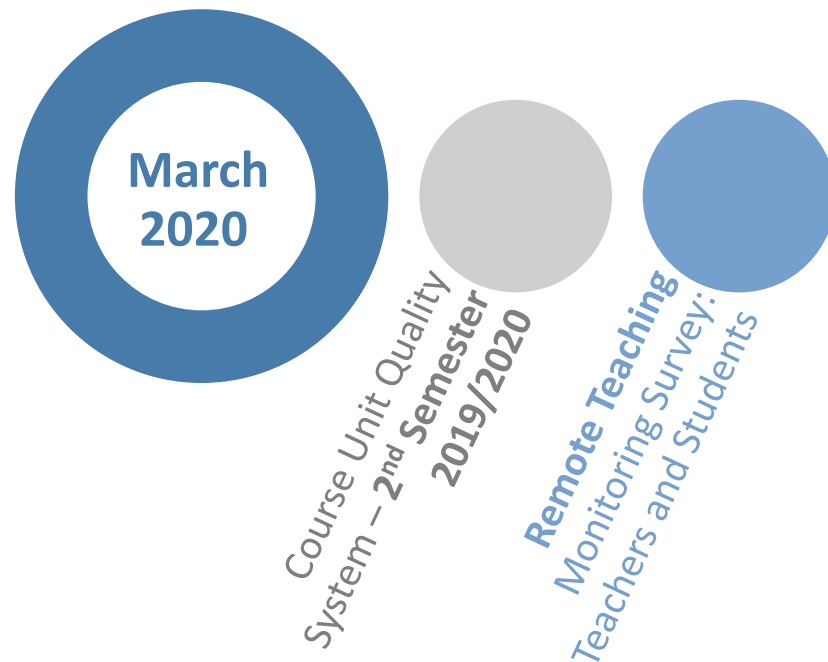
# Teaching and learning during one year of the pandemic at Técnico Lisboa

4<sup>th</sup> International Conference of the Portuguese Society for Engineering Education  
21-23 June 2021 IST-Lisbon, Portugal

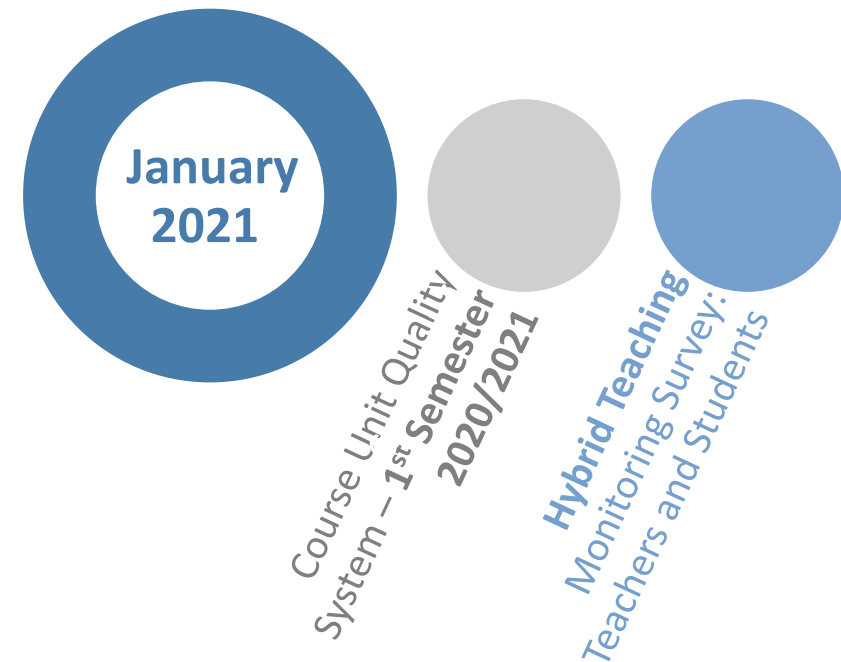
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# Introduction

Due to the COVID-19 pandemic, Técnico adopted emergency distance learning, providing Students and Teachers with the necessary tools to continue their teaching and learning activities.

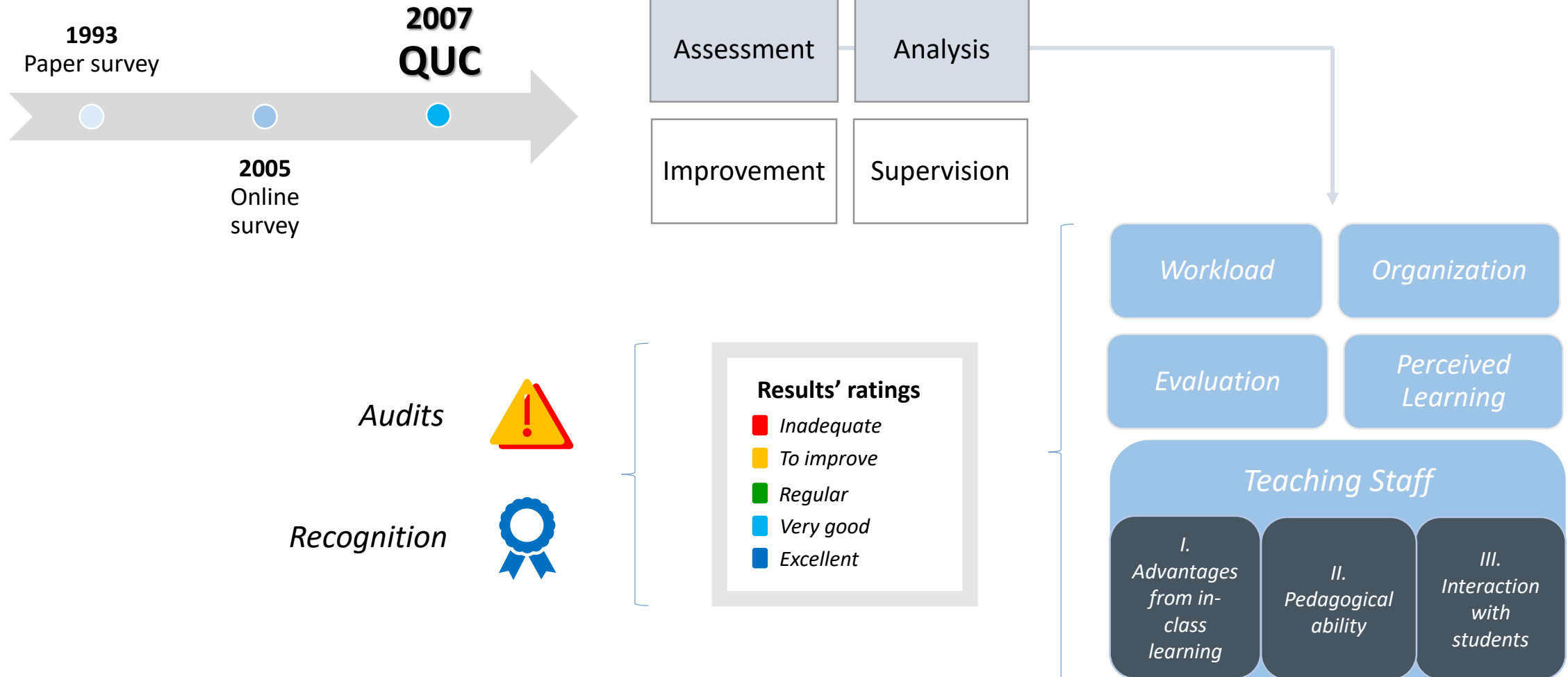


Later on, an hybrid teaching format was adopted and final assessments were carried out remotely.



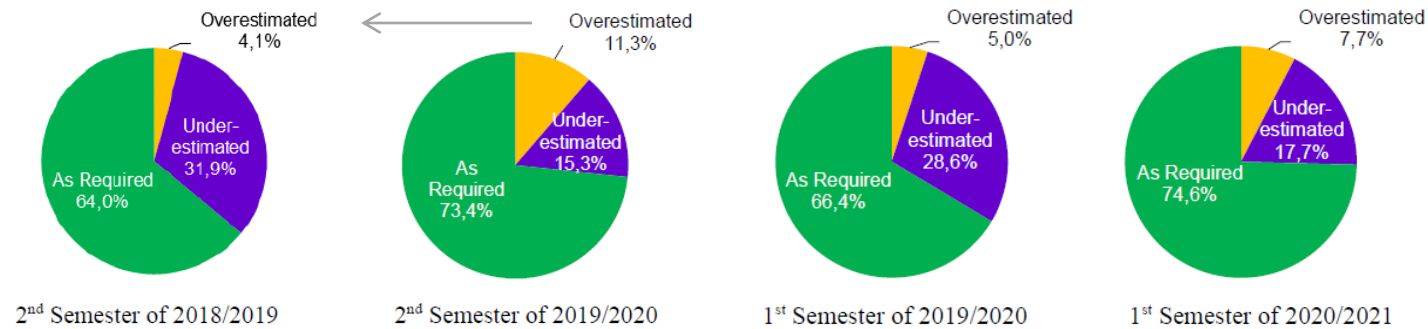
**Técnico had to reinvent the ways of teaching and learning and simultaneously evaluate the impact of the new methodologies on the students' academic performance and on the teachers' pedagogical achievements.**

# Course Unit Quality System – QUC

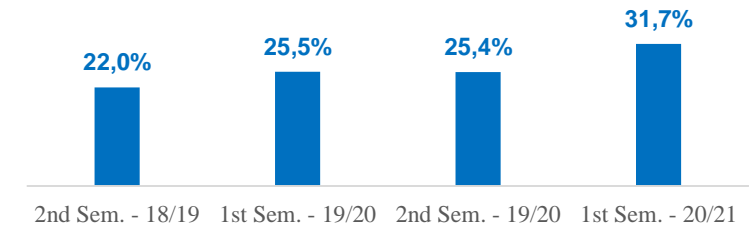


# QUC – Course Unit & Teachers evaluation results

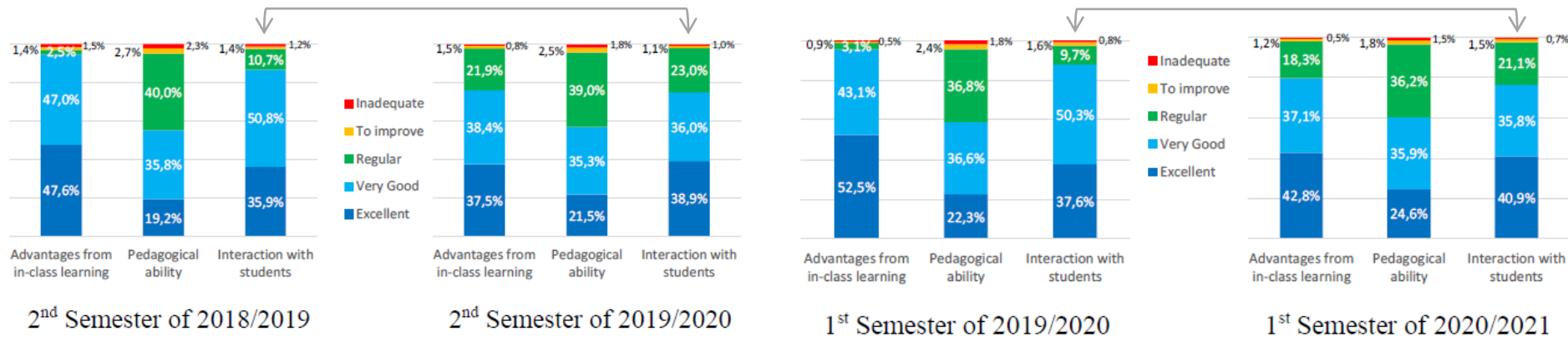
## A. Course Units' Perceived Workload



## C. Teachers with excellent results



## B. Course Units' Teaching Staff Dimensions



The negatively affected were perceived workload, advantages from in-class learning and interaction with students.

# Monitoring Process of Teaching and Learning - Surveys

Survey to the Students and Faculty Members

Objectives

Access to Teaching and Learning Contents, Methods and/or Tools

Types of Evaluation (Continuous and Final)

Teaching and Learning Process Satisfaction

Possible Constraints, Needs and/or Benefits

1. After the first week of the emergency stage

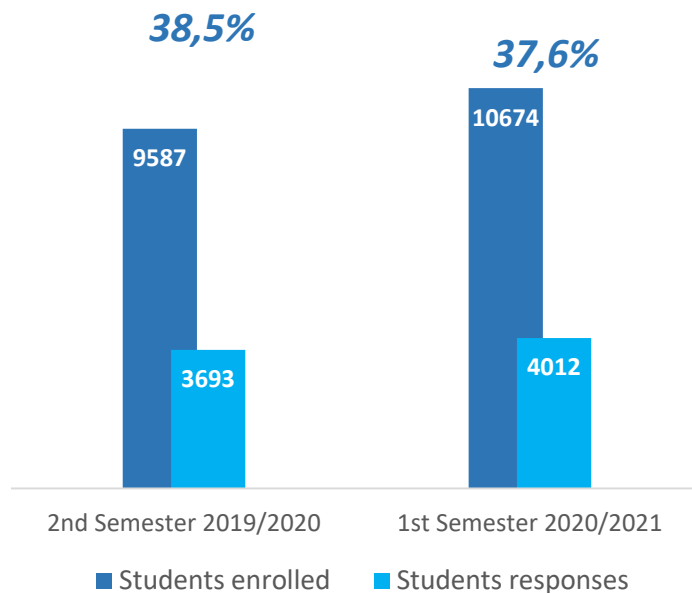
2. End of the 2<sup>nd</sup> Semester 2019/2020

3. End of the 1<sup>st</sup> Semester 2020/2021

Reflection report about the development of the 2<sup>nd</sup> semester of 2019/2020

# Perception of Students from Surveys

## A. Participation

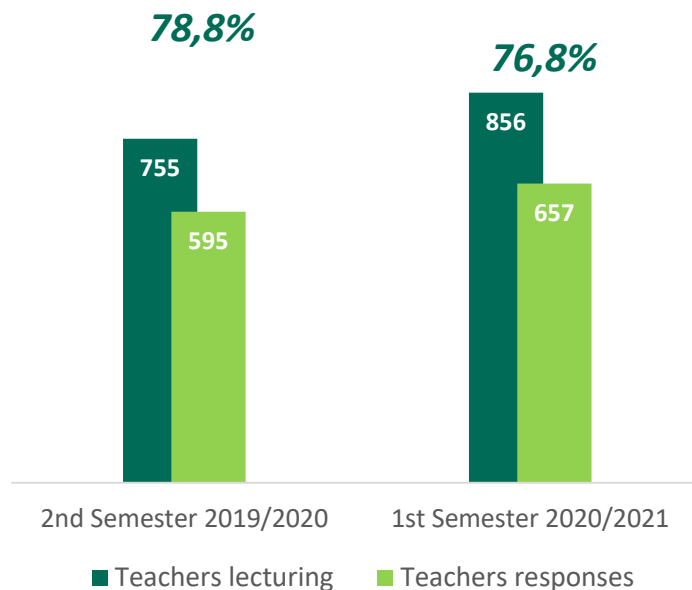


## B. Main results

- ✓ *> 90% had access to remote or hybrid format classes.*
- ✓ *More participation of students, with increased effectiveness, in scheduled online discussions.*
- ✓ *Usefulness of recorded lectures and digital platforms to enrich in-class lectures.*
- ✓ *Lack of interaction and proximity with their peers and teachers.*
- ✓ *Impact on time management and concentration.*

# Perception of Teachers from Surveys

## A. Participation

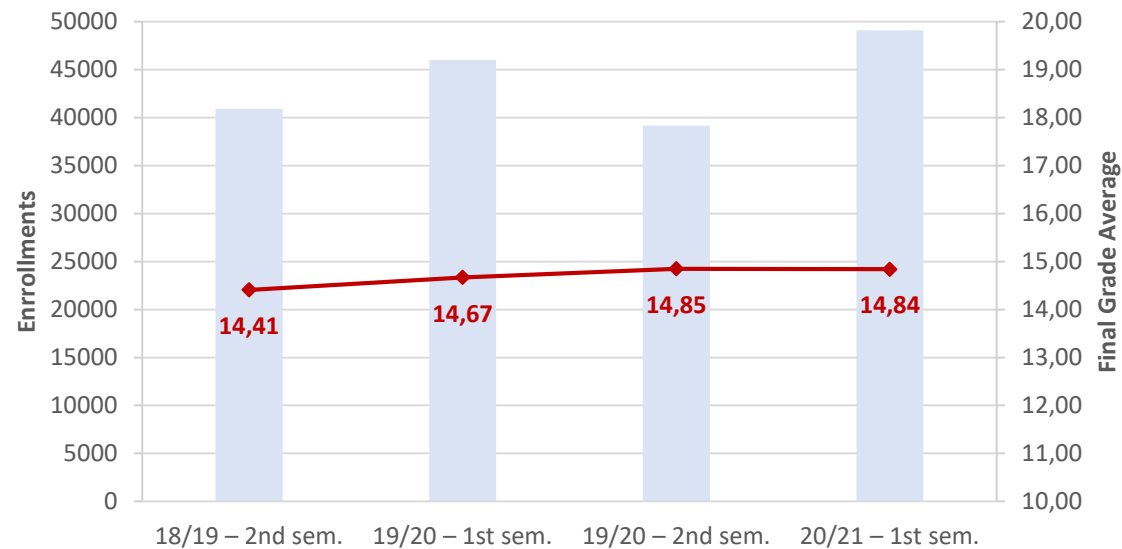


## B. Main results

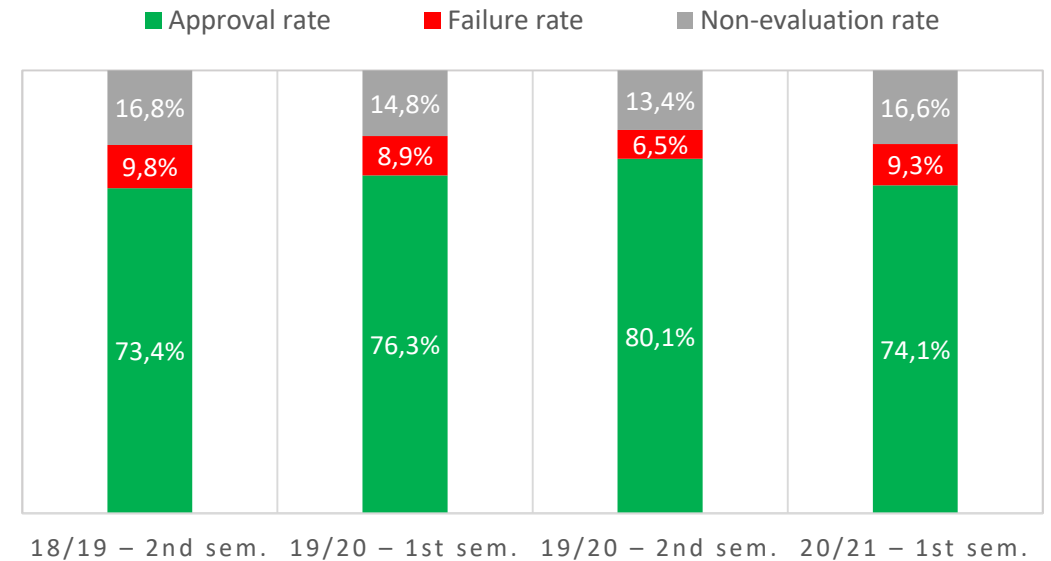
- ✓ *> 90% lectured in remote or hybrid format classes.*
- ✓ *Improvement of the adaptation to the new digital platforms for remote or hybrid teaching methods.*
- ✓ *Lack of interaction and communication with students and to motivate students' participation.*
- ✓ *Adapt certain type of classes (laboratory) to the remote reality.*
- ✓ *Classrooms need to be better equipped with audiovisual material to be more effective.*

# Students' Academic Performance

*Did the pandemic restrictions had impact on students' academic performance?*



*Better final grade average.*



*Better approval rate until 2019/2020. Despite the decline in 2020/2021, it is almost a 3/4 success rate!*



# Final remarks & Conclusions

- Time and task management, capacity of concentration and self-motivation were among the most experienced difficulties in the remote/hybrid teaching and learning methods.
- Results of the course units' organization and teaching staff improved during the pandemic.
- Teachers with pedagogical performance classified as “excellent” increased in the pandemic period.
- Advantages from in-class learning affected by the lack of interaction among students and between students-teachers.

Good practices	Trust	Interaction
<i>Digital Platforms Assignments &amp; Projects Study material</i>	<i>Communication Internal Forums Quality Assurance Procedures</i>	<i>Collaboration Webinars/Interactive Media Digital technologies</i>

# Follow up & Questions

🔍 Explore the data from the 1st year (new) students to understand the level of impact and perception of learning and living as an academic during this period.

*Were they the most severely affected by the situation?*



🔍 Study the impact on students developing the dissertation / final projects during this time of crisis.

*Besides the school's extension of academic deadlines, did students feel more support?*



🔍 Differentiate, in future surveys/studies, the responses according to typologies of lectures (theory, problems, laboratories).

*Can any of this typologies benefit from the remote and/or hybrid teaching format?*





# Thank you for your attention.

For more information please refer to:

<https://nep.tecnico.ulisboa.pt/en/>

<https://quc.tecnico.ulisboa.pt/en/>

<https://sartre.tecnico.ulisboa.pt/en/>