

# Absenteeism in polytechnical university studies: Quantification and identification of the causes at UPC

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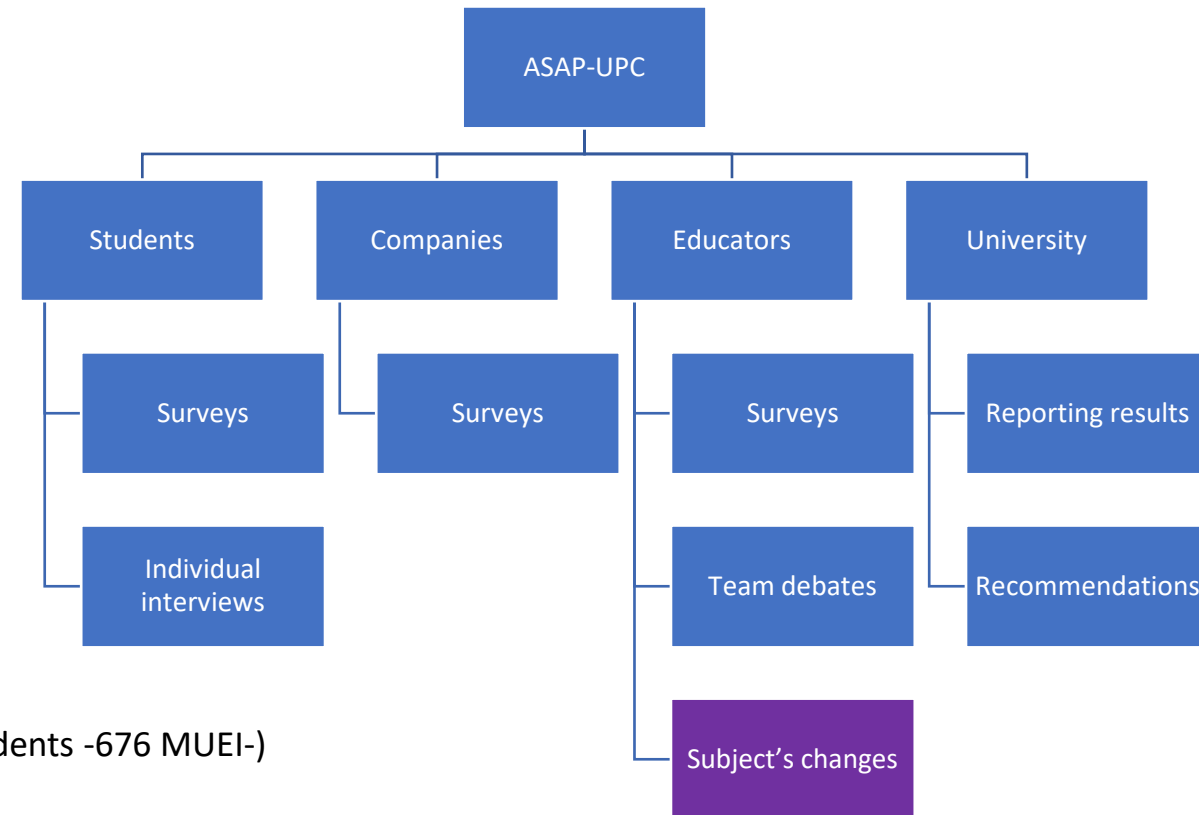
# Context

## University absenteeism:

- General issue
- Potential correlation with attainment
- Lost of opportunity (public investment, network, etc.)
- Caused by a multiplicity of factors → context-dependent

## ASAP-UPC:

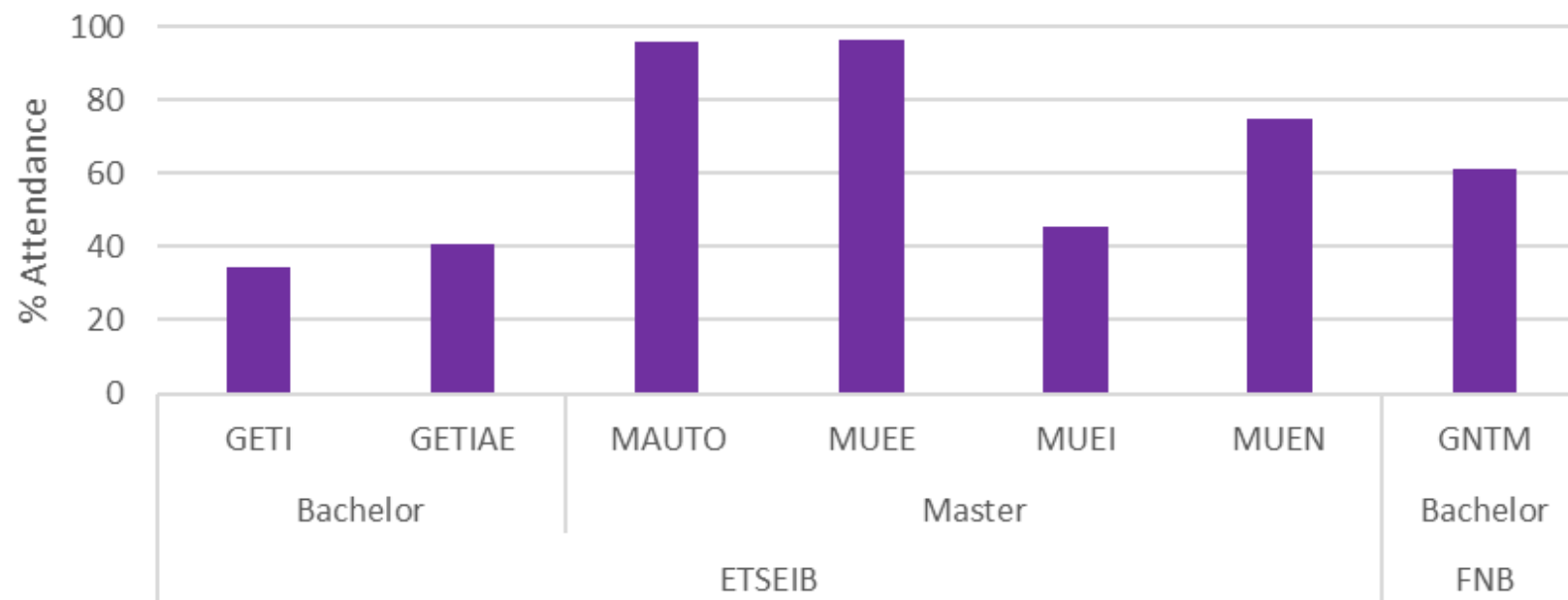
- Teaching innovation project (2023-2024, 3 semesters)
- Engineering field of studies
- 14 teaching staff members:
  - 9 ETSEIB (2.111 Bachelor students -1.888 GETI- & 1.061 Master students -676 MUEI-)
  - 5 FNB (697 Bachelor students & 117 Master students)
- Aim: minimizing absenteeism through the redesign of teaching methodologies



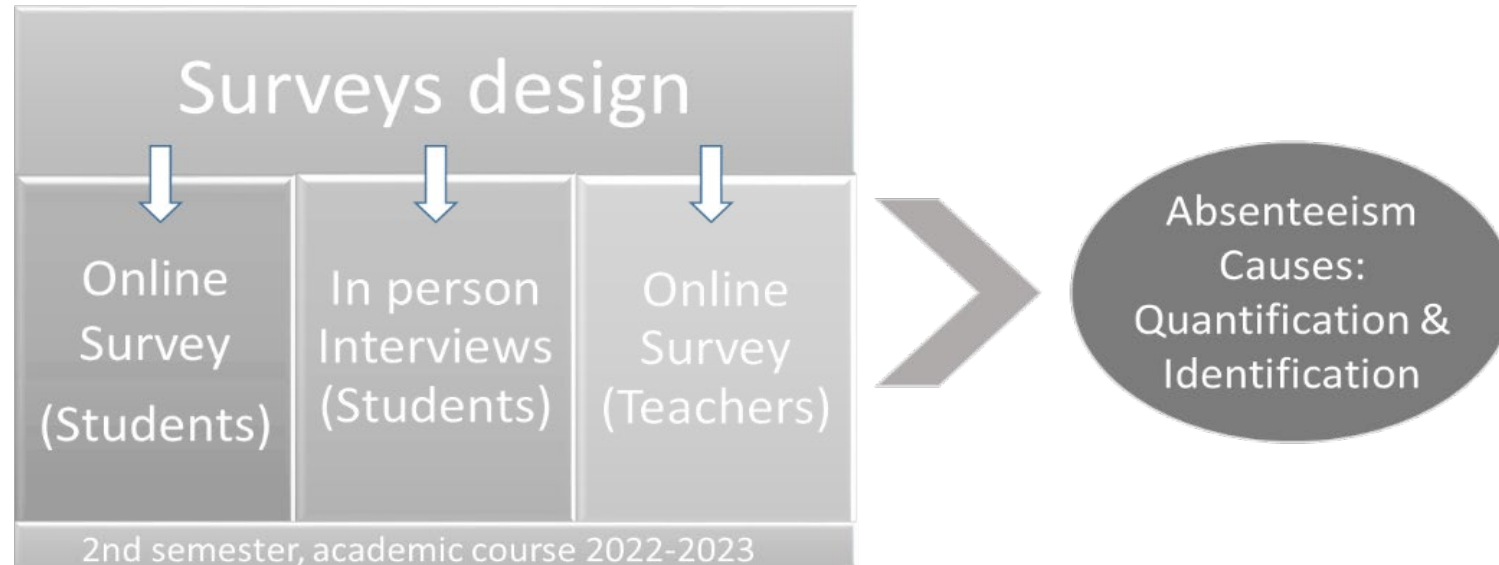
# Monitoring absenteeism

Faculty	Subjects	Enrollments	% students
ETSEIB	6 Bach + 7 Msc	563	18%
FNB	3 Bach	160	20%
<b>ETSEIB+FNB</b>	<b>9 Bach + 7 Msc</b>	<b>723</b>	<b>18%</b>

2022/23 2<sup>nd</sup> semester



# Identifying the causes...



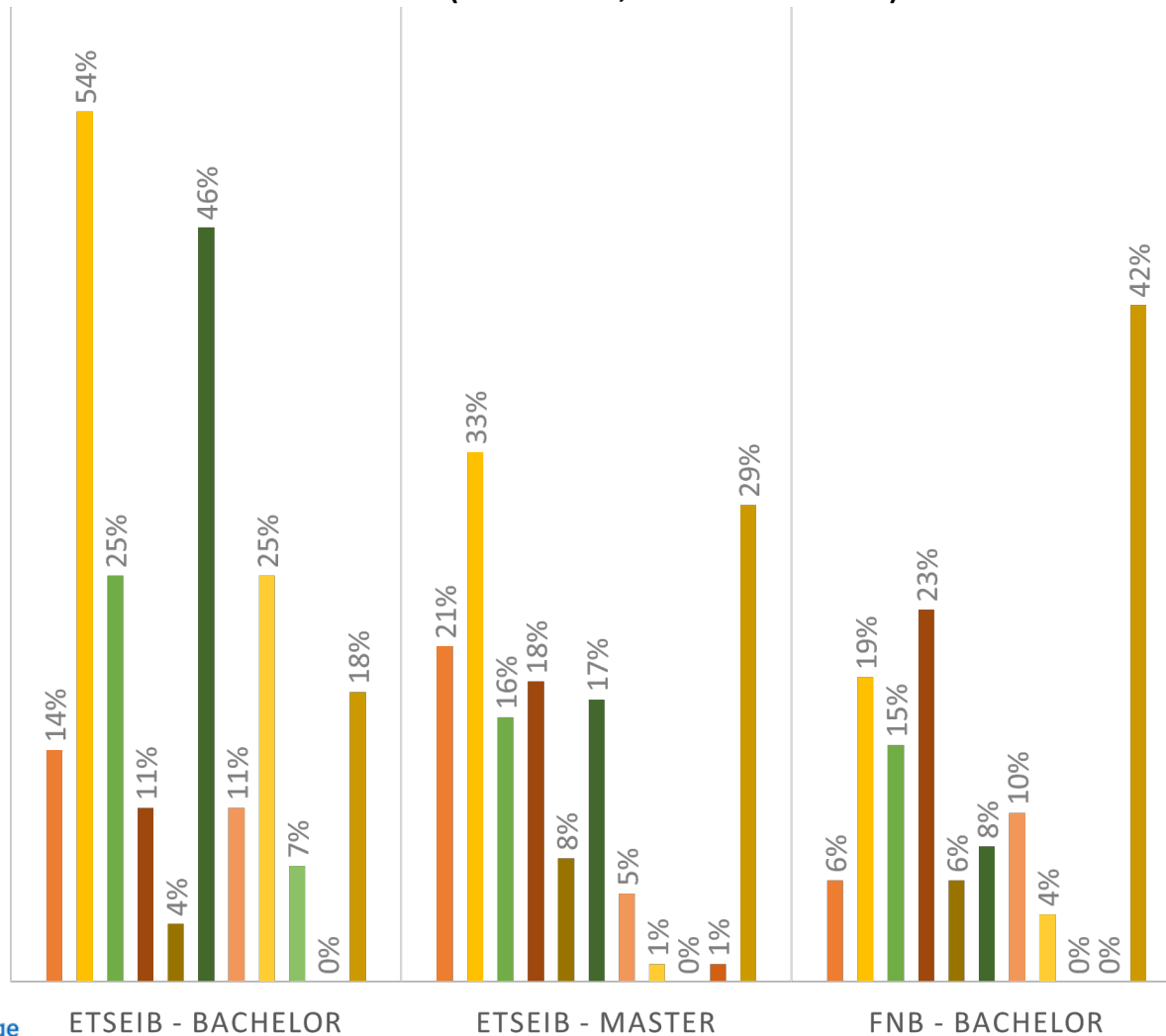
Faculty	Subjects	Enrollments	Participation	Interviews
ETSEIB	6 Bach + 7 Msc	563	22.7%	7
FNB	4 Bach	160	30.3%	14
ETSEIB+FNB	10 Bach + 7 Msc	723	24.5%	21

\*Interviews only if there exist absenteeism

\*\*Only few educators performed individual interviews at ETSEIB

# Student's opinion

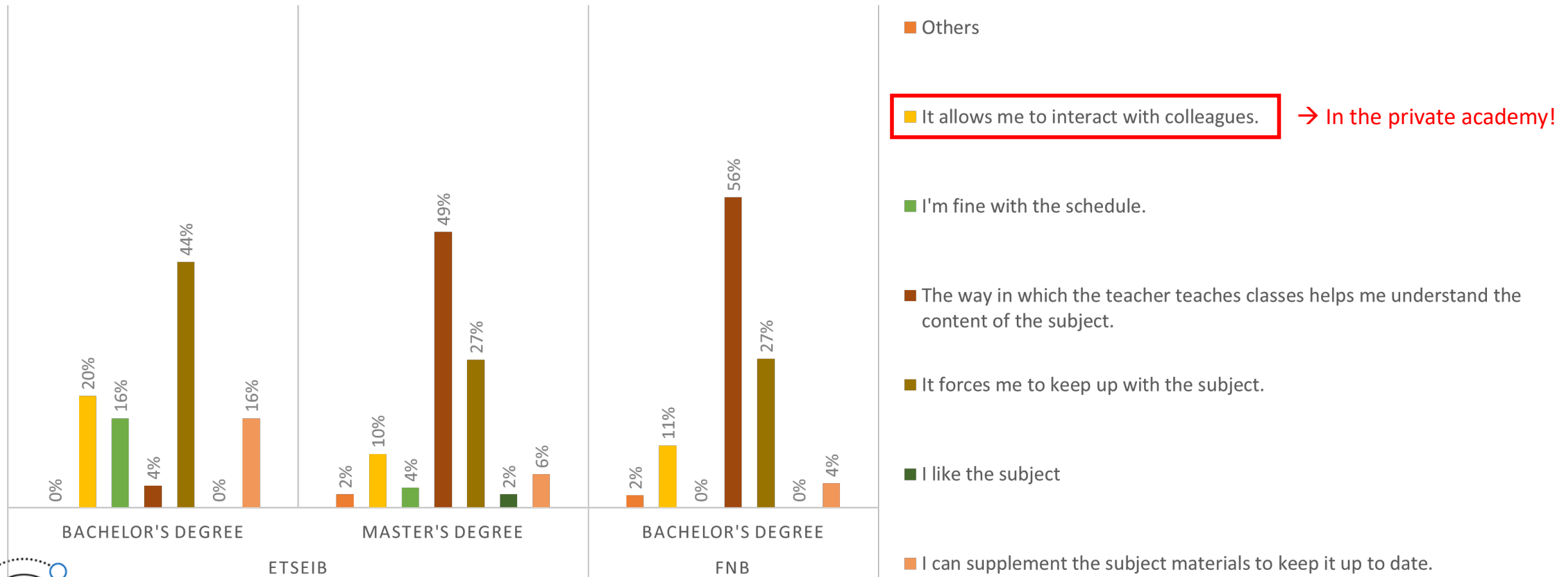
Reasons for their absenteeism (2022-23, 2<sup>nd</sup> semester)



- I don't like the way the teacher teaches classes.
- I make the most of my time studying on my own
- I don't like the schedule
- I work
- I was disappointed with the subject, it was not what I expected.
- All the material that is posted in Atenea is the same that the teachers explain in class, therefore, I prefer to watch it quietly from home and save myself the trip.
- I organize myself with colleagues to exchange notes and study
- I have already taken this class, but I did not pass it the previous semester/year
- I go to an academy
  - Subject is preconceived as difficult
  - Standard exams (known methodology)
- There is no good atmosphere in class
- Others
  - ETSEIB: lack of sense of belonging

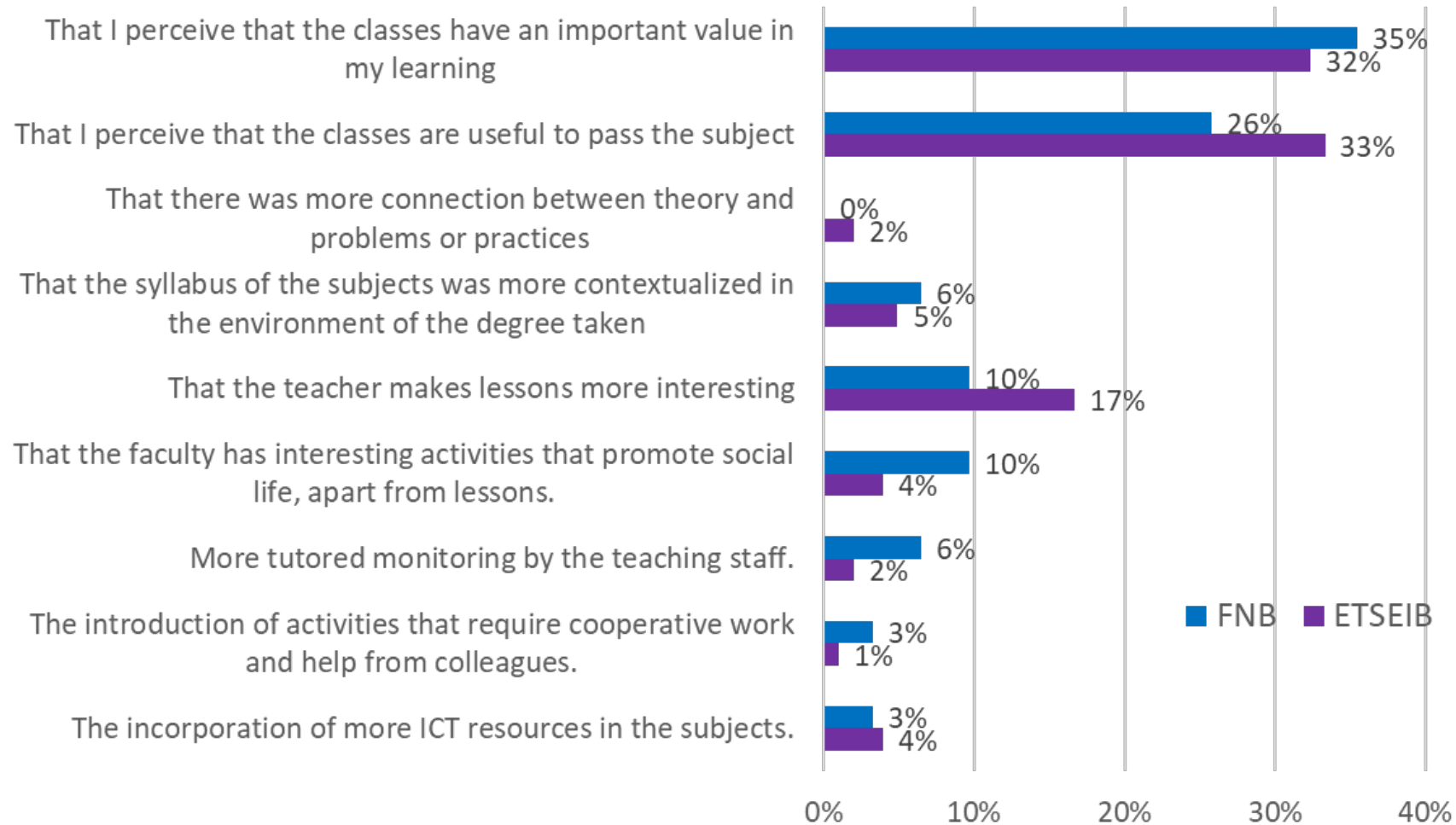
# Student's opinion

Reasons for their attendance (2022-23, 2<sup>nd</sup> semester)



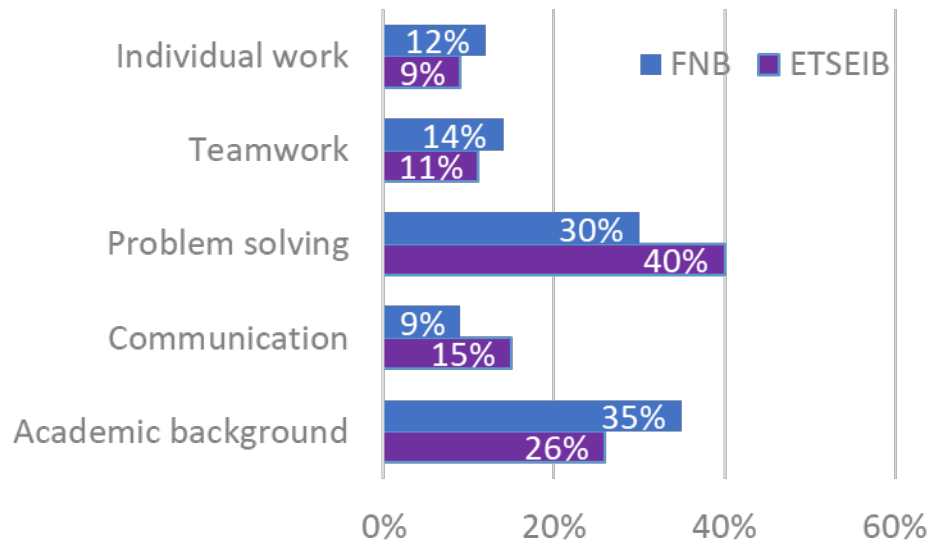
# Student's opinion

Reasons that could increase attendance (2022-23, 2<sup>nd</sup> semester)



# Student's vs. companies' opinion

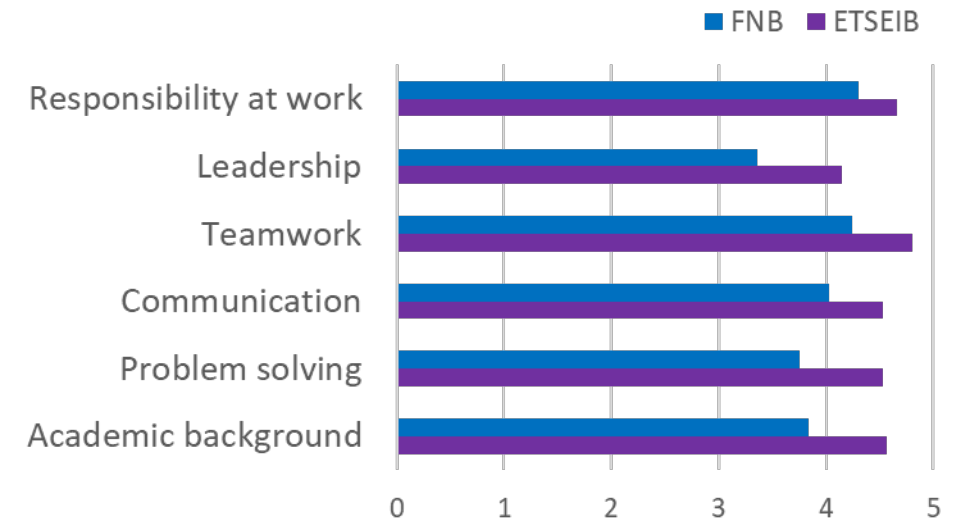
Skills considered relevant by students (2022-23, 2<sup>nd</sup> semester)



\*clustered skills (16 skills/5 clusters)

Companies' assessment of students' skills

	ETSEIB	FNB
Sample (students)	368	117
Agreements	866	120
Period	2020-21	2020
Satisfaction	3.84/4	7.46/10



\*\* ETSEIB values scaled from a maximum score of 4 to 5



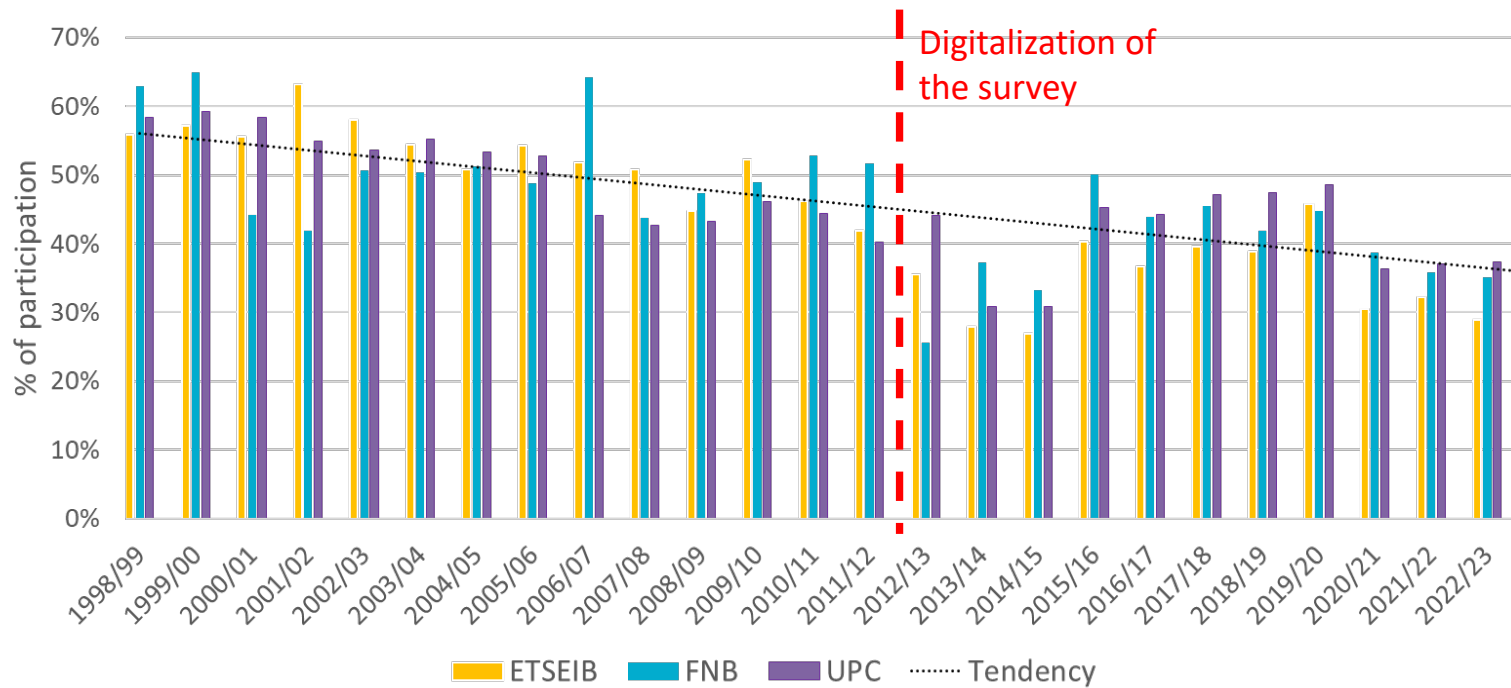
# Student's opinion

## Relevant skills (2022-23, 2<sup>nd</sup> semester)

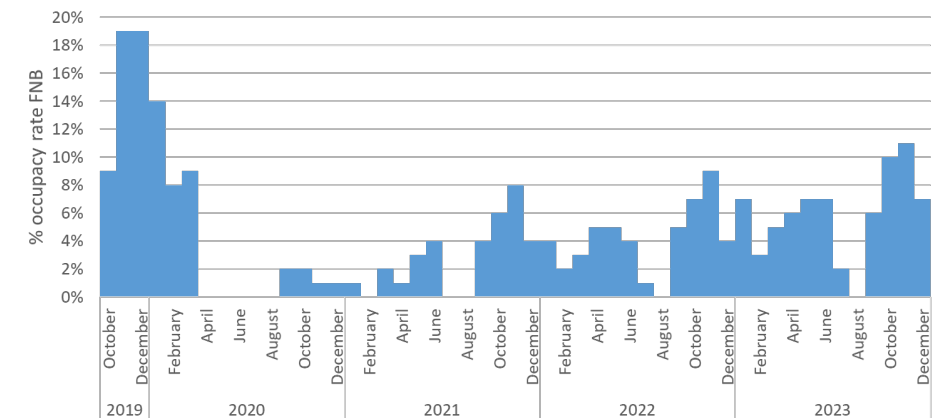
	Practical knowledge	Knowledge of laws and regulations	Numerical skills	Use of software specific to the professional sector	Communication skills (oral and written)	Negotiation skills	Real problem solving	Ability to make decisions	Ability to generate new ideas and solutions	Ability to generate new ideas and solutions following the principles of	Adaptability	Independent work	Teamwork	Leadership	Involvement in work	Responsibility at work
Theoretical knowledge	0.30217	0.14335	0.01578		-0.12440	-0.01097	-0.1384	-0.25569		0.06572		0.14335			0.08049	
Practical knowledge		0.01226	-0.00635	0.10284	-0.15116	-0.07802		-0.18699	-0.04434	-0.16611	-0.04242	0.06069	-0.03939	-0.04053	-0.13636	-0.02684
Knowledge of laws and regulations				-0.02472	-0.10904	-0.10172	-0.06150	-0.01581	-0.16763	-0.07416	-0.15754		-0.05264	0.09932	-0.03738	-0.02788
Numerical skills				0.12723	0.10484	0.09185	-0.02812	-0.05903	-0.05226		-0.03927		-0.12507	-0.02589	-0.05552	-0.19544
Use of software specific to the professional sector					0.02404	-0.04477	0.03176	-0.21121		0.07160		-0.02472			-0.02359	
Communication skills (oral and written)						0.15740	0.00476		0.13255	0.02464	0.01327	-0.06441	0.00433	0.00010	-0.12772	-0.12443
Negotiation skills							0.02449	0.16368	0.12365		0.00954	0.17537	0.0087	0.24028		
Real problem solving								-0.11163	-0.11160	0.05091	-0.11364	0.08001	0.06829	0.00282	-0.03202	-0.20292
Ability to make decisions									0.14121	-0.03934	0.10431	0.20720	0.01398	0.17863	0.10472	0.05793
Ability to generate new ideas and solutions										-0.18804		-0.07236			0.04544	
Ability to generate new ideas and solutions following the principles of											0.09069	0.04789	0.02960	-0.00462		-0.01313
Adaptability												0.13302			0.06618	
Independent work													0.17839	0.14867	0.01941	0.02334
Teamwork															-0.00042	0.03975
Leadership															-0.05522	
Involvement in work																

# Absenteeism and involvement

UPC official students' satisfaction survey – participation evolution



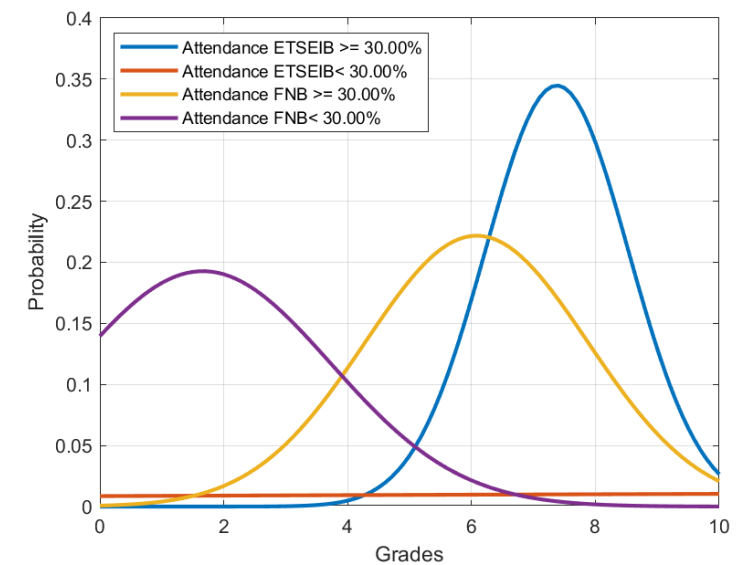
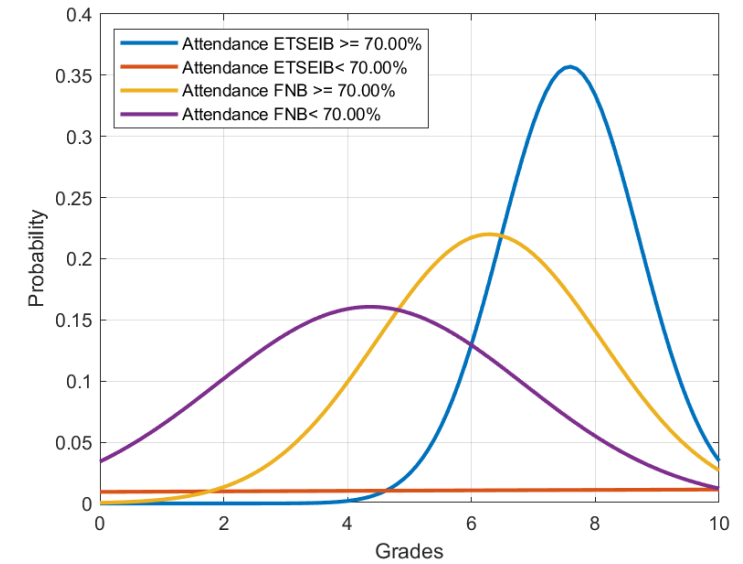
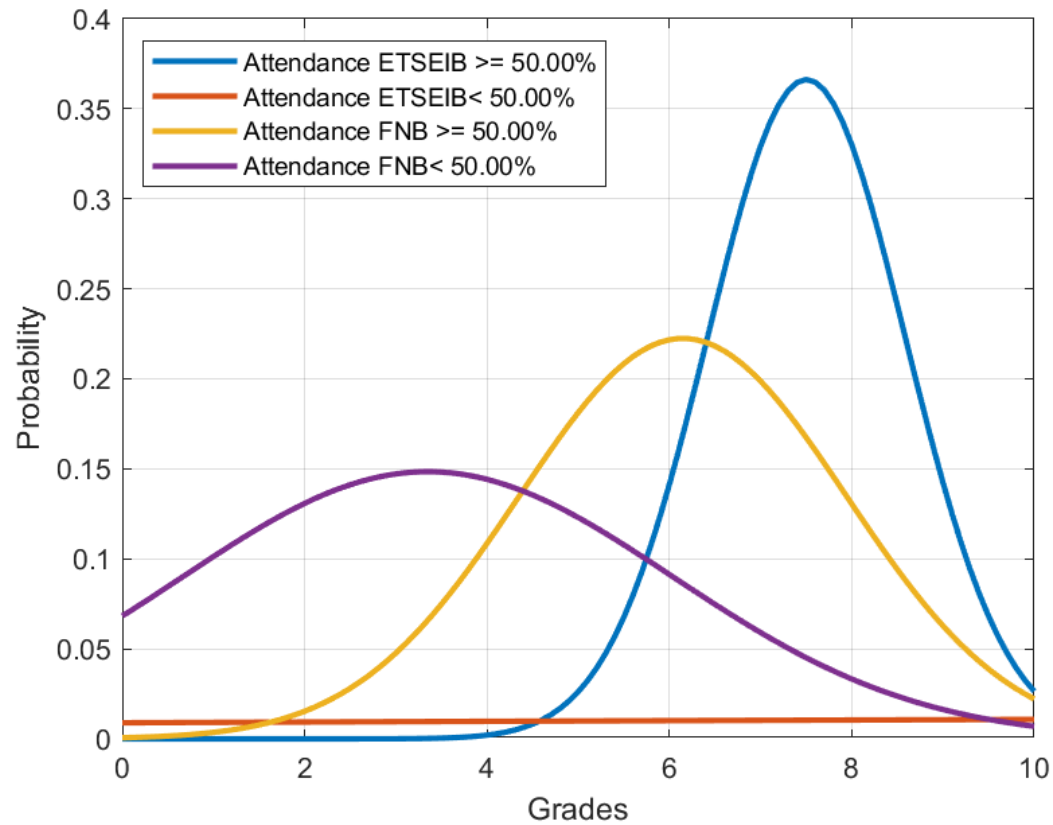
FNB – library occupancy rate



More indicators are required!

# Absenteeism and attainment

Normal distribution (2023-24, 1<sup>st</sup> Semester)



# Concluding remarks

According with students' comments, **attending should to be useful to:**

- Pass the subject** → coherence and adequacy of assessment instruments (but non-standard exams)
- Create networking** → sense of belonging, social networks

**Actions** to be introduced/improved within our subjects:

- Include more **critical thinking** activities (within the contents, methodology and assessment)
- Increase the number of **hands on activities** (laboratory/simulator, PBL) → mainly teamwork + feminist point of view
- Put in value** the attendance:
  - Show the statistics at the beginning of the course
  - FNB: need to fulfill the Standards of Training, Certification and Watchkeeping for Seafarers → 80% mandatory

**Faculty** needs to further promote the sense of belonging → common spaces, activities, ...

# Thank you for your attention

This innovation-teaching project has received funding from the UPC Teaching Innovation Projects 2023 Call Resolution (Agreement CG/2023/02/30, of 21 February 2023).