

Absenteeism in polytechnical university studies: quantification and identification of the causes at Universitat Politècnica de Catalunya

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Abstract—Absenteeism in universities, including polytechnical universities, is influenced by a variety of factors. Some factors overlap with those causing absenteeism in schools, while others are specific to the university and work-related environments. Indeed, these factors may stem from various sources, including students, educators, the institution itself, or even the alignment of degree curricula with professional requirements.

In Spain, there has been an increase in absenteeism in polytechnical university studies, especially after the Covid crisis, posing a significant challenge for institutions to address. This study focuses on Universitat Politècnica de Catalunya· BarcelonaTech (UPC) and aims to quantify the current level of absenteeism and identify its main causes. The study is part of the teaching innovation project ASAP-UPC, which aims to minimize absenteeism through the redesign of teaching methodologies. By understanding the factors contributing to absenteeism, the study seeks to inform the subsequent phases of the ASAP-UPC project, which involve implementing methodologies to minimize absenteeism and evaluating their effectiveness.

The study utilizes surveys conducted among students and polytechnical companies. Students' perspectives are gathered through both online surveys and in-person interviews. The surveys inquire about students' interest in attending classes, skill development throughout their UPC experience, and their perception of the skills required for a career in a polytechnical field. Additionally, polytechnical companies are surveyed regarding the skills they seek in prospective employees. The collected data is then analyzed to identify patterns and trends. This analysis involves organizing and categorizing the data, identifying common themes, and drawing conclusions based on the findings.

This mixed-method approach has revealed that higher levels of absenteeism are observed in large student groups at both the Bachelor's and Master's degree levels. However, the main causes of absenteeism differ between these two levels. At the Bachelor's level, many students express dissatisfaction with in-person classes, perceiving them as overly theoretical and lacking a balance between theory, experimental practice, and problem-solving components. They also find a lack of relevance to professional needs. Consequently, they resort to using online available materials developed during the Covid crisis and attending private academies for exam preparation instead. On the other hand, at the Master's level, absenteeism primarily arises from schedule incompatibility between university and professional work. There is a discrepancy between the skills highly valued by companies and the skills emphasized during the studies, aligning partially with students' perceptions.

These findings are of theoretical importance as they shed light on areas that can be improved to offer a more beneficial educational experience to students at UPC. The study also has potential applicability to other polytechnic universities, allowing them to adapt the surveys and apply the findings to their specific contexts. By addressing the identified causes of absenteeism, universities can

enhance the educational experience and better prepare students for successful careers in polytechnical fields.

Keywords—Absenteeism, polytechnical studies, professional skills, university challenges.