

The introduction of intersessional revision in a biology course for 1st-year university bachelors in the Wallonia-Brussels Federation was in relationship to improved results in the June exam

Palmaers¹ Amélie, Hindryckx² Marie-Noëlle, Thiry¹ Marc

¹ Tissue and Cell Biology Laboratory, Faculty of Sciences, University of Liege, Belgium

² Didactics of Biological Sciences, Faculty of Sciences, University of Liege, Belgium



Introduction

This biology course is part of the program for students of the 1st bachelor's degree in biological sciences and chemical sciences. Teaching/learning activities take place during the 1st quadrimester (September to December). In the Wallonia-Brussels Federation, three exam sessions are organized for 1st bachelor students: January, June and August/September. However, there was no learning support for students who failed the January exam during the 2nd quadrimester in this course. We therefore introduced four intersessional revisions in May 2022 and May 2023 to support student learning before the June exam. The aims of this preliminary study are to assess student participation in the system and to determine whether a relationship exists between participation in intersessional revisions and improved results on the June exam.

Material and methods

Intersession revisions are intended for all students who have failed the January exam. Four major themes, often posing difficulties for students, are addressed, each in a 2-hour face-to-face session. Prior registration is required, where students can choose from one to 4 themes, to be able to form groups of 25 to 30 students. Revision sessions require the active participation of students. The teacher, an assistant and/or the professor, begins with a short theoretical background, then the students work on exercises, alone or in small groups and the teacher interacts with them. On several occasions, the exercises are corrected collectively, with the active participation of the students. An important part of these revisions is devoted to identifying and analyzing students' difficulties and errors, as well as identifying and clarifying expectations. Data comes from attendance records, June exam results and an inquiry submitted to students in 2023.

Results

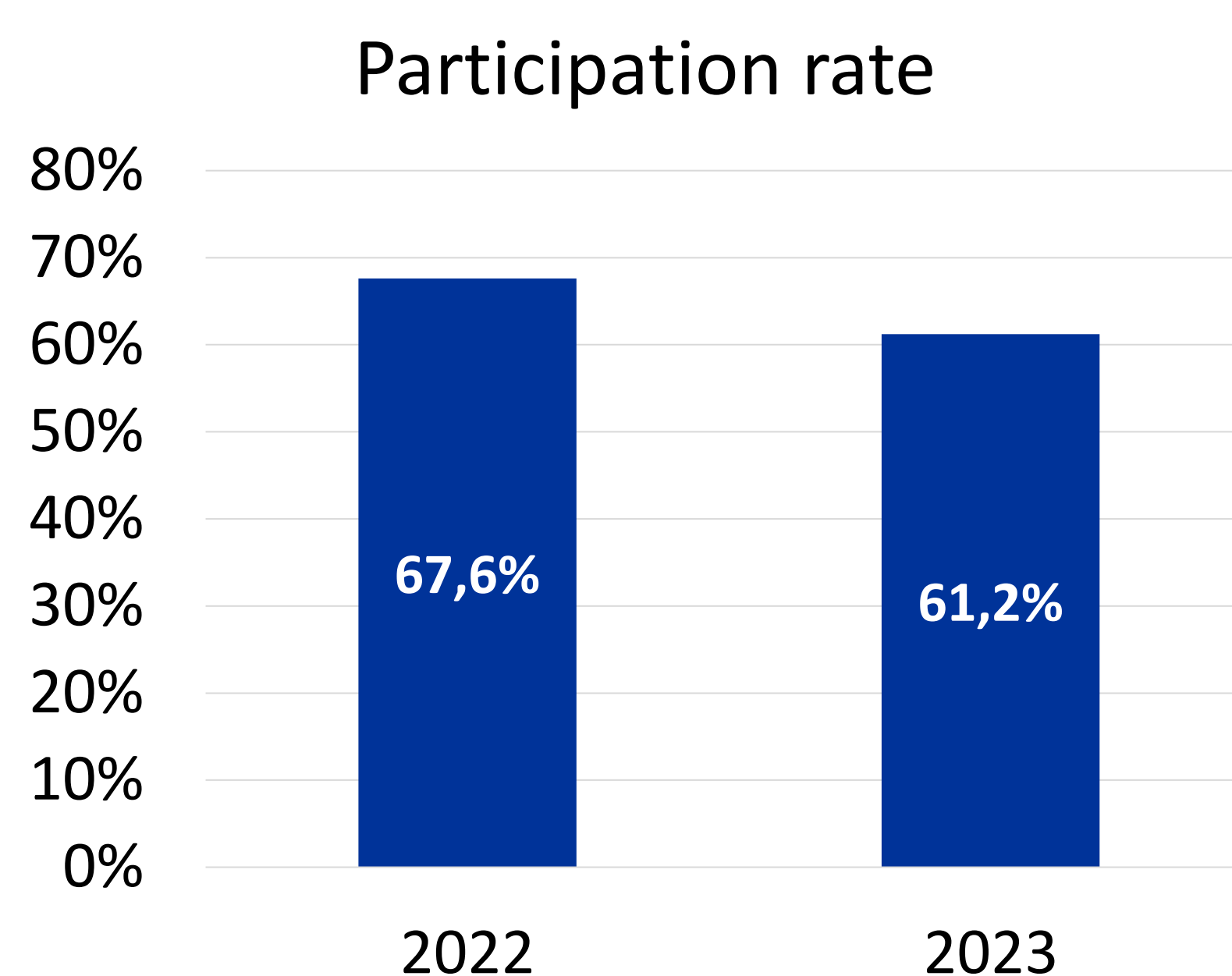


Fig. 1 – The participation rate, calculated on the basis of the number of students who presented the June exam and participated in at least one revision compared to the total number of students who presented the June exam.

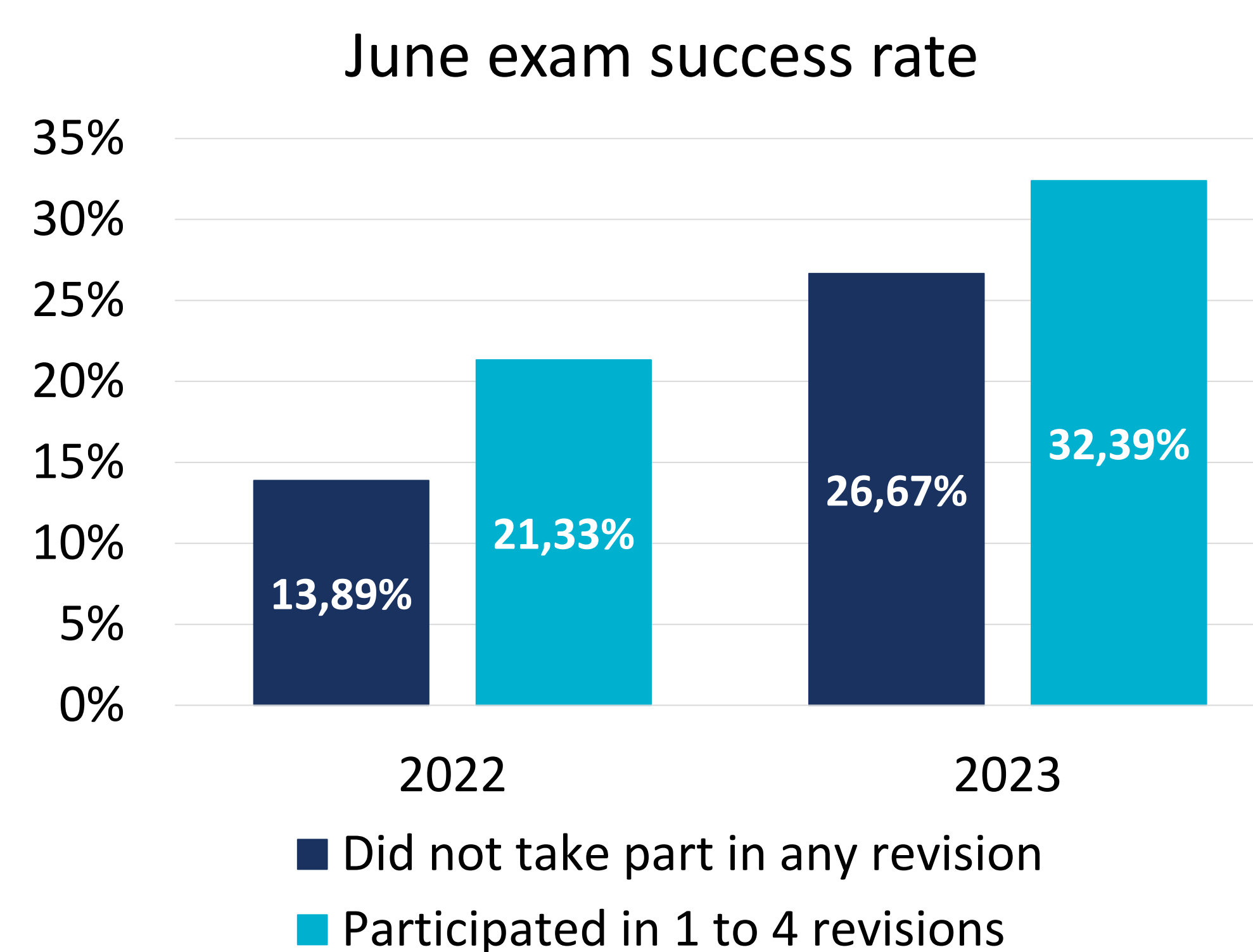
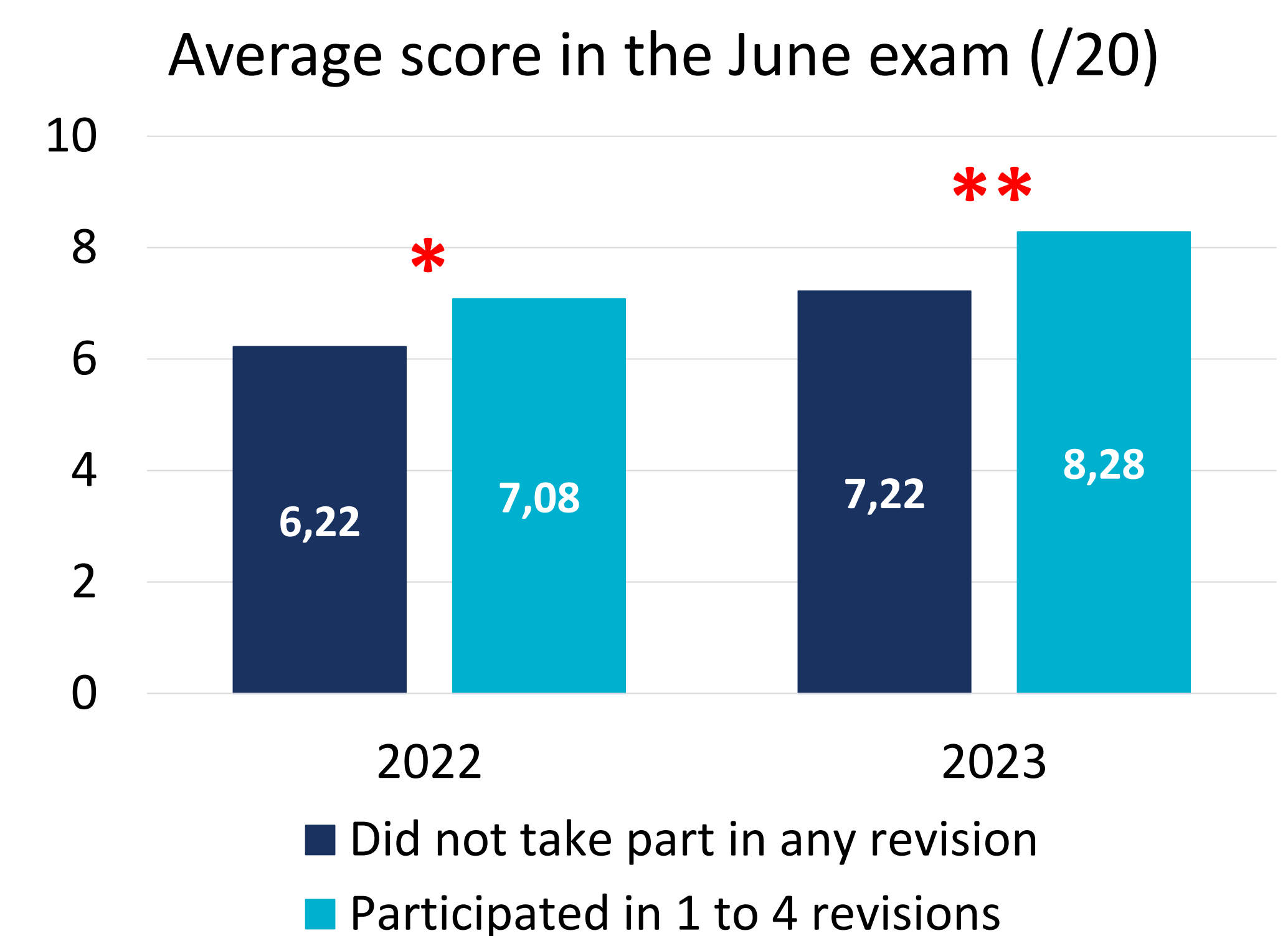


Fig 2 – The success rate is higher for students who have attended at least one revision. However, this difference is not statistically significant (χ^2 test). **Fig 3 – The average score** is higher for students who attended at least one revision. Student's t test were carried out and the difference was significant at the 10% threshold in 2022 (p value = 0.067), and at the 5% threshold in 2023 (p value = 0.037).



The revision inquiry was completed by 67% of students taking part in at least one revision. The results were very positive, with for example 97.8% of students stating that they thought their success chances for an exam question on the topics covered had increased after the revision sessions (57.78% "agreed" and 40% "strongly agreed" with the statement).

Discussion and conclusion

The results are very encouraging, both in terms of student participation and significant increase in the June exam average. However, there are some limitations. The choice of whether or not to participate in revisions can be an indicator of engagement, and students' level of engagement influences academic success. The significant increase in the average score obtained in June by students who participated in at least one revision, accompanied by a non-significant increase in the success rate among these students, could be explained by the fact that the four themes addressed during the revisions do not fully cover the course material. Further analysis is required to confirm this hypothesis. The results presented here demonstrate the value of organizing intersessional revisions for a course that takes place in the first quadrimester and encourage us to continue these revisions and the evaluation of their effectiveness in future years.