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

**Preferred strand: 7. Teaching strategies and learning environments**

## 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, from mid-September to mid-December, and include theoretical lectures, exercise and reflection sessions called study aids (Palmaers and Thiry, 2021), practical work, formative assessments… 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.

Since the Sars Cov-2 pandemic, the success rate for the January exam has dropped significantly. We therefore introduced four intersessional revisions (Perret et al., 2014) 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 for this biology course (final mark below 10/20), voluntarily. Four major themes of the course, often posing difficulties for students, are addressed, each in a 2-hour face-to-face session. Prior registration is required, and students can choose from 1 to 4 themes. Groups of 25 to 30 students are created and, depending on the number of students registered, each theme is organized twice.

As with study aids, revision sessions require the active participation of students (De Clercq et al., 2022). The teacher, an assistant and/or the professor, begins with a theoretical background including oral questions, then the students work on exercises, alone or in small groups. The teacher interacts with the students, enabling proactive, interactive and retroactive regulations (Wiliam and Thompson, 2008). 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. Intersessional revisions are therefore complementary to the teaching/learning activities organized during the 1st quadrimester.

Data comes from attendance records taken at each session, June exam results and an inquiry submitted to students at their group's last session in 2023 in the form of an online questionnaire.

## Results

The number of students who participated in at least one revision was 95 in 2022 and 75 in 2023. 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, was 67.6% in 2022 and 61.2% in 2023.

[1] The term “revision” comes from the French “révision”, which refers to a remedial course designed to refresh students' memories before an exam, identify the most important subject points and help students with any difficulties they may have.

The absence rate (registered students absent from the revision) was between 15.7 and 21.8% in 2022 and between 1.4 and 14.6% in 2023, depending on the theme.

The success rate is higher for students who have attended at least one revision than for those who have not, with an increase of 7.44% in 2022 and 5.73% in 2023. However, this difference is not statistically significant ($\chi^2$ test).

The average score obtained in June by students who attended at least one revision was higher than the average score of students who did not attend a revision session, and this was significant at the 10% threshold in 2022, with an increase in average score of 0.86/20 points (Student's t test, p value = 0.067), and at the 5% threshold in 2023, with an increase between the two groups of 1.06/20 points (Student's t test, p value = 0.037).

The revision inquiry was completed in 2023, with 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 of students who attended at least one revision. 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 (Dupont et al., 2015). In addition, the exercise statements were available to all students on the course's intranet platform and the corrections were shared on social networks, which may have helped to some extent students who did not participate in the revisions.

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 with these revisions and the evaluation of their effectiveness in future years.

**References**


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