

# Are student attendance and engagement related to achievement?

## Introduction

Student engagement is a multifaceted concept, with several components including, behavioural, emotional, cognitive and academic engagement (Fredricks et al., 2004). How a student partakes in academic and extra-curricular activities is behavioural engagement, emotional engagement is how a student interacts with others and cognitive engagement examines how students engage with complex skills and tasks (Fredricks et al., 2004). Yet which aspects are most important for student learning remain to be decided. A positive relationship between student engagement and academic performance was found when measuring effort in learning (Carbonaro, 2005) and attendance (Gunuc, 2014).

Active and collaborative learning structures are considered to enhance student engagement and lead to sessions which are more cognitively challenging and interesting for the students (Zepke & Leach, 2010). This in turn should lead to greater engagement and participation. A meta-analysis by Gunuc (2014) showed that classroom engagement is a significant predictor of student academic achievement. Thus, attendance to taught sessions as well as engaging with e-resources and online content may be important factors leading to greater academic achievement.

This research project examines aspects of behavioural student engagement. Particularly, the relationship between student engagement and attendance with their final grades from the end-point assessment of a new third year module at Nottingham Trent University in the Department of Psychology. Gaining an understanding of how students participate and engage and how it equates to their final grades will inform module and course leaders as to possible refinements to enhance engagement from the student body. It is important to critically review the specifics of the module learning in its infancy in order to improve and streamline future learning. This module uses a combination of front-led teaching, seminar discussions, small group discussions and online resources. Thus, engagement and attendance may be important factors to enhance student learning.

**Aim: To investigate if student attendance and engagement are related to achievement**

**Predictions: Higher engagement and attendance will be positively correlated with higher student grades in their end-point assessment**

## Methods

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In order to examine if attendance and academic engagement is related to student achievement, I took the following approach. Data on student engagement and attendance for a level six, 10-week module was used for this study during the 2021/22 period. This module is an optional 3<sup>rd</sup> year module for a BSc in Psychology at Nottingham Trent University and had an enrollment of 20 students for 2021/22.

Student engagement was measured via the engagement score and attendance was measured via the number of sessions each student attended for the module the Social Brain module.

1. Engagement score – collated from the NTU student dashboard and compiled via engagement with a suite of university resources, such as online log ins, attendance, card swipes and e-resource use.
2. Percentage of attendance – the percentage of module sessions attended across term 2 by the student.

Student grades were measured via their final the end-point assessment grade. This assessment was a set of five short critical writing pieces related to the taught module content with the aim to assess students' knowledge and critical thinking and evaluation of the subject. All student identities were anonymized, and no personal information was collected.

Due to small sample size statistical analysis could not be run on the compiled data.

## Bibliography

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3. Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of educational research*, 74(1), 59-109.
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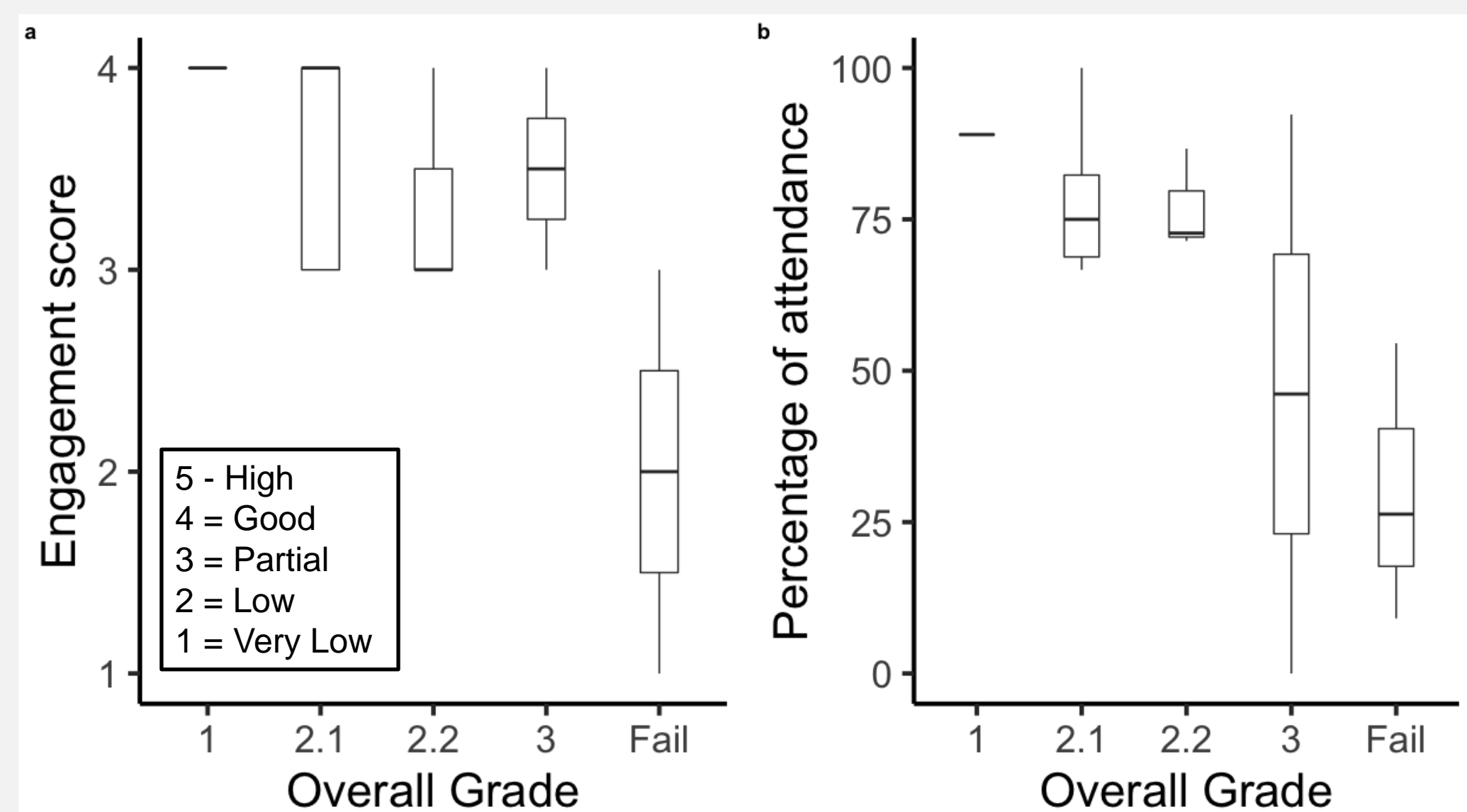
## Results

- **85% pass rate with mean attendance of 73.04% (Fail = 29.98% attendance)**
- **Large variation in levels of engagement (Fig 1 & Table 1)**
- **Greater engagement scores and attendance translate into higher grades**

Table 1: Mean ± standard deviation for the engagement score and the percentage of attendance for each grading category

Overall grade	Mean engagement score	Mean % of attendance
1 <sup>st</sup>	4.00 ± 0.00	89.00 ± 0.00
2.1	3.64 ± 0.50	76.96 ± 10.21
2.2	3.33 ± 0.58	76.94 ± 8.45
3 <sup>rd</sup>	3.50 ± 0.71	46.15 ± 65.27
Fail	2.00 ± 1.00	29.98 ± 22.95

Fig 1: Boxplot for a) the engagement score and b) the percentage of attendance for each grading category (N = 20)



- **Lowest mean engagement scores and % of attendance for fail.**
- **Highest mean engagement score and % attendance for 1<sup>st</sup>, although a small sample size.**

## Conclusions

- There is evidence that increased engagement and attendance can lead to higher overall grades. There is a clear distinction between pass and fail in terms of engagement and attendance. However, more long-term data is needed to examine this in detail.
- Student engagement is multi-faceted and combining current metrics with additional measures of behavioural, emotional, cognitive and academic engagement would provide further in-depth analysis. When combined with student feedback, e.g., MySay, these results can improve the module content and delivery in the future.
- A review of the taught content and online resources in order to improve their allure to students to enhance engagement, e.g., via greater use of technology, interactive quizzing or different suites of media for learning, would be the suggested next step from these findings.
- This research highlights the necessity to monitor and continually improve student engagement