

# Untangling Student Satisfaction and Achievement – The Impact of Module, Student and Lecturer Characteristics

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## Report for IATL (June 2016)

### Introduction

This is an interim report on the ‘Untangling Student Satisfaction and Achievement – The Impact of Module, Student and Lecturer Characteristics’ project, funded by IATL, University of Warwick. This is a collaborative project between Warwick Business School faculty, doctoral and master students.

### Project Progress

This project focuses on fostering excellence in teaching at the university level. Our aim is to explore predictors of student satisfaction and achievement to ensure our teaching is structured and led in a way that facilitates student learning and academic achievement and also results in high levels of student satisfaction with both modules and lecturers. Up to this point, we have collected a variety of different databases held at the University of Warwick by WBS eSolutions, Strategic Planning & Analytics Office, Academic Registrar's Office.

To process the data, which is both qualitative and quantitative in nature, we have hired three doctoral students: Thomas Engelthaler (Department of Psychology) and Sonya Liu and Juliet Banoeng-Yakubo (Warwick Business School). We have also worked with two WBS master students (John MacDonald and Gina Jiang), whom we have trained to conduct focus groups with undergraduate students to discover, through open ended questions, potential additional factors contributing to student achievement and satisfaction with modules and lecturers.

### Quantitative data:

In terms of the quantitative data, we have spent the majority of our time and effort on creating an up to date, centralized data file, merging data sets of a different nature.

A data file with student characteristics has been developed to test hypotheses such as:

1. Student **academic level (ug/pg)** influences the overall module (satisfaction) rating.
2. Student **gender** influences the overall module (satisfaction) rating.
3. **Student fee status** influences the overall module (satisfaction) rating → comparing student satisfaction/achievement before and after the fee hike.
4. Student’s **socio-economic status** influences the overall module (satisfaction) rating and achievement.
5. Student’s **IELTS/TOEFL score** influences **actual student mark**.
6. Student **actual mark** influences student’s overall module (satisfaction) rating.

7. Student **occasion** influences overall module (satisfaction) rating.
8. Do **distant learning** and face-to-face students differ in terms of satisfaction and achievement?
9. Student's **year of study (stage)** influences the overall module (satisfaction) rating.

Currently, a lecturer and a module-level centralized files are being developed, aimed to facilitate testing hypotheses such as:

1. Lecturer gender influences the satisfaction with the lecturer.
2. (Main) Lecturer gender influences overall module satisfaction.
3. Lecturer age influences student satisfaction with the lecturer.
4. (Main) Lecturer age influences overall module (satisfaction) rating.
5. Lecturer position influences satisfaction with the lecturer.
6. (Main) Lecturer position influences overall module (satisfaction) rating.
7. Lecturer research vs. teaching influences satisfaction with the lecturer.
8. (Main) Lecturer research vs. teaching influences overall module (satisfaction) rating.
9. Lecturer tenure/non-tenure influences overall module (satisfaction) rating.
10. Lecturer gender similarity (with student) influences student satisfaction with lecturer.
11. NIE/Lecturer overall rating (by student) for same module increases from **year to year**.
12. NIE/Lecturer overall rating varies by **academic level of module** (pg. vs. ug.).
13. NIE/Lecturer overall rating varies by **student year of study/stage**.
14. NIE/Lecturer overall rating varies by **delivery method** (e.g., duration of module, module virtuality).
15. The **number of CATS** a module has influences the overall module (satisfaction) rating.
16. **Module type** (whatever this is in Paul's data) influences the overall module (satisfaction) rating.
17. The **type of assignment** influences the overall module (satisfaction) rating.
18. The type of assignment influences the actual student mark.
19. The type of assignment influences the average module mark.
20. The **module delivery method** (with elements as duration, virtuality) influences the overall module (satisfaction) rating.
21. The module delivery method (with elements as duration, virtuality) influences the average module grade.
22. The **number of lecture hours** influences the overall module (satisfaction) rating.
23. The number of lecture hours influences the average module grade.
24. The **number of tutorial hours** influences the overall module (satisfaction) rating.
25. The number of tutorial hours influences the average module grade.
26. The **number of students in module** influences the overall module (satisfaction) rating.
27. The number of students in module influences the average module grade.
28. The **specificity of module objectives** influences the overall module (satisfaction) rating.

29. The specificity of module objectives influences the average module grade.
30. The **type of science (natural vs. social)** influences student satisfaction with module.
31. The type of science (natural vs. social) influences the overall module (satisfaction) rating.
32. The type of science (natural vs. social) influences the satisfaction with NIE/lecturer.
33. The type of science (natural vs. social) influences the average module grade.
34. **The number of lecturers in a module** influences student satisfaction with module.
35. The number of lecturers in a module influences overall satisfaction with module.

### **Qualitative data:**

The qualitative data uses student feedback sheets to identify other factors (e.g., lecturer's leadership style, applicability/practicality of information, quality of teaching materials) which influence student achievement and satisfaction. It is also meant to facilitate exploring student biases in terms of feedback provided to lecturers, with a focus on lecturer gender, age, race/ethnicity, tenure and perceived expertise.

The largest part of the qualitative data (around 60%) has been coded using NVIVO and preliminary results in terms of gender-based differences in student rating reveal a significant negative student bias in terms of rating female lecturers.

We foresee finalizing qualitative data coding within the next two months.

One focus group performed by our two master students with 5 undergraduate students has revealed the following in terms of factors contributing to student satisfaction and performance:

**Lecturer characteristics:** Enthusiastic and knowledgeable lecturers who use personal appeals and relationship-oriented teaching styles trigger positive student attitudes towards lecturer and learning in general. Practical application of theoretical issues was noted as the most effective way to engage students and generate active discussions during lectures.

**Module characteristics:** Modules assessed through 100% examination cause high stress levels, and do not contribute towards retaining knowledge. Partially assessing coursework decreases these symptoms. Lecture capture can either enhance learning due to the ease of adaptability towards individual learning preferences/pace, or decrease learning, as lecture attendance tends to drop.

**Student characteristics:** Participants noted undertaking independent research for coursework heightened their learning experience, and made topics more enjoyable

Approximately 85% of our budget was spent on paying our three PhD students for their processing of quantitative data and coding and preliminary analysis of the qualitative data. Next steps include finalising the merging of the data sets, the testing of our hypothesis, finalising the coding of the qualitative data, and writing the report, which will be the basis for the dissemination of our results by a number of means.