

## Teaching and Learning Projects

# Team-Based Learning: improving results, engagement and experience for international students

## University of Northampton

### Why this project?

Northampton Business School (NBS) has a large international student body studying in Northampton. NBS has always prided itself on having excellent teaching practices. Its core aims have been to develop students to think and work independently, teaching them how to research and construct arguments based on evidence.

Above all, NBS ensures that students learn to apply their knowledge and solve problems in the real world. Advancing teaching practices is vital for NBS and the HE sector as a whole.

Prior to the launch of the pilot project a number of critical observations had been made about international students studying in Northampton:

- Engagement levels were lower with international marketing students than with any other student base.
- Performance levels had not matched pre-admission expectations.
- The main distinction between the NBS offering and the 'domestic' option for a student had become 'location'.

### Summary of the project

The pilot project investigated how a shift in learning and teaching methodologies could improve results and engagement levels.

This study explores a new, dynamic approach with international marketing students. In order to prepare these students for their careers, it is imperative that they develop the appropriate social skills to succeed. Our research examines the pedagogical and practical considerations of evolving a traditional course towards a Team-Based learning model. This approach is seen to enhance the student's appreciation of decision-making through collaboration.

As a result of this intervention, we have identified strategies that can be repurposed across a number of courses in order to increase international students' contributions to seminar discussions.

### Rationale for piloting Team Based Learning with an international cohort

A key motivation for piloting Team Based learning (TBL) with international students was to move the teaching experience away from students 'absorbing' material in lectures, to applying concepts and tools in a team format. Initial discussions with students revealed that they wanted something 'more', something 'different' from their experience in the UK. Feedback from employers also highlighted a requirement for incoming graduates to possess first-class problem solving skills.

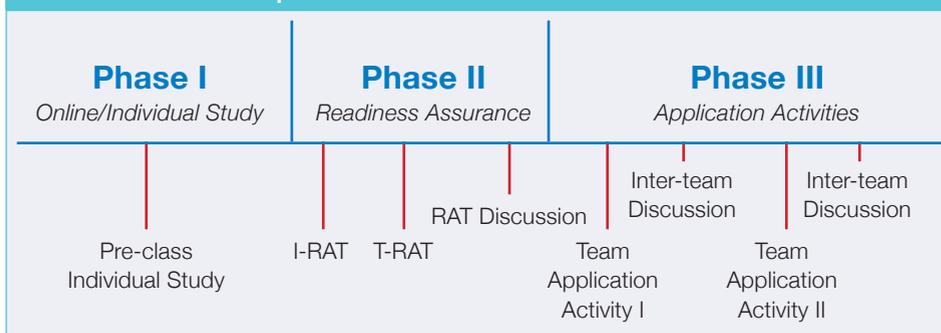
### How Team Based Learning works

In a TBL environment, contact time occurs in teams of six students. It is critical that each team contains a diverse set of students.

The second part of the module (the first part was delivered in a traditional format for comparison) covered essential topics for completing the assessed work. Key concepts were introduced prior to the TBL workshop. Completing pre-work is essential in a TBL environment. If pre-work is not completed, the tests will be more difficult and students will find it difficult to justify and articulate their answers.

In the pilot study, pre-work consisted of a series of presentations, data sets and interviews with a Marketing

### Overview of the TBL process





Director of a global research organisation. Pre-work was supported by a series of online lectures and webinars (along with English language support sessions).

## iRAT/tRAT

During the first workshop session of a TBL unit, all students take an **individual readiness assessment test (iRAT)** that covers the assigned material. Straight after this test, students retake the exact same test as a team, **team readiness assessment test (tRAT)**, and immediately find out how they scored in both the individual and team test. In the pilot project, the scores did not contribute directly to the final grades but had a direct effect on the learning process. Team scores were kept visible throughout the workshops to foster healthy competition.

Individual tests hold students accountable for learning material prior to a workshop and team tests provide an exciting opportunity for students to learn from each other while working together on the test.

## Pilot Project Phases

### Phase 1:

- Students took responsibility for studying assigned materials independently. The students were

provided with a series of interactive sessions where they examined a live business case.

- Tools and key concepts were introduced in webinars and online lectures, making contact time more 'applied'.

### Phase 2:

- The iRAT examines the readiness to apply the knowledge gained in phase 1. Taking the tRAT removes the impact of 'strong personalities' in teamwork. A challenge when working with international cohorts is that some cultures will be more comfortable with challenging other people's views.
- The students were tested on what the correct course of action should be for the company in the live business case.
- An **Immediate Feedback Assessment Technique Sheet (IF-AT)** was used. This was a scratch card. An IF-AT requires the team to discuss and justify each answer. Scratching off the correct answer straight away scores maximum marks (4); scratching off a wrong answer reduces the mark available by 1. Strong personalities can sometimes 'take over' team environments. Using the IF-AT encouraged students to discuss with their peers and think about why they reached their decision.

### Example of IF-AT sheet:

IMMEDIATE FEEDBACK ASSESSMENT TECHNIQUE (IF-AT®)					
Name				Test #	
Subject				Total	
SCRATCH OFF COVERING TO EXPOSE ANSWER					
	A	B	C	D	Score
1.	★				_____
2.					_____
3.					_____
4.					_____
5.					_____
6.					_____
7.					_____
8.					_____

During the TBL workshops students worked on solving business problems. They applied specialist techniques (**Inc. Six Sigma**), the knowledge acquired through the pre-work and received immediate feedback on their ideas.

## How the pilot project was set up

The pilot was introduced into the curriculum of the MSc International Marketing programme at Northampton University in 2015. Prior to their inclusion, the delivery of course content consisted of a series of didactic lectures and seminar sessions. 32 students completed the pilot study, evaluating the impact on performance and engagement.

The module is traditionally run over 12 weeks and is assessed in two parts, both equally weighted. To enable a meaningful comparison, the modified module was divided into two distinct types of teaching delivery. The first half

of the module (P1) comprised 6 didactic lectures, supported by case study material and recommended texts. The second half of the module (P2) consisted of TBL workshops and 'hands on' application of decision-making tools and techniques. Both assessments required the students to analyse information and produce an individual business report.

P2 followed the core elements of TBL, although the nature of the pilot study did not allow for an in-depth use of all available tools and techniques. An experienced faculty member with expert knowledge of decision-making techniques facilitated the workshops. To ensure comparisons between the two approaches were meaningful, the same faculty member delivered the didactic lectures and workshops.

## Evaluation

An evaluation of the new methodology considered the following measurements and methods:

- Level of pre-lecture / seminar preparation: Observations of P1 & P2
- Engagement with cohort members: Observations of P1 & P2
- Attendance: Analysis of attendance records
- Satisfaction: Focus group feedback of P1 & P2
- Performance: Analysis of assessment performance, P1 versus P2

## Timescale

The pilot project ran from September 2015 to May 2016. This allowed for an assessment of pre-programme expectations, the effects of TBL on P2 and post-module evaluations.

## Challenges

No challenges were encountered in respect of time and budget. The

nature of the pilot project meant that some discoveries merit further investigation; the sustainable nature of the project has meant that these can be developed in the future.

## A sustainable project

The professional decision-making tools and techniques that have been introduced can be utilised by future cohorts. The enhancements to engagement and performance levels can be used within different modules and programmes outside of the Business School.

The researcher will build on the insights of the pilot study and develop a more extensive research project.

## Reflections on the project

There has been a significant impact on engagement and performance, albeit in unexpected areas.

Observations of the first module, P1 and the second module, P2 show that 95% of students carried out pre-work in P2 vs. 15% who completed pre-work in P1. Having students complete the appropriate level of preparation activity has always been a challenge. The knowledge that preparation work will help students to solve problems and make decisions more effectively was the main motivating factor here.

Excluding absences due to sickness or emergencies, attendance levels for P2 were 100%, vs. 75% for P1. There is a recognised link between attendance and performance and this is significant here.

During P1, students were given the opportunity to engage with lecture material by way of group discussions in seminar sessions. This was difficult to achieve and only a small proportion of the cohort (less than 20%) actively participated. This level of engagement was typical of previous cohorts and

has historically been attributed to cultural differences in communication. P2 saw a significant change. Engagement levels were considerably increased. All students participated in the workshop sessions, although it was not a 'natural' process for some.

A key question of the pilot project was 'can increased levels of engagement deliver better performance and student retention?'

- Satisfaction: Focus group feedback of P1 & P2
- Performance: Analysis of assessment performance, P1 versus P2

Student performance was assessed using the results of the two set assignments. Both assessments involved students examining the same marketing research issue, but from different perspectives. The topics covered in both the didactic lectures and workshop sessions included research philosophies, quantitative and qualitative methodologies, scenario planning, process improvement and neuro-linguistic programming.

## P1 Grade Analysis

Grade	Number
A+	1
A	2
A-	3
B+	10
B	5
B-	2
C+	4
C	2
C-	1
F+	2
F	0
F-	0

## P2 Grade Analysis

Grade	Number
A+	1
A	2
A-	3
B+	10
B	11
B-	3
C+	1
C	0
C-	0
F+	0
F	0
F-	0

It is noticeable that top grade marks were unaffected by the inclusion of TBL, however there was a noticeable shift towards B grades from C grades in P2. High-grade marks were achieved by the same students in P1 and P2, indicating a strong level of existing knowledge. Further analysis of the top grade students showed stronger English language skills and more professional work experience.

It is important to note that the students who moved from C grades to B grades in P2 were more engaged with the teaching, better prepared and attended more. In addition to this 'bumping of the middle', there were no failures in P2.

The Business School recognises the significance of performance levels in the first module. Students who have low engagement levels and poor results in the first module are at high risk of withdrawing from the programme.

### Student feedback on TBL: learning points for Northampton

The majority of the cohort voiced their high satisfaction with the inclusion of TBL and the use of structured decision-making methodologies.

The more involved structure of a TBL workshop environment meant that



*The School of Science and Technology, Newton Building, University of Northampton*

engaging with material and 'the problem' was more enjoyable and 'part of the process', rather than a 'bolt on' to the didactic P1. Students also viewed the experience of the TBL workshop environment to be more 'suited to a business' course than a traditional lecture and seminar structure.

The most illuminating feedback was that students were more compelled to learn as a team, knowing that 'personality' had been removed from debates. Team members cannot dominate discussions. The key learning points for the institution have been that TBL can increase both performance levels and engagement levels when combined with practical problem solving and decision-making tools.

There is evidence that the inclusion of TBL and practical techniques can increase engagement and have a positive impact on the performance of 'middle grade' students. The techniques that have been used to increase performance levels have not had a detrimental effect on how satisfied the 'top' students are with their programme.

The University of Northampton is currently reviewing the delivery methods of selected Marketing programmes.

### Learning points for other institutions

TBL provides an opportunity for staff to be more flexible, enables a more 'flipped' approach and makes better use of time and technology.

The workshop approach provides a number of benefits, especially where a more 'traditional' delivery is not always possible due to logistical constraints.

### Further information

**A full review of the pilot project is available to any interested institution. Contact project lead, James Blackmore-Wright at James.blackmore-wright@northampton.ac.uk**