

PTAS Project Report (for REGULAR PROJECT GRANTS)

Project Title: Teaching Critical Thinking in Business (TCT-Biz): Developing the active teacher to support student critical thinking

Project type :

A Research Project (research focus on particular dimension of teaching, learning, assessment)

Principal Investigator:

Dr Sarah Ivory;

Co-PI: Dr Andrea R English

Schools/department:

University of Edinburgh Business School;

University of Edinburgh Moray House School of Education

Team members (including Schools and Departments) :

- Diana Murdoch, University of Edinburgh, Moray House School of Education
- Dr Mary Boville, University of Edinburgh, Moray House School of Education
- Jakov Jandric, University of Edinburgh Business School

For further details, please contact: Dr Sarah Ivory

Report (maximum 1500 words)

What did you do?

Project Aim:

Our project investigated teachers' experiences of developing *active teaching approaches* through critical reflection on practice aimed at supporting students' critical thinking on a new compulsory course, 'Global Challenges for Business,' for first year undergraduates studying for a Business Degree (N:350). Our aim was to better understand how to support teachers to improve students' learning experiences on the course, and in future courses in the Business School, with potential application across the University. The course was developed and taught by one of the Co-PIs, Dr Ivory. Drawing on pedagogic best practice, especially as relates to active, dialogic teaching, it was dramatically different from the course it replaced which followed a more traditional route.

Details of the study:

The framework for our empirical investigation builds off research on 'active, dialogic teaching' and 'productive struggle in learning' of Co-PI Dr. English, and is situated in the context of international research on teaching in HE that supports critical thinking, as well as research on teaching as a reflective practice.

We collected data from teachers (core tutors on the course). After survey of all tutors on the course (N:9), we purposefully selected 3 tutors. We interviewed the tutors before conducting 2 video observations of their Topic Seminars (this included approx. 60 students (18%) in all 3 seminars); we then conducted recall interviews on selected episodes from the video. The tutors also kept journals of their teaching experiences following a journal protocol. We analysed the interview data to gain understanding of the 'opportunities for' and 'challenges to' teachers' learning and enactment of active, dialogic teaching approaches that promote productive struggle involved in learning to think critically.

We also collected data from students on the course. We collected pre-course survey data from students on their prior knowledge experiences of active learning and critical thinking (62% response). We also interviewed 3 focal groups of students from the focal classrooms (approx. 15% of students) to understand whether they were appropriately challenged on the course in ways that could be described as 'productively struggling'.

What did you find out?

Our initial findings indicate that tutors who are learning active teaching methods in HE find it challenging to learn how to 're-negotiate authority' away from the traditional teacher-centred, lecture-centred classroom. In particular, tutors were challenged in relation to understanding and enacting their authority over knowledge of the subject-matter and over the direction of the class discussion. This aligns with research on active teaching that assigns a more collaborative role to teachers in relation to authority over knowledge and over class discussion. The challenges tutors faced impacted on their ability to support students' productive engagement with struggle. In some cases these challenges were seen by tutors as opportunities to reflect on their own practice, so that they could better support students to engage in the processes of learning involved in becoming critical thinkers, including productively struggling.

Our preliminary findings also indicate that some students on the course were productively challenged to struggle through their own uncertainty and ask questions in ways that support becoming critical thinkers, while others were not. The data suggest that the differences between students' who were productively or unproductively challenged, relates to their differing understandings of how to conceptualise, and in turn practically engage with, the tutor in relation to the tutor's authority to provide guidance over content learning and social learning (e.g. working successfully with peers). Though there is an initial insight into the possible correlation between teachers who are not successfully able to negotiate authority in active teaching settings, and students' lack of productive challenge in the course, which indicates a need for Tutor training in this area, additional research would be needed to demonstrate a strong correlation.

How did you disseminate your findings?

Event: Student Knowledge Exchange, University of Edinburgh Global Challenges for Business students

Location: Teviot House, UoE

Date: March 2018

Presenters: Dr Andrea English and Dr Sarah Ivory

In attendance: 45, mostly students on the course

Impact: We collected surveys from students, 96% indicated they took away new ideas about academic learning from the session.

This 1 hour session provided a Knowledge Exchange opportunity for the Co-PIs on the project to share their findings with the students from the Global Challenges for Business course. In addition to discussing the research and preliminary findings, it led to a fruitful discussion with the students including on topics of aims of Topic Seminars, approaches to teaching, and assessment.

Event: University of Edinburgh Moray House School of Education 'Research on Teacher Education Network' Seminar Series

Location: Moray House, UoE

Date: April 2018

Presenters: Dr Andrea English and Dr Sarah Ivory

Seminar title: *'Learning to Teach for Critical Thinking in Higher Education: A Business School Study'*

In attendance: 8 staff and Phd students

This 1 hour session presented our research and preliminary findings to the Moray House educators network.

Event: University of Edinburgh Business School, Staff Forum 'Innovations in Teaching and Learning'

Location: Business School, UoE

Date: September 2018

Presenters: Dr Sarah Ivory

Presentation title: *Researching Our Teaching: The Challenges of 'Active Teaching' approaches*

In attendance: 60 UoE staff members, including senior leadership and UoE Vice Principal.

Impact: Thus far, 3 staff commenting that they will alter teaching approaches following the session, and wider interest in reading more about the study outcomes.

This 15 minute presentation was for the School Forum (with all Business School academic and professional services staff invited). Our presentation formed part of the 'Innovations in Teaching and Learning' focus. In addition to outlining our research and preliminary results, Dr Ivory provided further personal insights in relation to active teaching based in her teaching on the course.

Event: British Academy of Management Annual Conference, Professional Development Workshop

Location: UWE Bristol

Date: September 2018

Presenters: Dr Sarah Ivory and Dr Andrea English

Workshop title: *The Challenges and Enablers of Active Teaching Approaches to Achieve Critical Thinking Outcomes for Business School Students*

In attendance: 50 business and management scholars from around the world.

Impact: Surveys from the workshop indicated many would apply elements to their own teaching approaches.

This 2 hour PDW outlined our research and preliminary results, as a way of engaging attendees in reflections of their own experiences.

Event: Scottish Educational Research Association Annual Meeting, Workshop

Location: School of Education, University of Glasgow

Date: November 2018

Presenters: Diana Murdoch and Dr Sarah Ivory

Workshop Title: *Reflecting on and Supporting Active Teaching Approaches to Achieve Critical Thinking: Learning from a Business School Study*

In attendance: 4 from UK and Canada

This 1 hour workshop shared research and active discussion for participants to reflect on practice.

Event: Scottish Educational Research Association Annual Meeting, Paper Presentation

Location: School of Education, University of Glasgow

Date: November 2018

Presenters: Diana Murdoch

Paper title: *'Learning to Teach for Critical Thinking in Higher Education: A Business School Study'*

In attendance: 20 international academics attended, including from the US and China

Feedback from the presentation included observations about links to issues of resilience and interest to expand the study to other institutions.

Event: Philosophy of Education Society of Great Britain Edinburgh Branch Annual Conference, Paper Presentation

Location: Moray House School of Education

Date: November 2018

Presenters: Diana Murdoch and Andrea English

Paper title: Learning Active and Reflective Teaching in HE: Philosophical underpinnings of a study with Business School teachers

In attendance: 31 staff and PG students (incl. UK, Europe, South Africa)

Feedback included interest in the idea of productive struggle that framed our study, and questions around teacher responsibility. The event was co-sponsored by The philosophy of Education Society of Great Britain, and the Institute for Academic Development, University of Edinburgh.

- Further planned dissemination: peer-reviewed journal article

What have been the benefits to student learning?

Changes in the Business School:

1. Curriculum changes

Assisting students to understand university and their role in it:

- Added to the first week:
 - The purpose of university – an academic perspective and
 - The purpose of university – a professional perspective (a young(ish) Edinburgh graduate in a senior finance job in Edinburgh)
- Two readings on how AI is changing the job market, and why curiosity is the most important trait.

2. Assessment changes

Altering assessment:

- **Reflection:** In addition to existing final 'reflective essay focused on transition to university'...
 - Requirement for **4 'Topic Seminar' reflections on the learning approach** in that seminar
- **New assessment: Essay due in week 5 with the focus *not on the mark*** (worth just 10%), but on providing feedback against our three skills: quality of argument; strength of evidence, clarity of presentation

3. Tutor training changes

More explicit tutor training:

- Added to existing tutor training (house keeping and 'content'):
 - **Discussion of active teaching** approaches, readings for tutors on the topic
 - **Discussion of 'role of uncertainty/productive struggle', and 'shifts in authority'**: for themselves and the student
 - Encouragement for **tutors to use reflective tools** – teaching journals, observing and talking to peers, the tutor blog
 - A **tutor handbook** available for the entire semester in advance allowing tutors to understand how the course 'builds'

How could these benefits be extended to other parts of the university?

We are already extending benefits to other parts of the University through dissemination of the study and its findings to university staff with teaching responsibilities on two Institute for Academic Development courses: (1) Post-graduate Certificate in Academic Practice, Foundations of Academic Practice Block 2. (2) Researching your Teaching. On each of these courses, Dr. English will discuss how her concepts of 'active teaching' and 'productive struggle in learning' informed the study and discuss with HE staff on the course what new learning they could bring into their own teaching contexts at University of Edinburgh.

We also plan further dissemination to University teaching colleagues through the University's blog, 'Teaching matters'.

Financial statement:

This project has utilised the funding awarded to it by the PTAS adjudication committee and the Principal Investigator or School Administrator appropriate can provide financial statements showing the funding usage as and when required by the UoE Development Trusts who may require it for auditing purposes.

Please send an electronic PDF copy of this report to:

Email: iad.teach@ed.ac.uk