

# Adopting open research practices: engaging doctoral students through debate-based learning.

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New outlooks on the development of researchers  
**in a changed landscape**

## Open research

- Open access to publications
- Open data
- Open monographs
- New publishing models
- Open peer review
- Public engagement
- Citizen science
- Communities of practice/open collaboration

# Background

## New outlooks on the development of researchers in a changed landscape: pedagogy and theory

A changing landscape: scholarly communication.



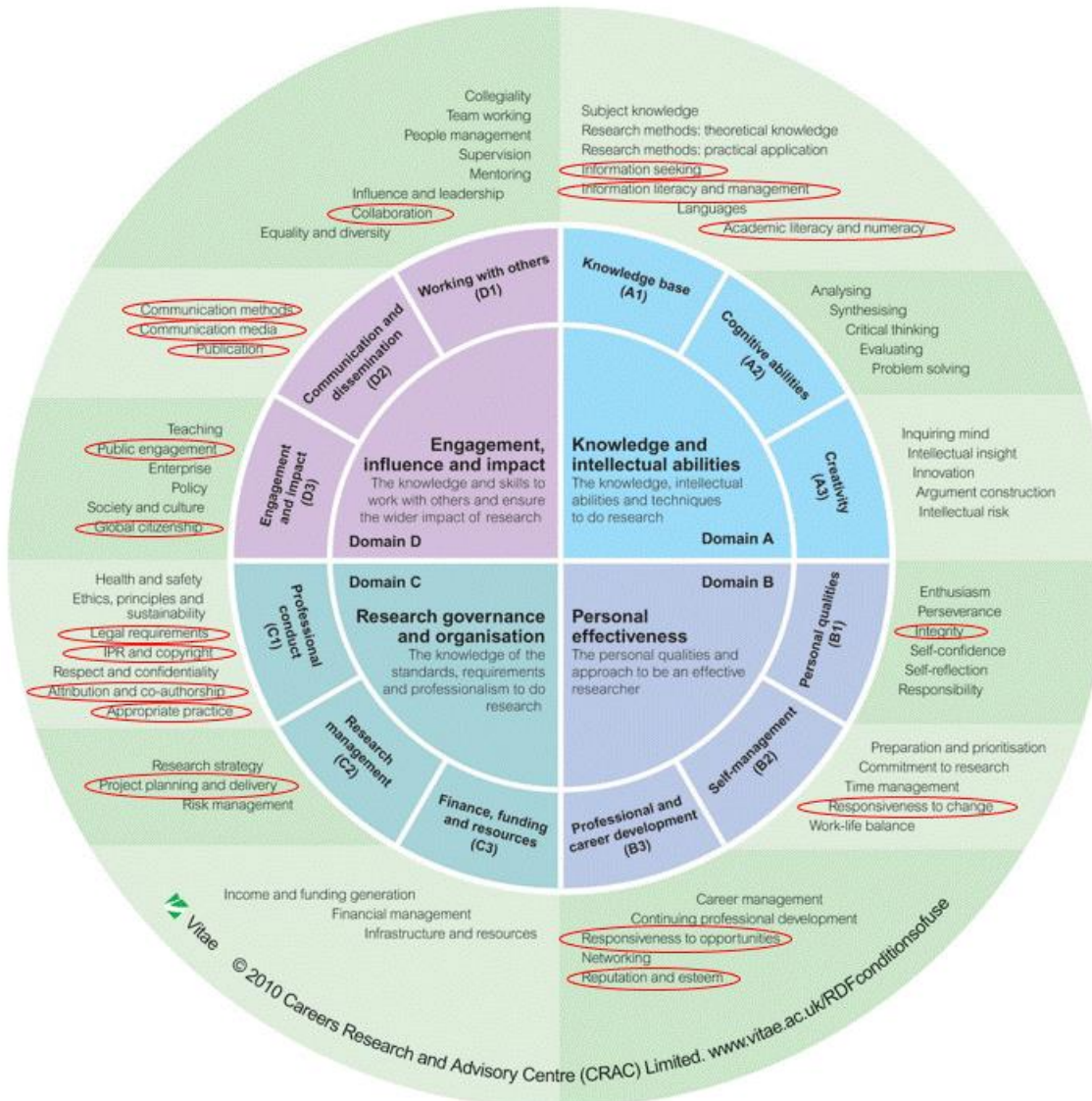
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# A need for new skills?



**Vitae recognises the need for open research skills.**

✓ Member poll identified gaps in researchers' understanding, skills and confidence.

✓ Relevant skills mapped to the RDF.

✓ Working in an open research environment extends beyond academic jobs.

## Open research

Accommodated with in the researcher professionalism model (Evans).

- Behavioural
  
- Attitudinal
  
- Intellectual

Development related to open research is largely behavioural – but is this enough?

In fact, is this a case where the behavioural element hinders further development?

# From box ticking to culture change.

- Meet all open access and data requirements (HEFCE, funders, institutional).
- Understand licensing and copyright.
- Awareness of publishing models – and predatory publishers.
- How, when, where to deposit on open access?
- Research metrics.

## Why do all this?

Have a stance on sharing research openly.

Attitude and culture change.

## **New outlooks on the development of researchers in a changed landscape: pedagogy and theory.**

Apply pedagogical methods that aim to:

- ✓ Encourage independence in looking up and evaluating relevant information.
- ✓ Develop attitudes and values.
- ✓ Encourage having a critical stance.

Open research is a political issue, after all.



...which brings us to the research idea.

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- Introduce and evaluate a workshop aimed at the attitudes related to open research.
- Test the effects of a debate-based session on changing researchers' perception of open research.
- Look for evidence of deeper engagement, not just behavioural change.

**Flipped classroom approach documented in:**

Critz et al., 2013; Kong, 2014; McLaughlin et al., 2014.

**Evidence supporting benefits of debate-based learning:**

Candela et al., 2003; Smith Randolph, 2007; Lampkin et al., 2015.

**Evidence for:**

- Increased knowledge of the subject;
- Improved communication, critical thinking, team work and research methods skills (self-reported);
- Greater engagement with the subject.

## The pilot study: design and method.

- ✓ Participants (PGRs) asked to sign up for 'Become an open researcher' workshop.
- ✓ Given basic information (definitions) of open research concepts.
- ✓ Working in pairs, debate the following:
  - Concerns and benefits of sharing a thesis online.
  - Concerns and benefits of sharing publications and data openly.
- ✓ Optional cue cards provided for ideas (semi-structured debate).
- ✓ Measures of attitudes towards open research practices taken before and after the discussions. 12 questions, 1 – 5 ratings.

General discussion: what will you do next?

## ✓ Questions

*'I would be reluctant to share my thesis online before it is published'*

*'Knowledge is a public good; research should be freely available to everyone'.*

## ✓ Debate cues:

*Concern that having the thesis online will stop it from being published.*

*Counter-argument: evidence that most publishers do not consider an online thesis prior publication.*

## The pilot study: results.

✓ 5 participants.

✓ **Average pre-session score: 3.94**

**Average post-session score: 4.63**

### **New actions considered:**

- Consider preparing thesis for open access
- Look into further information
- Look up open access journals
- Look up creative commons licences
- Discuss open access with peers
- Look into open practices outside traditional journal publishing.

# The pilot study: shortcomings

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- Selection bias
- Informant biases
- Not enough knowledge to go into depth
- Control group needed.
- Discussion too structured?

Evaluation of an instructional method not simple...

## The pilot study: discussion and suggestions.

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- How can we use this method to develop the open researcher?  
(Last minute addendum: it doesn't have to be a workshop!)
- How can we demonstrate it worked?  
(e.g. see Bromley, 2012, on impact levels)
- Pedagogical implications: can we apply similar methods in other areas of researcher development?
- How does this method fit (if at all) within current pedagogical theory on researcher development?

# Thank you!

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