

Lessons in Achieving Evidence-based Teaching Practice

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Two acts of professionalism in university teaching

Using existing evidence in teaching

Gathering local evidence on teaching

Scholarship of Teaching and Learning (SoTL)

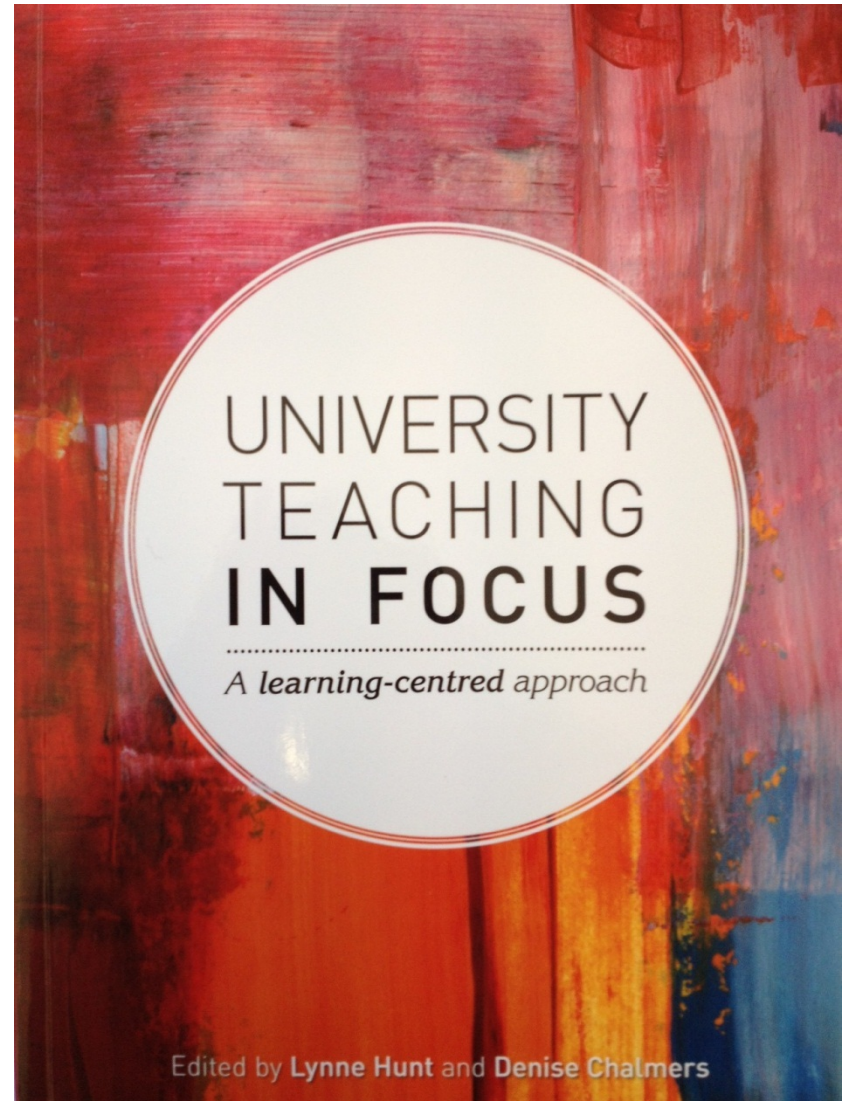
SoTL, where the focus is on learning, not research



Presentation based on Chapter 15:

Scholarship of teaching and learning

2012, ACER press





Who is doing it?

Scholarship of Teaching and Learning item	Disagree	Agree	d/k
I often ask other teachers to comment on my teaching ideas.		✓	
I often investigate questions related to how students learn in my discipline.		✓	
Improving my teaching is more effective if reviewed by my colleagues.		✓	
I can explain what concepts, models or theories underpin my teaching in this subject.		✓	



What is scholarship of teaching/learning?

... begins with intellectual curiosity, is conducted deliberately and systematically, is grounded in an analysis of relevant evidence, and results in findings shared with peers to be reviewed and to expand a knowledge base. [Taylor Inst T&L Calgary]

Case 1. Decide whether you think this is an example of SoTL or not.

Case 1: Miranda

When grappling with the dilemma of how to encourage her students to be more engaged with her subject matter, Miranda picked up an idea from the start of a TV program. It began with three people talking about their experience of the topic of the program. She wondered if she could ask a student, mid-way through each teaching session, to present a scenario that showed how they thought her topic was of relevance to them (and other students). She drafted an outline of how it might work — how the students would be selected, what notice they would be given, how long they would be asked to talk in each class, what she expected to happen and why? Before trying it she sent a copy by email to an experienced colleague. She explained that she thought the student experience would be enhanced because they may be able to connect more with the topic if they experienced it as being more relevant. Her colleague agreed to observe her using the idea and on judging it to have been successful, suggested she write up a two-page outline of the process as a teaching tip.

A way to raise the status of teaching

A means through which teachers may come to teach more knowledgeably

A means through which the quality of teaching may be assessed

A way to enhance students' experience of learning

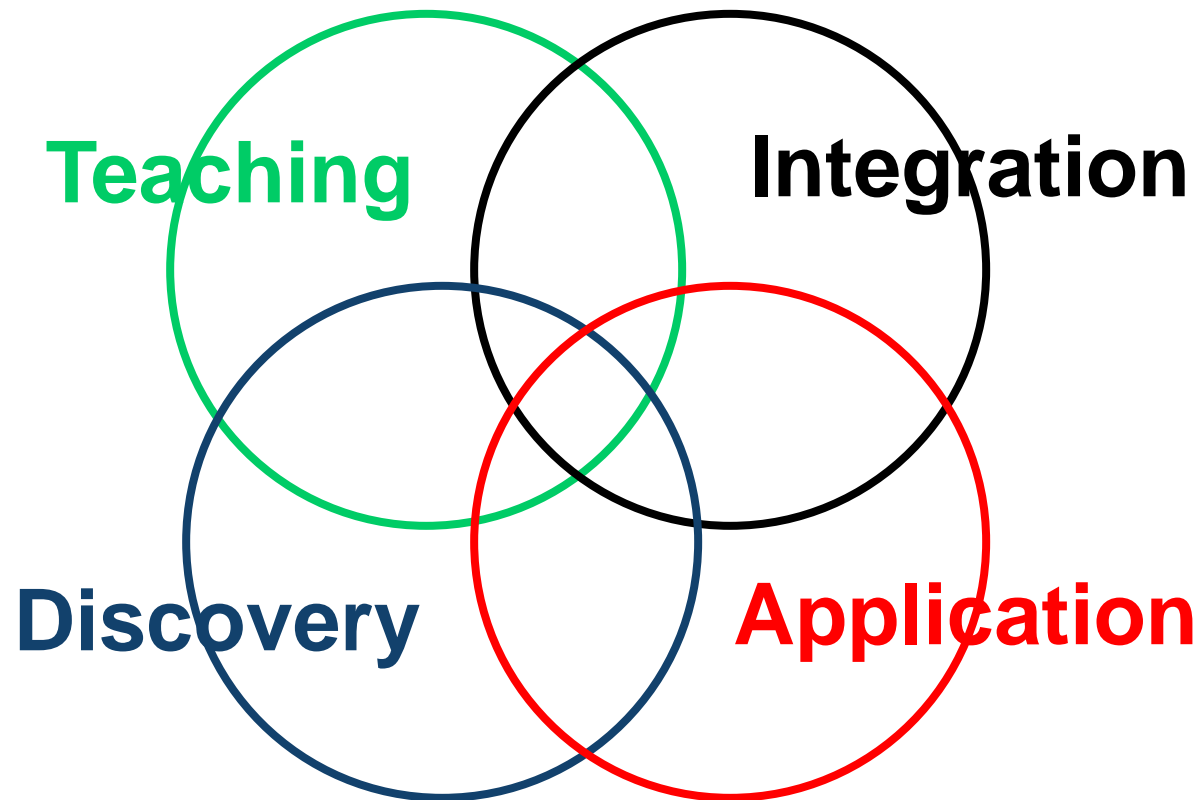


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Scholarship



Boyer's overlapping scholarships



To be **scholarly** is to be engaged in personal, but rigorous intellectual inquiry/investigation and development involving values such as honesty, integrity, open-mindedness, scepticism and intellectual humility, and building on what is known.

To be engaged in **scholarship** is to take that process, for scrutiny, into the public arena.

It is to make transparent the processes and outcomes of scholarly activities.



Discovery

A large, thin blue circle outline is positioned behind the word "Discovery". The word "Discovery" is written in a bold, dark blue, sans-serif font and is partially overlaid by the circle.



Scholarship of
discovery is research, which
involves making transparent the
scholarly processes that contribute
new knowledge to the *field*.

Example: Studies of how faculty
emotions in biology teaching are
related to student
learning.

SoTL

If teaching is about making learning possible ...

... then the scholarship of teaching is about making transparent how learning is being made possible.

If teaching is about collaborative meaning-making ...

... then the scholarship of teaching is about making transparent how collaborative meaning-making is happening.



Teaching

A large green circle outline is positioned behind the word "Teaching".



Making transparent
how learning has been made
possible. Discussing, reflecting,
describing, in an informed and
literature-based scholarly way, what
happened and why.

Example: A departmental discussion
about an approach to teaching a
course using student-focused
teaching ideas from the
literature to explain
learning aims.

Levels of investigation: Level 3

Level	Purpose of investigation	Evidence gathering processes will be	Investigation results in
1	To inform oneself	Verified by self	Personal knowledge
2	To inform a group within a shared context	Verified by those within the same context	Local knowledge
3	To inform a wider audience	Verified by those outside of that context	Public knowledge

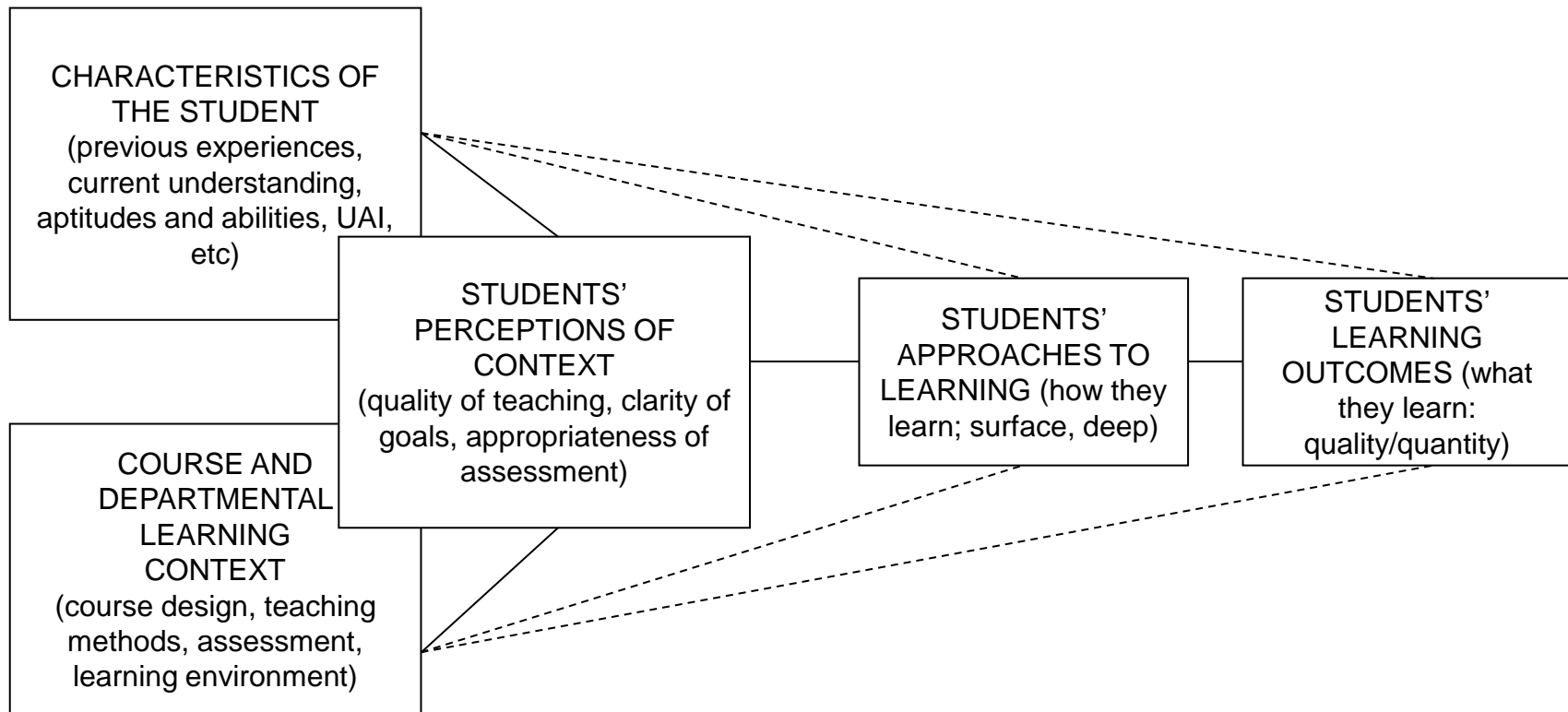
Six Steps (order of 1-3 may change)

1. Use a '**theory**', model, framework or a substantial teaching tip to ground the initiative and provide the justification for action
2. Identify an intervention, or a current **practice**, or a collection of information that might lead to enhanced learning (preferably linked to a theory)
3. Formulate an investigative **question** related to teaching and/or student learning in the chosen context

PRESAGE

PROCESS

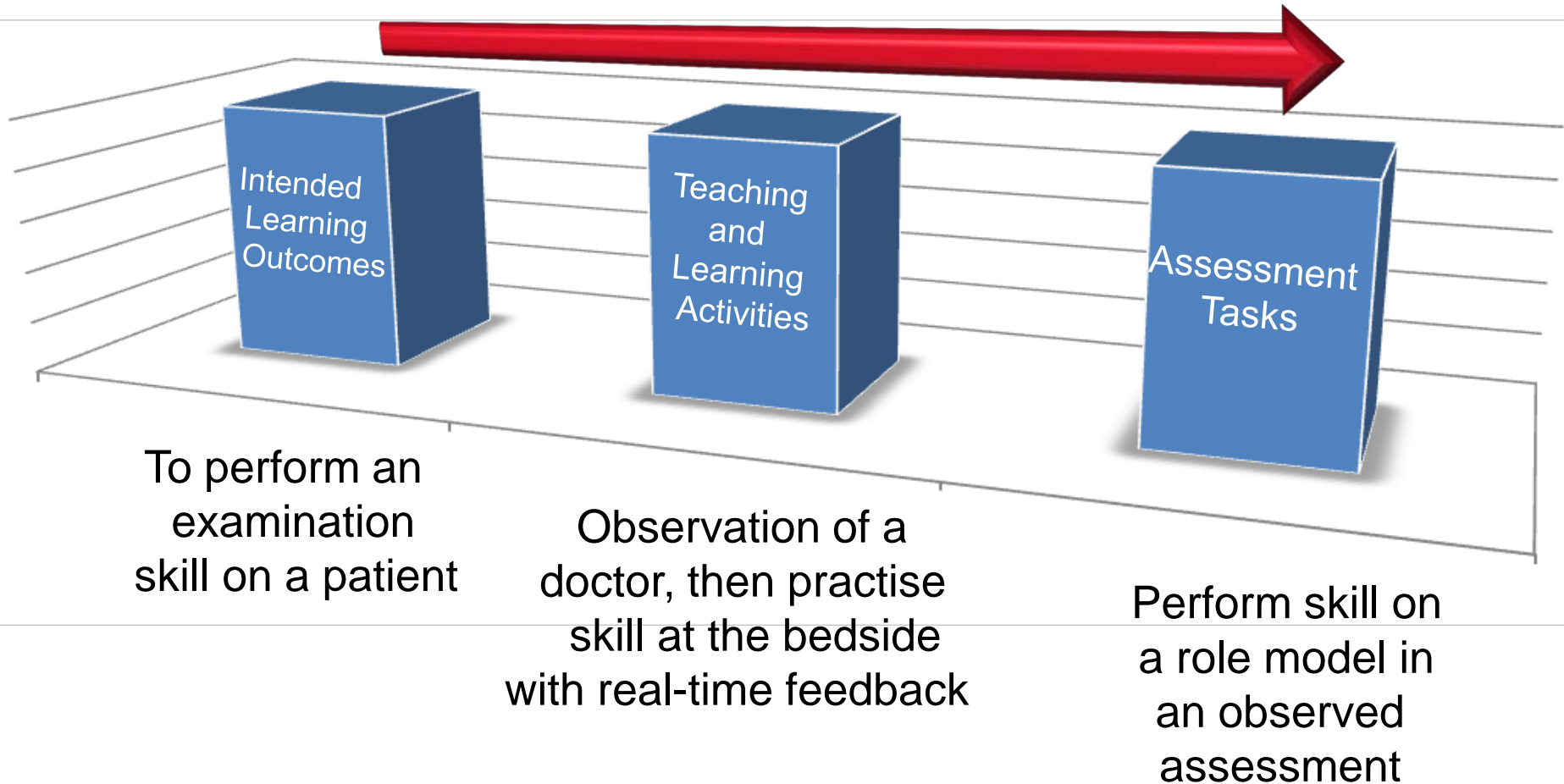
PRODUCT



Adapted from Trigwell, K. & Prosser M. (1996). *Towards an understanding of individual acts of teaching*. HERD.



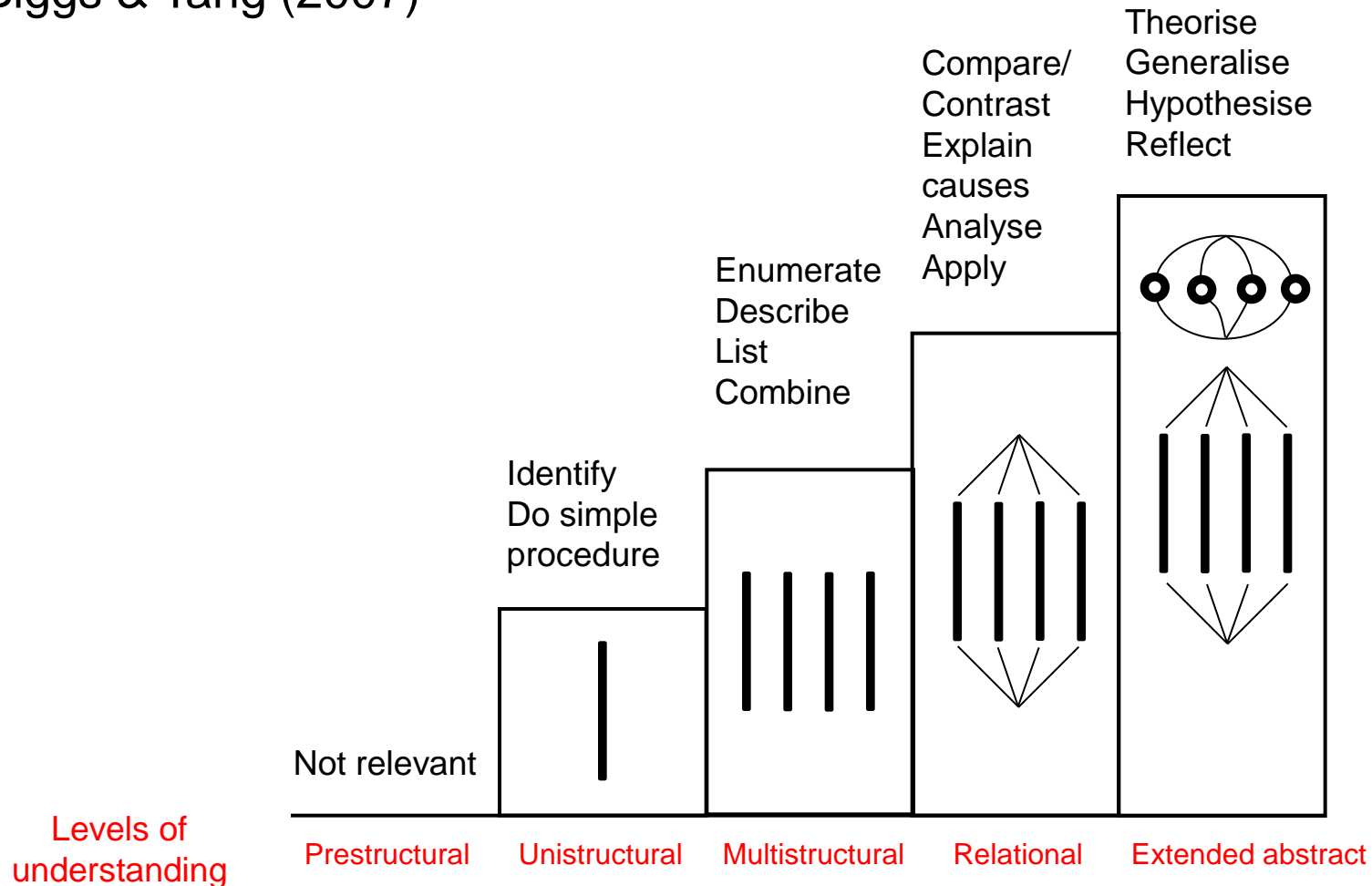
CONSTRUCTIVE ALIGNMENT





Structure of Observed Learning Outcomes (SOLO) taxonomy

Biggs & Tang (2007)






Steps (order of 1-3 may change)

1. Use a '**theory**', model, framework or a substantial teaching tip to ground the initiative and provide the justification for action
2. Identify an intervention, or a current **practice**, or a collection of information that might lead to enhanced learning (preferably linked to the theory)
3. Formulate an investigative **question** related to teaching and/or student learning in the chosen context
4. Conduct an investigation (empirical, theoretical or literature-based) which addresses the question [with appropriate **method**]
5. Produce a **result** and some form of public artefact
6. Invite peer review on the clarity of each of the theory, practice, question, method and result steps of the procedure.



Who should be engaged with SoTL?

Level	Purposes	Verified by	Knowledge	SoTL	Who should do it?
					0% 100%
1	Inform self	Self	Self	No	
2	Inform local	Local peers	Local	Yes	
3	Inform the world	Internat. peers	Inter-national	Yes (o/l)	 ?



Why level 2?

Scholarship of Teaching and Learning item	Disagree	Agree	Scale
I often ask other teachers to comment on my teaching ideas.		✓	Public
I often investigate questions related to how students learn in my discipline.		✓	Inquire
Improving my teaching is more effective if reviewed by my colleagues.		✓	Review
I can explain what concepts, models or theories underpin my teaching in this subject.		✓	Theory

Why should all faculty do level 2?

Pearson Correlation co-efficients for Approaches to Teaching and Scholarship of Teaching

Variable		Theory	Public	Inquire	Review
CCSF		.30*	.42**	.43**	.43**
ITTF		-.27*	-.12	-.13	-.36**

CCSF = Conceptual Change/Student-focused approach to teaching

ITTF = Information Transfer/Teacher-focused approach to teaching

N = 56, *p<.05; **p<.01; ***p<.001

Preparing the ground for SoTL might involve:

- › find out who in your department is already engaged in SoTL
- › contact CoESP to see what they do and/or can do
- › establish or join a network of university teachers with whom you can share your thoughts on teaching
- › become familiar with learning ‘theories’ and teaching ideas and frameworks (see Chapters 1 and 2, of Hunt & Chalmers, 2012)
- › attend research conferences that include teaching and learning in your discipline, and conferences about teaching and learning
- › find out what sorts of SoTL investigations are acceptable.
e.g. institutional support for the method used

Getting started

- › List the questions related to your teaching or your students' learning that you would like to know more about
- › Search the literature for answers to those questions. If not answered ...

A very useful starting resource is :

- › *A Tertiary Practitioner's Guide to Collecting Evidence of Learner Benefit*
- › (Alkema 2011) – from this web-link

› <http://akoatearora.ac.nz/download/ng/file/group-4/a-tertiary-practitioners-guide-to-collecting-evidence-of-learner-benefit.pdf>

- › Be clear about your purpose (level 2 or levels 2 and 3)

Evaluation as SoTL

Evidence-based educational evaluation (General):

Evidence from more than one source/method

(for example, Guba & Lincoln, 1985)

Contextualised information can also be found in standard university teaching development texts:

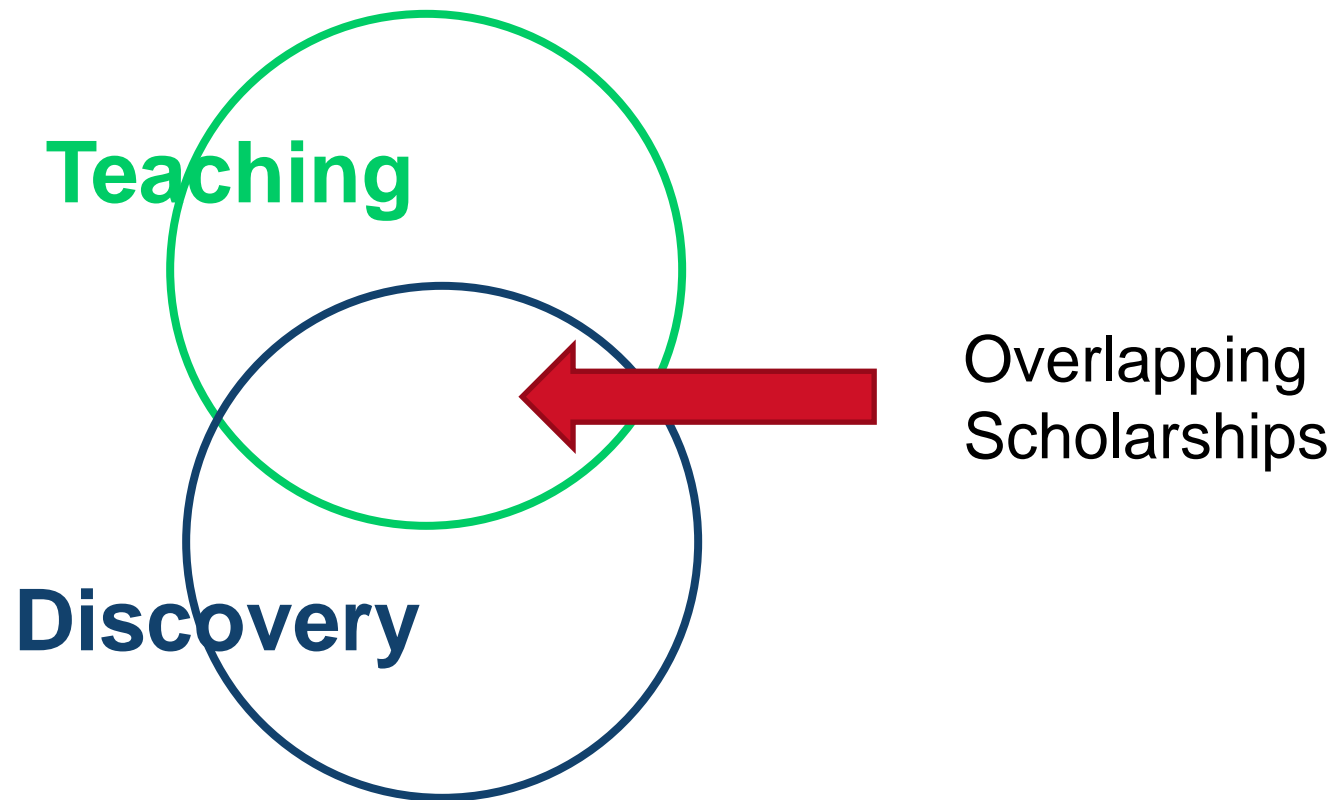
(for example Ramsden, 2003, *Learning to Teach in Higher Education*)

Short, practical guides:

(for example Knight, 2002, *Small Scale Research: Pragmatic inquiry in social science and the caring professions*)



Overlapping scholarships

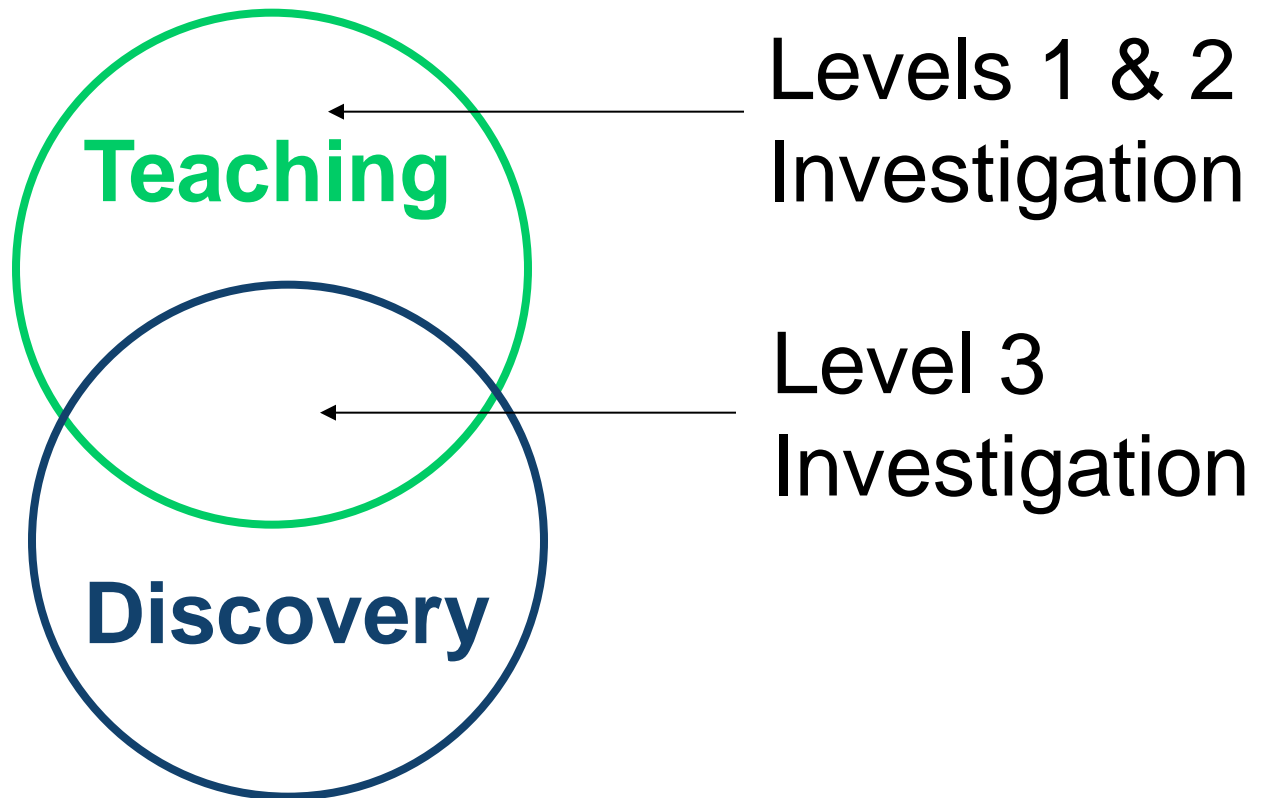


Example: An investigation designed as a result of a literature-informed discussion, in a biology department, about student learning in relation to the use of constructive alignment in teaching biology.

The study has a focus on the department, and is intended for use in improving learning, but also includes departments in other universities, with an eye on publication in the biology education literature.



Scholarship of:



Level 3 engagement

A practical approach to a successful outcome is to be a part of a team of investigators that includes someone familiar with social science research.

They can provide :

- guidance on methodology and analytical techniques,
- interpretation of research texts, e.g. Cohen et al. (2007) and Tight (2003).

Level 3 engagement: All good research practices apply

Align investigation background, question, & method

Read related applications

Complete a thorough search for what has already been researched

Ensure that anticipated results are likely to be new knowledge

Allow time to prepare the application/proposal

Involve peers at all stages

Marrying results with literature

Ethics approval may be needed for publication



Engaging in SoTL is most likely to be a rewarding experience if it is seen as an integral part of teaching, and engaged in, with others, as questions about teaching arise during practice