



University
of Glasgow

LEADS CPD Series: Scholarship of Teaching and Learning

Designing Data Collection and Analysis

Dr Michael McEwan

Head of Subject ADD, Programme Coordinator



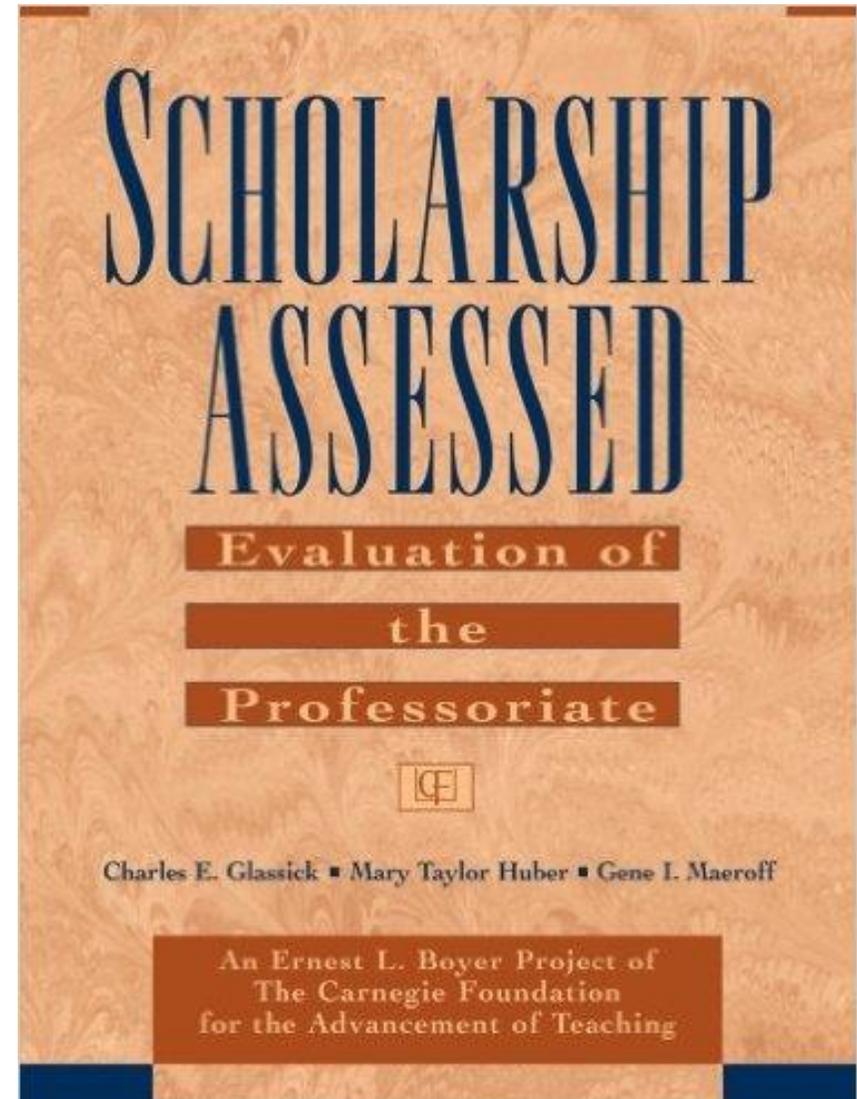
This session moves from formulating scholarship questions towards deciding how you'll answer them.

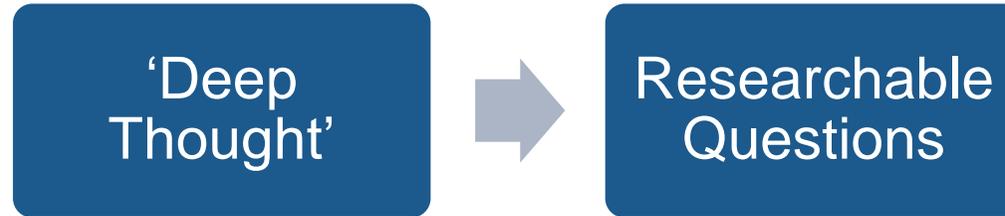
- What counts as data?
- What kind of data do you need?
- How can you plan your data collection, management and analysis?

Glassick's Framework:

1. Clear goals
2. Adequate preparation
3. Appropriate methods
4. Significant results
5. Reflective critique
6. Effective dissemination

Designing any project
starts with your question.
Methods always follow
from that!





Interesting	Motivating but not to the point of introducing bias
Relevant	Addresses a 'gap' within a specific context
Feasible	Bounded scope
Ethical	Although we will address ethics later, ethics need to be considered from the outset
Concise	Precise and defined
Answerable	Consider your interrogatives!

The relationship between student preparation and participation in tutorials:

What is the relationship between the amount of time level 1 History students' in my tutorial group report that they spend on tutorial preparation and the number and quality of comments they make in a tutorial?

Do you have any goals we could work with for this session?

engagem... ing activities in a lecture on student

An exploration of level 3 Pharmacology students' perceived engagement in response to a lecture with problem solving activities in comparison to lectures without such activities

‘Deep
Thought’



Researchable
Questions

Teaching and Learning in
Higher Education

Disciplinary Approaches to Educational Enquiry

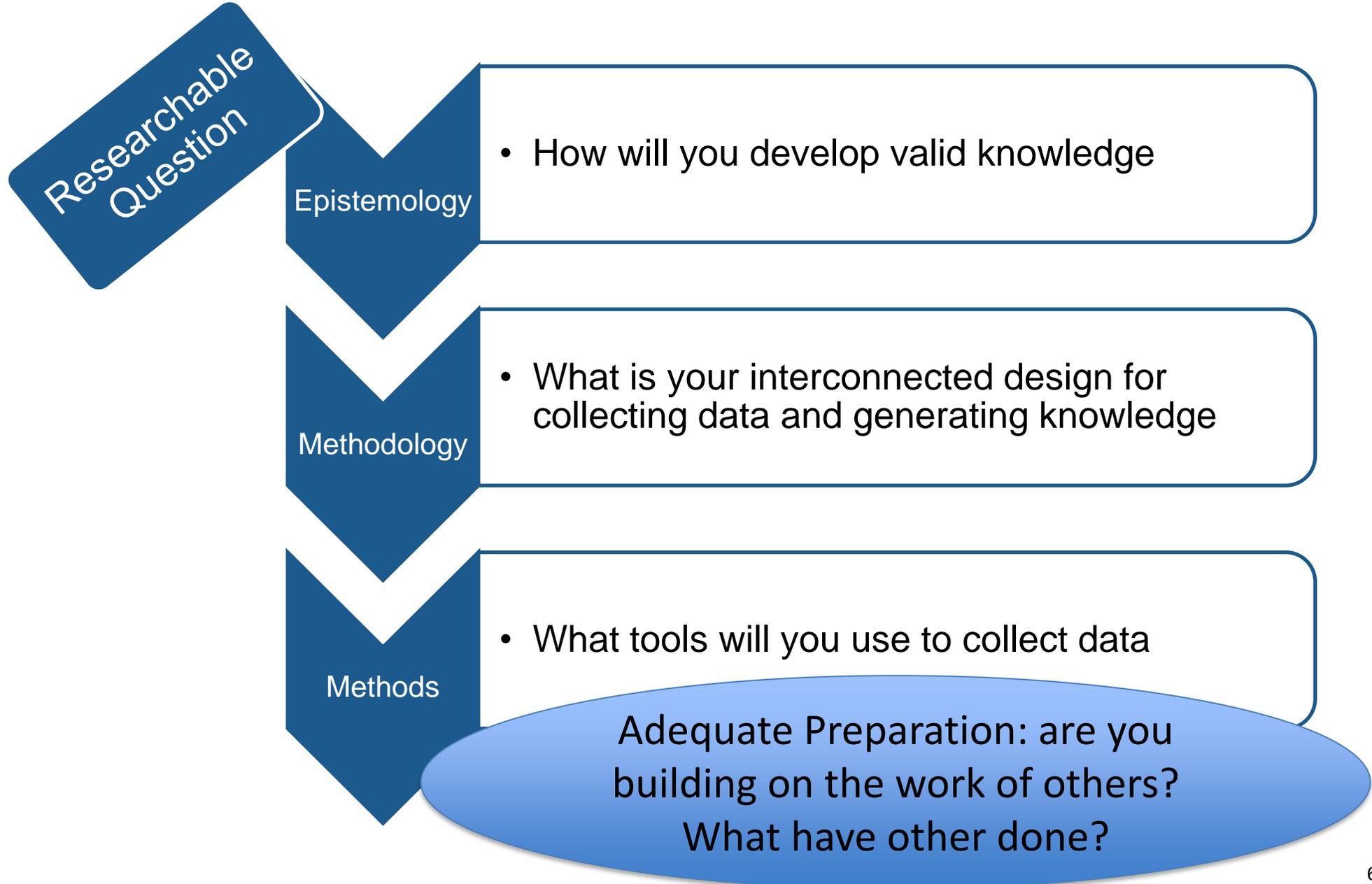
Elizabeth Cleaver, Maxine Lintern and Mike McLinden



The literature

- What is already known about your goal?
- Can you define ‘the gap’?
- How have other tackled similar questions?

Cleaver, E., Lintern, M., McLinden, M., & Askews & Holts Library Services. (2014). *Teaching and learning in higher education: Disciplinary approaches to educational enquiry*. London: SAGE Publications Ltd.



Epistemology will influence your research design because it will impact on your view of what is acceptable/valid knowledge. As will your discipline...



Which is why you
start with your
question/goals!

Knowledge as
experience

Knowledge as
communicable

Knowledge as
empirical data

Knowledge as
action

This will impact on what you believe to be valid data which will, in turn, impact on your methods for collecting that data.

Researchable
Question

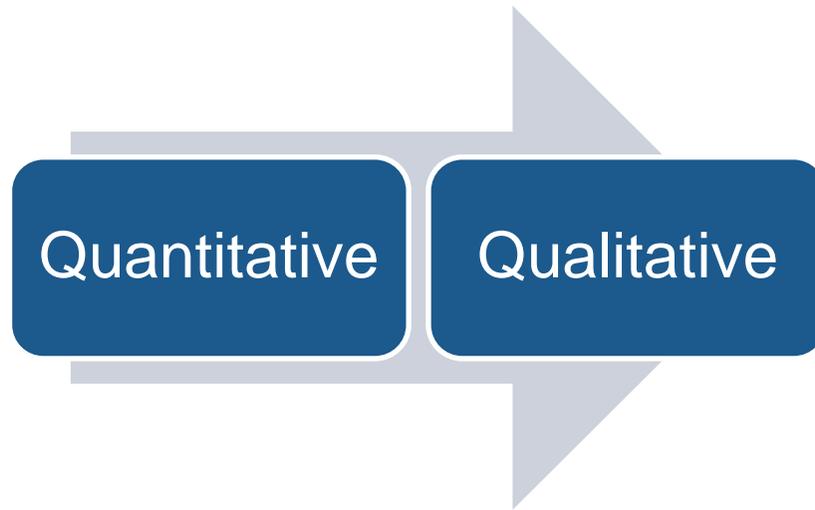
Do you want to know about experiences and actions?

QUALITATIVE

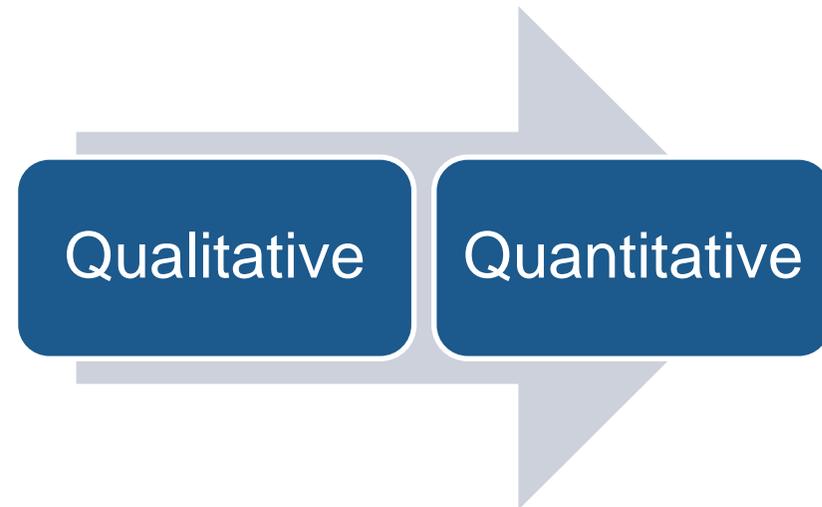
Do you want to find overwhelming evidence and try to
'prove' something or generalise?

QUANTITATIVE

Or is it a bit of both?



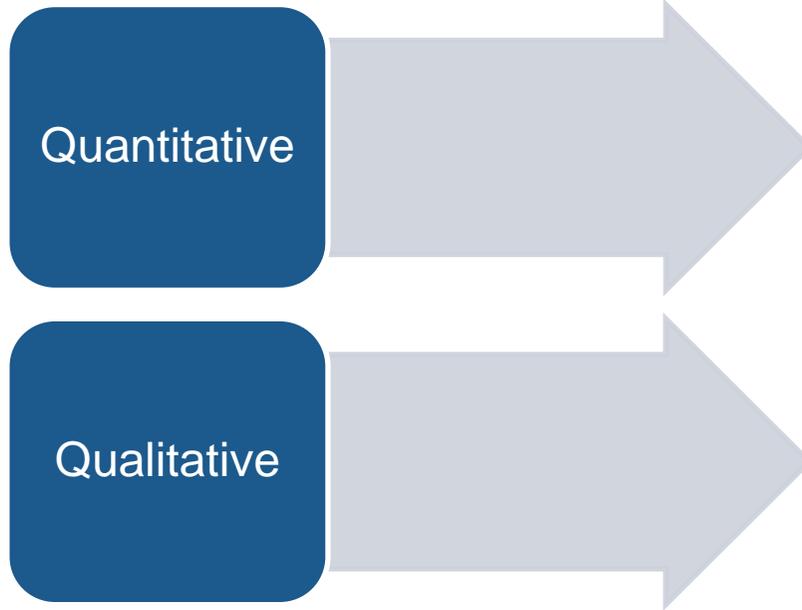
Sequential Explanatory Design



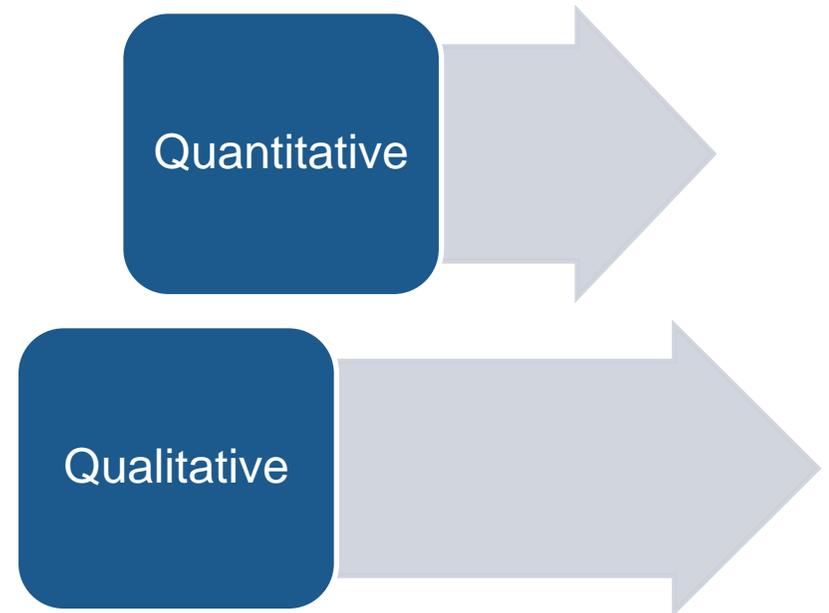
Sequential Exploratory Design



Concurrent Triangulation



Concurrent Nested Triangulation



Level 1: Learner's reactions/preferences

e.g. student satisfaction, NSS, course evaluations – all proxies of student learning.

Level 2a: Modification of attitudes and perceptions

level of motivation, engagement, enthusiasm – these can be seen as proxies of student learning

Level 2b: Acquisition of knowledge and skills

student outcomes in terms of assessments or declared knowledge/skills – a more definitive measure of student performance and learning

Level 3: Change in behaviour

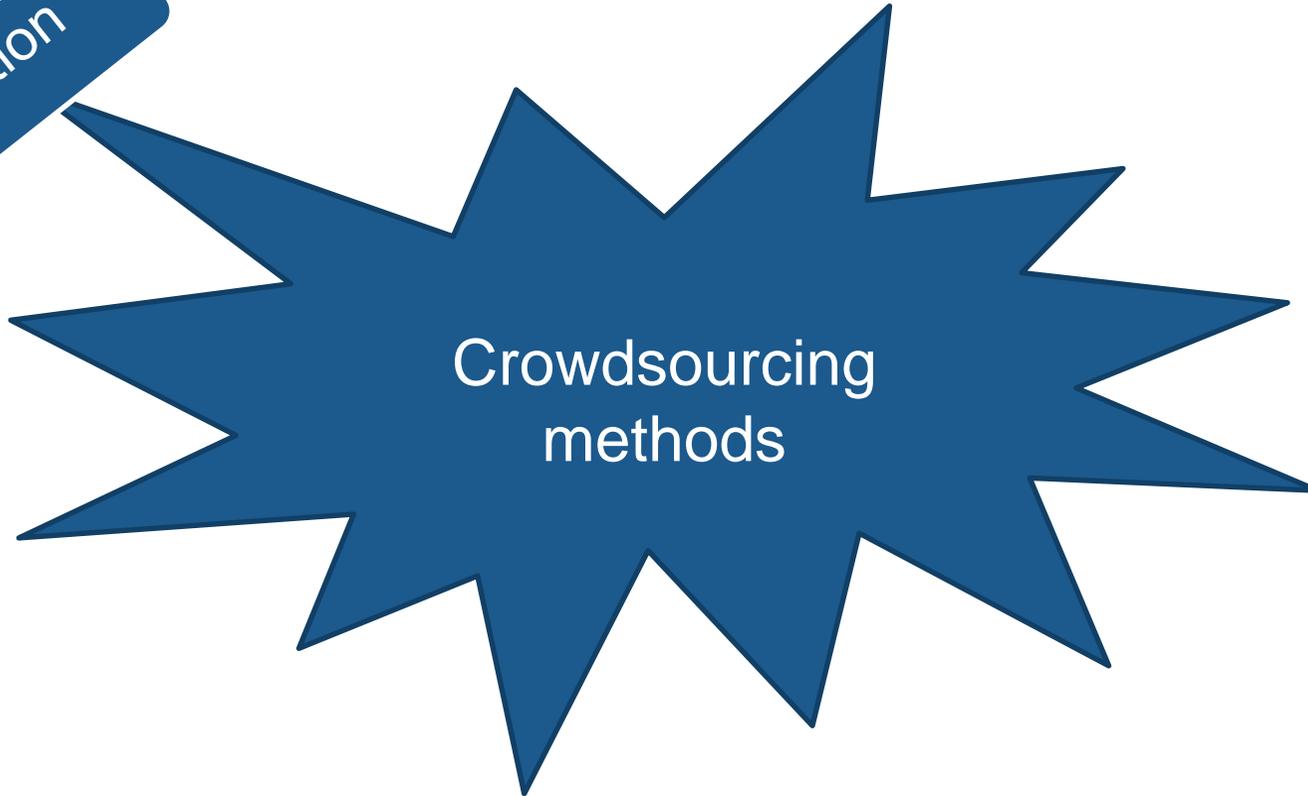
the impact of practice/intervention on students in terms of the activities/behaviours engaged in – a measure of the student learning process

L1: Learner Preferences	L2: Attitudes	L3: Student Learning Gains	L4: Behaviour
Course evaluations	Observational data	Assessment data	Intervention data
NSS	Validated instrument	Pre-entry data	Observational data
PTES	'Big' data	Confidence logs	Stakeholder views
Validated instrument	Attendance data	Pre-post test	Longitudinal data
CATs		Competence tests	
'Big' data			

Researchable
Question

Crowdsourcing
methods

Researchable
Question



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