# Challenges facing
# a BEME systematic review of
# *The contribution of theory to the effective development & delivery of interprofessional curricula*

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**In-2-theory** Interprofessional Theory, Scholarship and Collaboration

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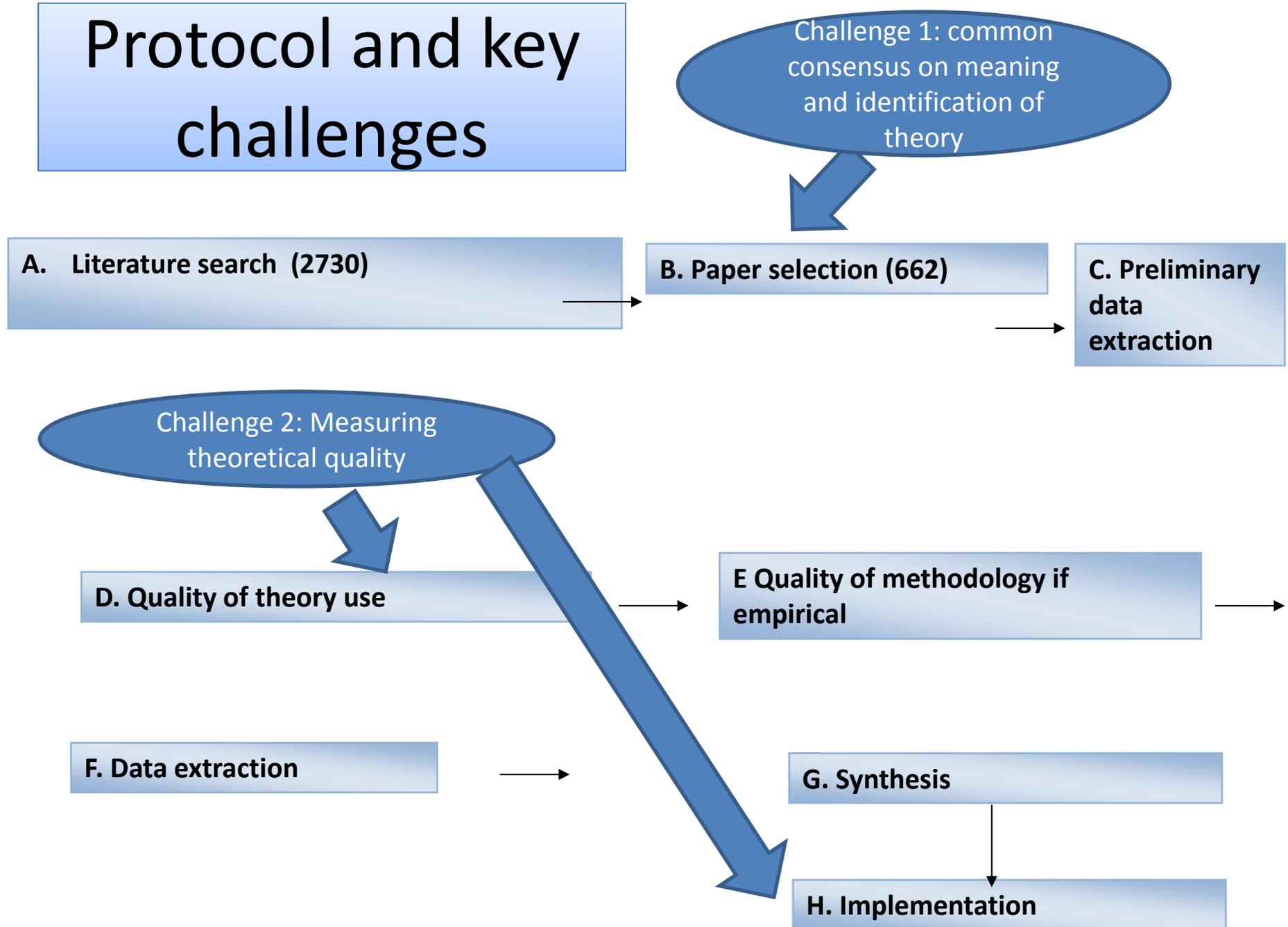Liz Anderson, University of Leicester, UK, Reviewer

# Aim and rationale of presentation

- Brief introduction to remit of review

- Sharing some challenges to a review on contribution of <u>theory</u> to medical education

- Practical take home messages



- Target audience: fellow and new BEME reviewers
- Need to share methodological challenges with international, national, regional hubs

# Utility of review for Medical Educators

- IPE theory less but not any more.

- The review will guide:

  - The design and evaluation of IPE curricula with strong theoretical underpinnings.

  - Selection and application of theories fit for purpose.

# Protocol and key challenges

**Challenge 1: common consensus on meaning and identification of theory**

A. Literature search (2730)

B. Paper selection (662)

C. Preliminary data extraction

**Challenge 2: Measuring theoretical quality**

D. Quality of theory use

E Quality of methodology if empirical

F. Data extraction

G. Synthesis

H. Implementation

# Challenge 1: defining and identifying theory

**Definition of theory**

- Set of propositions that link concepts together though a rational argument.

- Predict, describe, explain, prescribe or organise a particular phenomenon. (Walker & Avant, 2005;Jary and Jary, 1995; Fawcett & Downs, 1992). The phenomenon in question is IPE.

**Definition of Interprofessional education**

- When students from two or more professions learn about, from and with each other to enable effective collaboration and improve health outcomes (WHO, 2010.p.10).

**Paper selection**

Selection framework

Pilot 1

Inclusion and exclusion criteria

| THEORY | |
|---|---|
| Can you identity a concept from the title or abstract* (A concept is a word or phrase that describes an abstract idea or mental image of some phenomenon)? | YES/NO |
| Can you identify a clear proposition being presented in the abstract or title of paper (a proposition is a declarative statement about a concept or the relationship between concepts. These may be relational and non relational). i.e. is a theory/proposition being tested deductively | YES/NO |
| Is reference made explicitly to an established theory in this paper? | YES/NO |
| Is the theory/concept or proposition applied to an IPE curriculum (either description evaluation, research, theoretical piece/reflection)* | YES/NO |
| CURRICULUM | |
| Is there evidence that the curriculum is written down in some form (curricula on paper) Papers may describe how the and by whom the curriculum is delivered (curricula in action)* | YES/NO |
| Does this paper describe the design of an interprofessional curriculum, the evaluation of an interprofessional curriculum, or describe research to understand the outcomes/processes of an interprofessional curriculum ?* | YES/NO |
| Is the curricula (presented, evaluated or researched) a planned event* | YES/NO |
| Are there intended outcomes to the event?* | YES/NO |
| Are interprofessional learning outcomes evident?* | YES/NO |
| It is designed for the many not the individual? * | YES/NO |

20 papers whole team

Poor agreement on what theory is

# Try, try, try again

Second pilot with SH, RP, CJ
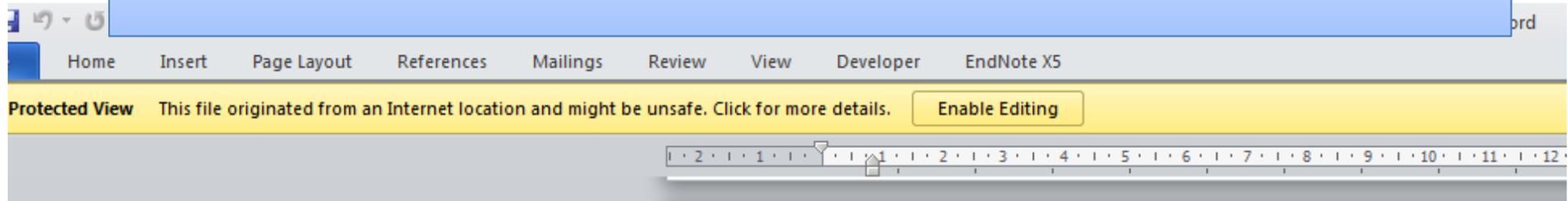
More simplistic framework

Inter rater reliability

Unacceptable inter rater reliability

| Reviewer Check | Accepted (yes theory, Yes IPE) | Rejected (no theory, Yes IPE) | Rejected (no theory, No IPE) | Total |
|---|---|---|---|---|
| Sarah/Carol measure of Disagreement | 5/25 (20%) | 2/10 (20%) | 0/15 (0%) | 50 |
| Sarah/Richard measure of Disagreement | 9/25 (36%) | 9/15)(60%) | 0/10 (0%) | 50 |

# Seeing inside each other's heads:

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related to community health and successful partnerships have b
community agencies.

C GD

Agree GD

Salvatori, P.S., Berry, S.C. & Eva, K.W., 2007. Implementation and e
interprofessional education initiative for students in the health p
in Health and Social Care, 6(2), pp.72–82. Available at: 10.1111
6861.2007.00152.x.

This paper reports the results of a 2-year pilot study that involved 13
various health professions in 13 interprofessional education proj
western Ontario, Canada. The educational model was based on
problem-based, self-directed, small group learning and combine
placement with a series of interprofessional tutorials and other s
experiences. Project evaluation entailed the use of both quantita
outcome measures. Student ratings revealed a high level of lear
There was no change in student perceptions of interprofessional
between pre-test and post-test. A difference was observed betw
with rehabilitation students having more positive perceptions th
Qualitative analysis of student journals revealed four major ther
into interprofessional roles and the potential for collaboration: (i

- Each person extracts into MS Word abstract and titles of allocated papers stored on Mendeley.

- Each paper abstract reviewed for presence of IPE and presence of theory.

- Potential theory highlighted.

- Comments annotated by both reviewer 1 and 2.

Introduced preliminary data extraction phase
- highlighted theory
- empirical/non empirical
- Coles and Grant model

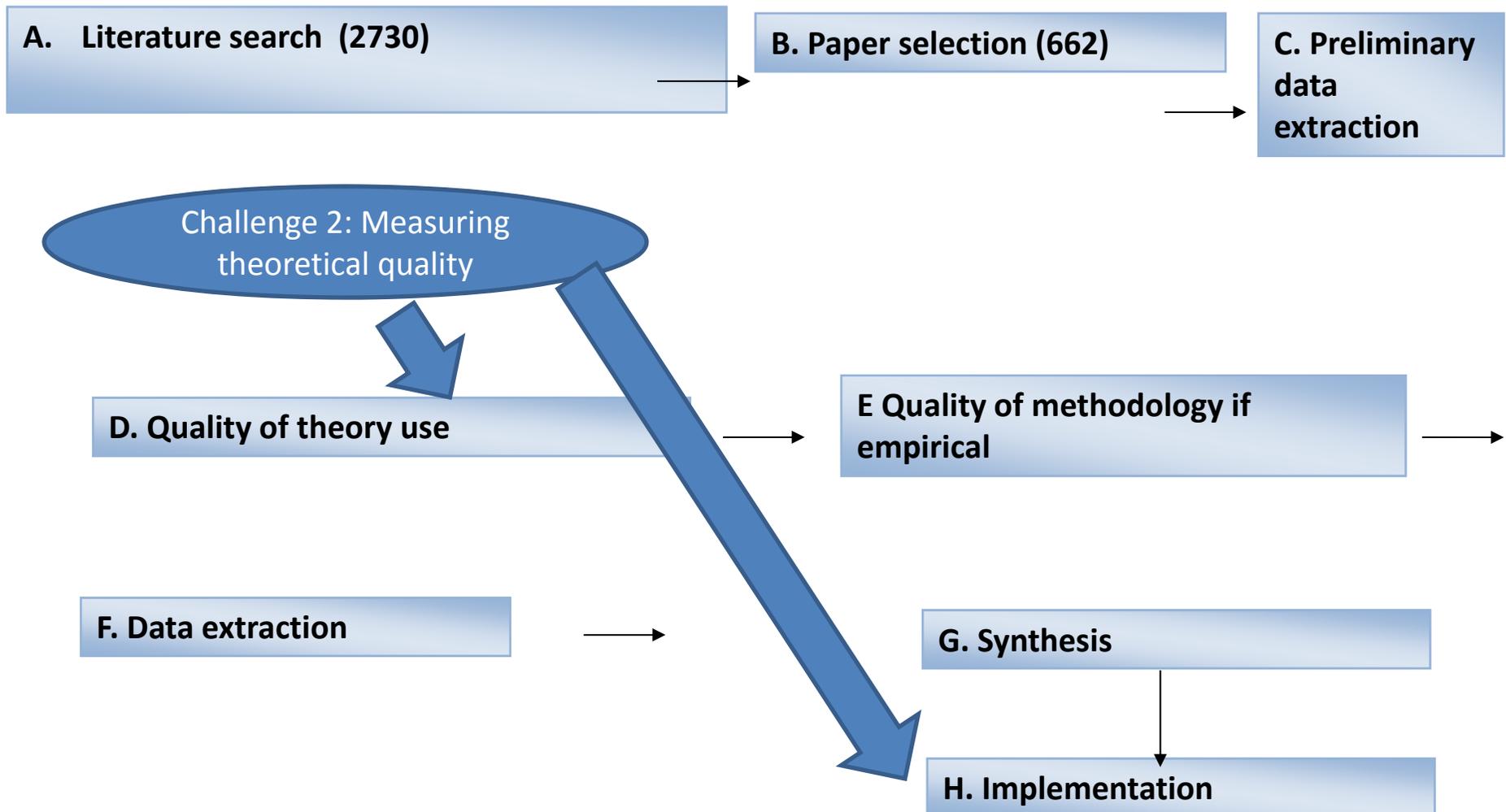## Iterative definition of what is theory

| SARAH | WHAT THEORY IS | WHAT THEORY IS NOT |
|---|---|---|
| | It is when authors have given an explanation of why they have done something, chosen to measure something.<br><br>Individual concepts , builds to proposition link to theory; so identify concepts for benefit of doubt.<br><br>It is when they make a prediction and test it. (e.g. when they have applied a predesigned model/framework to structure their thinking (e.g. Kirkpatrick)<br><br>About using a predetermined framework to help describe, explain, predict or measure a phenomenon. | What theory is not.<br><br>It is not an education model, because this is when they have said what they have done and not why they have done.<br><br>It is not what students learn at the university, that they then put into practice, i.e. when they say I learn about what communication was and then tried to communicate in practice.<br><br>It is not simply describing the outcomes expected of IPE (e.g. we taught them communication skills). It has to articulate why communication skills are necessary (predict what they do) |

# Inter rater reliability not so bad

- Clarified individual decision making processes.

- Main problem: poor team communication and use of Mendeley and other logistics.

- Closer examination shows 100% agreement on IPE definition fine; and 90 to 95% agreement on theory.

- Some of theory disagreement related to more/less conservatism.

- Clearer articulation of theory required

# Protocol and key challenges

**A.   Literature search  (2730)**

**B. Paper selection (662)**

**C. Preliminary data extraction**

Challenge 2: Measuring theoretical quality

**D. Quality of theory use**

**E Quality of methodology if empirical**

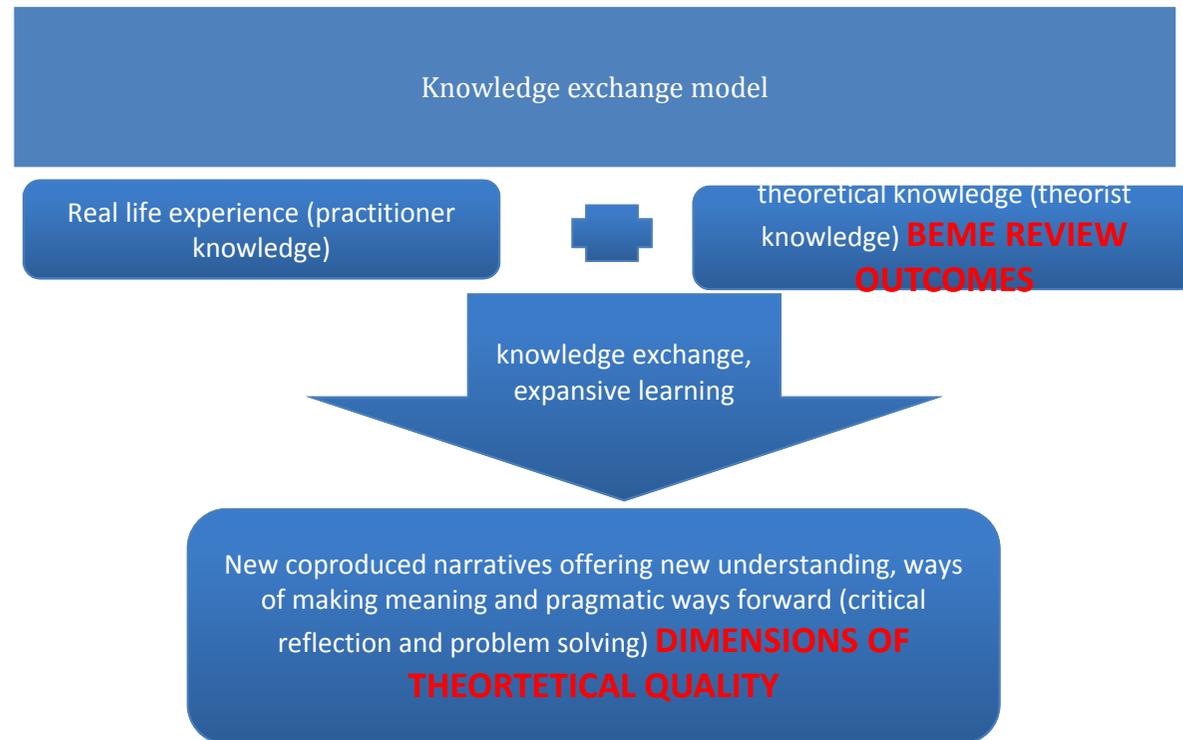**F. Data extraction**

**G. Synthesis**

**H. Implementation**

# Challenge 2: Establishing Theoretical quality

Framework assessing use of theory in research(Fawcett 2005):

- Pragmatic Adequacy
- Parsimony (Einstein)
- Internal consistency
- Testability
- Operational adequacy
- Empirical adequacy

- **Papers selected on a minimum level of pragmatic adequacy**

# Implementation: theory into practice

Knowledge exchange model

Real life experience (practitioner knowledge)

theoretical knowledge (theorist knowledge) **BEME REVIEW OUTCOMES**

knowledge exchange, expansive learning

New coproduced narratives offering new understanding, ways of making meaning and pragmatic ways forward (critical reflection and problem solving) **DIMENSIONS OF THEORTETICAL QUALITY**

- Running in parallel to BEME review
- Theoretical framework to knowledge exchange (creating terrains of knowledge -Hammick,1998-, Narrative, PBL)
- Workshops apply dimensions of theoretical quality and findings of BEME review (paper guides not enough for some).

# Key challenges and take home messages for a BEME review on theory

- Theory specific challenges
  - Defining and identifying theory
  - Development of theoretical quality assessment tool
  - Implementation of theory into practice
- Take home message
  - Importance of sharing methodological challenges with fellow reviewers
  - Developing logistical solutions to improving communication between team members
  - Importance of piloting each phase of the protocol (incl. frameworks, communication strategies, database sharing and implementation)

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# THANK YOU

# QUESTIONS

# References

- Fawcett, J., 2005. Criteria for evaluation of theory. *Nursing science quarterly*, 18(2), pp.131–5

- Hammick M. 1998. Interprofessional education: Concept, theory and application. J Interprof Care 12:323–332.