Challenges facing *a BEME systematic review of the contribution of theory to the development & delivery of effective interprofessional curricula in health professional education*

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In-2-theory
Interprofessional Theory, Scholarship and Collaboration

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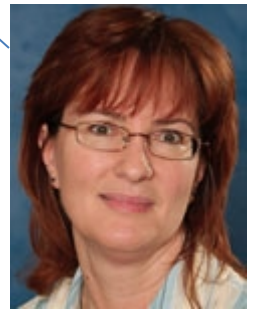

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interprofessional theory, scholarship and collaboration

Content

- Brief introduction to
  - Context
  - Review questions
  - Protocol (see handouts)

- Focus on one of two challenges facing the review team (see handouts for second)
- Practical take home messages

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PILOT

PILOT

Literature search

Guided by BeHEMoTh framework and (**Be**haviour; **H**ealth condition; **E**xclusions; **Mo**dels or **Th**eories).((Booth and Carroll, in press) and Freeth et al. 2002; Reeves et al. 2010

Paper selection

Selection framework

Validity/trustworthiness of paper in general/methodology

Not a selection criterion but a field in the extraction procedure BEME tool or CASP framework for each methodology

Assessment of paper for overall validity/quality/trustworthiness (outcome measure rather than exclusion criteria): hypothesis: lower quality papers may use theory less effectively

No rejection of papers on grounds of quality as want to assess relationship between theory use and quality of paper

Quality of theory use

Not a selection criterion but a field in the extraction procedure

Assessment of paper for overall quality of theory use

Assessment tool based on Fawcett and Downes (1995), Walker and Avant (2005), Wallis, (2010)

No rejection as want to identify in what contexts theory is being used and how and unclear if quality of theory assessment is hierarchical or merely a classification system

Data extraction

Do these variables answer the original research questions

Theory employed; Nature of outcomes

Nature of process; Stakeholders

Educational and contextual context

quality of paper (as dependent variable)

quality of theory use (as independent variable)

Synthesis

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Challenge 1: Placing "effectiveness"

- Contribution of theory to the development & delivery of **effective** interprofessional curricula in health professional education
- Starting point
  - An effective IPE curriculum =objectives are achieved.
  - Judgment drawn only if the IPE intervention has been formally evaluated .
  - Effectiveness measure through improvement in learning, behavioural, attitudinal, organizational and patient outcomes (Kirkpatrick, 1964)

- But
  - Outcomes of IPE will vary dependent on theory used.
    - Contact hypothesis: stereotype change:
    - Social capital: quality and longevity of relationships built
  - Can all outcomes be fitted into levels proposed by Kirkpatrick
  - Can we accept outcomes lie on a hierarchy or a continuum (Yardley and Dornan, 2012)
  - But the intervention here is use of theory. So what are the outcomes of using theory? Methodological quality?

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- Search limited to outcomes by

  S1 *interprofessional* AND *education* AND *outcomes* AND *theory*

- Papers rejected where theory is used to explain/predict process, curriculum delivery, or describe the structure of a curriculum

  – Lees, A., & Meyer, E. (2011). Theoretically speaking: use of a communities of practice framework to describe and evaluate interprofessional education. *Journal of interprofessional care*, *25*(2), 84–90.

  – O'Halloran, C., Hean, S., Humphris, D., & Macleod-Clark, J. (2006). Developing common learning: the new generation project undergraduate curriculum model. *Journal of interprofessional care*, *20*(1), 12–28.

- Contribution of theory to the **effective** development & delivery of interprofessional curricula in health professional education
  - How do we assess effective development and delivery if not through its outcomes?

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- Contribution of **effective use of** theory to the development & delivery of interprofessional curricula in health professional education
  - What are the outcomes of effective use of theory
  - Are we talking about effectiveness or quality?
  - As we measure quality of methodology of paper using CASP tools, so too is a tool required to measure the quality of the theory that has been applied.
- A framework developed from a combination of Fawcett and Downes (1992) and Walker and Avant (2005); Wallis (2008)

Theoretical quality

- Theory used is clearly articulated
- Parsimony and internal consistency: is the theory used clearly and concisely described (e.g. RIPLS and contact hypothesis)
- Does the theory underpin an issue of clinical or theoretical significance

- The concepts, propositions hypotheses derived from the theory are identified (e.g. social capital theory)
- Propositions created are validated with stakeholders (e.g. social capital workshop)
- Empirical adequacy: are adequate operational indicators derived from the theory identified

- Is this a hierarchy or is it a classification structure?

- **Abandon the word effective** altogether
  - An exploration of the variation and nature of theory use in the development & delivery of interprofessional curricula in health professional education
  - our secondary questions are constructivist rather than positivist in nature (Yardley and Dornan, 2012).
  - They are not about placing a number or a hierarchy on the way theory is used but who used it, in what context, the variation in theory used and the way it is used.

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- *What is the contribution of theory to the development & delivery of effective interprofessional curricula in health professional education*

- How is theory used in the development & delivery of interprofessional curricula in health professional education?

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Take home messages

- Clearly define “effective” and “theory”
- Reviews of theory are different from reviews of the outcomes or processes of an educational intervention
- More in common with a review of the effectiveness of a methodology
- Treat the review as an empirical research study:
  - does the research methodology and method fit the research question addressed;
  - Databases are data sources, search terms are variables

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Take home messages

- Overestimate the time required at the beginning of the review to get definitions, selection and quality frameworks right
- Piloting essential
- The importance of the librarian
- Working iteratively with papers and between subject headings and search terms
- Writing theory in my own title and abstracts

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References

- BOOTH, A. AND CARROL, C. (in Press) A simple method for identifying the theoretical basis for systematic reviews: the BeHEMoTh Procedure: A.Booth@sheffield.ac.uk
- ERAUT (2003) The many meanings of theory and practice, *Learning in Health and Social Care*, 2 (2), 61-65
- FREETH D, HAMMICK M, KOPPEL I, REEVES S, BARR H**.** (2002) *A critical review of evaluations of interprofessional education*. London: LTSN-Centre for Health Sciences and Practices
- HEAN, S., HAMMICK, M., MIERS, M., BARR, H., HIND, M., CRADDOCK, D., BORTHWICK, A. & O'HALLORAN, C., (2009a). *Evolving theory in interprofessional education: conclusion report res-451-26-0360.* Project Report. Poole, England: Bournemouth University
- HEAN S, CRADDOCK D AND O'HALLORAN C (2009b) Learning Theories and Interprofessional Education: A User's Guide *Learning in Health and Social Care* 8(4):250-262
- KIRKPATRICK DL (1994). *Evaluating training programs. The four levels*. San Francisco CA: Berrett-Koehler
- JARY, D. AND JARY,J. (1995) *Collins Dictionary of Sociology,* Glasgow: Collins
- FAWCETT, J. & Downs, F.S. (1992) *The Relationship of Theory and Research,* Philadelphia: F.A. Davis Company
- REEVES, S. ZWARENSTEIN, M., GOLDMAN, J., BARR, H., FREETH, D., KOPPEL, I. &HAMMICK, M. (2010) The effectiveness of interprofessional education: key findings from a new systematic review, *Journal of Interprofessional Care,* 24 (3), pp230-241
- YARDLEY, S. DORNAN, T. (2012) Kirkpatrick's levels and education 'evidence' *Medical Education* 2012; 46: 97-106.
- WALLIS, S. E. (2008). Validation of Theory : Exploring and Reframing Popper' s Worlds. *Review Literature And Arts Of The Americas*, *4*(2).
- WALKER L.O, & AVANT K.C, (2005). Strategies for Theory Construction in Nursing. Pearson Prentice Hall, Upper Saddle River, NJ.
- WHO (2010) *Framework for Action on interprofessional education and Collaborative practice,* Geneva: WHO

Background to IPE

- Interprofessional education (IPE) aims to enhance interprofessional collaborative practice (IPC) and better, more fluid care pathways.

- Interprofessional education occurs when two or more professions learn about, from and with each other to enable effective collaboration and improve health outcomes' (WHO 2010, p. 13).

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Importance of Theory

- Theory is a tool whereby we are able to define, predict, organise and explain IPE.
- Theory and practice are interdependent.
- Practice without a theory to guide it, amounts to malpractice
(Eraut, 2003)

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Current state of play for Theory in IPE

- Past decade: IPE accused of being theory-less (Freeth et al. 2002).
- Curriculum design and evaluations superficial, descriptive, little justification for why certain outcomes were being evaluated and potential processes at work (Hean et al., 2009a,b).
- Past 5 years an increasing number of IPE stakeholders who have begun to search for and apply theories from other disciplines: sociology, psychology and education.
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- A plethora of theory now exists, applied in a wide range of contexts, for different purposes and with different levels of rigour.

Utility of review

- For curriculum developers who wish to:
  - design rigorous IPE curricula with strong theoretical underpinnings.
  - appreciate range of theories on offer, their utility and their relationship with one another.
  - select and applying theories that are fit for purpose to reflect on the **why,** rather than just the **how**, of interprofessional curriculum design and delivery.
  - Ways in which theory can be used
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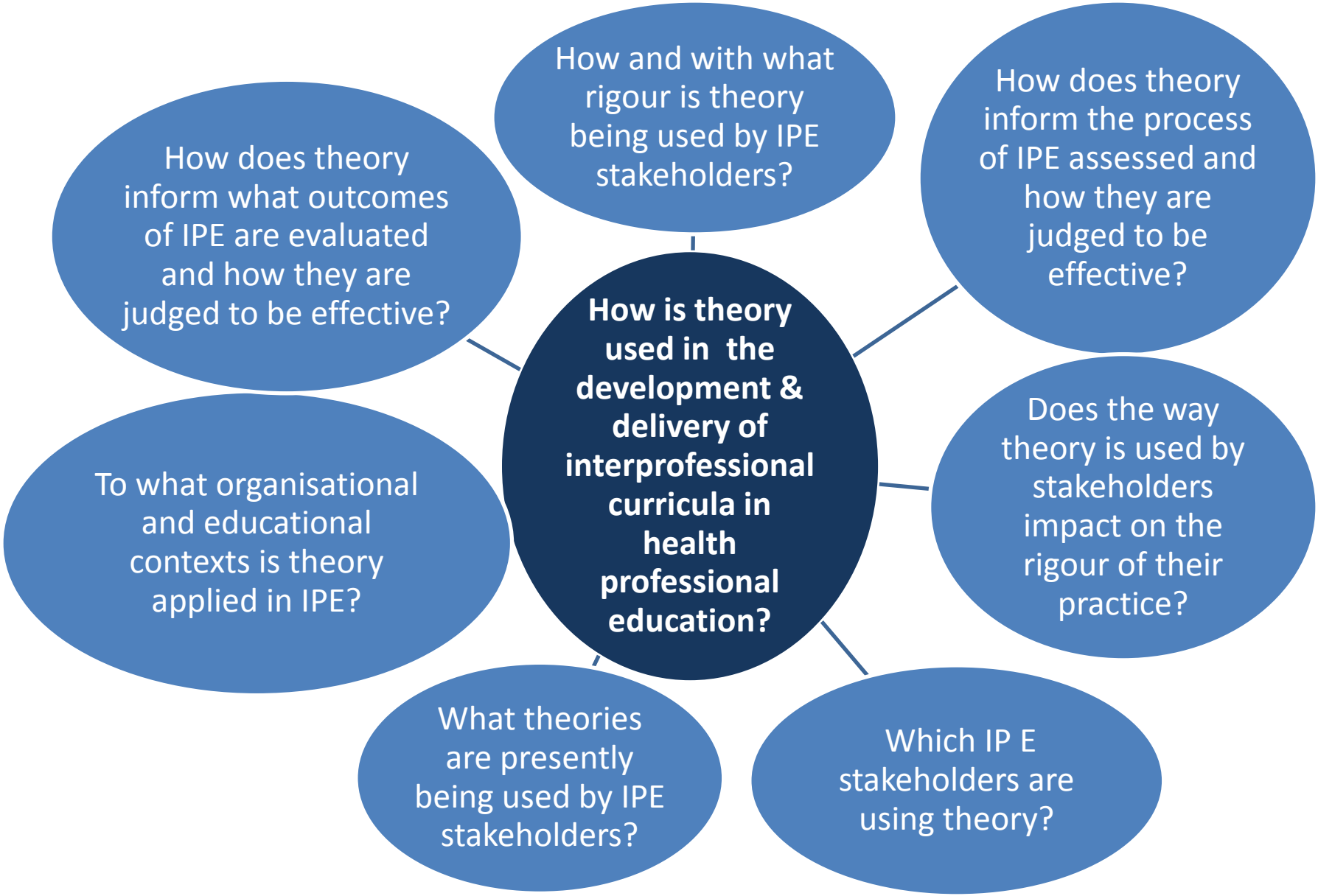

Challenge 2: Recognising theory

Theory defined as

- a set of propositions that link concepts together though a rational argument. These statements 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.

- Explored; different types of proposition (definitional, relational) meaning of concept, framework, model
- Is reference made explicitly to an established theory, conceptual framework or model in the abstract or title of paper?
- Theory versus concept
- Implicit use of theory
- Using theory deductively versus theoretical consciousness
- Grand theories versus middle range theory

- Working backwards

A definite yes

Baker, L., Egan-Lee, E., Martimianakis, M. and Reeves, S. (2011) Relationships of power: implications for interprofessional education, *Journal of interprofessional Care, 25: 98–104*

Interprofessional education (IPE) is considered a key mechanism in enhancing communication and practice among health care providers, optimizing participation in clinical decision making and improving the delivery of care. An important, though under-explored, factor connected to this form of education is the unequal power relations that exist between the health and the social care professions**. Drawing on data from the evaluation of a large multi-site IPE initiative, we use Witz's model of professional closure (1992) to explore the perspectives and the experiences of participants and the power relations between them.** A subset of interviews with a range of different professionals (n = 25) were inductively analyzed to generate emerging themes related to perceptions of professional closure and power. Findings from this work highlight how professionals' views of interprofessional interactions, behaviours and attitudes tend to either reinforce or attempt to restructure traditional power relationships within the context of an IPE initiative.

- **Clear reference to a model and its application**

A definite no

Furness PJ; Armitage H; Pitt R (2011) .An evaluation of practice-based interprofessional education initiatives involving service users. *Journal Of Interprofessional Care*25 (1), pp. 46-52.

There is little published evidence regarding the impact of service-user focused **interprofessional education** in the practice setting. This article reports evaluative case studies of two practice-based interprofessional initiatives, in which service users played a central role. These initiatives formed part of the Trent Universities Interprofessional Learning in Practice (TUILIP) project a collaboration between Sheffield Hallam University and the University of Nottingham. Practice settings were an acute mental health service and a community organisation offering care and services to adults with learning disabilities. Interprofessional initiatives were developed by facilitators, and empirically studied at each site. Facilitators, managers, practitioners, students and service users took part in interviews and focus groups to discuss their perceptions of the initiative in their practice setting. The study revealed participants' perceptions of the projects' aims, process and outcomes, factors which facilitated success or proved challenging, and their impact upon individuals, clinical practice and the organisations involved.

- **No theory, model or framework mentioned.**

A definite maybe

Carpenter, J. (995) Doctors and Nurses: Stereotypes and Stereotype Change in Interprofessional Education, *Journal of Interprofessional Care,* 9, No. 2 , Pages 151-161

Effective working relationships between doctors and nurses are often thought to be hampered by **inter-group stereotypes. It is argued that more collaborative teamworking would be enhanced by the fostering of positive stereotypes, including autostereotypes (stereotypes of one's own profession) and the diminution of negative stereotypes between the professions.** This paper presents data about stereotypes held by medical and nursing students who participated in a programme of interprofessional education. The existence of strong positive and negative stereotypes was demonstrated, together with considerable mutual inter-group differentiation: nurses were seen by both groups as caring, dedicated and good communicators and neither arrogant nor detached; doctors were confident, decisive and dedicated but arrogant. There was evidence of some beneficial effects of interprofessional education in diminishing negative heterostereotypes, at least over the course of the programme.

An example of multiple papers

- **Implicit use of theory and reliance on own knowledge**
- **Missed from search for *interprofessional* AND *education* AND *theory* search strategy**
- **Not indexed**

I don’t know

Reid R; Bruce D; Allstaff K; McLernon D (2006) Validating the Readiness for Interprofessional Learning Scale (**RIPLS**) in the postgraduate context: are health care professionals ready for IPL?*Medical Education* 40 (5), pp. 415-22.

Aims: This paper describes the process of validating the Readiness for **Interprofessional Learning** Scale (RIPLS) for use with postgraduate health care professionals.
Context: The **RIPLS** questionnaire has proved useful in the undergraduate context, enabling tutors to assess the readiness of students to engage in interprofessional learning (IPL). As a preliminary to undertaking an extended IPL project, the researchers tested the validity of the **RIPLS** tool in the postgraduate health care context.
Results: Three factors, comprising 23 statements, emerged from the statistical analysis of the survey data, namely, teamwork and collaboration, sense of professional identity and patient-centredness.

Conclusions: The **RIPLS** questionnaire was validated for use in the postgraduate context, thus providing researchers with a tool for assessing health professionals' attitudes towards interprofessional learning at practice level, community health partnership level or at a national level of education and training.

- **Not picked up in searches**
- **What is the theory? Is there a theory implicit?**

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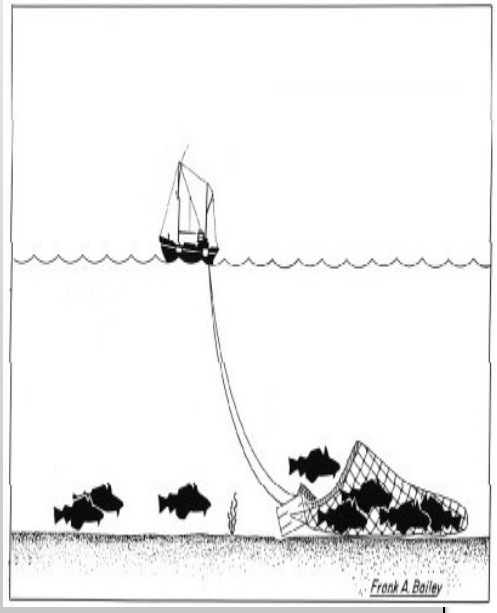
Killing Fish (Booth and Carrol, in press)

- BeHEMoTh framework
- (**Be**haviour; **H**ealth condition; **E**xclusions; **Mo**dels or **Th**eories).(Booth & Carroll, (in press.)
- Theor* Concept* Framework*Model*



- Trawl 1 (Exhaustive/Valid)
- S1: I*nterprofessional* AND *Education* AND *theory*
- Our definition of interprofessional, education and theory
- Trial in Medline 23 912
- Separation of interprofessional and education

- Trawl 2 (Relevant/Focused)
- *S1:* Education, Interdisciplinary AND Theories, models

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- **Depth Charging**:
  Search for theories that dominate in health education
  E.g. Cognitive Behavioural Theory, Health Belief Model, Theory of Planned Behaviour, Social Cognitive Theory

- **Fishing**:
  Using team's expertise in IPE theory. Seeks out theories that are known to be peculiar to the IPE context specifically.

- **Catching a sprat**
  Key citations that are commonly associated with models often used in IPE will be added to the search.

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	Fishing	Catching a sprat
•	Professional identity	Turner
•	Contact hypothesis	Hewstone, Carpenter, Allport
•	Intergroup differentiation	
•	Stereotyping	
•	Activity theory	Engestrom
•	Communities of Practice	Wenger
•	Scaffolding	Vygotsky,
•	Zone of proximal development	Vygotsky