RECAP

CLARIFICTION

An interesting EPOC protocol

Cochrane Database of Systematic Reviews

Implementation strategies for health systems in low-income countries: an overview of systematic reviews

| Protocol | | Overview |

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Theories models and frameworks

Implementation science workshop
Hawassa University, August 21-25, 2017

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Today

- THE RATIONAL FOR USING THEORIES/FRAMEWORKS/MODELS
- A FEW EXAMPLES

THE RATIONAL FOR USING THEORIES, FRAMEWORKS AND MODELS

Using or not using theory

- An expensive versions of trial and error, providing little or no knowledge about which factors successfully influenced implementation efforts.

Eccles et al., 2005

- Transferring theory to the design of studies is not straightforward and there are many theories and it is not clear which ones should be given primacy.

Bhattacharyya et al., 2006

Whether one uses theory or not, one needs to identify
- **how** an innovation and the implementation strategy produces certain outcomes,
- **explore** by which processes change is brought about, and
- **define** which contextual factors that are critical for success or failure

Why we do this

- Helps practitioners plan implementation and think ahead
- Guides researchers to decide which data to gather to describe and explain implementation
- May include hypotheses or theory about action steps needed and critical contextual influences

Theories, frameworks and models

A theory is "a coherent and non-contradictory set of statements, concepts or ideas that organizes, predicts and explains phenomena, events, behaviour, etc."

Bem S and Looren-de-Jong H, 1997

Models are specific and attempts to objectify the concept they represent – has value even if not complete

Frnkfort-Nachmias et al, 1996

A framework provides a frame of reference, assists in organizing thinking and guides the user on what to focus on.

Rycroft-Malone and Bucknall, 2010

# Types of theories, models and frameworks in Imp Sci

Table 1. Definitions of categories used to sort models

Category	Variable definition	Anchor definitions
Construct flexibility	Definition/flexibility of model constructs	1 = *Broad*: loosely outlined and defined constructs; allows researchers greater flexibility to apply the model to a wide array of D&I activities and contexts 5 = *Operational*: detailed, step-by-step actions for completion of D&I research processes
Dissemination and/ or implementation (D/I)	Focus on dissemination and/or implementation activities	*D-only*: Focus on active approach of spreading evidence-based interventions to the target audience via determined channels using planned strategies *D=I*: Equal focus on dissemination and implementation *I-only*: Focus on process of putting to use or integrating evidence-based interventions within a setting
Socioecologic framework	Level of the framework at which the model operates	*Individual*: Personal characteristics *Organization*: Hospitals, service organizations, factory *Community*: Local government, neighborhood *System*: Hospital system, government

Table 2. Categorization of D&I models for use in research studies

Model	Dissemination and/or implementation	Construct flexibility: broad to operational	Socioecologic Level					References
			System	Community	Organization	Individual	Policy	
Diffusion of Innovation	D-only	1		x	x	x		21
RAND Model of Persuasive Communication and Diffusion of Medical Innovation	D-only	1		x	x	x		22
Effective Dissemination Strategies	D-only	2		x	x	x		23
Model for Locally Based Research Transfer Development	D-only	2		x	x			24
Streams of Policy Process	D-only	2	x	x	x		x	25, 26

Tabak, 2012

Types of theories, models and frameworks in Imp Sci cont.

Nilsen, 2015
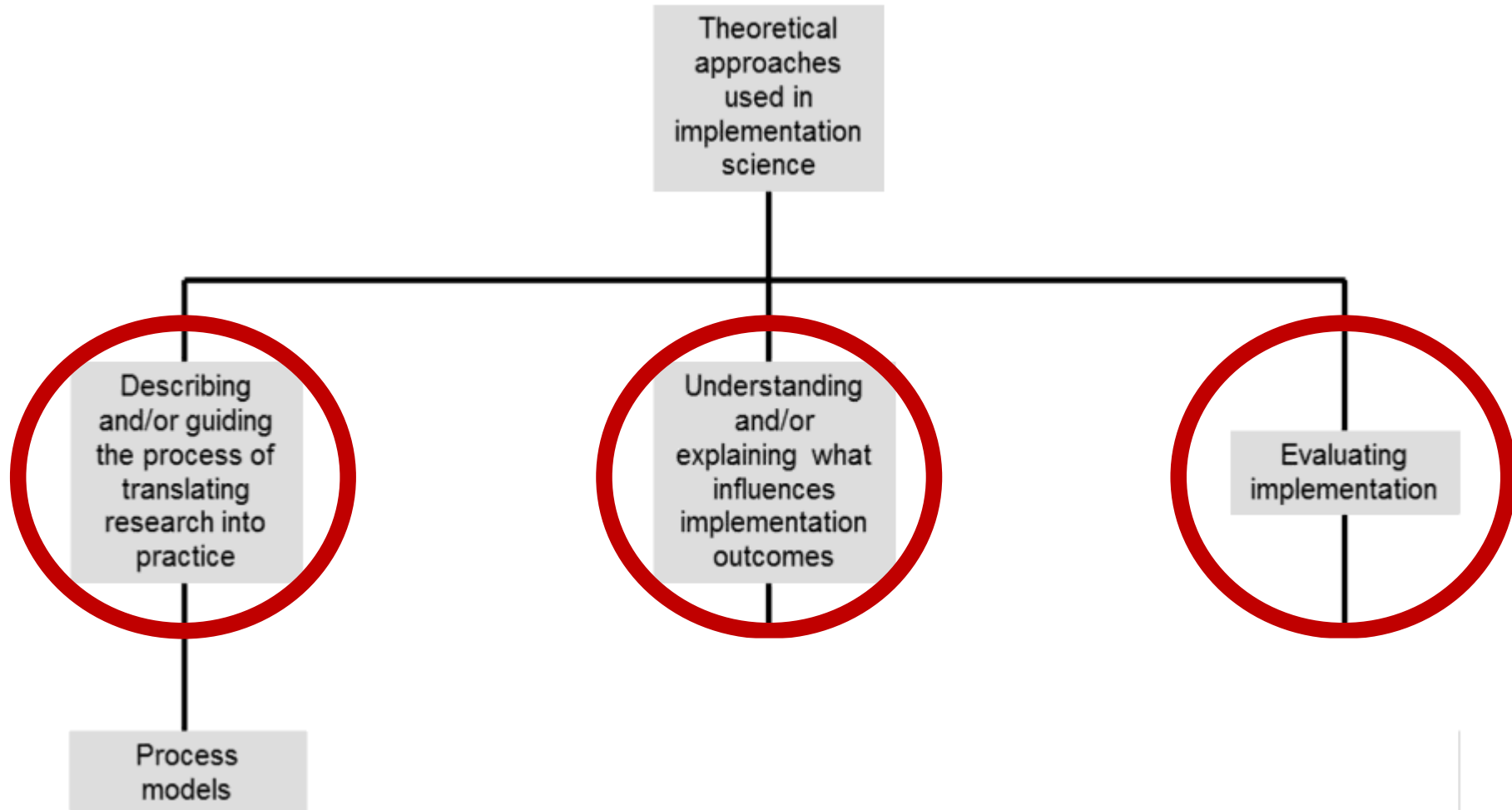
A FEW EXAMPLES

Some examples

- Theory of diffusion - Classic (determinant)

- Theory of planned behavior - Classic (determinant)

- Promoting Action on Research Implementation in Health Services framework – Determinant

- Integrated-Promoting Action on Research Implementation in Health Services framework – Determinant (but some process)

THE GODFATHER

a classic theory/determinant –
more towards passive spread

Mr. Rogers

- This theory seeks to explain how innovations are taken up in a population.

- An innovation is an idea, behavior, or object that is perceived as new by its audience.

- Diffusion is the process in which the *innovation* is *communicated* through certain channels over *time* among members of a *social system*.
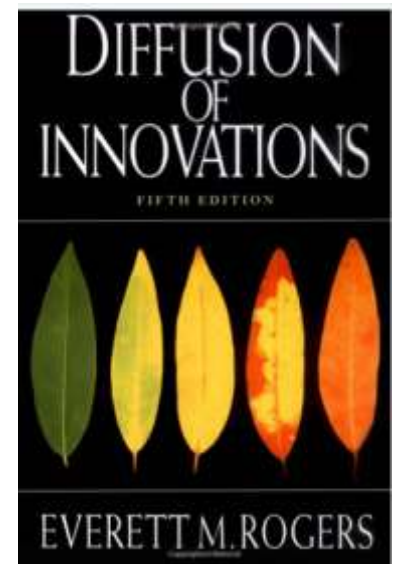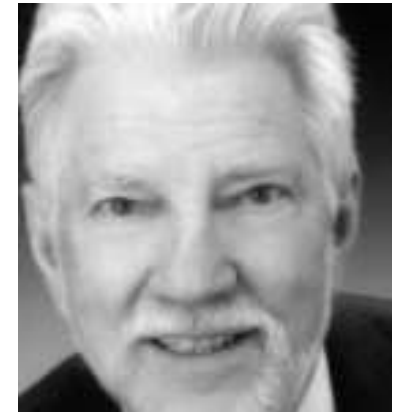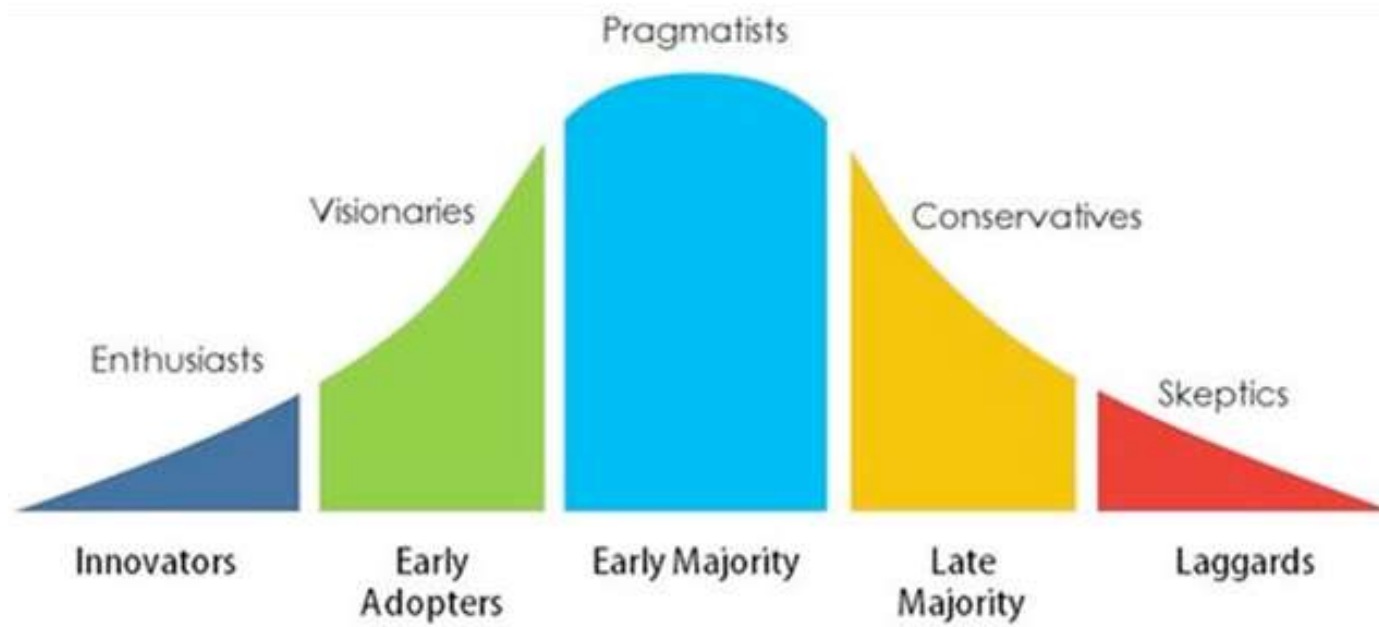
What qualities make an innovation spread successfully?

1. Relative advantage
2. Compatibility with existing values and practices
3. Simplicity and ease of use
4. Trialability
5. Observable results

(1-5) determine 49-87% of variation
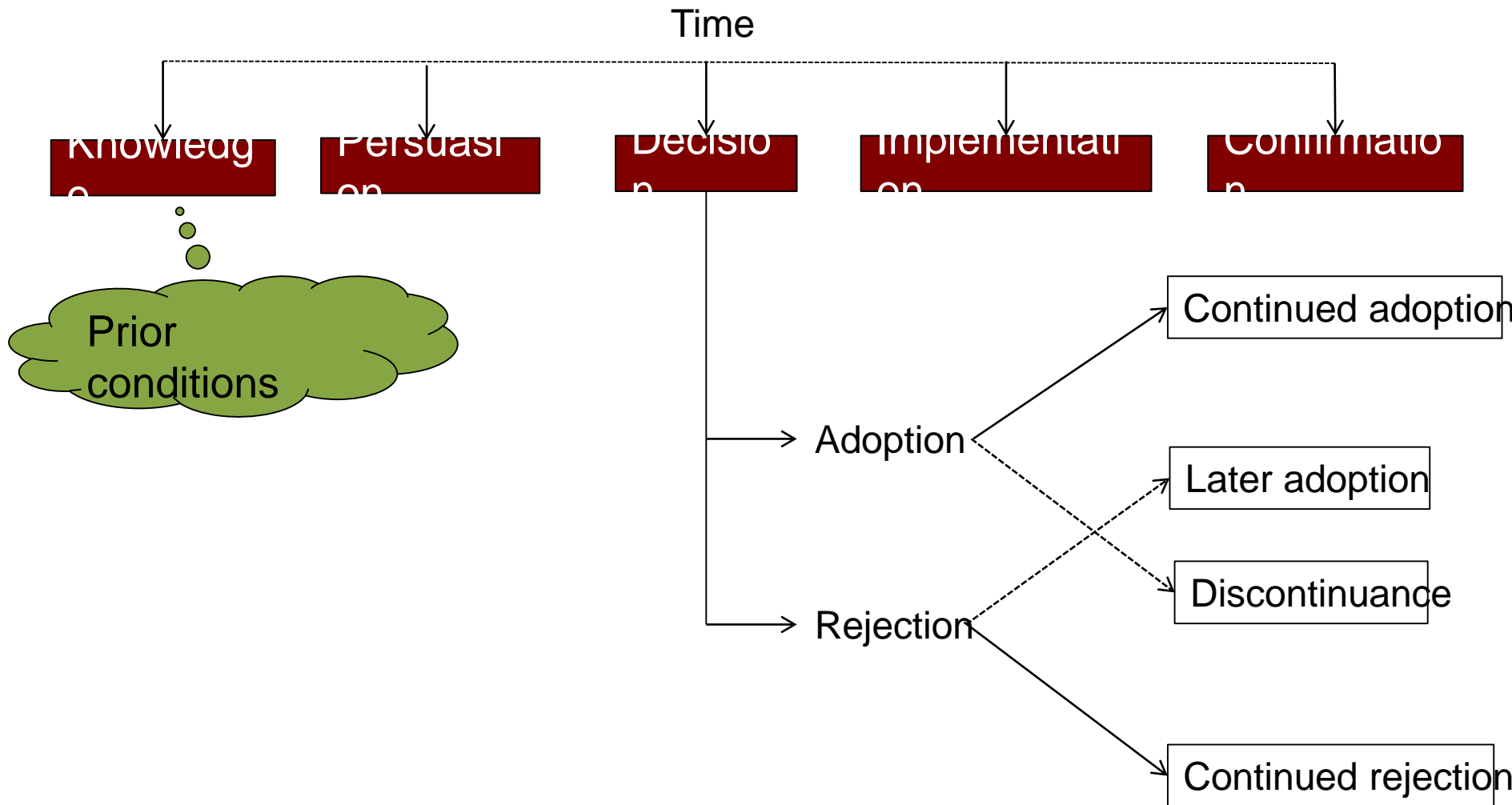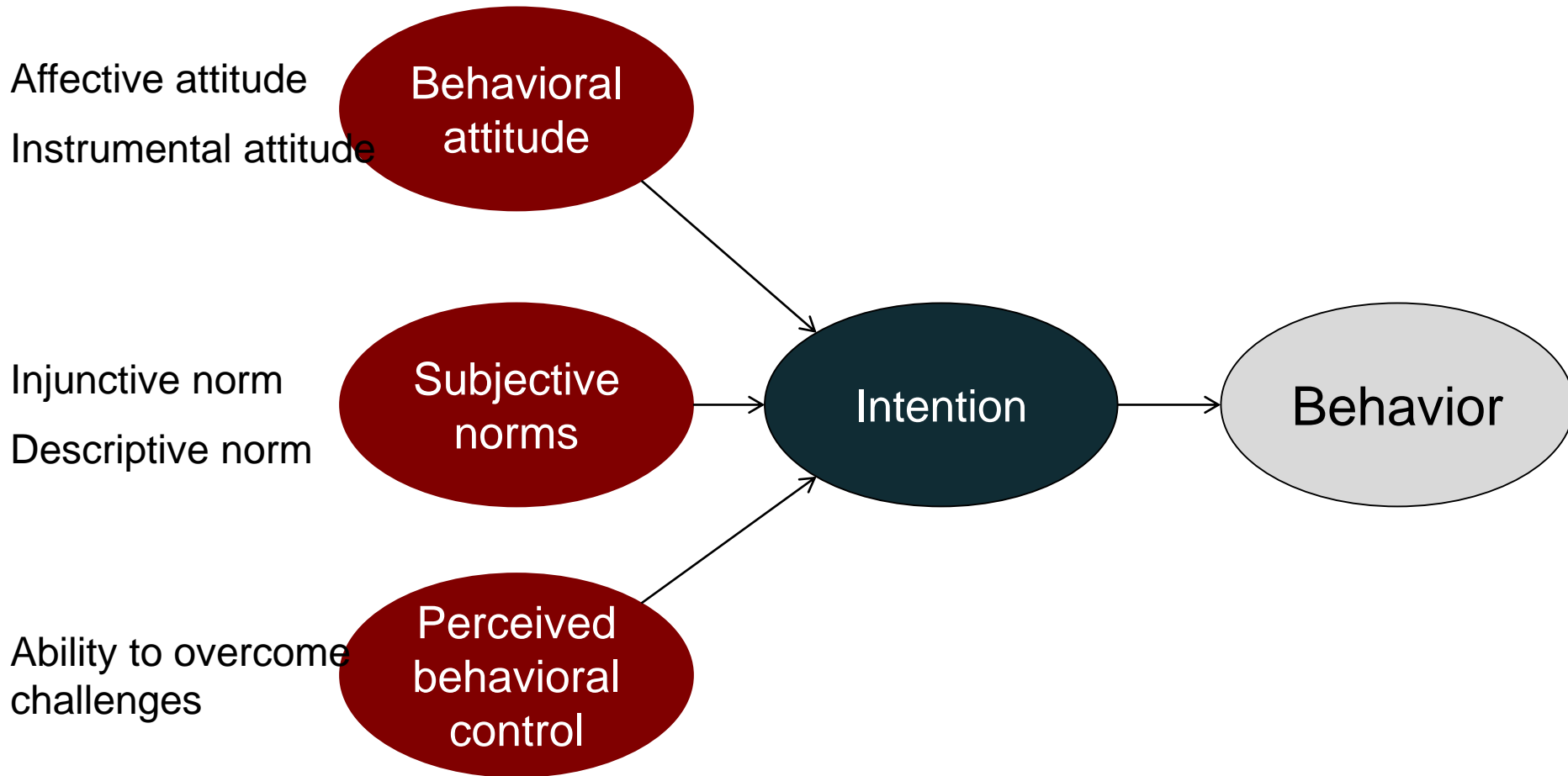
Social system: Adopter categories

The effect of time

Time

Knowledge   Persuasion   Decision   Implementation   Confirmation

Prior conditions

Continued adoption

Adoption

Later adoption

Discontinuance

Rejection

Continued rejection

Theory planned behavior (TPB) – classic theory/determinant

Affective attitude

Instrumental attitude

Behavioral attitude

Injunctive norm

Descriptive norm

Subjective norms

Intention

Behavior

Ability to overcome challenges

Perceived behavioral control

Ajzen, 1991

Promoting Action on Research Implementation in Health Services (PARIHS)
determinant

Evidence

Research evidence
Clinical experience
Locally derived data
Patient preferences

Context

Leadership
Evaluation
Organizational culture

Facilitation

'technique by which one person makes things easier for others'

Rycroft-Malone et al., 2002

i-PARIHS

Innovation

Recipients

Inner context

Outer context

Facilitation
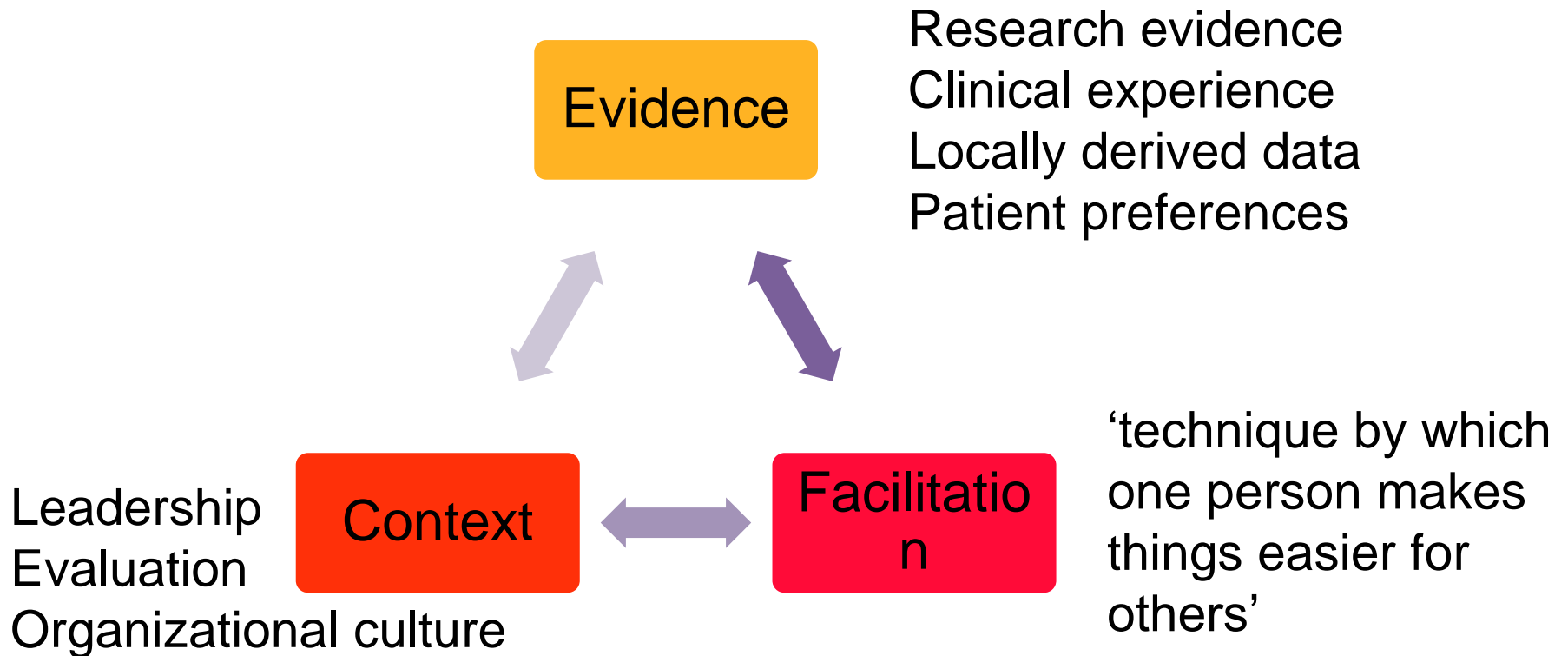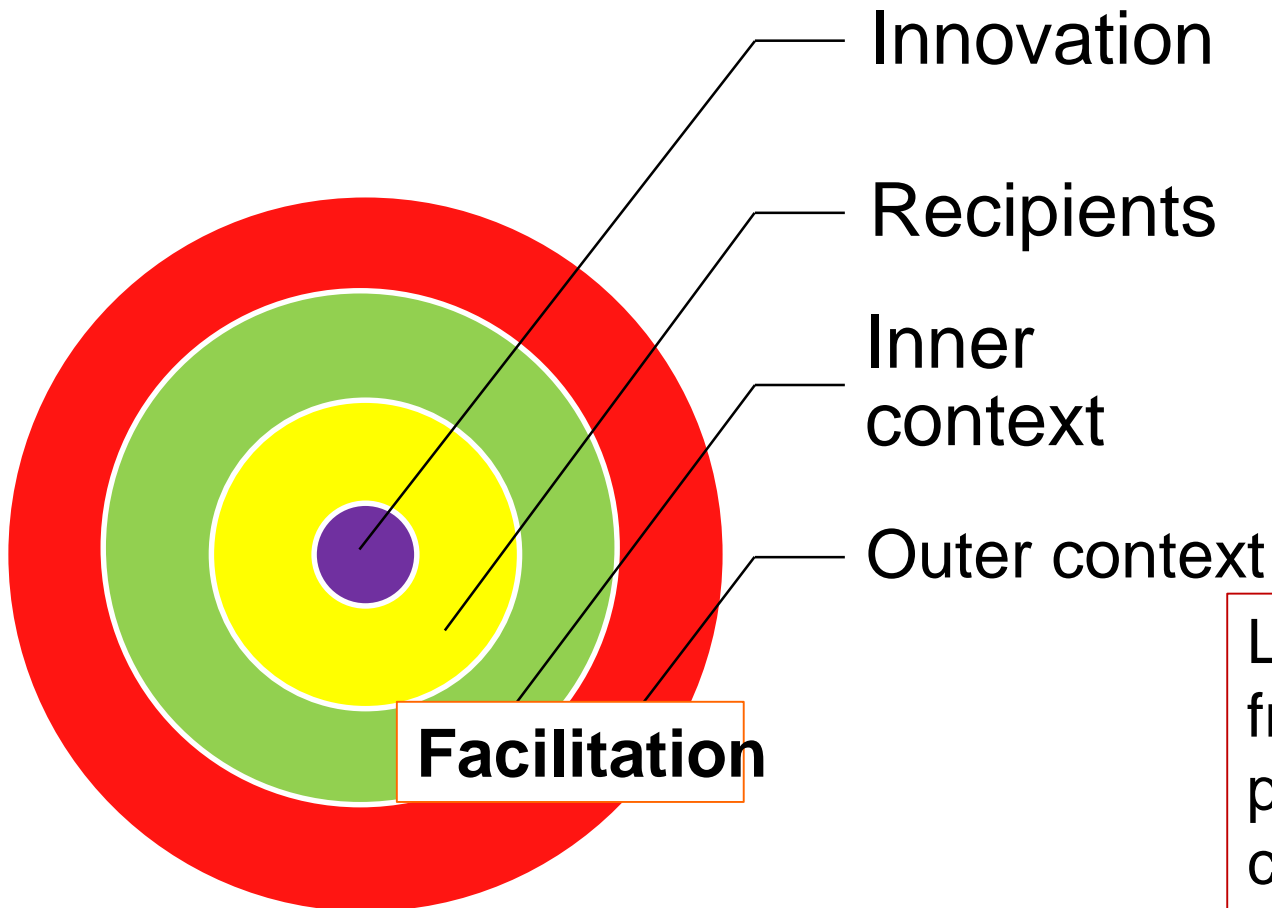
Look at the slides from yesterday presenting the characteristics of these constructs!

Harvey and Kitson, 2015

Consolidated Framework for Implementation Research (CFIR)

The CFIR provides a menu of constructs can serve

- As a practical guide for systematically assessing potential barriers and facilitators (preparation for implementing an innovation,

- To provide theory-based constructs for developing context-specific logic models

Constructs

- Intervention characteristics

Tension for change (inner setting):

The degree to which stakeholders perceive the current situation as tolerable or needing change

Damschroder et al. 2009
http://cfirguide.org/

CFIR cont.

The constructs can be used as implementation and evaluation criteria in three different ways, they may:

- Raise awareness for potential influential factors

- Facilitate the analysis of key processes and outcomes

- Help organise all findings of an implementation process to explain the outcomes

CHOOSING YOUR THEORY, MODEL OR FRAMEWORK

Choosing theory (framework or model)

Determine the origin. Who developed it? Where are they from (institution, discipline)? What prompted the originator to develop it? Is there evidence to support or refute the development of the theory?

Examine the meaning. What are the concepts and how they relate to each other. What are the concepts comprising the theory? How are the concepts defined? What is the relationship between concepts?

Analyze the logical consistency. Is there a logical structure of the concepts and statements? Are there any logical fallacies in the structure of the theory?

Consider the degree of generalisability and parsimony of the theory. Can generalizations can be made from the theory? How simple and briefly can the theory be stated and still be complete in its explanation of the phenomenon?

Determine the testability. Can the theory be supported with empirical data? A theory that cannot generate hypotheses that can be subjected to empirical testing through research is not testable.

Determine the usefulness of the theory. Usefulness of the theory is about how practical and helpful the theory is in providing a sense of understanding and/or predictable outcomes.

ICEBeRG and Rycroft-Malone, 2007

- Type of theory/model framework
  - Classic change theory/Process model/determinant framework
- What evidence is there to support the assumptions made?
- Can it guide you planning?
- Can it guide your tailoring?
- Can it guide you to choosing your implementation strategy?
- Can it guide the evaluation?

Assignment (only a few examples!)

- Would the use of a framework assist you in informing and planning for evaluating a component of the OHEP intervention?
- Would the use of a framework be of value for your PhD for:
  - Generating in-depth understanding of determinants for change?
  - Better describe change processes?
  - Understand variations in outcomes?
  - Understand how characteristics of the innovation, recipients or context influenced the outcome?
- Could your study provide evidence or understanding of the validity of a framework in a low-income setting?