STEP 5: Evaluate Impacts of a Faculty Development Program Using a Framework or Model

Starting with the End in Mind:
Designing and Evaluating Faculty Development

Global Forum on Innovation in Health Professional Education
The National Academies of Sciences, Engineering, and Medicine

August, 2020

Aliki Thomas, PhD, OT

Anthony Artino, PhD

McGill UNIVERSITY

THE GEORGE WASHINGTON UNIVERSITY

WASHINGTON, DC

Program Development

Attract Talent

Formally Develop Faculty

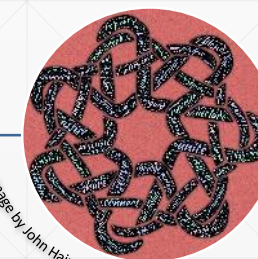Informal and Incidental Learning

Program Design & Evaluation

Image by John Hain from Pixabay

Image by John Hain from Pixabay

Session take-home messages

1. Think of faculty development (FD) as a knowledge translation activity

2. Use theory, a conceptual framework, and/or prior evidence to guide your educational design and select your evaluation outcomes

3. Beware of the limitations of satisfaction surveys

4. Combine evaluation evidence from multiple sources
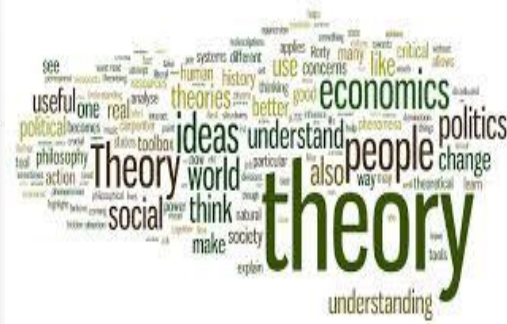
Case

You are a nurse practitioner in a large teaching hospital and have observed questionable feedback practices between staff (nurses and doctors) and students (and residents).

Most recently, 3 students have complained to you that they do not receive timely feedback from their preceptors, that the feedback is frequently «hurtful» and that it does not focus on ways to improve.

You would like to change and improve the ways in which feedback is provided in your center and are aware of the research on giving effective feedback. Your hope is that the teaching practices within your institution will be more aligned with those in the literature. **Importantly, your ultimate goal is to make sure that learners can benefit from their experience, and make good use of the feedback they receive, so that they may meet their learning goals.**

Poll

Is faculty development a knowledge translation (KT) intervention?

1) Yes
2) No
3) I don't know
4) What is KT?
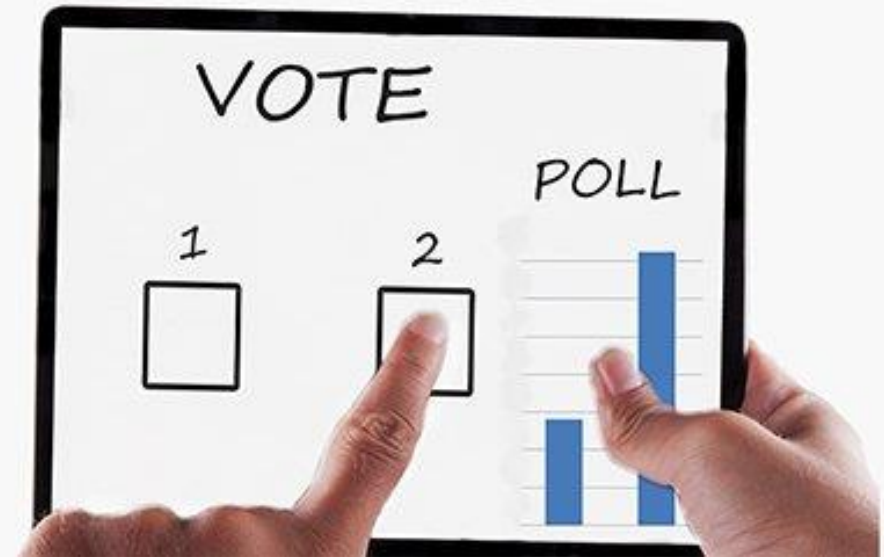
Conceptualizing faculty development (FD) activities as knowledge translation (KT) interventions in their own right

Thomas & Steinert, 2016

KNOWLEDGE TRANSLATION

Knowledge Translation in 3 steps

1. Where is/are the gap?	2. Why is there a gap?	3. What do we do about it?
About the nature and the magnitude of gaps in practice	About the factors that support or hinder best practices	About theory driven and tailored interventions to reduce R-P gaps

Thomas & Bussieres, 2016 a,b; Graham et al., 2006;

Evaluation: Definition & Purpose

- "The systematic acquisition and assessment of information to provide useful feedback about some object" (Trochim, 2006, p. 1)

- Its purpose: "To determine the merit or worth of some thing" (Cook, 2010, p. 296)

To maintain accountability	To generate new understandings & insights	To guide improvements

Evaluation vs. Research

- Research: discover generalizable knowledge, understanding, or theory

Ask relevant questions

Be rigorous

Use appropriate methods
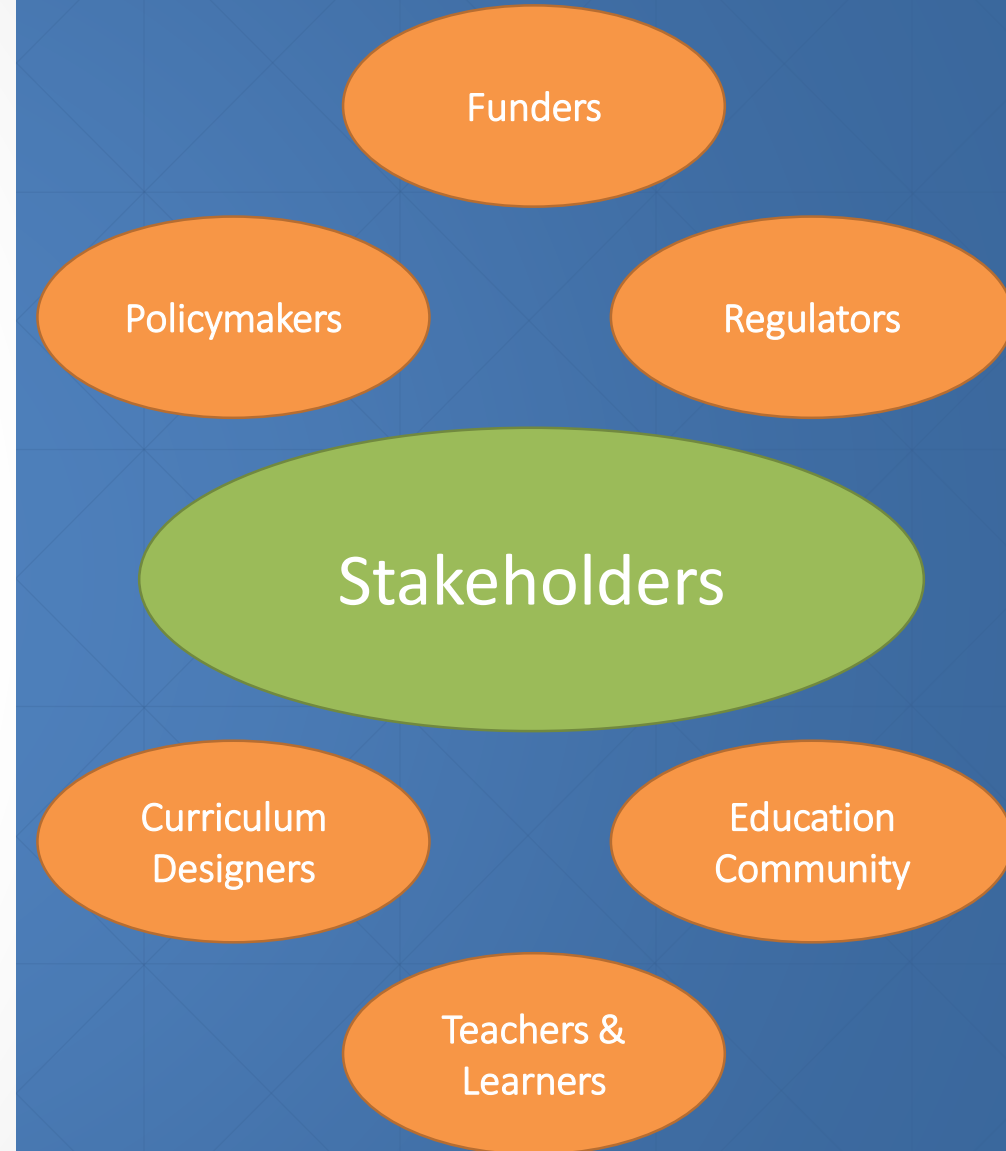
Adhere to ethical principles

Report & disseminate findings

Evaluation vs. Research

Key difference:
- Evaluation is situated in potentially sensitive political and ethical contexts

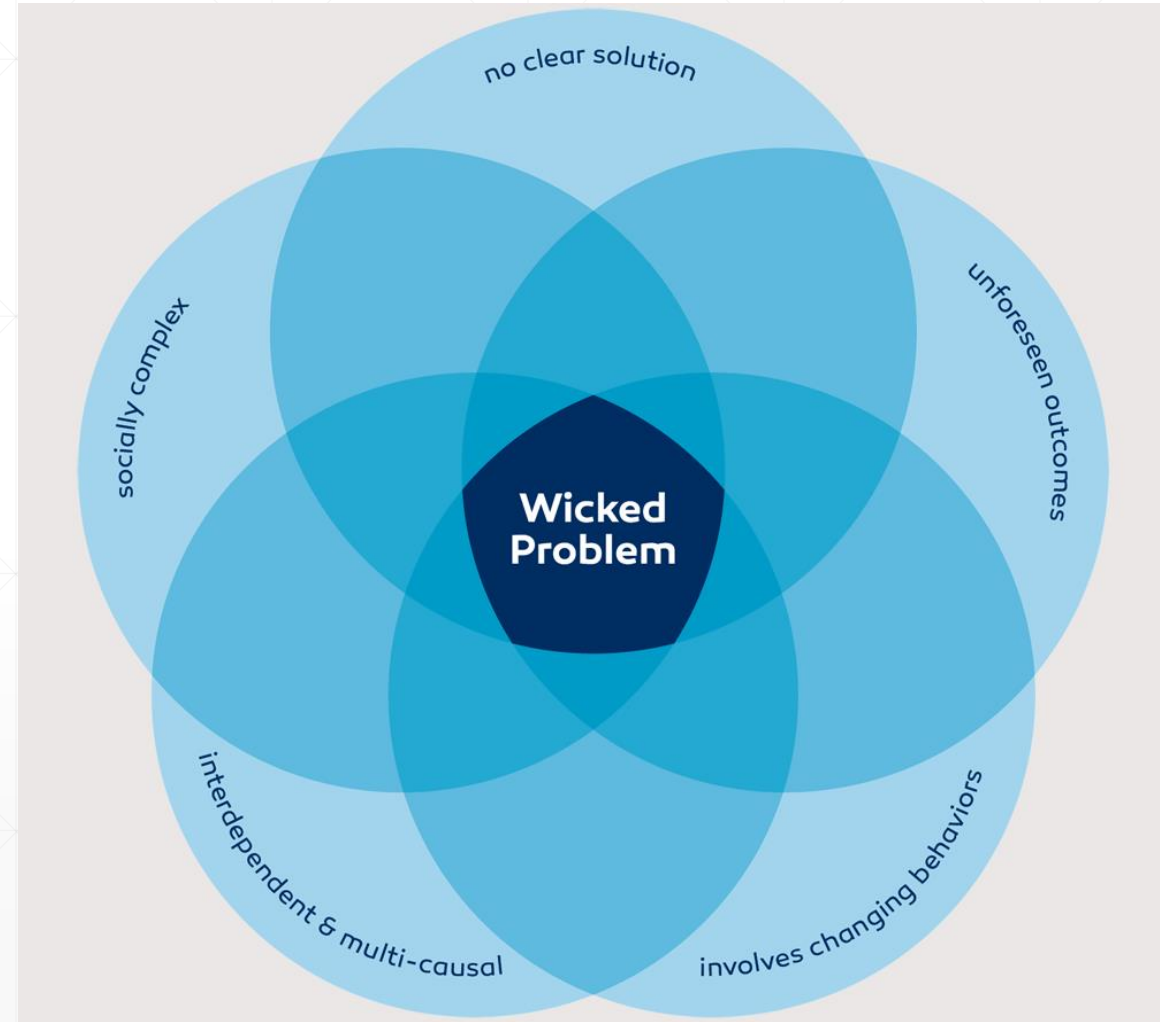Includes lots of different stakeholders...

Funders

Policymakers

Regulators

Stakeholders

Curriculum Designers

Education Community

Teachers & Learners

Evaluating Faculty Development

Instead of…

- "Does my program work?"

  ➢ This question suggests a specific way to evaluate (e.g., a quasi-experimental design)

Better question is…

- "Why does it work, for whom, and under what circumstances?"

  ➢ This question suggests a different way to evaluate (e.g., using qual. or mixed-methods)

no clear solution

socially complex

unforeseen outcomes

Wicked Problem

interdependent & multi-causal

involves changing behaviors

But changing behaviour is complex...

- Implementation science is the **scientific study** of KT

- Theories, models, methods that underpin KT efforts **aimed at changing behaviours/promoting uptake or research in practice**

(Brehau;t & Eva, 2012; Colquhoun et al., 2010; Davies et al., 2010; Eccles et al., 2005; Philippa et al., 2010; Nilsen, 2015)

Why use a model/framework in FD?

1. To describe and/or guide the process of translating research into practice: process models

2. To understand and/or explain what influences outcomes: determinant frameworks, classical theories, implementation theories

3. To evaluate implementation: evaluation frameworks
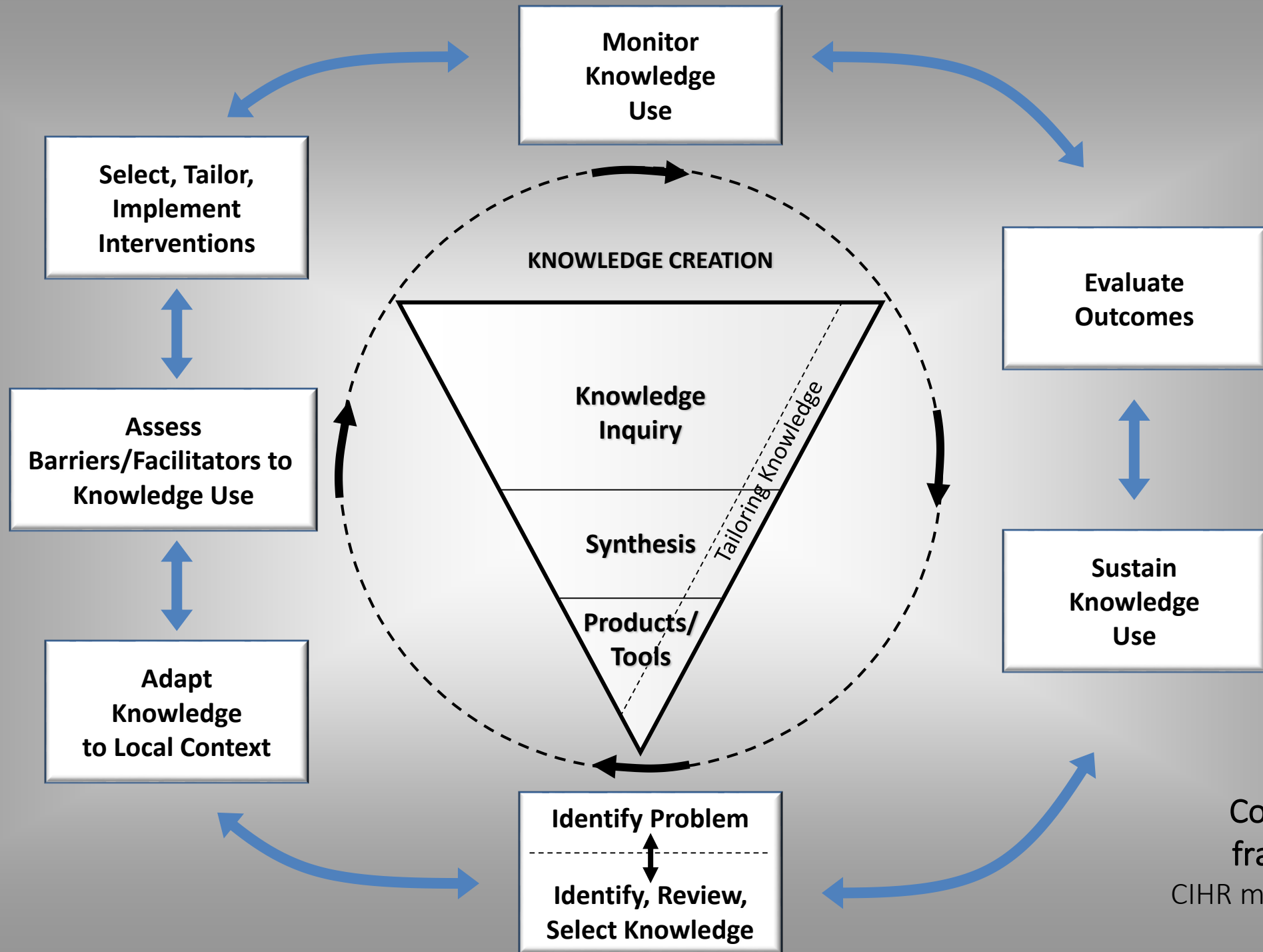
Conceptual framework
CIHR model (Graham 2007)

Back to our case
## AIM: Providing better feedback to learners

- How do you ensure that there is uptake [teachers' use] of best practices in feedback during clinical rotations?

- How do you evaluate the components of the program, and the outcomes?

Step 1:
Identify a problem in practice or a gap in knowledge; Identify, review, and select the knowledge to be implemented


Conceptual framework
CIHR model (Graham 2007)
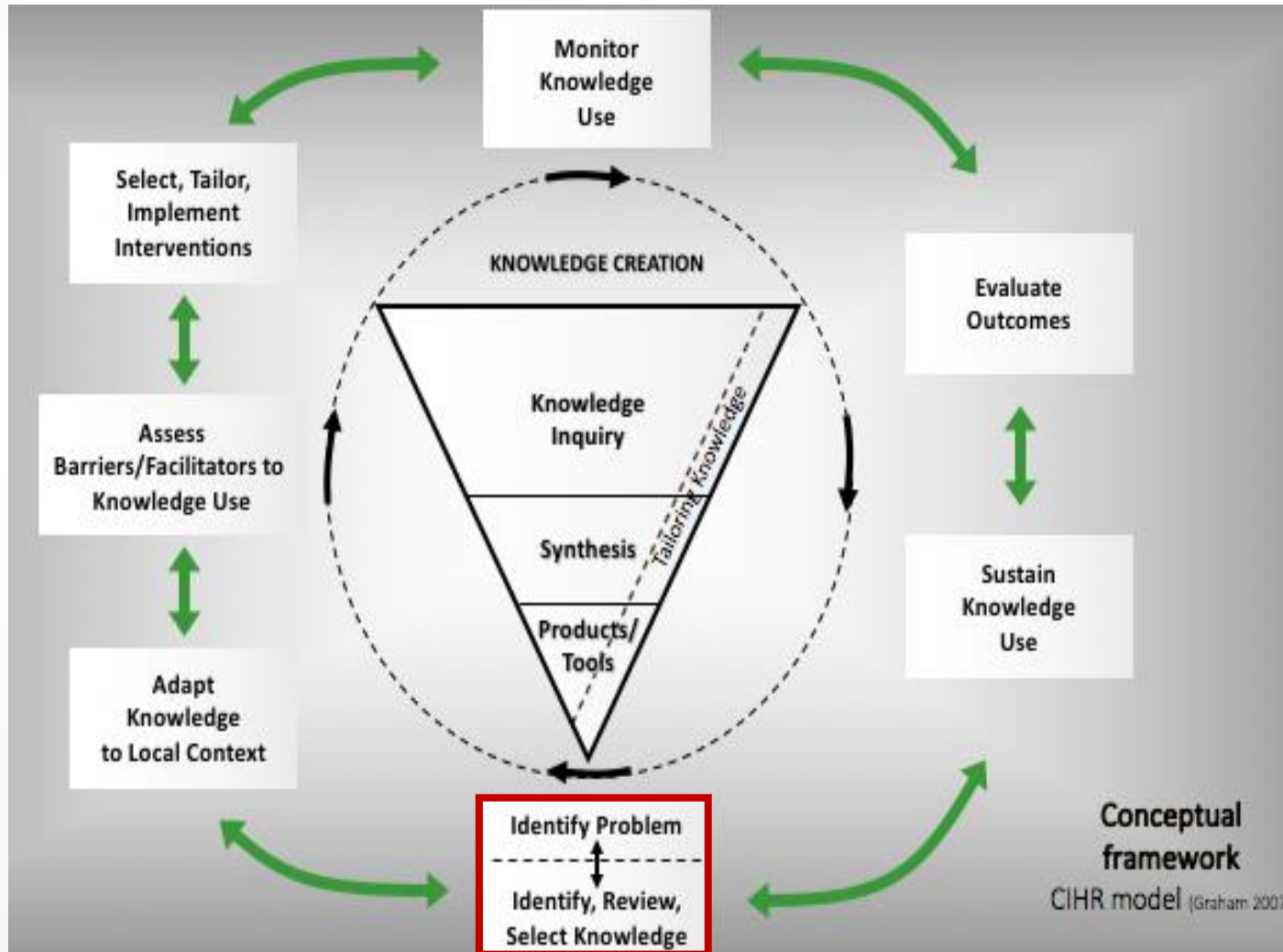
ACTIONS

A. Review evidence on strategies for giving students effective feedback

B. Identify current feedback practices in residency training programs

C. Confirm presence and nature of the gap between current feedback practices and best practice strategies

Step 2: Adapt knowledge to local context
Making sure that the evidence applies/ is useful in the setting

Conceptual framework
CIHR model (Graham 2007)
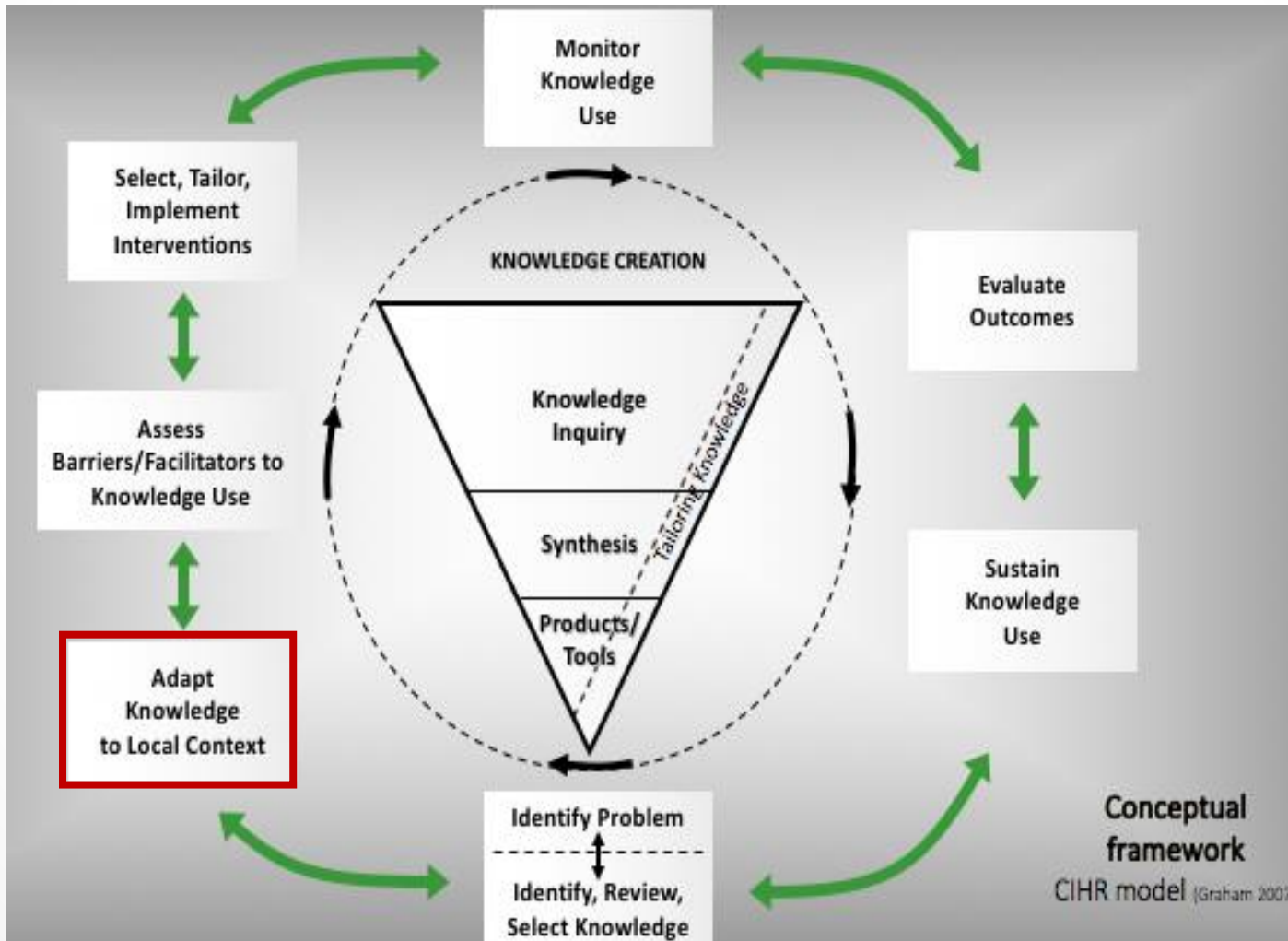
ACTIONS

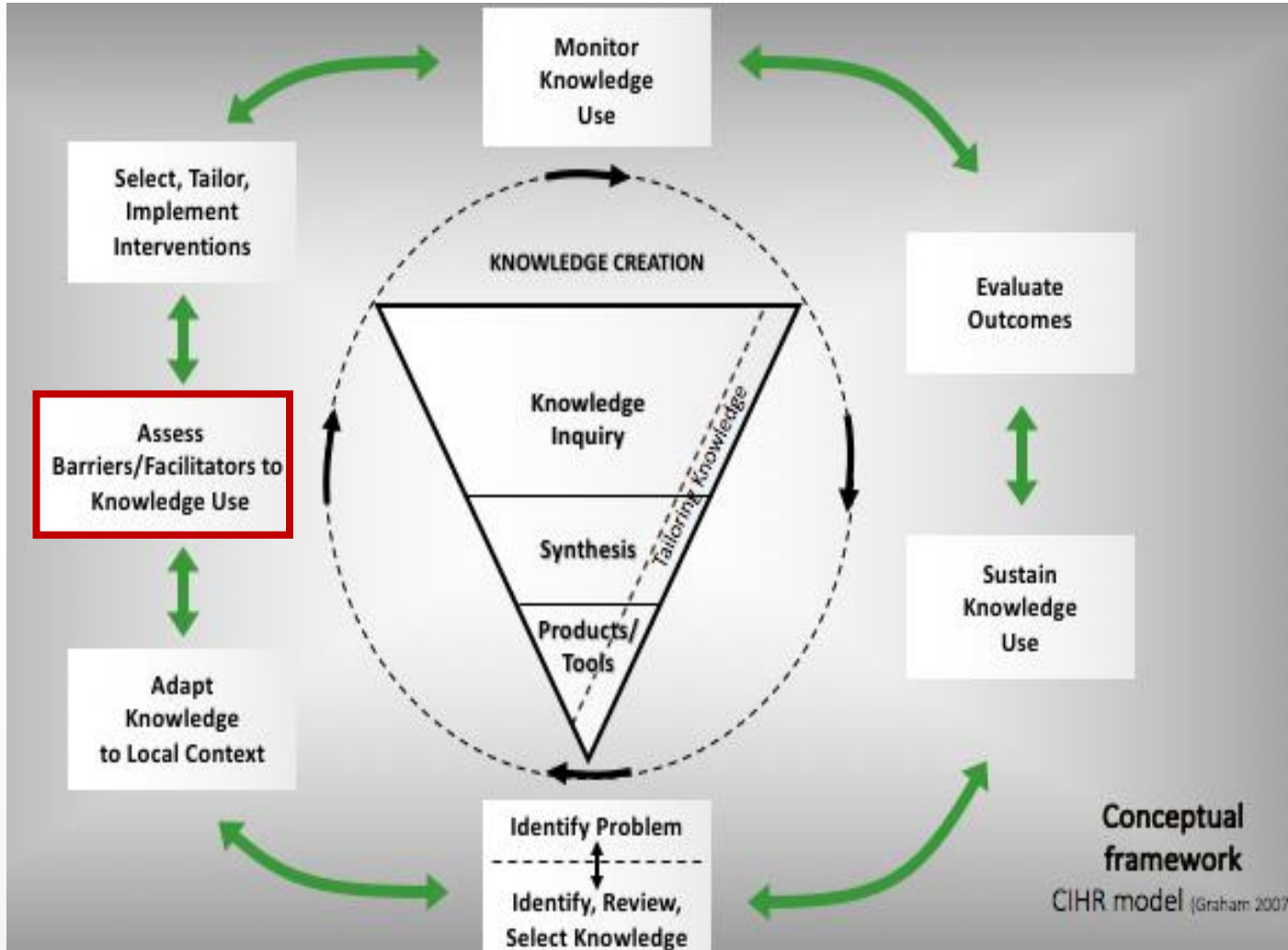When possible use a collaborative/ integrated approach

Should be based on consensus among relevant stakeholders
- Teachers
- Learners
- Program directors
- Curriculum chairs

Kitson & Bisby, 2008; Kothari et al., 2017

Step 3: Assess facilitators and barriers to knowledge use

Conceptual framework

CIHR model (Graham 2007)

Identify the facilitators:
what factors will increase the likelihood that behaviour change *(giving better feedback to learners- more)* will occur?

Identify the barriers:
what factors will make it more difficult or decrease the likelihood that behaviour will change?

|	INDIVIDUAL	ORGANIZATIONAL
SUPPORTS	- Motivation to change - Readiness to change - Belief that feedback will result in better learner outcomes	- Protected time to read and discuss evidence on feedback - Proximity to university - Strong residency training
BARRIERS	- Heavy patient caseloads/lack of time to read literature - Lack of knowledge on effective feedback strategies - Lack of good role models	- Program with few resources to support uptake of new practices - No funds for faculty development - Lack of recognition of CPD for educational issues

Step 4: Select, tailor, implement intervention

Conceptual framework
CIHR model (Graham 2007)
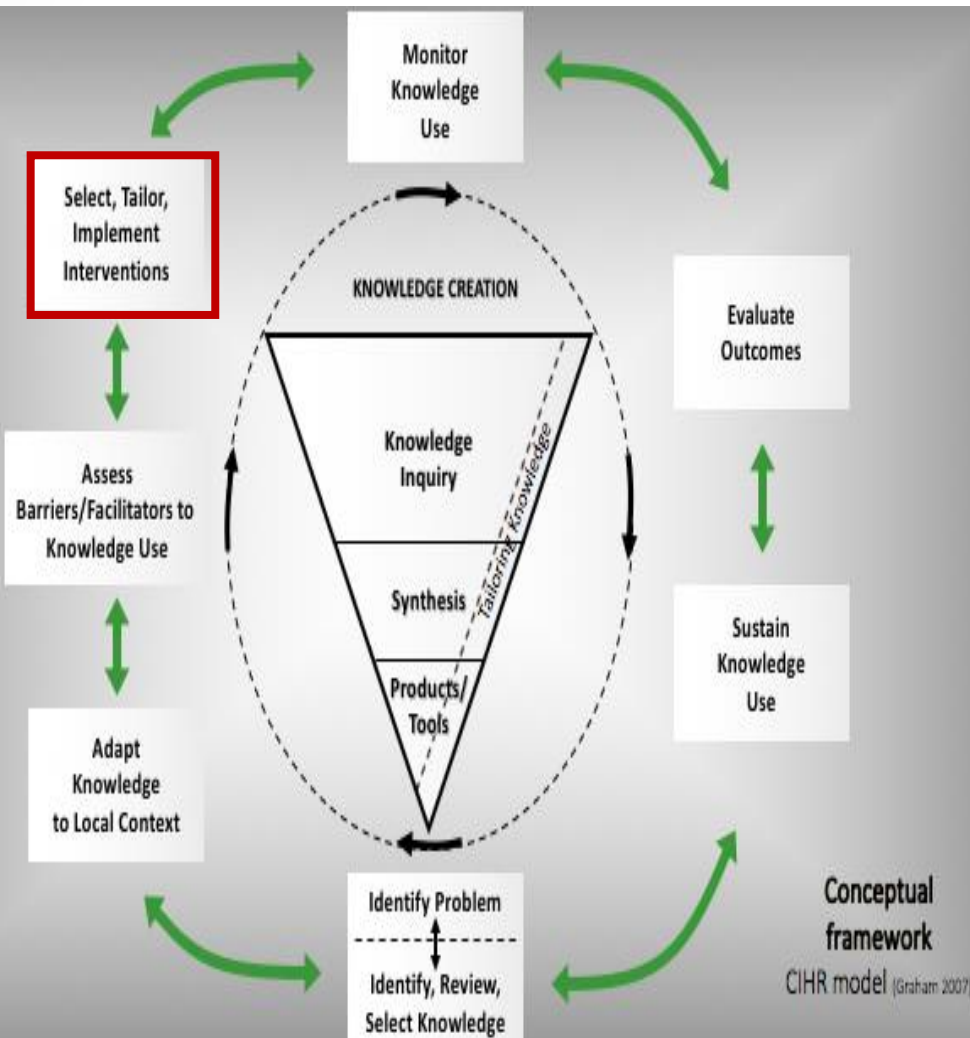
ACTIONS

Ask
- who needs to do what differently, why, when, and how?

Involve others when designing the KT interventions to promote uptake of new feedback strategies
- teachers
- department chairs
- learners

Examples of KT interventions
- seminars,
- mentorship,
- practice with feedback,
- audits

French et al., 2012;
Michie et al., 2008

Possible interventions if the problem is…

| ....lack of knowledge on how to give effective feedback:	...lack of time to read literature in the clinical setting:

- **Practice with feedback**
  - Delivered (online twice/week for 2 months)
  - By supervisory clinician to a new group of residents
	- **Look for syntheses, 12 tips**
	- **Prepare brief guidelines**
	- **Consult colleagues**
	- **Advocate with department chairs/program directors**

Step 5: Monitoring knowledge use

Conceptual framework
CIHR model (Graham 2007)
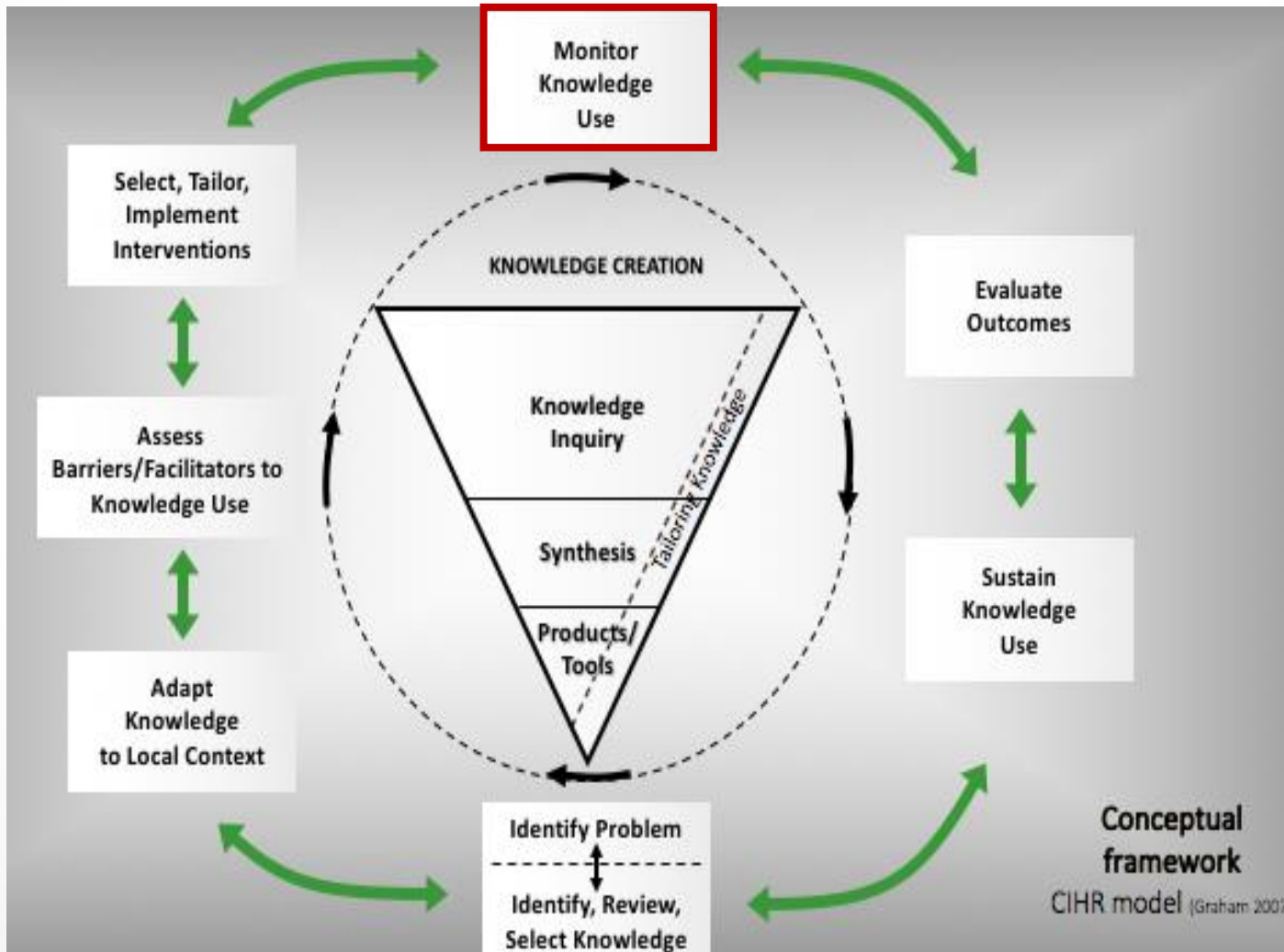
- **Measurable changes in:**
  - knowledge
  - attitudes
  - skills
  - behaviors

  regarding effective feedback strategies in residency training programs

- Cost-effective and streamlined residency programs, improved learner outcomes, etc.

- Accreditation, licensure, quality of care, safety, etc.

A few more…
Evaluation Pearls
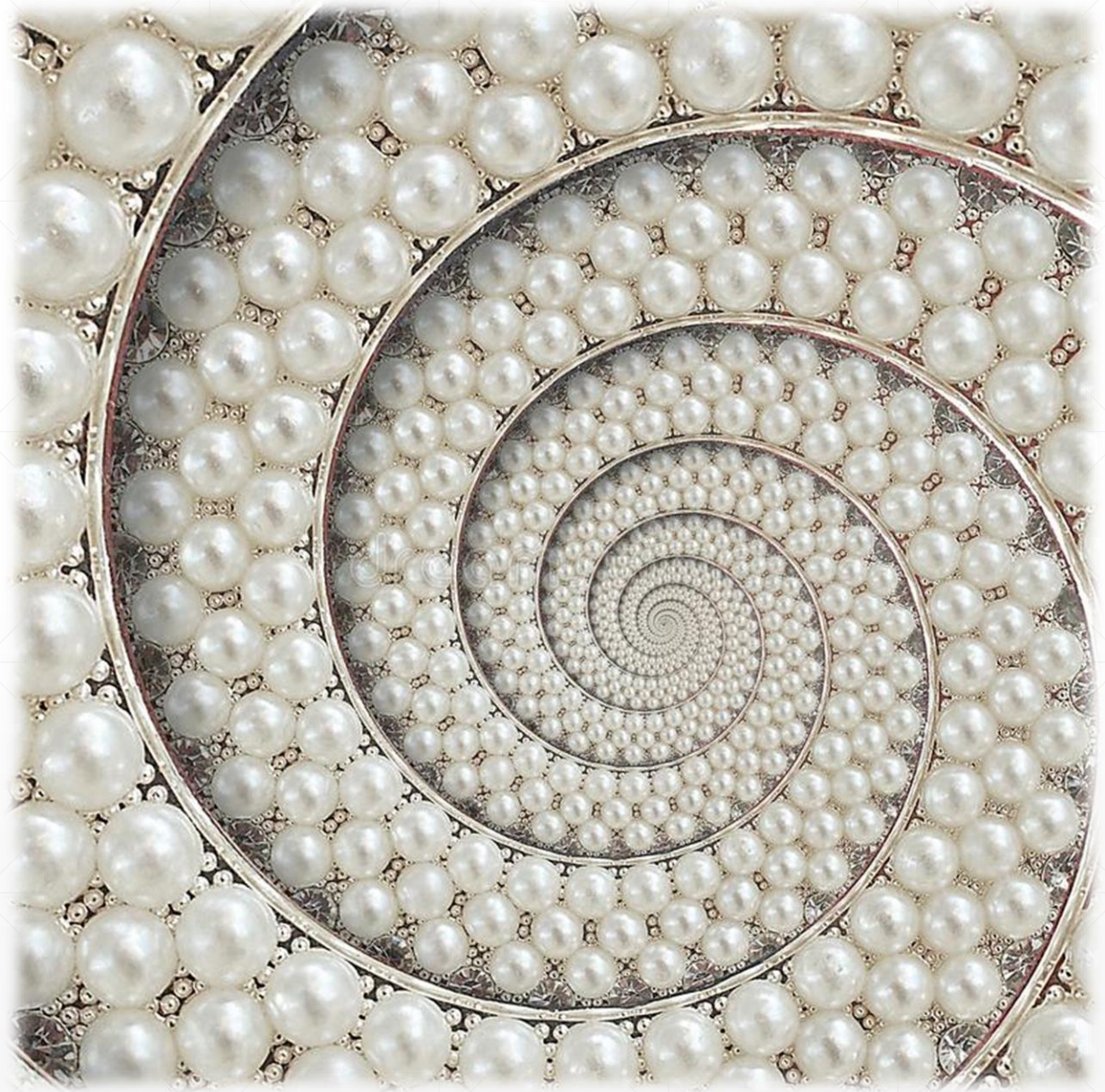
Poll

Are self-report surveys of satisfaction with FD workshops (aka, "smile sheets") a good way to collect outcome data for evaluation purposes?

1) No, "smile sheets" are ALMOST NEVER a good way to collect outcome data

2) Yes, "smiles sheets" are OFTEN a good way to collect outcome data

Are "Smile Sheets" a Useful Way to Evaluate FD?

Are satisfaction surveys or student evaluations of teaching related to learning?

- Uttl et al. (2017), meta-analysis of teacher ratings
  - Ratings are unrelated to learning (at most, ~1%)

- Hessler et al. (2018). Availability of cookies during an academic course session, *Medical Education*

Take-home message:

If we want to <u>rigorously</u> evaluate FD, we need to go beyond "smile sheets"

# Surveys Can Still Provide Valuable Evaluation Data

- If well designed, linked to theory/framework, and focused on constructs beyond satisfaction, teacher effectiveness, etc.

  - Examples:
    - Confidence, attitudes, practice patterns

  - Recommendations:
    - Search the literature
    - Find surveys with existing validity evidence
    - Use experts and other team members to review and "pretest" prior to use

WHAT should you evaluate?
outcomes

Conceptual framework
CIHR model (Graham 2007)
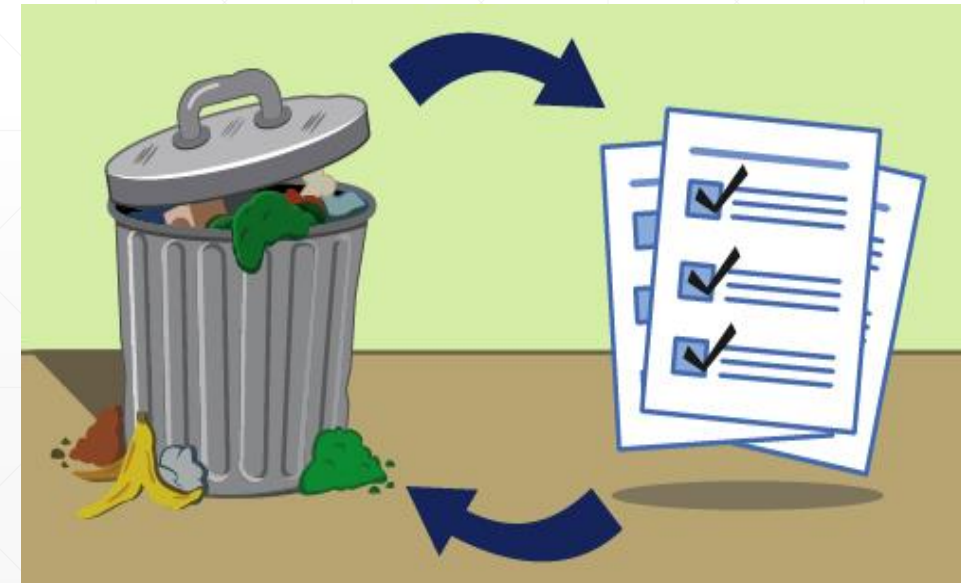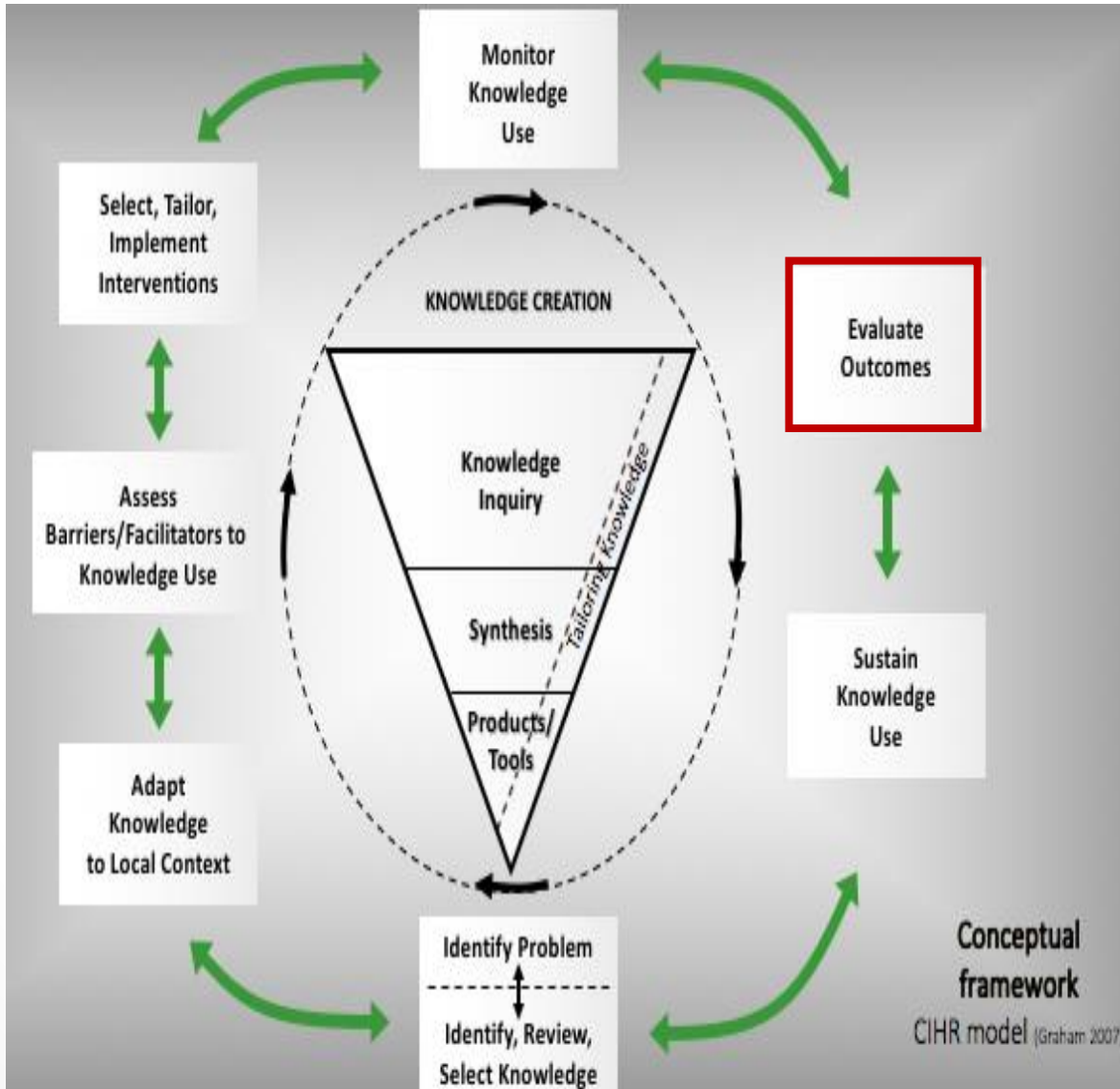
POSSIBLE OUTCOMES

- N of learners receiving appropriate feedback

- Nature and frequency of the feedback

- Students' and teachers' self-reported benefits

- Other outcomes?

HOW should you evaluate outcomes?
Measuring current feedback practices

CONSTRUCT	METHOD
Knowledge	Survey, vignette, test
Attitudes	Survey, standardized questionnaire, interviews
Self-reported practices	Survey, standardized questionnaire, interviews
Self-efficacy	Survey, standardized questionnaire, interviews
Actual practice	Observation, chart audit, video recall
Competence	Simulation, vignettes, observation, videoconference

Step 7: Determining strategies for ensuring sustainability of knowledge

Conceptual framework
CIHR model (Graham 2007)

ACTIONS

Start with…
- Having « champions » on site
- Regular meetings with team
- Regular check-ins

- Would you use the same or different strategy?
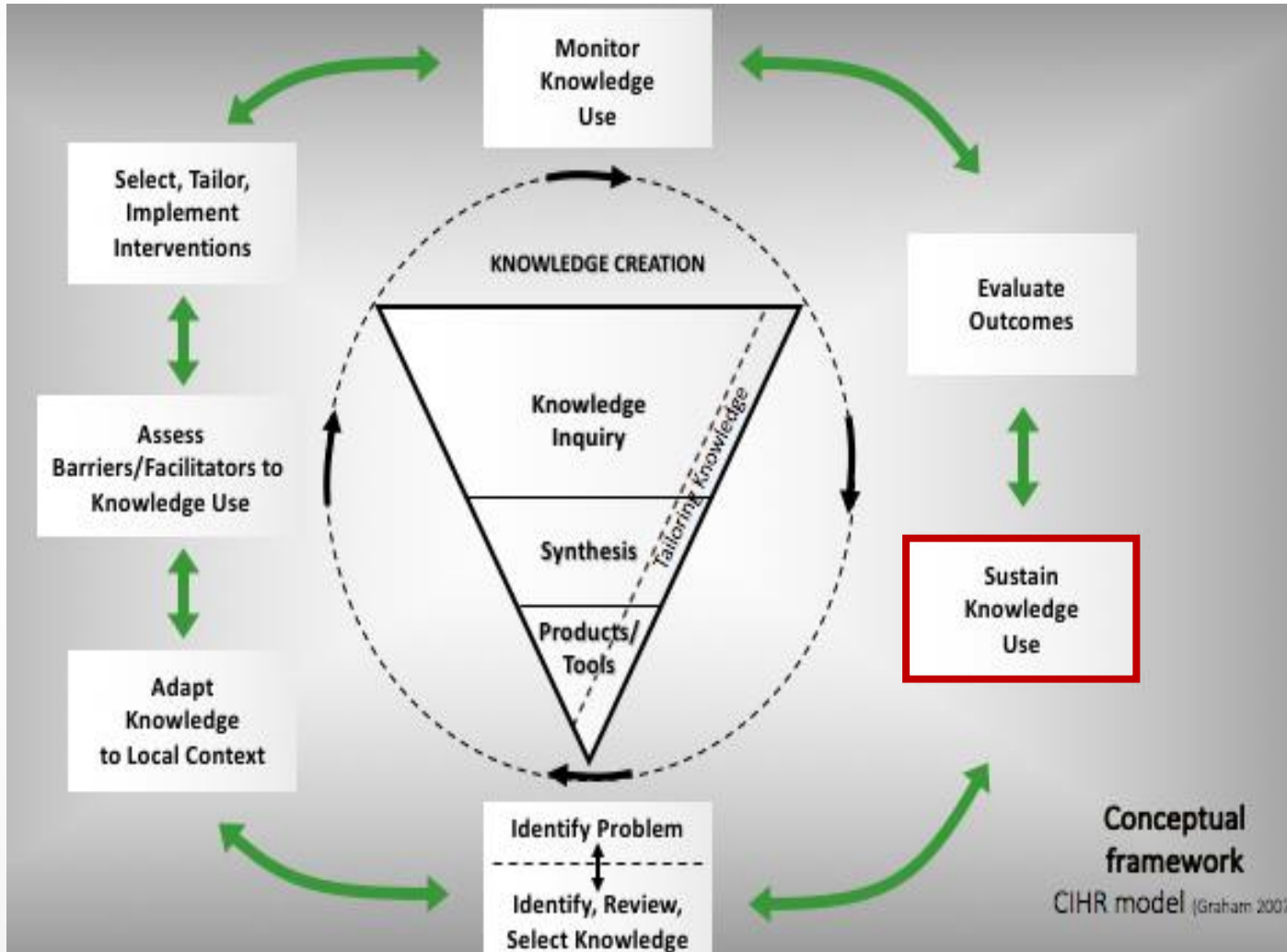
Session take-home messages

1. Think of faculty development (FD) as a knowledge translation activity

2. Use theory, a conceptual framework, and/or prior evidence to guide your educational design and select your evaluation outcomes

3. Beware the limitations of satisfaction surveys

4. Combine evaluation evidence from multiple sources

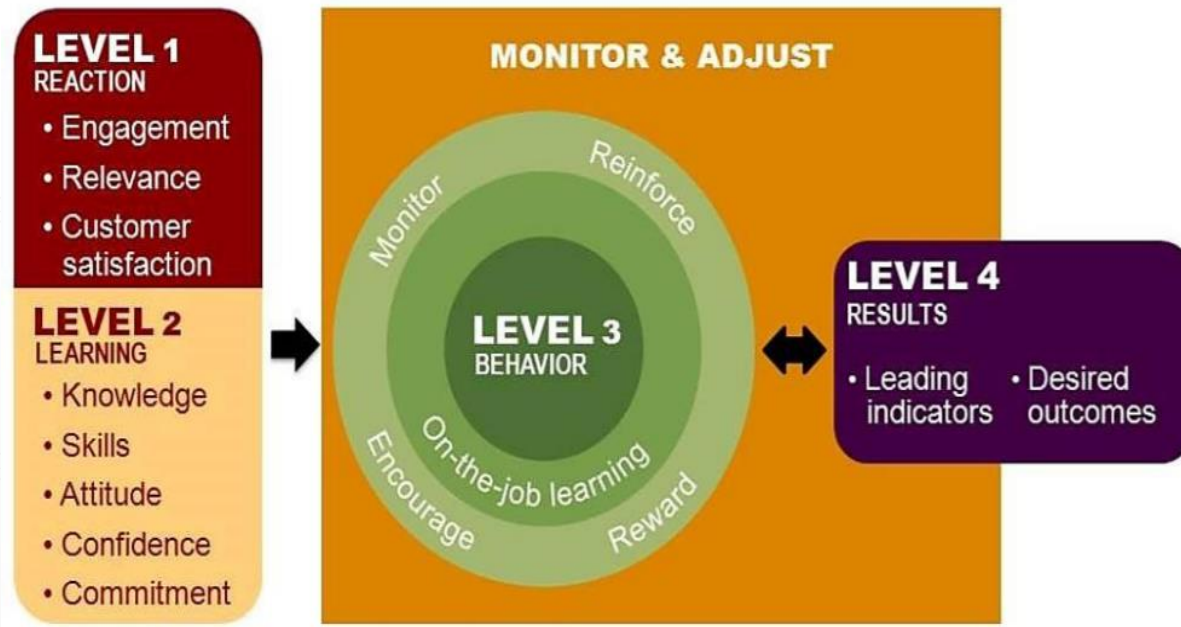# Thank you!

Aliki Thomas - *@aliki_thomas*

Anthony Artino - *@MedEdDoc*

Supplemental Slides

Evaluating FD: Two Key Questions

What to evaluate – Content

THE NEW WORLD KIRKPATRICK MODEL

How to evaluate – Method
(quant, qual, mixed-methods)

- Self-report survey or checklist

- Faculty observation

- Multiple-choice test

- Focus group or interview

- Journaling

- Chart review

- Social network analysis

Source: https://www.kirkpatrickpartners.com/Our-Philosophy/The-New-World-Kirkpatrick-Model

Combine Evidence from Multiple Sources...

Outcome level	Outcome	Method	Instrument	Advantages and disadvantages
Reaction	1. 2.	1. 2. 1. 2.	1. 2. 1. 2. 1. 2.	1. 2. 1. 2. 1. 2.
Learning	1. 2.	1. 2. 1. 2.	1. 2. 1. 2. 1. 2.	1. 2. 1. 2. 1. 2.
Behavior	1. 2.	1. 2. 1. 2.	1. 2. 1. 2. 1. 2.	1. 2. 1. 2. 1. 2.
Results	1. 2.	1. 2. 1. 2.	1. 2. 1. 2. 1. 2.	1. 2. 1. 2. 1. 2.

*Table adapted from Cook, D. A. (2010). Twelve tips for evaluating educational programs. *Medical Teacher, 32*, 296-301.

Evaluating FD:

Thinking creatively about outcomes, methods, and instruments in evaluating aducational interventions