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Integrating Problem Based Learning and Research Skill  
Development: An Example from a Master's Teacher-Leader  
Course

# INTEGRATING PROBLEM BASED LEARNING & RESEARCH SKILL DEVELOPMENT: AN EXAMPLE FROM A MASTER'S TEACHER LEADER COURSE

PRESENTATION FOR THE I-MELT CONFERENCE  
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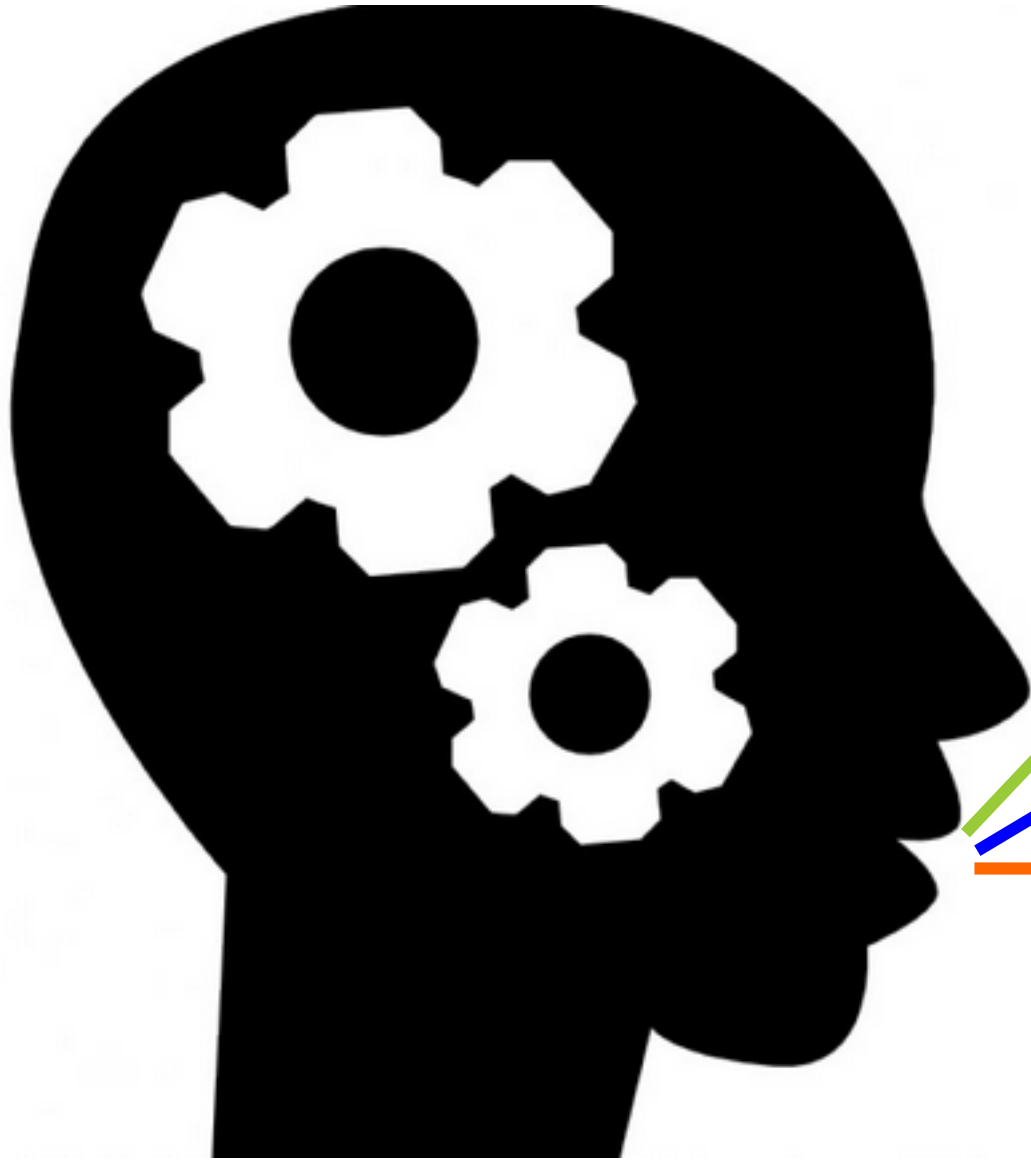
Educational Leadership & Counselor Education

Eastern Kentucky University



# ABSTRACT

- Outside *a priori* MELT model
- Problem-to-solution (problem-based/project-based) strategy
- *Area of concern* in schools for working teachers
- Pilot study (4 classes, 86 students)/ surveys & assignments
- Question: Alignment to RSD & OPS models?
- Alignment of questions & Cronbach's alpha test internal validity
- Question: Perceived value of authentic workplace learning?
- Getting to theory (inside and out) through more research



**1. COURSE AND STUDENTS**

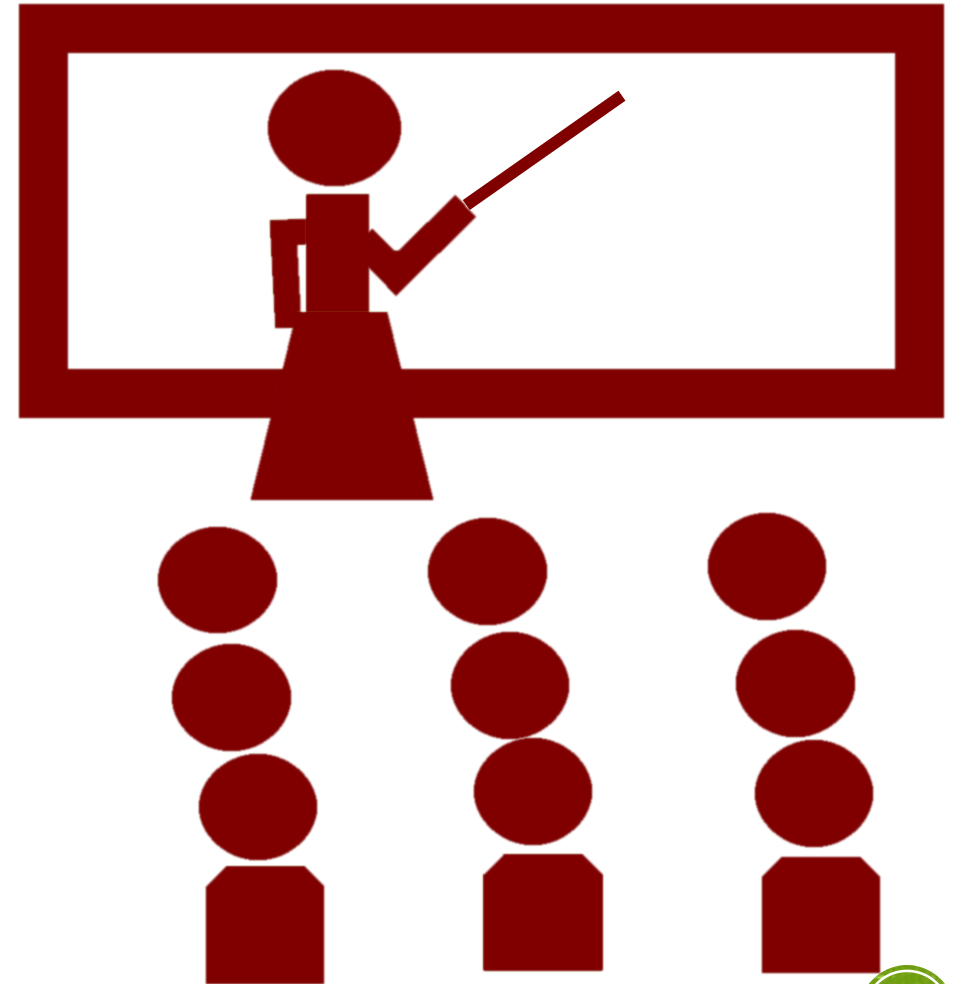
**2. PILOT STUDY AND FINDINGS**

**3. NEXT STEPS AND  
GETTING TO THEORY**

# 1. COURSE AND STUDENTS

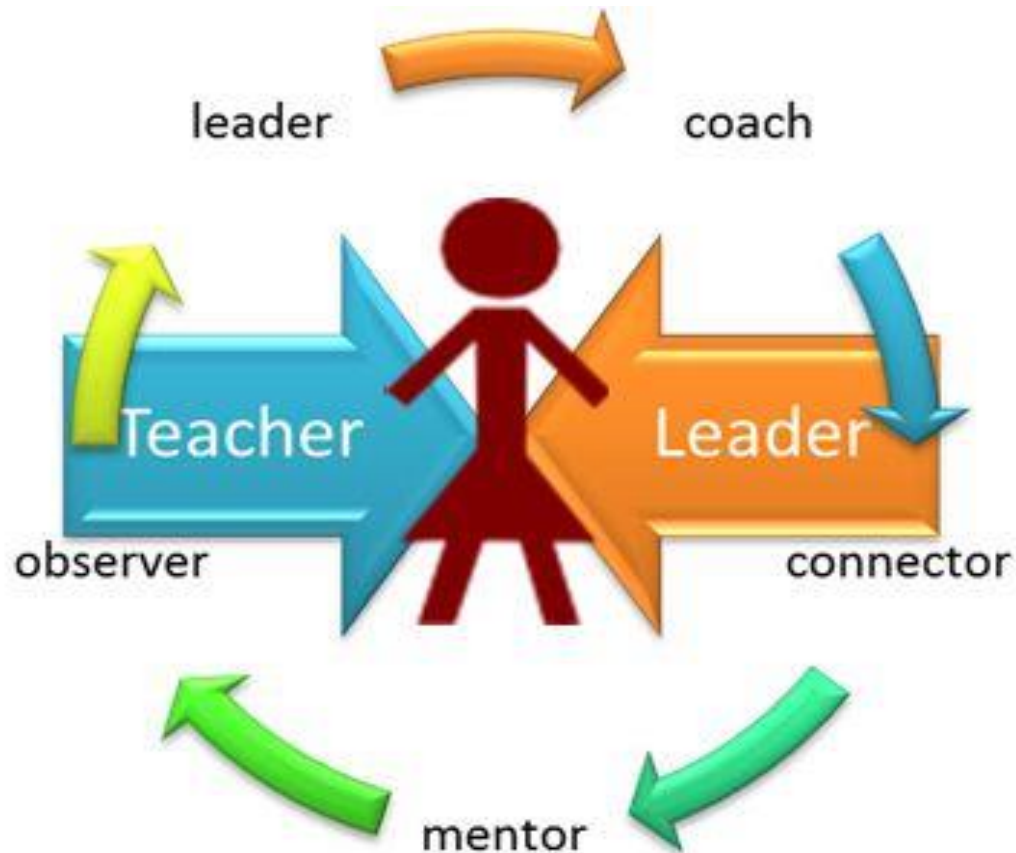
## **Students:**

- Mostly young in-service teachers
- Preschool – Secondary
- All subjects
- Rural, Urban, Suburban, Private



# 1. COURSE AND STUDENTS

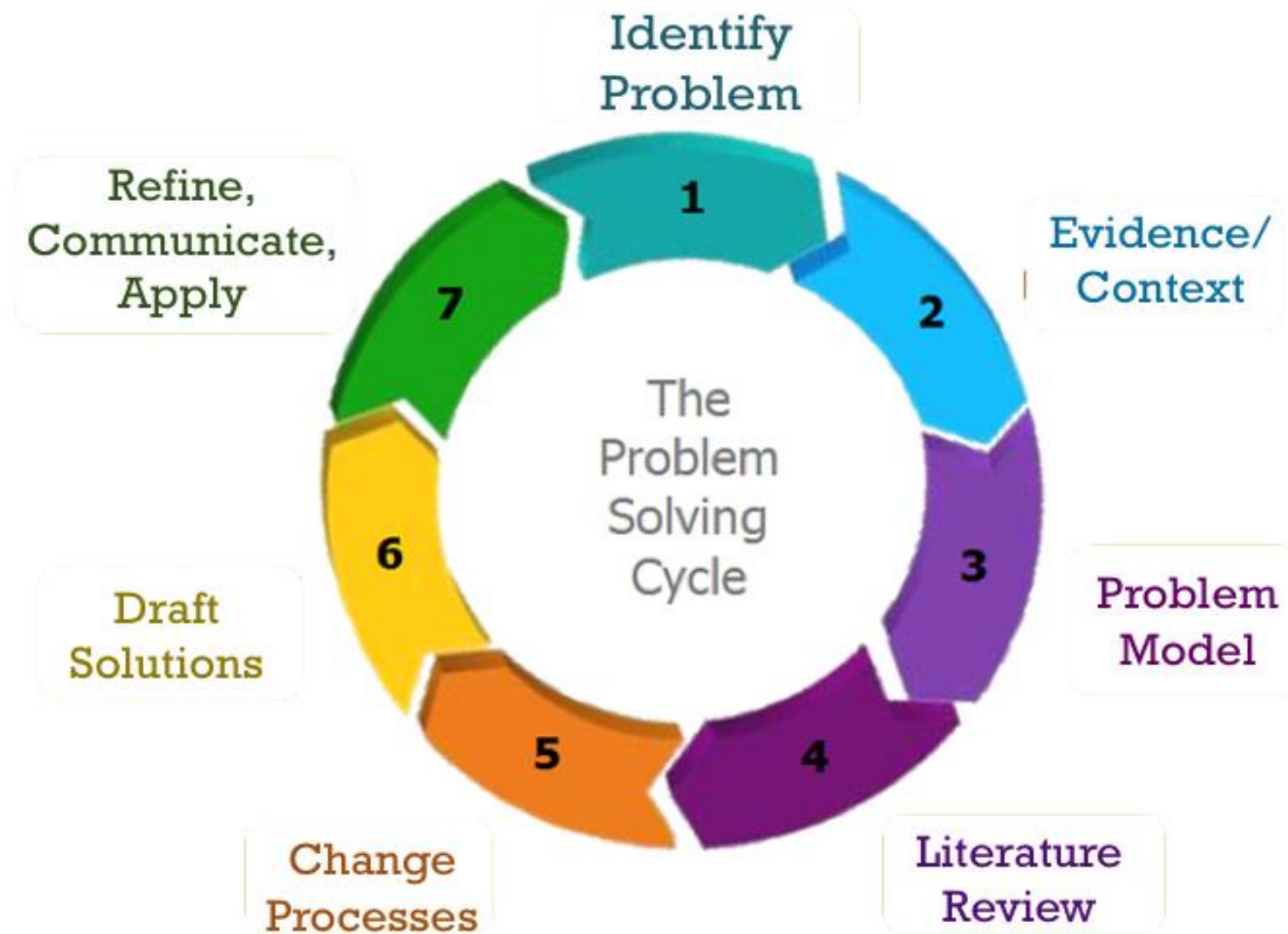
## Teacher Leadership



## Reform & Accountability

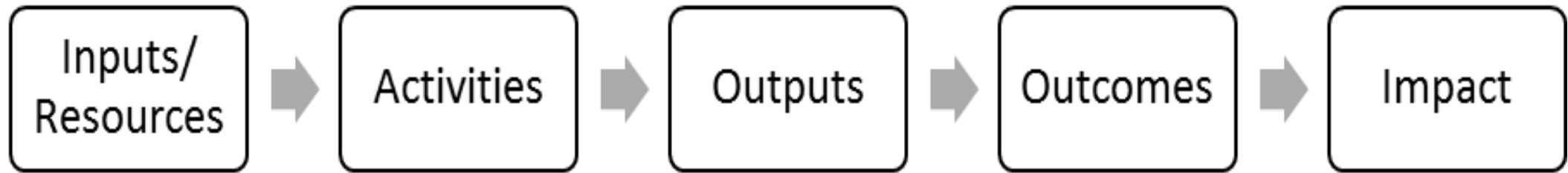
- Shared responsibility
- Evidence based decision making
- Communications & collaboration
- Change processes
- Problems of Practice

# 1. COURSE AND STUDENTS



# 1. COURSE AND STUDENTS

Logic models for diagnosis, clarity, visualization





## 2. PILOT STUDY AND FINDINGS

### **DATA SOURCES:**

- Assignments
- End-of-course student evaluations
- Students (N=86) from four classes (out of 432 students/13 classes)
- Fall 2016 – Summer 2017

## 2. PILOT STUDY AND FINDINGS

1. **Problem-to-Solution project align to MELT models?**



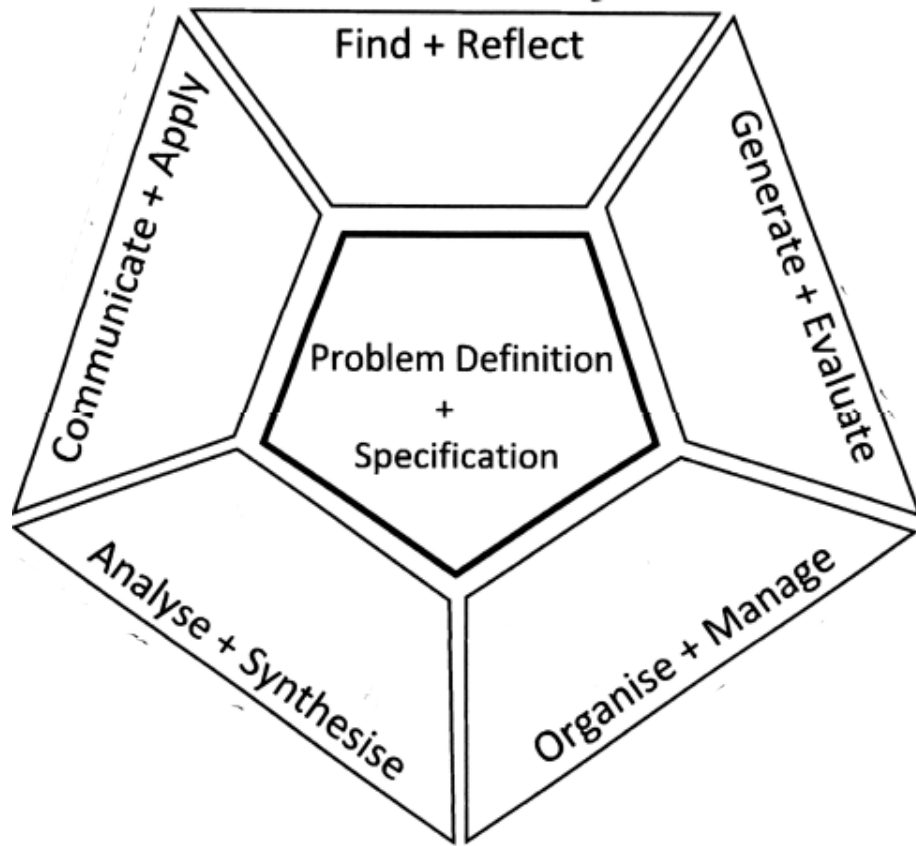
## 2. PILOT STUDY AND FINDINGS

	Phase 1: Prevalence Study	Phase 2: Prevalence Study	Phase 3: Prevalence Study	Phase 4: Prevalence Study	Phase 5: Prevalence Study
Study Objectives	...	...	...	...	...
Study Design	...	...	...	...	...
Study Population	...	...	...	...	...
Study Methods	...	...	...	...	...
Study Results	...	...	...	...	...
Study Conclusions	...	...	...	...	...
Study Limitations	...	...	...	...	...
Study Recommendations	...	...	...	...	...

# 2. PILOT STUDY AND FINDINGS

## Optimizing Problem Solving (OPS):

**When in doubt, return to the center**



- Define problem
- Gather information
- Organize data
- Critique and analyze arguments
- Consider alternative solutions
- Use graphs, table, themes
- Convey & communicate options

## 2. PILOT STUDY AND FINDINGS

### 2. Does problem to solution assignments align to OPS model?

**Step 1- Organize questions/responses around OPS.**

**Step 2- Student perception based on end-of-course student evaluations.**

**Total of 21 questions and 77 responses:**

3.31-4.05 Means

0.66-0.94 (SD range)

0.87 mean (Cronbach's alpha)

## 2. PILOT STUDY AND FINDINGS

### 3. ...the *single most valuable thing I learned in the course?*

#### **Step-by-step approach:**

*How to follow a logical process...identify current needs in my school and research-based solution...to effectively address these issues.*

#### **Communication and participation with others:**

*I learned how to read people's levels of concern...*

*...importance of communication and collaboration....*

#### **How research fit into the problem solving process:**

*Instead of rushing in, it's best to research problems carefully....*

## 2. PILOT STUDY AND FINDINGS

### **Leadership & personal agency:**

*... I have the power to work with my peers and colleagues to make our school and work environment better...*

*... anyone can develop a plan to implement small changes that can positively impact :*



# 3. NEXT STEPS AND GETTING TO THEORY

## **Teacher leader and practitioner specific focus**

- Problems, solutions, policies, and school practice

## **Expanded research with extant data**

- Expanded look at student perception data
- Projects undertaken in school settings

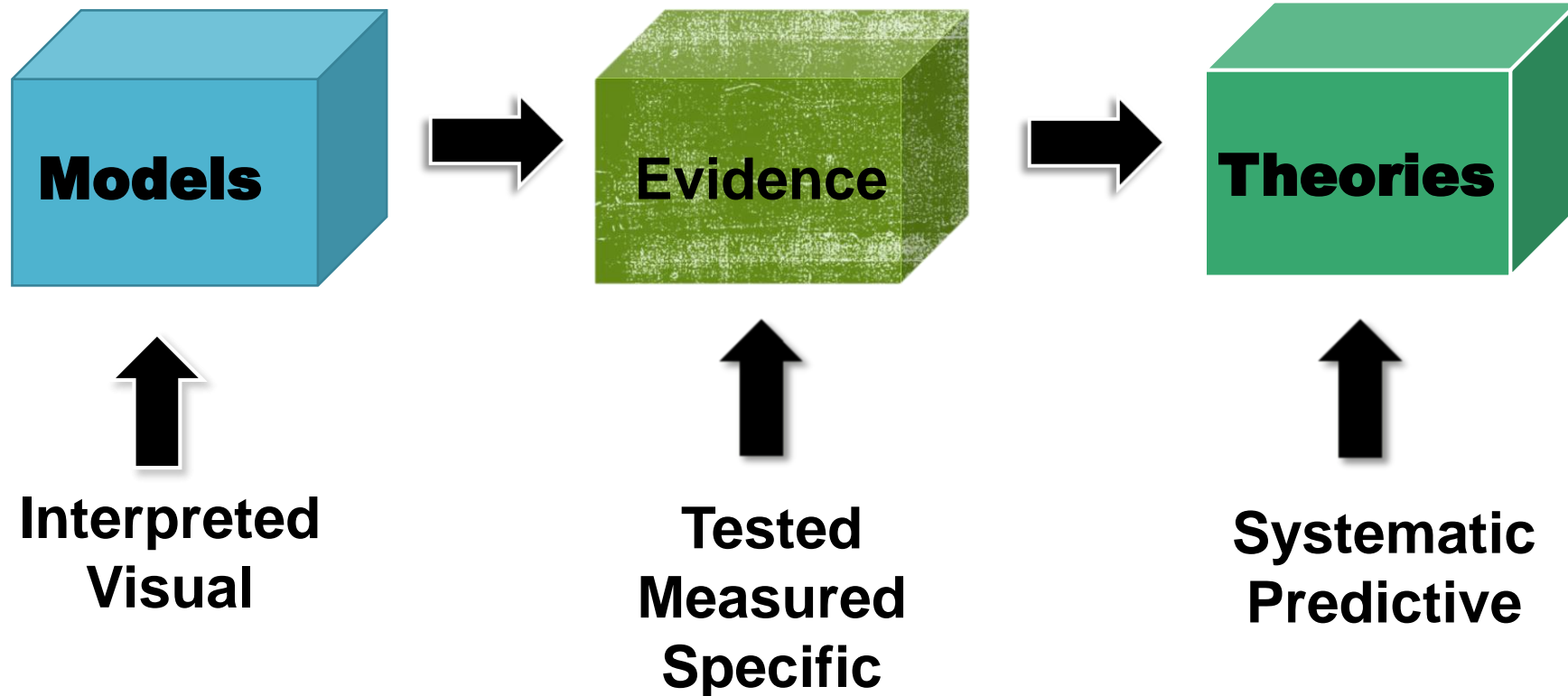
## **Alignment and integration of models**

- Alignment of P-S strategies and MELT models
- Integration of course framework- course, program, departments



# 3. NEXT STEPS AND GETTING TO THEORY

## Research Based Learning



# 3. NEXT STEPS AND GETTING TO THEORY



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