

# **Evaluation of ID and TD Research Collaboration**

## **An International Review of The State of The Art**

**Julie Thompson Klein, Ph.D.  
Wayne State University**

**NCI Conference on the Science of Team Science:  
Assessing the Value of Transdisciplinary Research  
Bethesda, MD, October 30-31, 2006**

# From Mantra to Principles

- **Large literature on IDR and IDS**
- **Quality, criteria, and indicators**
- **Cluster 1: TD Team Science**
- **Cluster 2: International ID web**
- **Cluster 3: European TD network**

# Research and Evaluation

- **Generative process**
- **Leveraging, harvesting, and capitalizing multiple expertise**
- **Managing tensions: balancing**
- **Readiness , multiple pathways**
- **New epistemic communities and cultures of evidence**

# MIT Research Environment

- **MD: juxtaposition**
- **ID: integration for new knowledge or a pragmatic end**
- **Early TD: overarching syntheses**
- **TD Science: “transcendent IDR,” systematic theoretical frames**
- **European trans-sector TD**

# Complexity of Evaluation

- **More than one discipline or field**
- **Levels/subsystems, stages differ**
- **Settings, size, integrations vary**
- **Irwin Feller's "multiples"**
- **"Quality" a relative concept**
- **"Attune a pluralism" of interests**
- **Spaapen & Dijstelbloem**

# **Principle #1: Variability of Goals**

- **Flexibility & Context (Langfeldt)**
- **Epistemological  $\leftrightarrow$  Products**
- **AFIR Team findings**
- **Harvard Project findings**
- **Methodological ID dominant**

## **Principle #2: Variability of Criteria and Indicators**

- **Conventional metrics: “proxy”**
- **Indirect/field-based peer review**
- **Sidestep “warranted ID”**
- **Primary or epistemic measures**
- **“Rigor,” “fit,” and “power”**

# **Expanded Evaluation**

- **Multiple outcomes and feedback**
- **New expertise, vocabulary, tools**
- **Work in new areas and subfields**
- **Changed career trajectories**
- **Expanded publication criteria**
- **Policy and intervention protocols**



# **Principle #3:**

## **“Leveraging” Integration**

- **Crux of ID and TD**
- **TTURC: readiness, antecedents**
- **Defila & Di Giulio and Klein**
- **Catalogue of Criteria**
- **“Generative” building blocks in flexible “pool” approach**

# Klein Checklist of Questions

- **Spectrum of disciplines/fields**
- **Approaches, tools, and partners**
- **Flexible structure for changes**
- **Patterning-testing relatedness**
- **Unifying theories or questions**
- **New analyses and models**

## **Principle #4:** **Social <> Cognitive Factors**

- **An inherently social process**
- **Communication and negotiation**
- **Leveraging: iterations, commons**
- **Mutual Learning > Knowledge**
- **“Best” = partial and negotiated**

## Principle #5: Management

- **Overarching: common, shared**
- **Leadership: balancing acts**
- **Coaching models**
- **REPP, Klein, Defila & DiGiulio**
- **AFIR funding and peer review**
- *Sonderforschungsbereiche*

# **Principle #6:**

## **Iteration & Transparency**

- **Comprehensive System**
- **Feedback and Non-linearity**
- **TTURCs Logic Model**
- **Basic activities> methods, models**
- **Publication> recognition**
- **Content Base> communication**
- **Practices> outcomes> policies**

# European TD Pattern Models

## Aenis and Nagel Log Frame

- Mobility & Interaction
- Axioms: ID + TD Participation

## REPP Embedment-Performance

- Indicators scored on radar graph
- Feedback and transparency

# **Principle #7:**

## **Effectiveness and Impact**

- **Principles #1 and 2 return**
- **Unintended consequences**
- **Long-term, diffused impacts**
- **Investment return, value added**
- **Generative technologies**
- **Large Programs**

## **“Discipline” and “Peer”**

- **Harvard: antecedent knowledge**
- **“Mastery” versus “Adequacy”**
- **“Fit” of novelty and innovation**
- **Bias against non-conventional**
- **Disciplines not stable matrices**



# Peer Review

- **May not bias against ID and TD**
- **Finding qualified evaluators**
- **“Cognitive particularism”**
- **Incipient and emerging fields**
- **Variety of strategies**

# Peer Review Strategies

- **Joint panels, “matrix” schemes**
- **Candidate naming of peers**
- **“On the fly” e-teams**
- **Bridging “interpreters”**
- **Special funding categories**

# **“Production of Legitimacy**

- **Lamont, Mallard, & Guetzkow**
- **Panels: new rules of fairness**
- **Negotiated meaning of “good”**
- **Distance <> Familiarity**
- **Multiple balancing acts**
- **Methodological pluralism**

# Creating ID & TD Cultures

- **SFBs: interdisciplinary learning**
- **ID culture of fields**
- **“Moderate interdisciplinarity”**
- **Premise of TD Team Science**
- **New cultures of evidence**

# **Evaluation of ID and TD Research Collaboration**

**An International Review of  
The State of The Art**

**Julie Thompson Klein, Ph.D.  
Wayne State University**

**NCI Conference on the Science of Team Science:  
Assessing the Value of Transdisciplinary Research  
Bethesda, MD, October 30-31, 2006**