Implementation Science: Moving Evidence into Practice and Giving Practice Evidence

ASHA Chicago – November 14, 2013

Research Issues Across the Discipline

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Social Thinking

Olswang Disclosure

- Relevant *financial relationship* disclosure: funding by the University of Washington and the National Institutes of Health, National Institute of Child Health and Human Development (5 P01 HD018955)
- Relevant *nonfinancial relationship* disclosure:

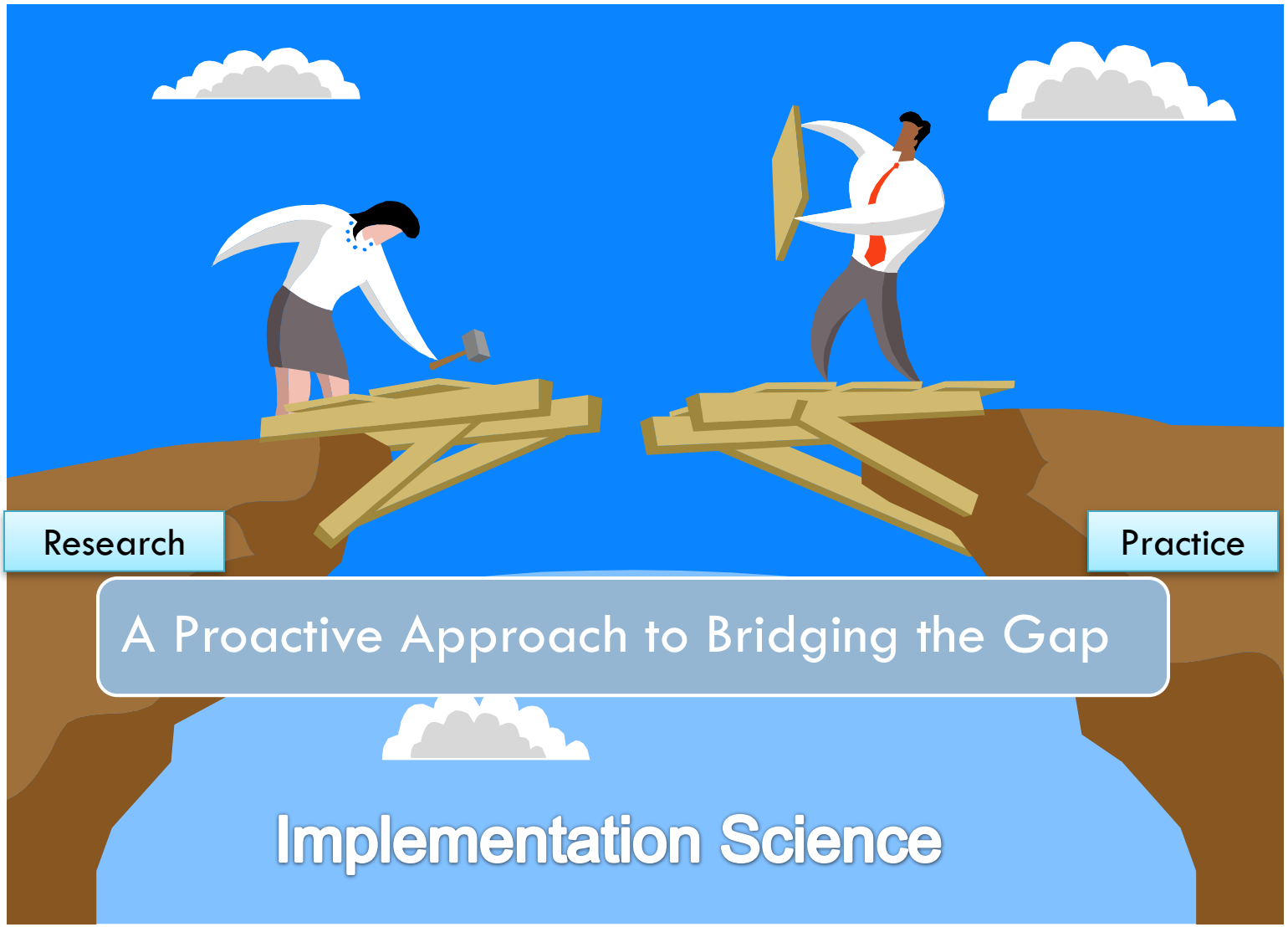
  Institutional relationship as a member of the Board of Trustees, American Speech-Language-Hearing Foundation

Now, more than ever, integrated approaches to acquiring scientific knowledge are needed to support practitioners in their delivery of the most effective services possible.

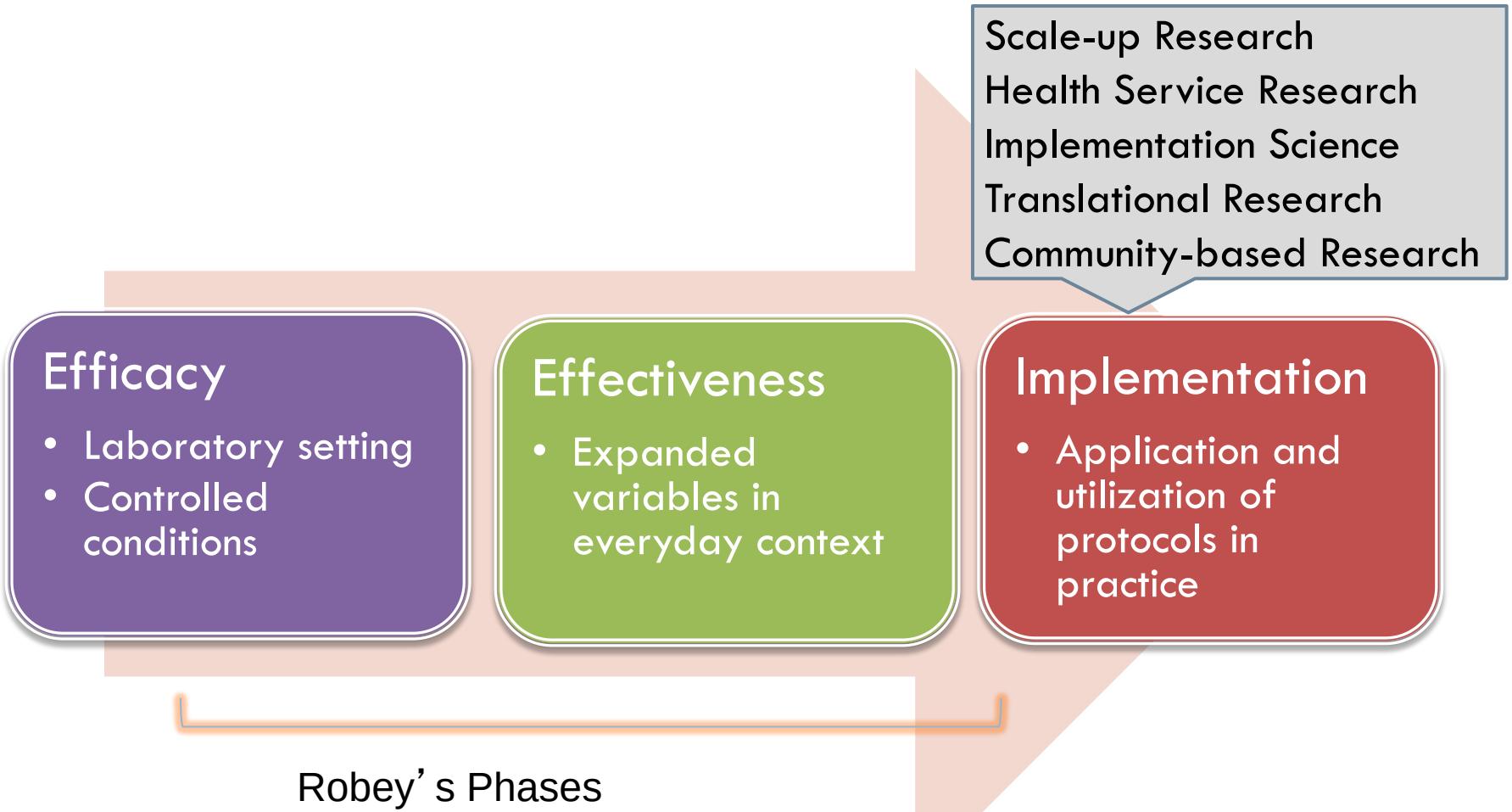
Evidence for the 21st Century:

Requires a comprehensive view of research that

- Continues to examine **efficacy** of assessment and treatment protocols under controlled conditions, but also
- Examines how proven protocols can be implemented with fidelity and sustainability into practice
- Examines practice-based protocols for evidence of their success
- Examines issues of service delivery and quality of care

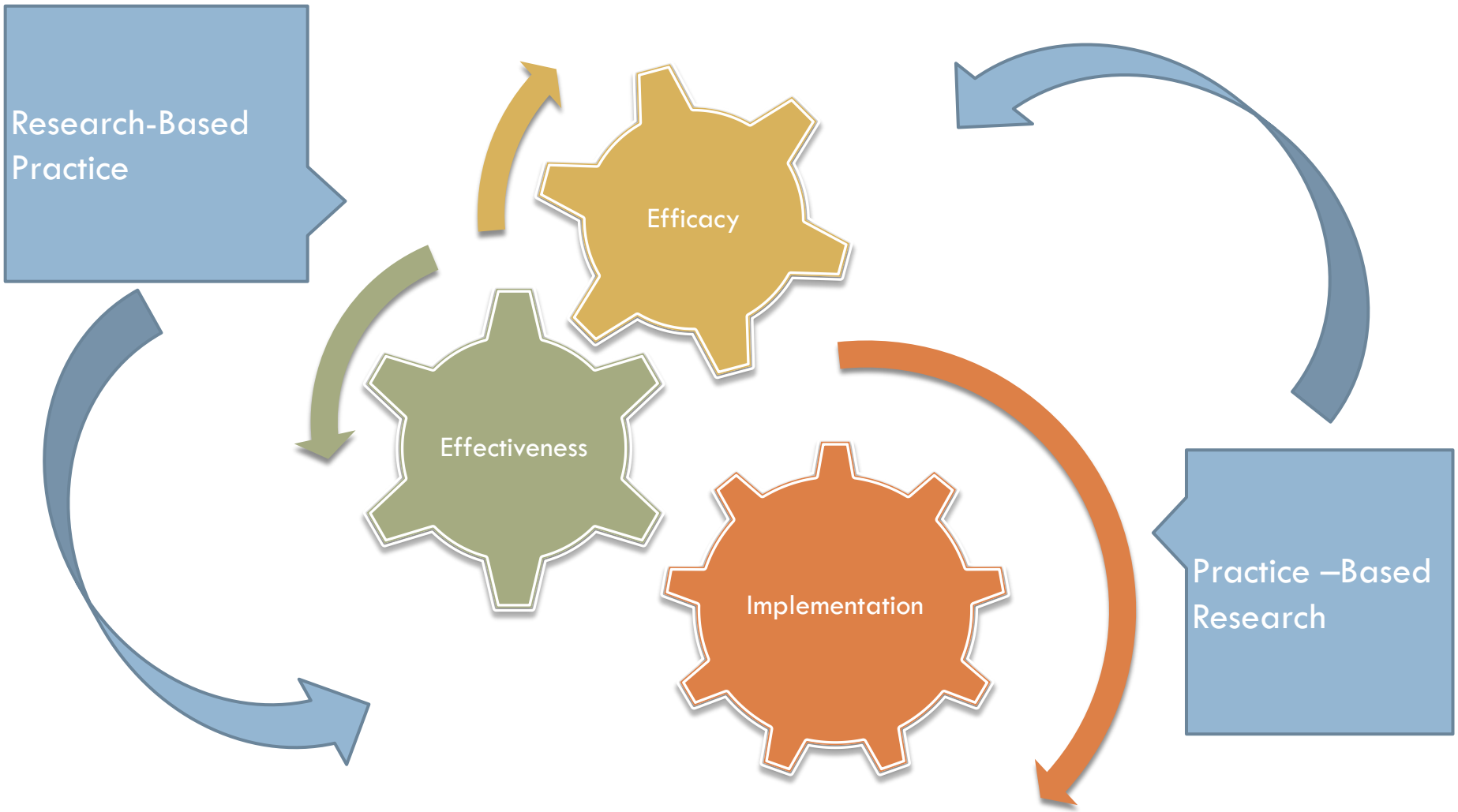

Research
Practice
A Proactive Approach to Bridging the Gap
Implementation Science

Traditional Research Continuum



Where are the stakeholders (practitioners, administrators, clients, caregivers) in this model?

Research


Research-Based Practice
Efficacy
Effectiveness
Implementation
Practice –Based Research

Implementation Science

- Research that addresses the complex, real-world variables in practice settings by
  - Investigating **barriers to** and **solutions** for delivery of sustainable, effective protocols that will maximize positive outcomes for a large number of consumers
  - Including stakeholders
  - Actively integrating research and practice

Asha Journals	2006	2007	2008	2009	2010	2011	2012	Total
Total # articles	136	142	155	161	169	127	135	1025
Total # (%) of treatment articles	12 (9%)	8 (6%)	25 (16%)	11 (7%)	18 (11%)	13 (10%)	22 (16%)	109 (11%)
# (%) of treatment articles focusing on efficacy	6 (50%)	7 (88%)	13 (52%)	3 (27%)	10 (56%)	9 (69%)	14 (63%)	62 (57%)
# (%) of treatment articles focusing on effectiveness or implementation	3 (25%)	1 (13%)	3 (12%)	3 (27%)	4 (22%)	4 (31%)	6 (23%)	24 (22%)

Olswang & Bain, 2012

Three Perspectives

- Applied/Clinical Researcher
- Basic Researcher
- Practitioner Researcher

Applied Researcher's Perspective

As an SLP in early intervention: Am I making a difference? What's the role of maturation?

What to treat?

When to treat?

How long to treat?

My* research story: Moving from efficacy to

Implementation

Examining the efficacy of a short-term, intensive treatment designed to teach triadic eye gaze (TG)(shifting gaze between an object and adult) as a signal of intentional communication to young children (10-24 months of age) with severe physical disabilities

*UW TG Team: Patricia Dowden, Gay Lloyd Pinder, Julie Stratton Feuerstein, Kathryn Greenslade

Following the traditional research continuum……

Triadic Gaze Research Program

1990s

- Feasibility Study: Time Series, Single-Case Study, ABA, Multiple Baseline across contexts (Pinder, Olswang & Coggins, 1993)
- Feasibility Study: Time Series, ABA, Multiple Baseline across contexts, replicated across three children (Pinder & Olswang, 1995)
  - Single SLP, Child-focused Tx, 2 times/week, ~15 weeks, in clinic, outcome measures 1 time/week
- Feasibility Study: Time series, Multiple Baseline across caregivers (Olswang, Pinder, & Hanson, 2006)
  - Same SLP, Caregiver-focused Tx, 2 times/week, 3 weeks, outcome measures 1 time/week

2006 – 2012

- Randomized Controlled Study: (46 consented)

  Experimental Group (N=9) TG treatment + standard care

  Control Group (N=9) Standard care only

  3 different Tx SLPs

  Tx 2 times/week, ~16 weeks, in home

  Different SLP outcome measures every three weeks, with follow-up 1 month post tx

  As with the feasibility studies – promising results for the success of a short-term, SLP delivered, child-focused treatment to teach gaze as a communication signal to young children with physical impairments

Implementation – Moving into practice

Challenges (to name a few):

- Understanding the intricacies of service delivery systems (birth-to-three centers), including:
  - the needs, priorities and investment of stakeholders (organization/administrators, practitioners, children, families)
  - the constraints of “real-world” logistics that influence the training, implementation fidelity and stability of treatment delivery
  - the appropriateness and sensitivity of outcome measures for phases of implementation and various stakeholders

Next Research Step – Implementation Research

- Can the treatment be implemented as designed?
- What adaptations need to be made?
- What type and degree of training are required?
- How does administrator/practitioner buy in influence implementation?

- Research that investigates and documents the success of implementation is every bit a science as efficacy research – but different research paradigms

The question that I keep coming back to: If I knew more about implementation science, would I have designed my program differently from the start?