#GEIS2018

GLOBAL
EVIDENCE
AND
IMPLEMENTATION
SUMMIT
2018

22-24 October, Melbourne, Australia www.geis2018.org

Evidence and Implementation in Education: Three Perspectives

22 October 2018

Matthew Deeble (Moderator)

EVIDENCE FOR LEARNING

Helping great practice become common practice

New high quality evidence on programs through randomised control trials (RCT) published in plain English

Plain English summaries that show the learning gain from different approaches, the evidence strength and the cost to implement

Build knowledge

Share evidence

Encourage use

Tools and support to select and implement and to evaluate the benefit to learners

E4L

Evidence and Implementation in Education: Three Perspectives

Gary W. Ritter
Saint Louis University, US
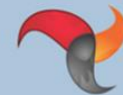
Monday October 22, 2018
Concurrent Session 3, 11:30 am – 12:30 pm
Room 105 (Level 1)

Quick Outline

1. Background

2. Campbell Strategy

3. The Logic Chain & Missing Links

4. Challenges to Ed Research

5. Barriers to Better Use of Evidence
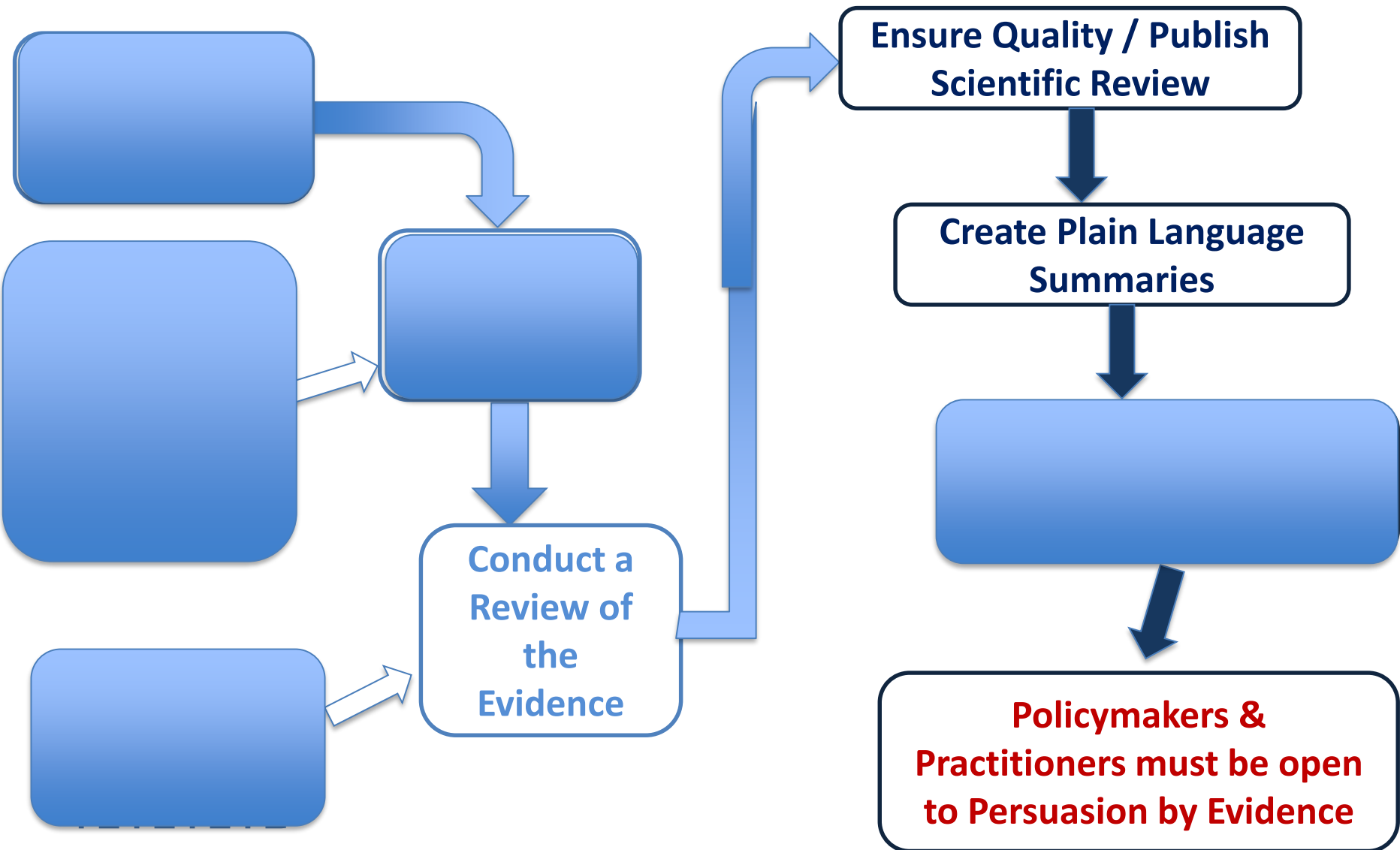
6. A Way Forward – Bridging the Gap

1. Background

1. Ed Policy Researcher – supporting teachers and leaders to make better decisions using evidence

2. Work with Primary and Secondary Schooling

3. Connected to Campbell Collaboration for 10+ years

4. I will use Campbell to talk about:

   a) Attempts to inject evidence

   b) Challenges & barriers to evidence use

   c) A path forward

2. Campbell Collaboration

- *Better Evidence for a Better World*
- Logic Chain:
  – Researchers conduct systematic reviews of evidence (on education issues)
  – Researchers translate the findings into policymaker-friendly language
  – Findings inform policy and practice

3. Logic Chain

SAINT LOUIS UNIVERSITY

Ensure Quality / Publish Scientific Review

Create Plain Language Summaries

Conduct a Review of the Evidence

Policymakers & Practitioners must be open to Persuasion by Evidence

SAINT LOUIS UNIVERSITY

Policymaker /Practitioner has a ?

Are resources and/or researchers available ?

Connection to Research Team

Are there primary studies ?

Conduct a Review of the Evidence

Ensure Quality / Publish Scientific Review

Create Plain Language Summaries

Connect Back to Policymakers & Practitioners

Policymakers & Practitioners must be open to Persuasion by Evidence

Higher Purpose. Greater Good.™

4. Challenges to Ed. Research (& responses)

Before we meta-analyze, it can be hard to generate primary evidence in schools:

- *RCTs can't be done in school-based settings*

- *RCTs are not ethical*

- *Educators will not condone "experimenting with our students"*

5. Barriers to Use of Evidence

1. Evidence matters, but it is not the only thing (and we don't ask about where it is needed)

2. Teachers and school leaders, like most of us, may not be great consumers of evidence (one bar graph may do the trick, depending on priors)

3. Researchers are generally NOT great communicators of evidence

4. We might have evidence on the wrong topics! Researchers, also, do not necessarily ask the right questions (related to influencing policy)

SAINT LOUIS UNIVERSITY

"Examining Exclusionary Activity Through Mediated Discourse Analysis: Looking Critically at Play, Peer Culture, and Paper Airplanes."

"Counter-Storytelling Through Teatro: Culture Clash in a Chicana-Chicano History Classroom."

"Outdoor Learning: Authenticity or Performativity."

"'Game Changers': The Role of Epistemic Reflexivity in the Work of Epistemic Gaming."

"'Performative Nostalgia': Institutionalizing Feminist Knowledges in Chile"

Carrie Conaway @clconaway · Oct 19

What if faculty going up for tenure at applied schools (policy, education, etc.) had to submit a letter from a policymaker or practitioner whose work they have influenced, along with all the letters from other faculty?

💬 17   ⟳ 48   ❤️ 236   ✉️

6. Bridging the Gap Between R&P

1. (R) Asking the right questions
2. (Pr) Trying multiple strategies *(exploiting opportunities; rolling out interventions)*
3. (R, Pr) Keeping track of what happens
4. (R) Thoughtfully gathering the evidence
5. (Pol) Acting on that information
6. Ideal – The Evaluating Society

CESE and evidence in education

Global Evidence and Implementation Summit

Dr Jenny Donovan | 22 October 2018

CESE is the central point of education evidence within NSW. It was the first education research and data hub of its kind in Australia.

We have three core responsibilities

Provide data analysis, information and evaluation that improve effectiveness, efficiency and accountability

Collect essential education data and provide a one-stop shop for information needs

Build capacity across the whole education sector so that everyone can make better use of data and evidence
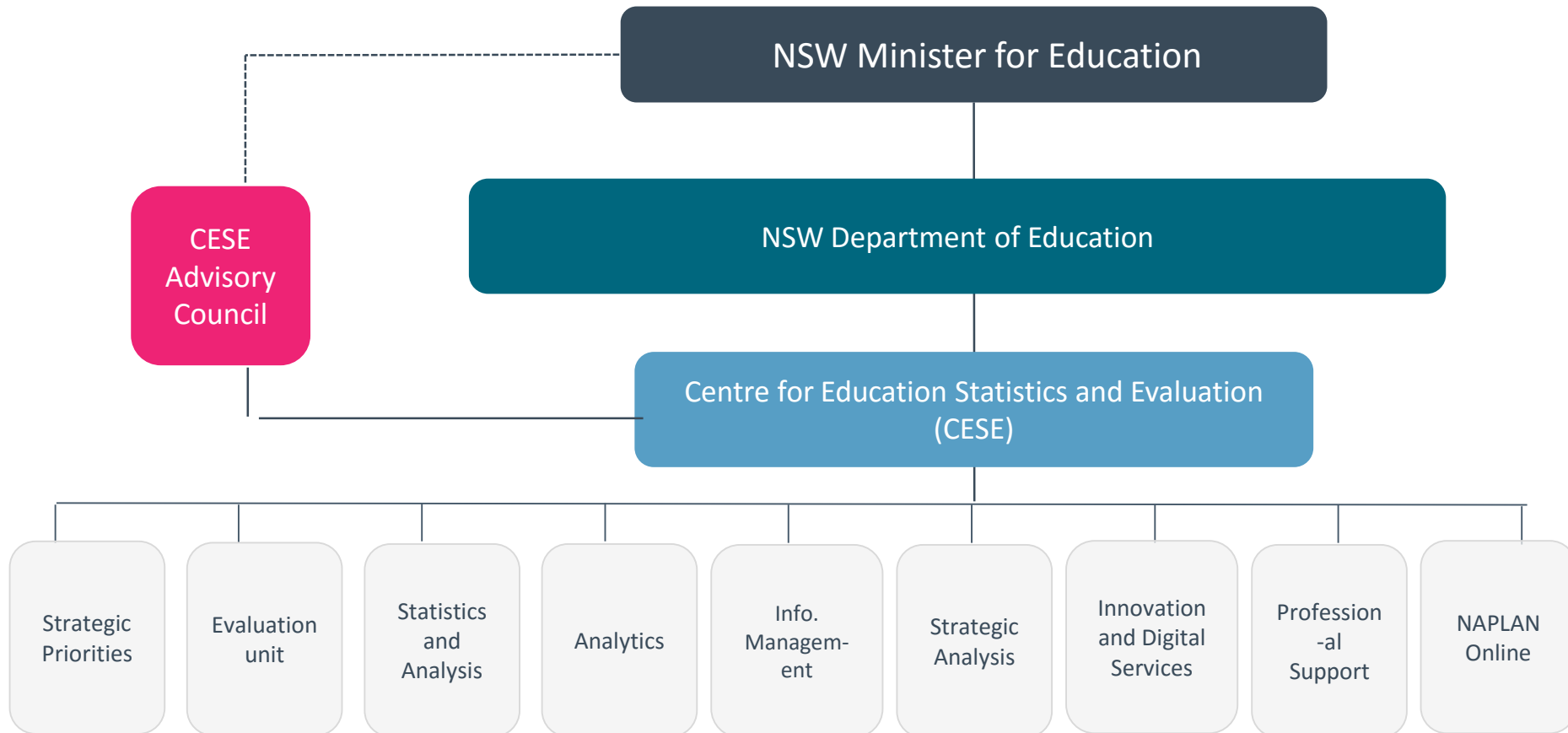
Prior to school	Primary school	Secondary school	Training / Higher Education	Post school

CESE was created in 2012 to improve the effectiveness, efficiency and accountability of education in NSW

Organisational chart:

- **NSW Minister for Education**
  - **NSW Department of Education**
    - **Centre for Education Statistics and Evaluation (CESE)**
      - Strategic Priorities
      - Evaluation unit
      - Statistics and Analysis
      - Analytics
      - Info. Managem-ent
      - Strategic Analysis
      - Innovation and Digital Services
      - Profession-al Support
      - NAPLAN Online
- **CESE Advisory Council** (connected to NSW Minister for Education and CESE)

Our work is guided by education experts from Australia and overseas

CESE Advisory Council

Dr John Ainley (Chair)
Principal Research Fellow, and former Deputy CEO (Research) ACER

Dr Hans Wagemaker
Independent Consultant and former Executive Director of the International Association for the Evaluation of Education Achievement (IEA)

Leslie Loble
Deputy Secretary, External Affairs and Regulation, NSW Department of Education

Dr Andreas Schleicher (France)
Director for Education and Skills, and Special Advisor on Education Policy to the Secretary-General , OECD

Emeritus Professor Denise Bradley AC
Former Vice-Chancellor and President of the University of South Australia

Professor Bruce Chapman
Professor of Economics, Research School of Economics and the Crawford School of Public Policy, ANU (recently retired)

Robert Schwartz (USA)
Francis Keppel Professor of Practice of Educational Policy and Administration, Harvard (recently retired)

Professor Alan Hayes AM
Distinguished Professor of Family Studies and Director - Family Action Centre, Faculty of Health and Medicine, University of Newcastle

Dr Lisa O'Brien
CEO
The Smith Family

Professor Linda Harrison
Professorial Research Fellow in Early Childhood, Faculty of Human Sciences, Department of Educational Studies, Macquarie University

Professor Magdalena Mo Ching Mok (Hong Kong)
Chair Professor of Assessment and Evaluation and Director of Assessment Research Centre, The Education University of Hong Kong (recently retired)

Dr Ben Jensen
Chief Executive Officer, Learning First

CESE provides the evidence base for decision-making about policy and reform. CESE also evaluates implementation and impact.
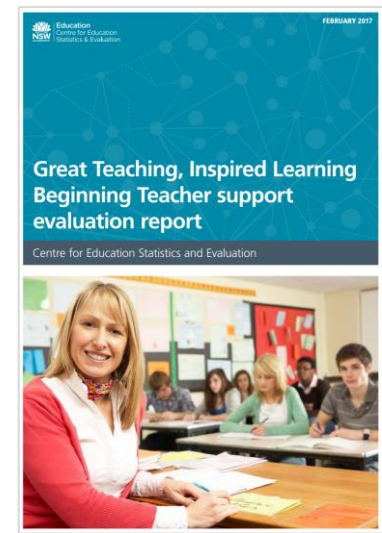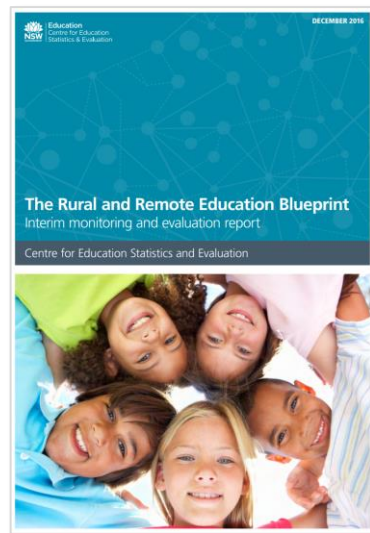
The NSW *Tell Them From Me* surveys provide a reliable and valid tool through which schools can capture insights into:

| Student wellbeing | Engagement | Effective teaching practices |

- **Students** can share their thoughts and experiences of school

- **Schools** gains information about what is going well and what could be done better

- The department gets **system-wide** information about students and schools to inform decision-making

- We produces **case studies** and **research** publications that describe state-wide trends and how schools are using their TTFM data

The student survey contains a suite of indicators that are important for academic and non-academic student outcomes

Social and Emotional Outcomes

Social engagement
- Participate in sport
- Participate in extra-curricular activities
- Sense of belonging
- Positive relationships

Institutional engagement
- Values school outcomes
- Truancy
- Homework behaviour
- Positive behaviour at school

Intellectual engagement
- Interest and motivation
- Effort
- Skills-Challenge

Drivers of Student Outcomes

Quality instruction
- Effective learning time
- Relevance
- Rigour

School context
- Experience of being bullied
- Advocacy at school

Classroom context
- Positive teacher-student relations
- Positive learning climate
- Expectations for success

Family context
- Advocacy outside school (Yrs. 7-12)
- Aspirations:
  Finish university (Yrs. 4-12)
  Finish Yr. 12; VET/TAFE (Yrs. 7-12)

NSW Custom Measures*

- Importance of skills for future job or career plans (Yrs. 7-12)
- Aboriginal students – culture at school
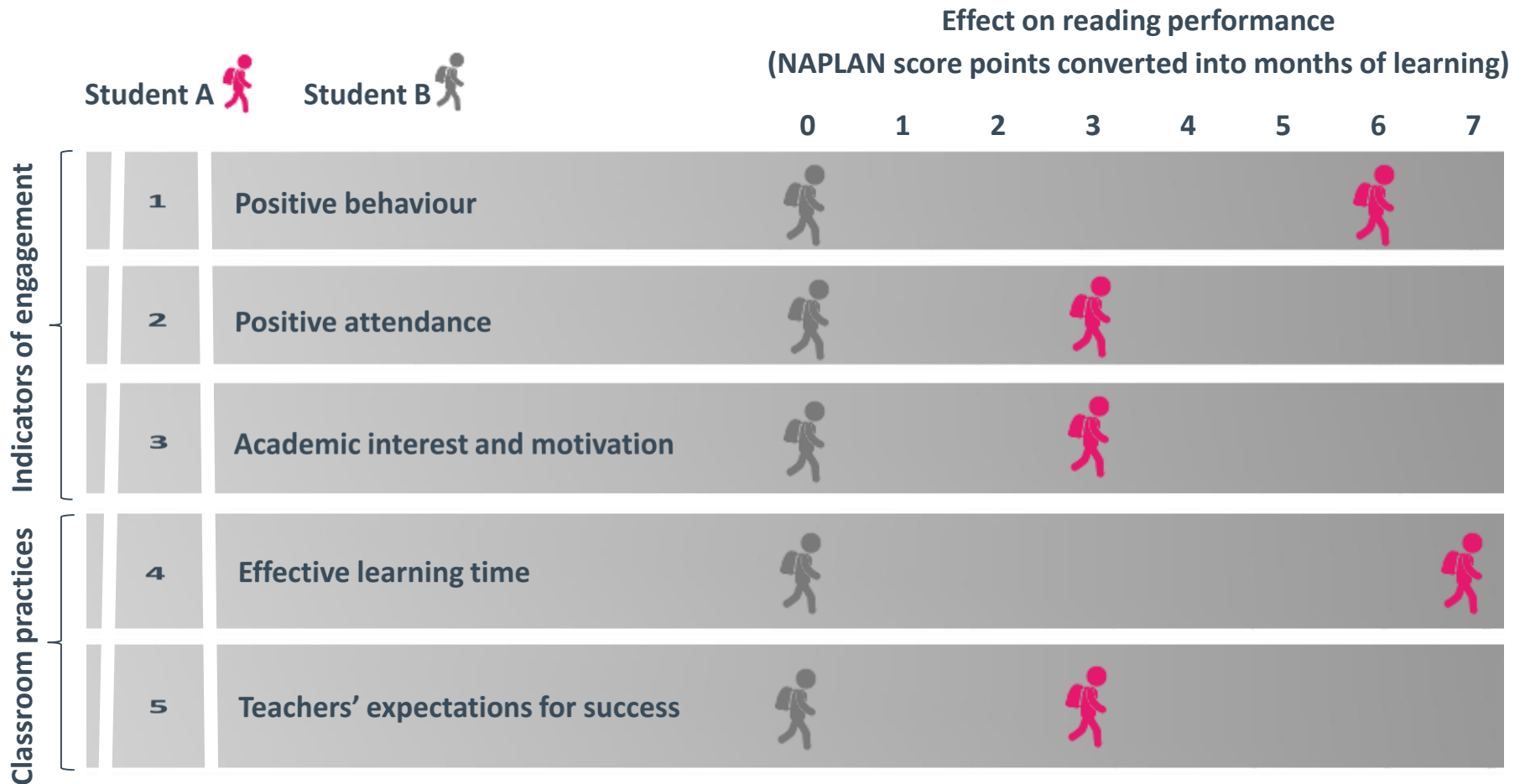- ICT for learning

Wellness (Yrs. 7-12)
- Optimism
- Academic self-concept

- Perseverance (all students)
- Personal Best goals (Yrs. 7-12)
- Challenging goals (Yrs. 7-12)
- Academic buoyancy (Yrs. 7-12)

NEW in 2018

- Structured teaching practices (Yrs. 7-12)

CESE's research shows that engagement and effective classroom practices do make a difference to student outcomes

Effect on reading performance
(NAPLAN score points converted into months of learning)

Student A 🏃   Student B 🚶

		0	1	2	3	4	5	6	7

Indicators of engagement

1	Positive behaviour	(B at 0)						(A at 6)	
2	Positive attendance	(B at 0)			(A at 3)				
3	Academic interest and motivation	(B at 0)			(A at 3)				

Classroom practices

| 4 | Effective learning time | (B at 0) | | | | | | | (A at 7) |
| 5 | Teachers' expectations for success | (B at 0) | | | (A at 3) | | | | |

The diagram shows how far one hypothetical student who reports these traits is ahead in learning of another who does not, after accounting for student socio-economic status and prior achievement. Estimates of the effect on performance are based on NAPLAN score points converted into months of learning for Year 9 students.

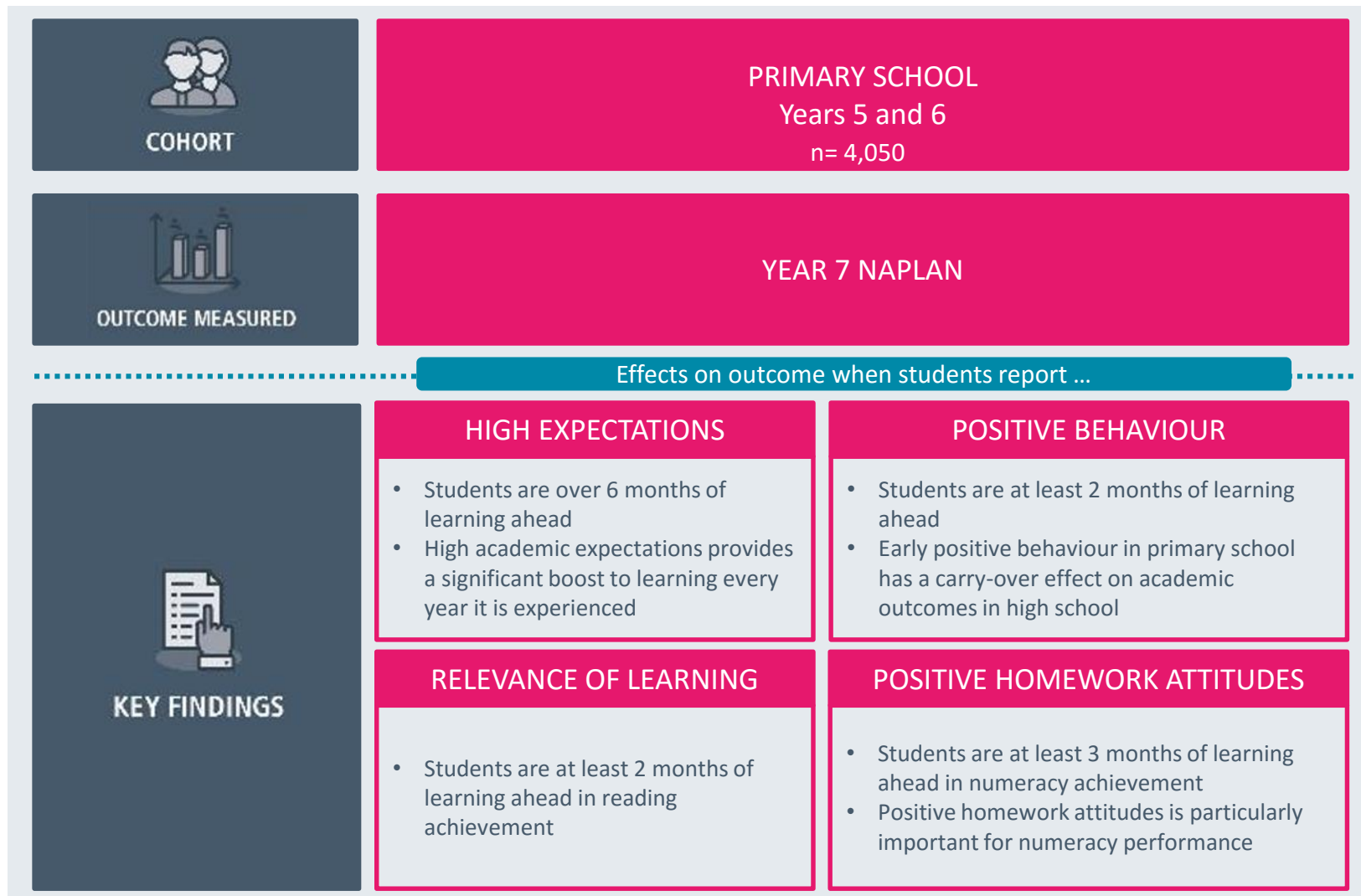# Recent research quantified the difference that engagement and effective classroom practices make to student outcomes in NSW

COHORT

HIGH SCHOOL
Year 7 to Year 9
n=6,800

SENIOR HIGH SCHOOL
Year 10 to Year 12
n=10,800

OUTCOME MEASURED

YEAR 9 NAPLAN

SCHOOL COMPLETION
(Award of the Higher School Certificate)

Effects on outcomes when students report experiencing...

KEY FINDINGS

HIGH EXPECTATIONS
- Students are 3 months of learning ahead
- Improves attendance, behaviour and motivation

BEING CHALLENGED
- School completion rate increases by 2% pts

EFFECTIVE LEARNING TIME
- Students are 7 months of learning ahead
- Most of the effect is direct

POSITIVE TEACHER-STUDENT RELATIONS
- School completion rate increases by 3% pts

Upcoming research explores how engagement and effective classroom practices in primary school impact on student outcomes by the time they enter secondary school

COHORT

PRIMARY SCHOOL
Years 5 and 6
n= 4,050

OUTCOME MEASURED

YEAR 7 NAPLAN

Effects on outcome when students report …

KEY FINDINGS

HIGH EXPECTATIONS
- Students are over 6 months of learning ahead
- High academic expectations provides a significant boost to learning every year it is experienced

POSITIVE BEHAVIOUR
- Students are at least 2 months of learning ahead
- Early positive behaviour in primary school has a carry-over effect on academic outcomes in high school

RELEVANCE OF LEARNING
- Students are at least 2 months of learning ahead in reading achievement

POSITIVE HOMEWORK ATTITUDES
- Students are at least 3 months of learning ahead in numeracy achievement
- Positive homework attitudes is particularly important for numeracy performance

High academic expectations in primary school drive student outcomes; the earlier the better, but it's not too late by Year 6

Year 5	Year 6	Year 7

If **STUDENT A** reports experiencing high academic expectations in Year 5 …

… they can be more than **6 months** of learning ahead from a student who doesn't

If **STUDENT B** reports experiencing low academic expectations in Year 5 …

… but by Year 6, **STUDENT B** reports high academic expectations …

… they can be **4 months** ahead …

NAPLAN reading achievement

… of where they would have been if their experience of teacher expectations hadn't changed

Students' perceptions of teacher support start to decline in the final years of primary school. Secondary school students perceive teacher support to dip in the middle years of school, before improving in Years 11 and 12

Support received from teachers at school, index responses from the **NSW primary** and **secondary student surveys** ('Advocacy at School' measure)
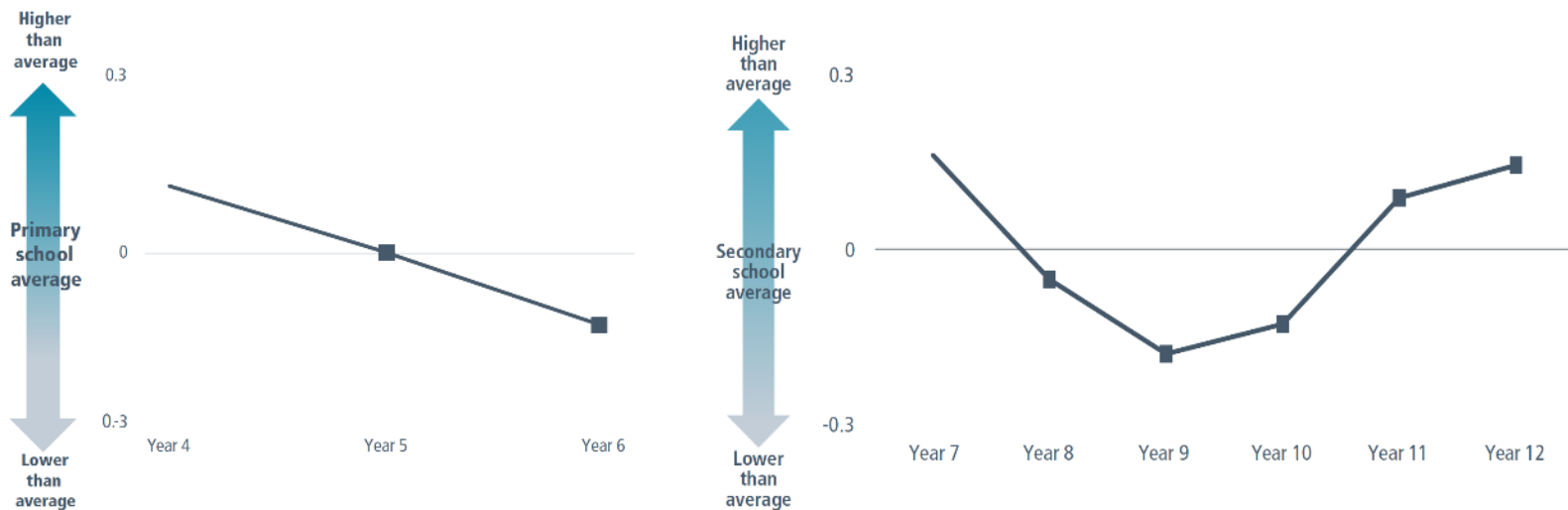
Note: symbol denotes a significant difference in the level of support from the previous school year. Averages are displayed separately for students in primary and secondary school (NSW government schools only).

Get in touch

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Centre for Education Statistics and Evaluation

Implementation Science and Practice in Schools: Unique Obstacles and Common Opportunities

Aaron Lyon, PhD
Associate Professor
UW Psychiatry & Behavioral Sciences
Director
School Mental Health Assessment,
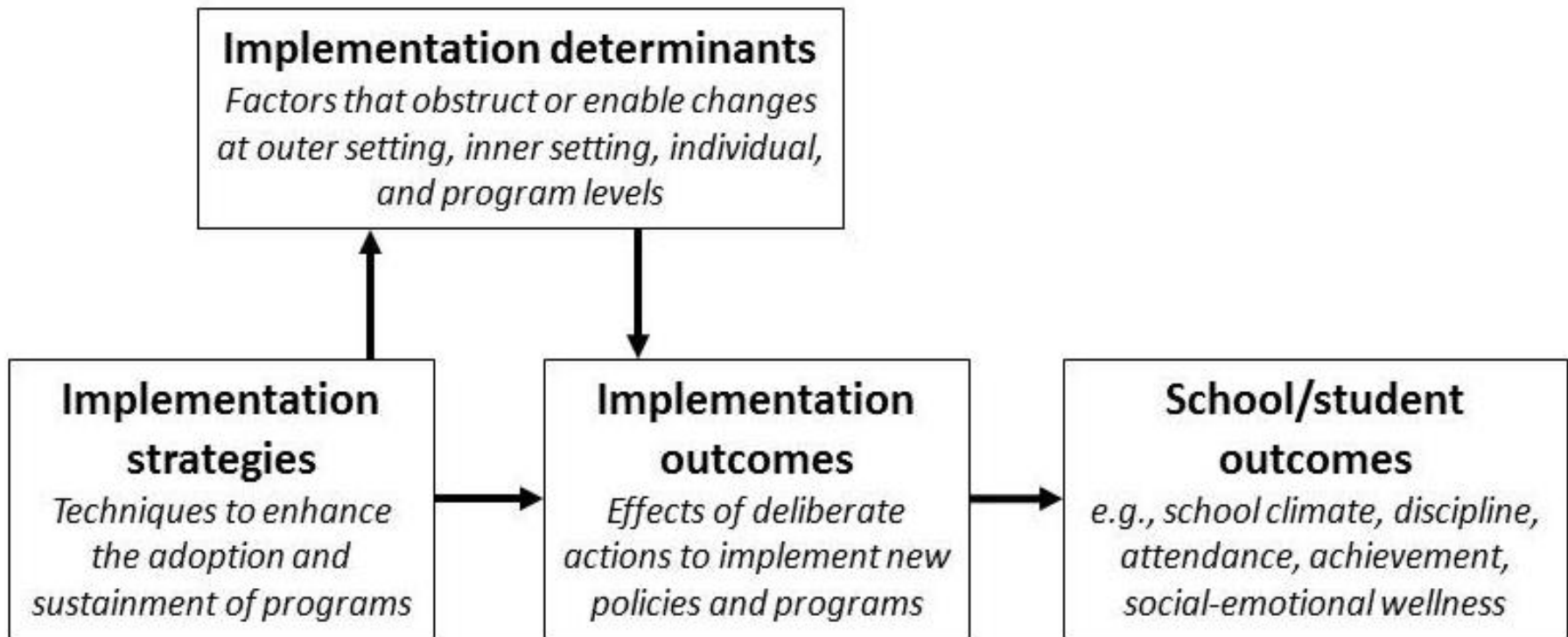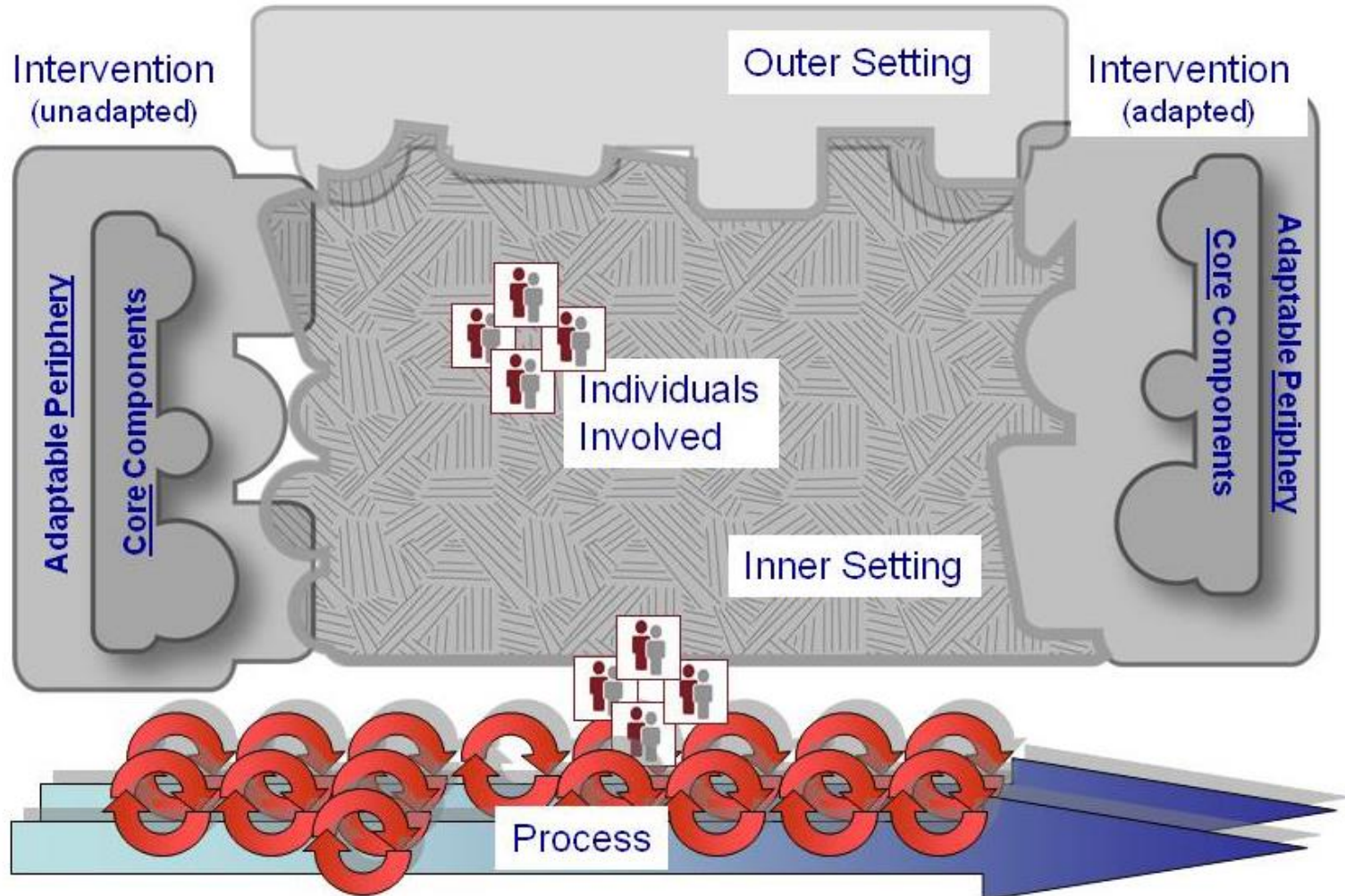Research, & Training (SMART) Center

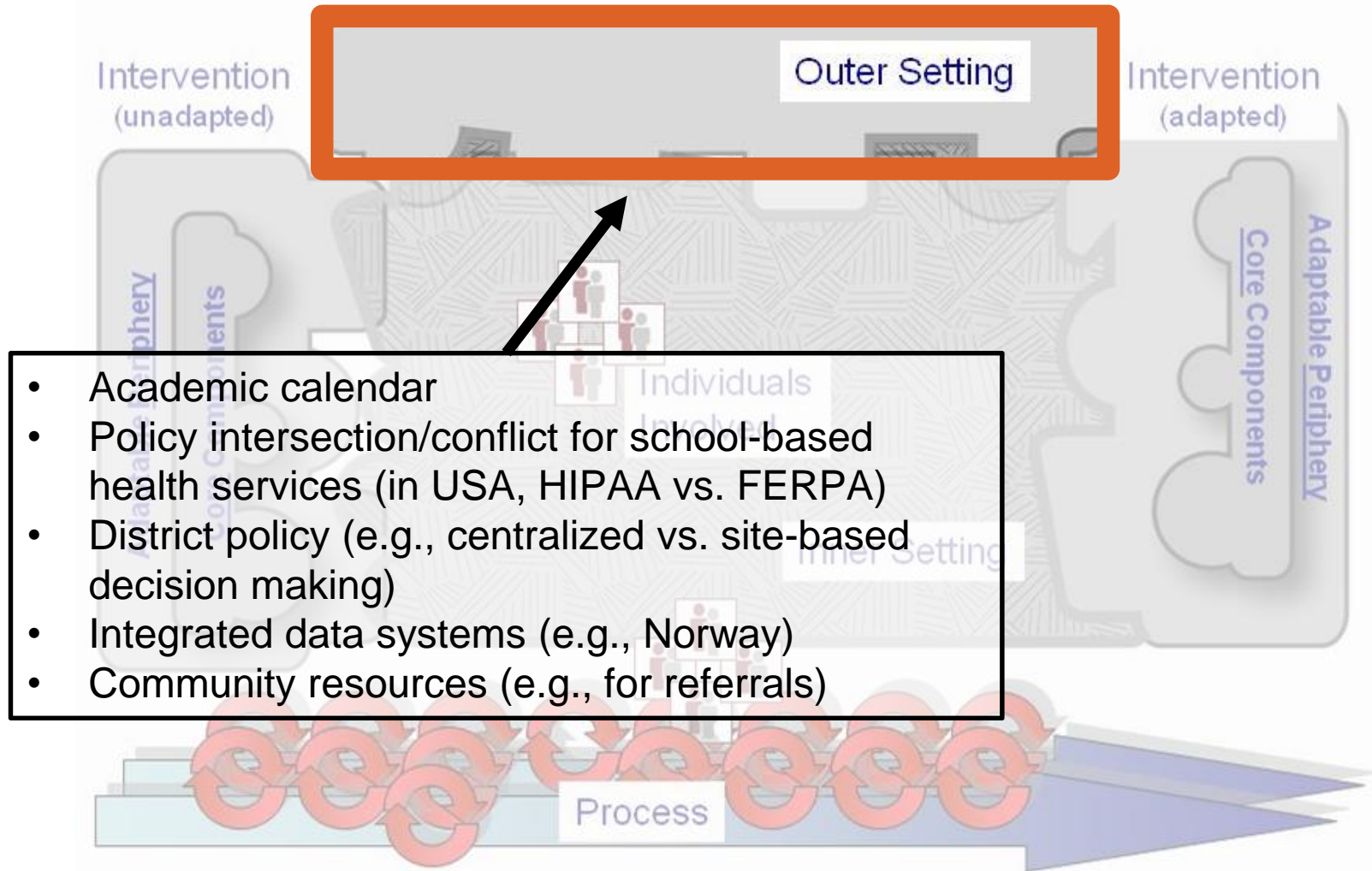# Determinants, Strategies, & Outcomes

(Lyon & Bruns, in press; adapted from Lewis et al., 2017)
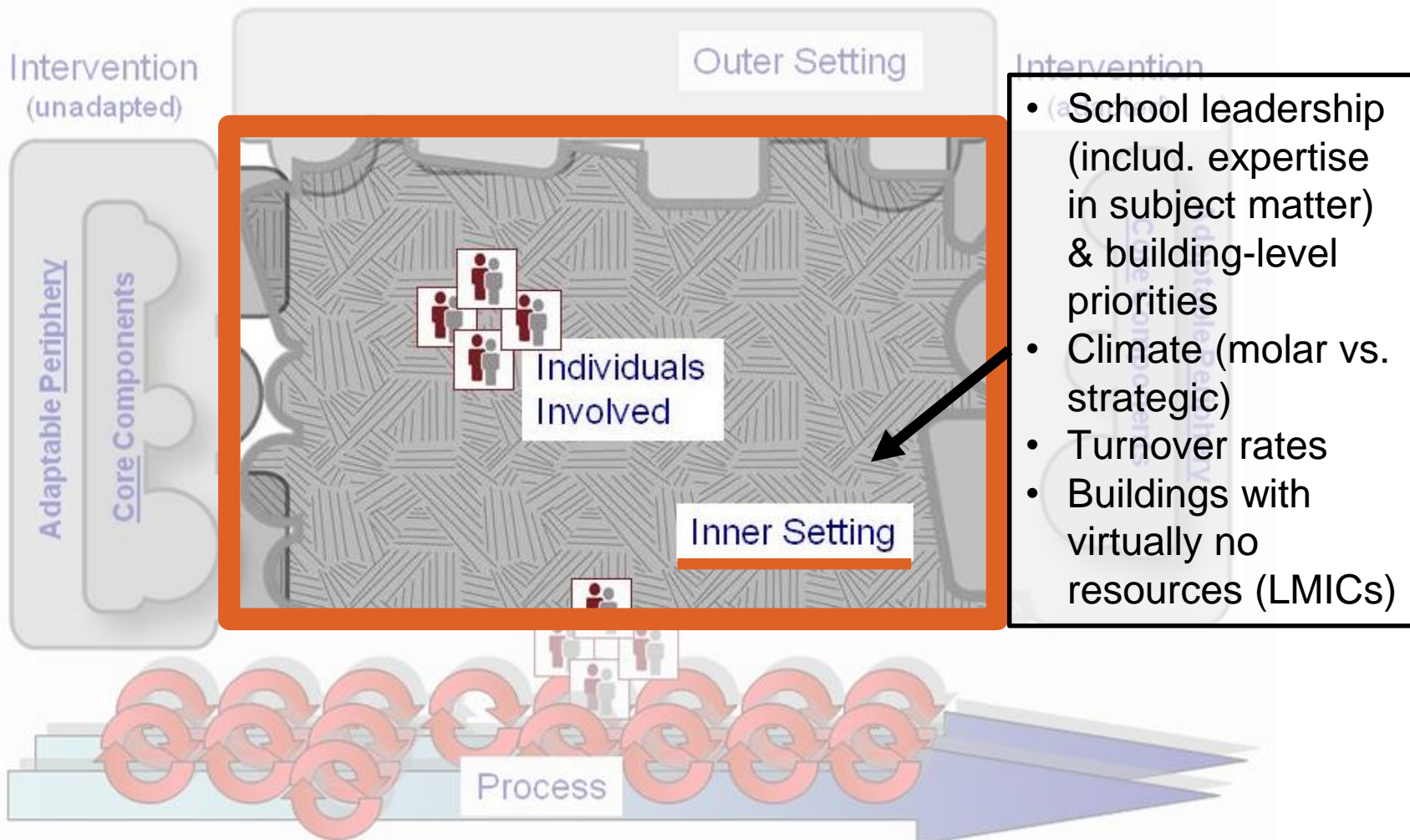
Implementation Frameworks (*n* = 61+)

ONE EXAMPLE: Consolidated Framework for Implementation Research (CFIR; Damschroder et al., 2009)

System Level: *Outer Setting*

Outer Setting

Intervention (unadapted)

Intervention (adapted)

- Academic calendar
- Policy intersection/conflict for school-based health services (in USA, HIPAA vs. FERPA)
- District policy (e.g., centralized vs. site-based decision making)
- Integrated data systems (e.g., Norway)
- Community resources (e.g., for referrals)

Process

System Level: *Inner Setting*

- School leadership (includ. expertise in subject matter) & building-level priorities
- Climate (molar vs. strategic)
- Turnover rates
- Buildings with virtually no resources (LMICs)

Outer Setting

Inner Setting

Individuals Involved

Intervention (unadapted)

Adaptable Periphery

Core Components

Process

SMART
School Mental Health Assessment
Research & Training Center
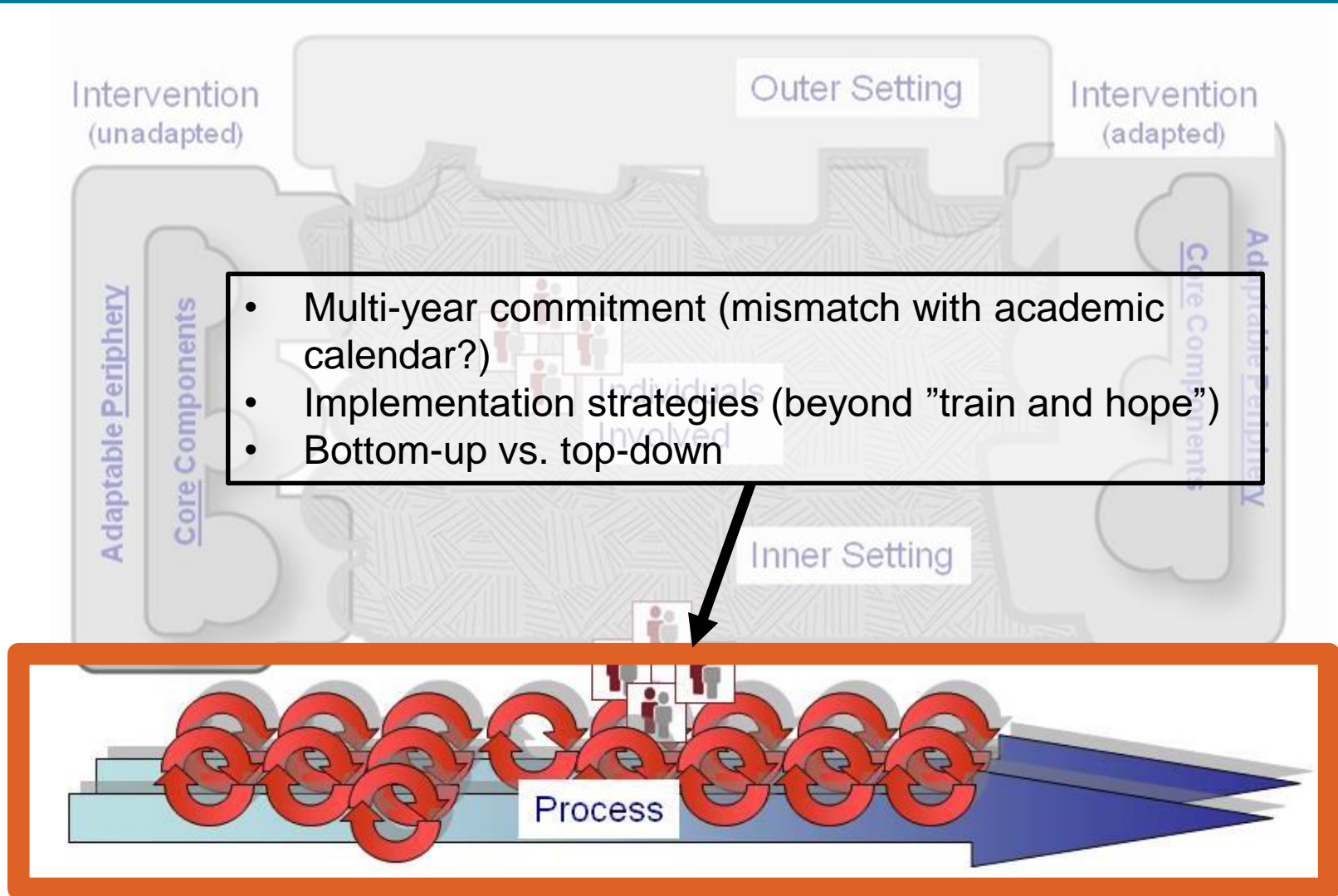
System Level: *Individuals*
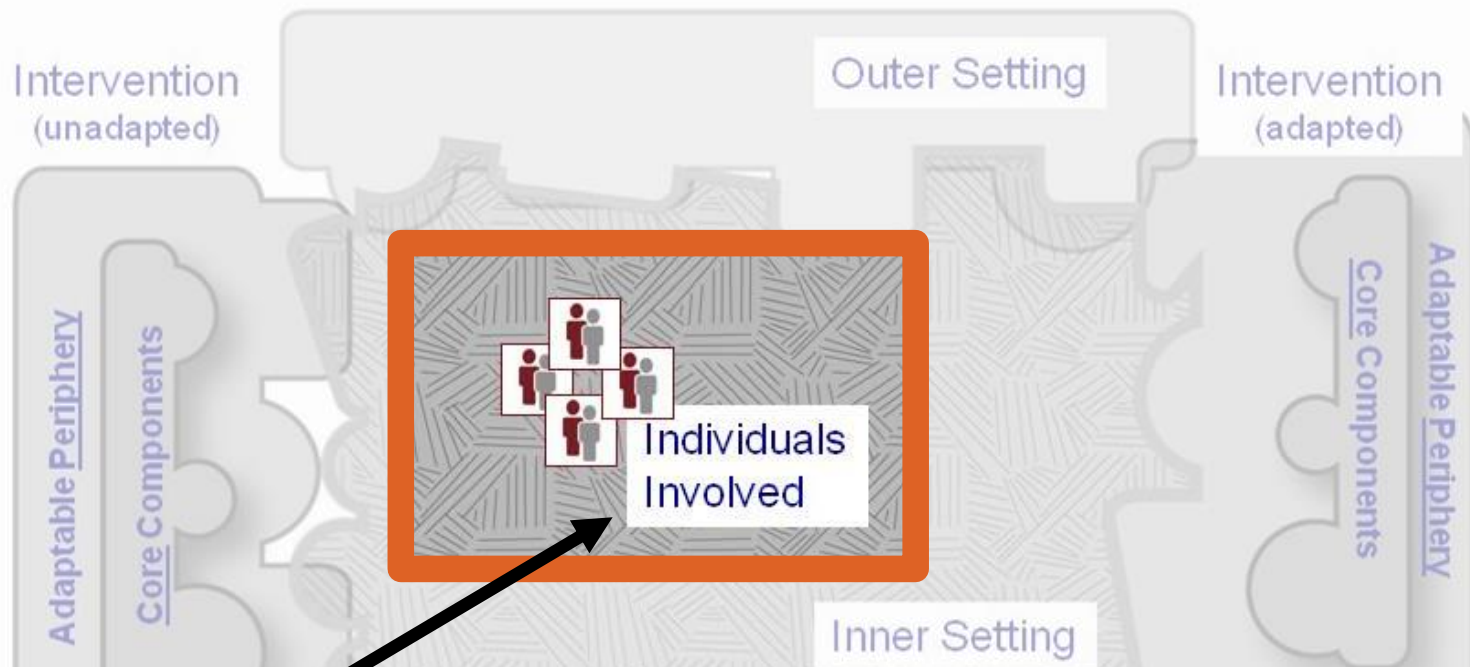
- Professionals with diverse backgrounds (e.g., differing knowledge, role expectations)
- Attitudes toward evidence
- Beliefs about initiative stability (i.e., "flavor of the month")
- Wide range of student need and severity
- Student diversity (ethnic, racial, cultural, gender, economic, etc.)

SMART
School Mental Health Assessment
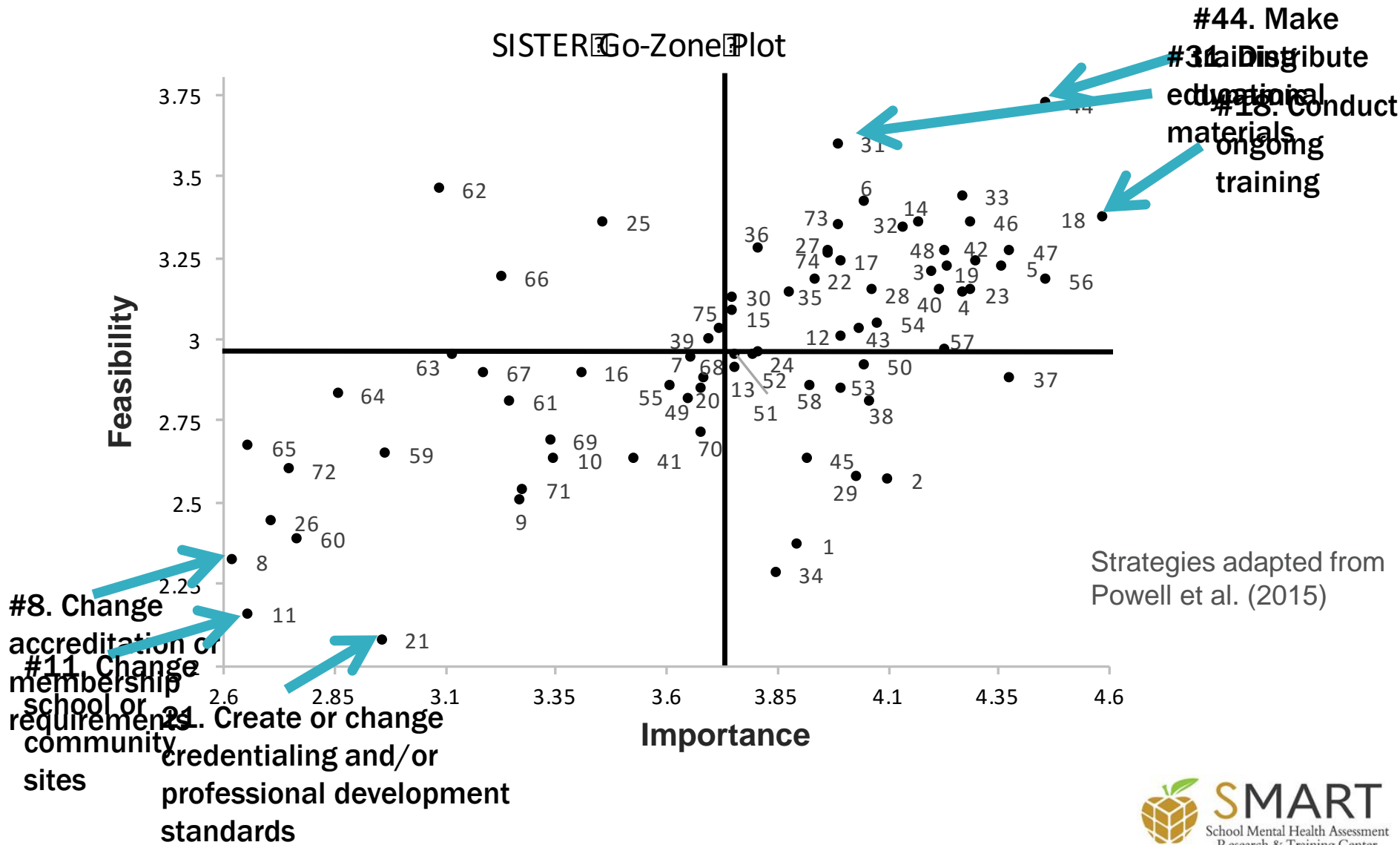Research & Training Center

System Level: *Intervention*
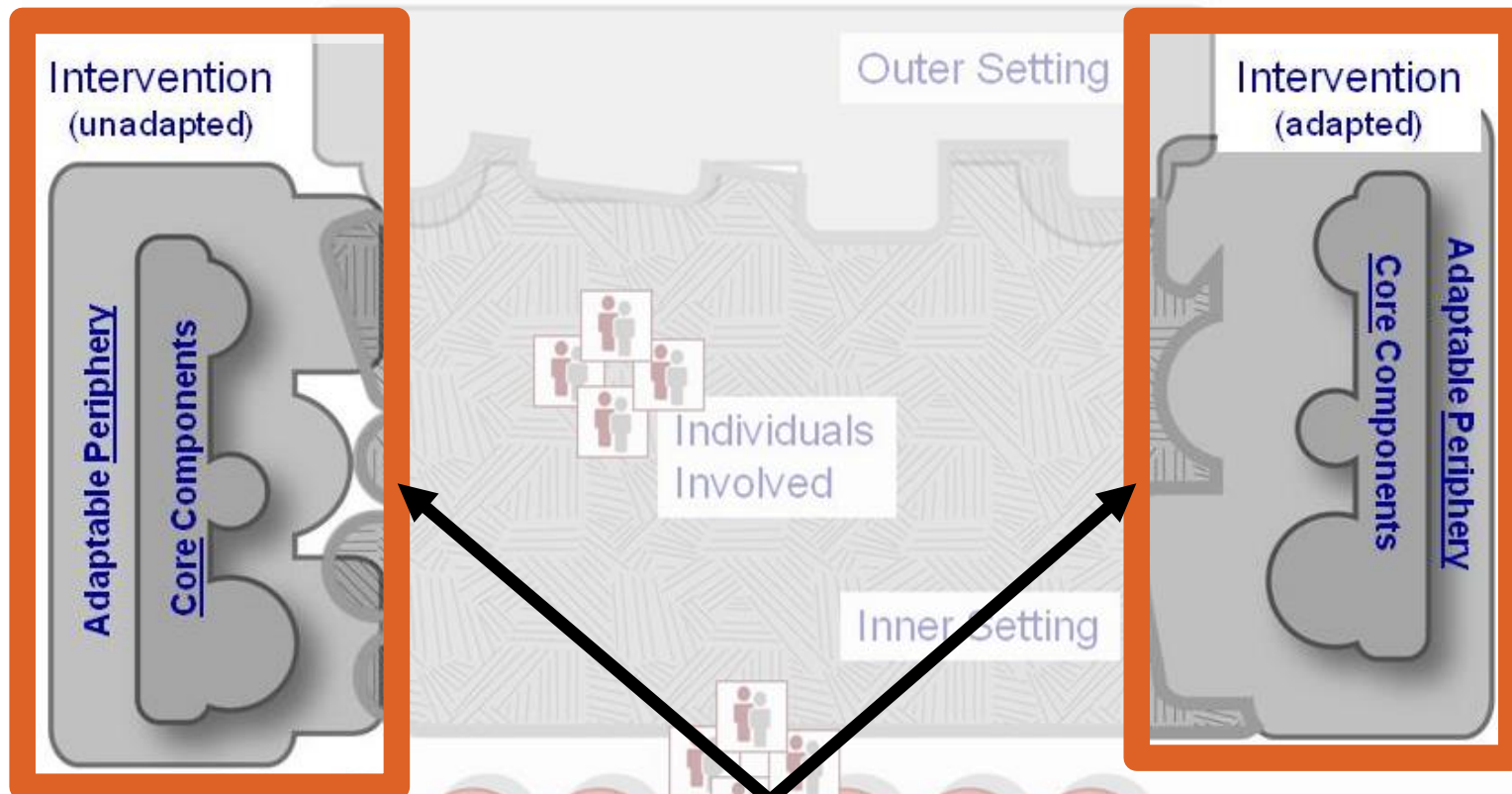
- Designed for schools vs. adapted to schools
- Interventions often need to be multilevel
  Intervention usability / design quality
- Plenty of non-evidence based programs and
  practices that may need *de-adoption*

SMART
School Mental Health Assessment
Research & Training Center

Level: *Process*

- Multi-year commitment (mismatch with academic calendar?)
- Implementation strategies (beyond "train and hope")
- Bottom-up vs. top-down

SMART
School Mental Health Assessment
Research & Training Center

Process: School-Adapted Implementation Strategies (Lyon et al., under review)

SISTER Go-Zone Plot

Feasibility / Importance

#44. Make training educational
#31. Distribute educational materials
#18. Conduct ongoing training

#8. Change accreditation or membership requirements
#11. Change school or community sites
#21. Create or change credentialing and/or professional development standards

Strategies adapted from Powell et al. (2015)

SMART
School Mental Health Assessment
Research & Training Center

Themes

1. Multilevel determinants of successful implementation in schools
2. Setting, policies, and personnel are often not focused on (or familiar with) non-educational interventions (e.g., health)
3. Most determinants are similar to other settings, but may be exacerbated, minimized, or manifest differently
4. Strategies should be carefully selected to match the most critical determinants

https://education.uw.edu/smart

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