

Measuring Implementation Quality for Multiple Purposes

Conceptual and Practical Challenges

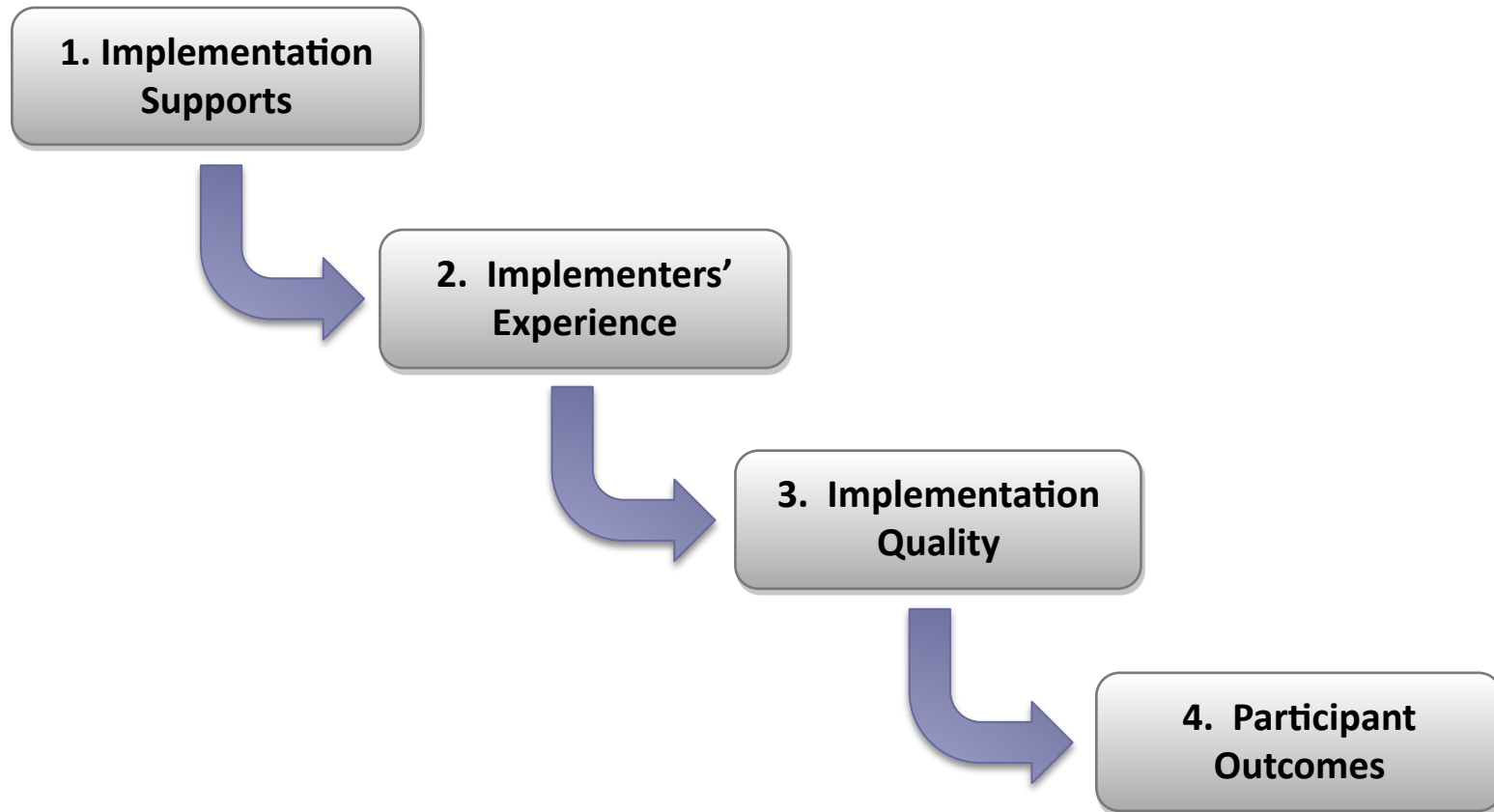
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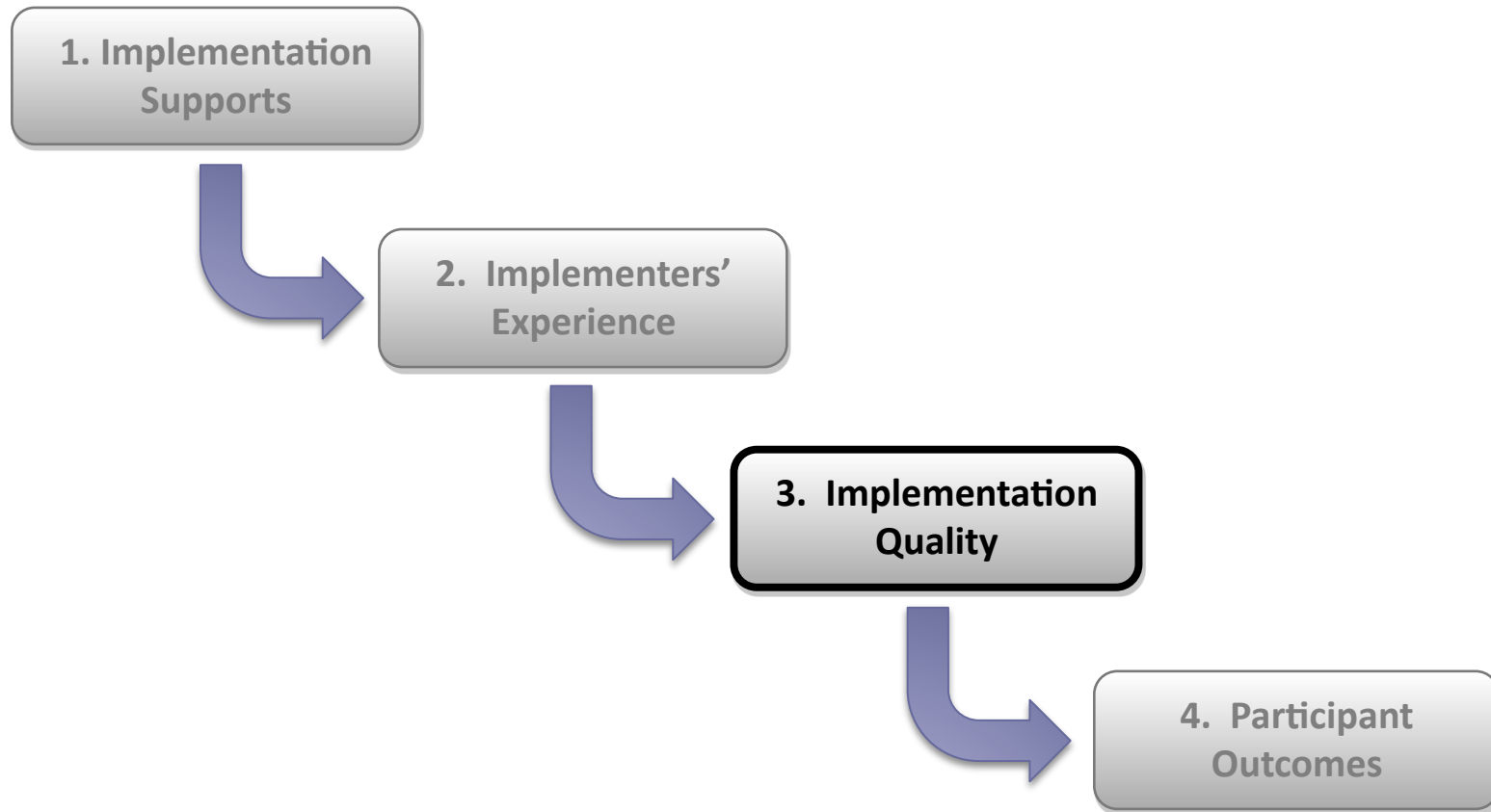
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Generic Theory of Change for Interventions



Generic Theory of Change for Interventions





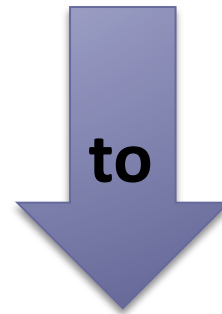
Potential Purposes of Implementation Quality Measures

- Evaluation and basic research
 - Use as mediator, moderator and outcome variable in RCT and quasi-experimental intervention studies
 - Identify “active ingredients” in multi-pronged interventions
- Quality control and intervention management
- Short cycle intervention improvement

Continuum of Approaches to Measuring Implementation Quality

Survey/Interview, Observation and/or Administrative Records Review

- Extract high level ratings requiring complex and expert judgment



- Granularize the intervention into indicators that can be reliably and more easily rated



Criteria for Multi-use Implementation Quality Assessments

- **Credibility**
 - Are results believable to all relevant audiences?
- **Transparency**
 - Are results understandable and interpretable to all these audiences?
- **Utility**
 - Are the results actionable and timely for these audiences?
- **Practicality**
 - Is the instrument practical for use by these audiences?



Characteristics of IRRE's Implementation Quality Rating System (IQRS)

- Key elements of intervention quality described
- Nuggets of effective practice defined within each element
- Density of effective practices assessed within incidents of each element
- Prevalence of high density incidents yields quality ratings for each element
- Configuration of elements' quality ratings yields overall implementation quality rating



Application of Implementation Quality Rating System (IQRS) to IRRE Curricular Interventions

- Key Elements
 - Engagement strategies
 - Aligned learning activities
 - Assessment of student understanding
 - Teacher fluency with curriculum materials
 - Timing and sequencing of lesson and instruction
 - Focus and tone of student/teacher interaction
 - Start, finish, transitions and lesson extensions

Incidence of Key Elements

Indicate incident of key element as it occurs during the class period:

- Engagement strategy
- Learning activity
- **Assessment of student learning**

Nuggets of Effective Practice

Assessment of Student Learning

Indicate the presence of each of these practices for each incident

The Teacher:

- Engages all students in the assessment
- Requires students to demonstrate their understanding
- Inspects or checks students understanding
- Uses a variety of methods and strategies to gather data
- Provides feedback to students based on level of mastery
- Re-teaches or moves on to the next steps or new material informing students of intent

Density of Effective Practices

Assessment of Student Learning

KEY ELEMENT	Not Evident (1)	Emerging (2)	Promising (3)	Exemplary (4)
Assessment of Student Learning	None or only 1 of the practices were observed.	2-3 of the practices were observed.	4-5 of the practices were observed.	All of the practices were observed.

Density of Effective Practices

Assessment of Student Learning

Key Element: Assessment of Student Learning

Not Evident (1)	None or only 1 of the practices observed
Emerging (2)	2-3 of the practices were observed.
Promising (3)	4-5 of the practices were observed.
Exemplary (4)	All of the practices were observed

Prevalence of Effective Practices

Assessment of Student Learning

(Note: Final *prevalence rating* for the *key element* is highest score received on rubric)

KEY ELEMENT	Not Evident (1)	Emerging (2)	Promising (3)	Exemplary (4)
Assessment of Student Learning	No incident had at least emerging density rating	Half or most incidents had at least emerging density rating	Half or most incidents had at least promising density rating.	Most incidents had exemplary density rating



Overall Implementation Quality Rating

- Based on combinations of indicators weighted by face and criterion-related validity
- Reflect absolute levels of quality of all component ratings



Technology Supports for IQRS

- Data collection process uses software platform developed by IRRE and Mizuni, Inc.
- Smart phone and iPad compatible
- Algorithms for generating multi-level implementation quality ratings pre-loaded
- Cloud-based analytic and reporting functions provide simultaneous and cumulative reports to users of ratings



Next Steps

- Complete software applications for survey-, and observation- and record-based rating systems
- Conduct larger-N studies of these measures to establish stronger psychometric evidence of their quality and utility
- Document use of IQRS for three intended purposes
 - Research
 - Performance management
 - Short-cycle program improvement