# Using the Quality Implementation Tool as a Framework for Process Evaluation: Going Beyond Fidelity

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# Overview

- Why conduct a process evaluation?
- Introduction to the Quality Implementation Tool
- Focus on Component 6 of the QIT: Evaluate the Effectiveness of Implementation
- Applied example: 1TWO1 Process Evaluation Plan

# Process Evaluation

Why conduct a process evaluation?

# Process Evaluation

- Oftentimes, evidence-based/evidence informed programs fail to reach desired outcomes in the "real-world".

- One major reason for this is because the program is simply not implemented with quality.  This is referred to as an **Implementation Failure** (Wandersman, 2009)

- *If we want to achieve outcomes, programs must be implemented with quality.*

# Process Evaluation

- Process evaluations focus on the implementation process.
  - *How well is a program being implemented?*

- Quality implementation is defined as putting an innovation in place in such a way that it meets the necessary standards to achieve desired outcomes.

- Process evaluation, when done well, tells us the extent to which this is happening.

# Process Evaluation

What makes a "good" process evaluation? What is a "gold standard" process evaluation?

- Historically, process evaluations focused primarily on FIDELITY.
- Fidelity is insufficient for a comprehensive process evaluation.

- There is a need for an empirically-informed approach to process evaluation.

# Quality Implementation Tool (QIT)

A framework for process evaluation

# Quality Implementation Tool

- A translation of the implementation science literature
  - Quality Implementation Framework (a synthesis of leading implementation frameworks in the literature)
    - Meyers, Durlak, Wandersman, 2012

- Aims to support the "how to" of implementation

- Delineates the factors deemed most important for implementation success.

Getting To Outcomes®

- #1 Needs/Resources
- #2 Goals & Objectives
- #3 Best Practices
- #4 Fit
- #5 Capacities
- #6 Plan
- #7 Implementation Process Evaluation
- #8 Outcome Evaluation
- #9 Improve / CQI
- #10 Sustain

# Quality Implementation Tool

- Six components
  1. Develop an implementation team
  2. Foster supportive climate and conditions
  3. Monitor an implementation plan
  4. Provide and receive technical assistance'
  5. Collaborate with program developers
  6. **Evaluate the effectiveness of implementation**

- Each component has associated action steps

ORIGINAL PAPER

## Practical Implementation Science: Developing and Piloting the Quality Implementation Tool

Duncan C. Meyers · Jason Katz · Victoria Chien · Abraham Wandersman · Jonathan P. Scaccia · Annie Wright

**Abstract** According to the Interactive Systems Framework for Dissemination and Implementation, implementation is a major mechanism and concern in bridging research and practice. The growing number of implementation frameworks need to be synthesized and translated so that the science and practice of quality implementation can be furthered. In this article, we: (1) use the synthesis of frameworks developed by Meyers et al. (Am J Commun Psychol, 2012) and translate the results into a practical implementation science tool to use for improving quality of implementation (i.e., the Quality Implementation Tool; QIT), and (2) present some of the benefits and limitations of the tool by describing how the QIT was implemented in two different pilot projects. We discuss how the QIT can be used to guide collaborative planning, monitoring, and evaluation of how an innovation is implemented.

underscores its importance (Durlak and DuPre 2008), and implementation has received heightened attention as a mechanism to lessen the persistent gap between research and practice (e.g., Fixsen et al. 2005; Wandersman et al. 2008). Empirical support for the important role of implementation suggests that if evidence-based programs are not implemented with quality, they are not likely to result in the same outcomes that were observed in efficacy and effectiveness studies (e.g., Dubois et al. 2002; Durlak and DuPre 2008; Gottfredson and Gottfredson 2002; Smith et al. 2004). Simply put, if we want to achieve outcomes, we have to be able to implement with quality.

Narrowing the gap between implementation in research settings and implementation of programs in everyday practice is an endeavor that can impact diverse fields of study. The purpose of this article is to discuss a tool called

# Quality Implementation Tool (QIT)

- Component 6: Evaluate the Effectiveness of Implementation

  - Action Steps:

    - 6.1 Measure **fidelity** of implementation
    - 6.2 Measure **dosage** of the innovation
    - 6.3 Measure **quality of the innovation's delivery**
    - 6.4 Measure **participant responsiveness** to the implementation process
    - 6.5 Measure **degree of program differentiation**
    - 6.6 Measure program **reach**
    - 6.7 **Document all adaptations** that are made to the innovation

# Applied Example

Process Evaluation of 1TWO1 Computing

# 1TWO1 Computing: Background

- Educational Technology integration initiative

  - Personalized computing devices distributed to all students in grades 3-12
  - Large scale initiative: 39 different schools and programs, over 1000 teachers and classrooms, more than 20,000 students

- *"Changing the way teachers teach and students learn!"*

# 1TWO1 Computing: Background

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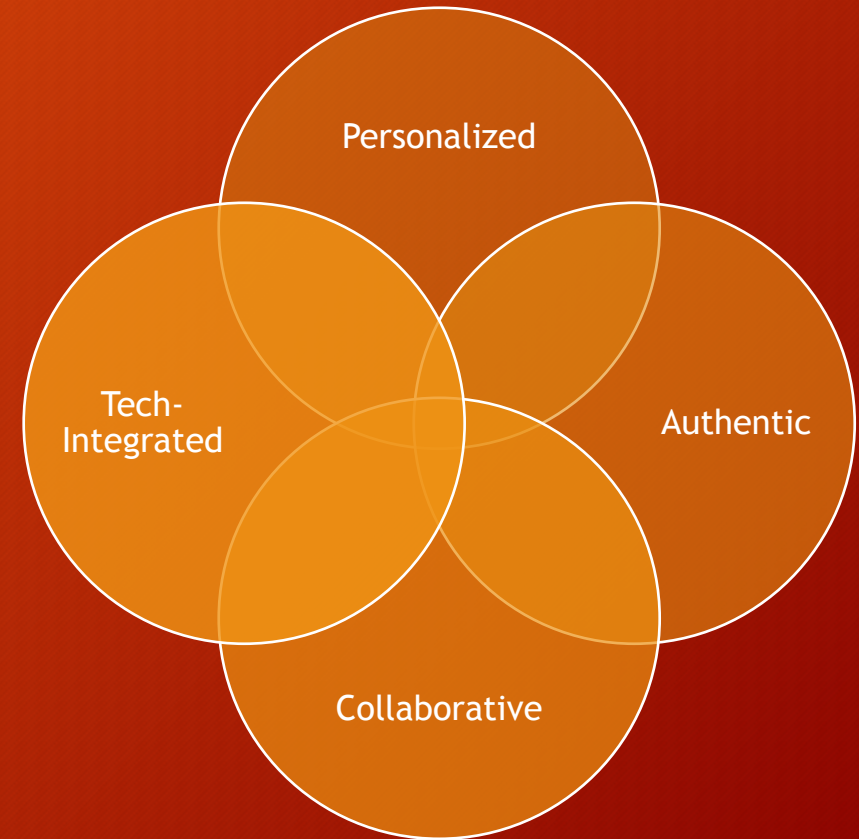- Chuck Holland
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# 1TWO1 Computing: Background

- Simplified logic model

**Distribution of devices and district support** → **Changes in instructional strategies** → **Student Outcomes**

# 1TWO1: Process Evaluation

- In order to achieve desired outcomes, teachers needed to implement 1TWO1 well: changing instructional styles in the classroom
  - PAC-Tech

- To understand how well this was happening, we knew that we needed a comprehensive framework for the process evaluation. Fidelity alone was not enough.

Personalized

Tech-Integrated

Authentic

Collaborative

# 1TWO1: Process Evaluation

- Already using QIT Components 1-5 as a formative tool in working with the district
- Decided to use QIT Component 6: as a framework for process evaluation.
  - Dosage, Quality, Fidelity, Reach, Differentiation, Responsiveness, and Adaptations
- This provided the comprehensiveness needed for such a large scale project.

# QIT Component 6

1. Dosage
2. Quality
3. Fidelity
4. Reach
5. Differentiation
6. Responsiveness
7. Adaptations

# Domain 1: Dosage

- *HOW MUCH?*

  - Dosage is the amount or quantity of the innovation received by students
    - How much time is spent on devices?
    - How much time spent in classrooms with innovative instructional practices?

  - Two aspects of dosage:
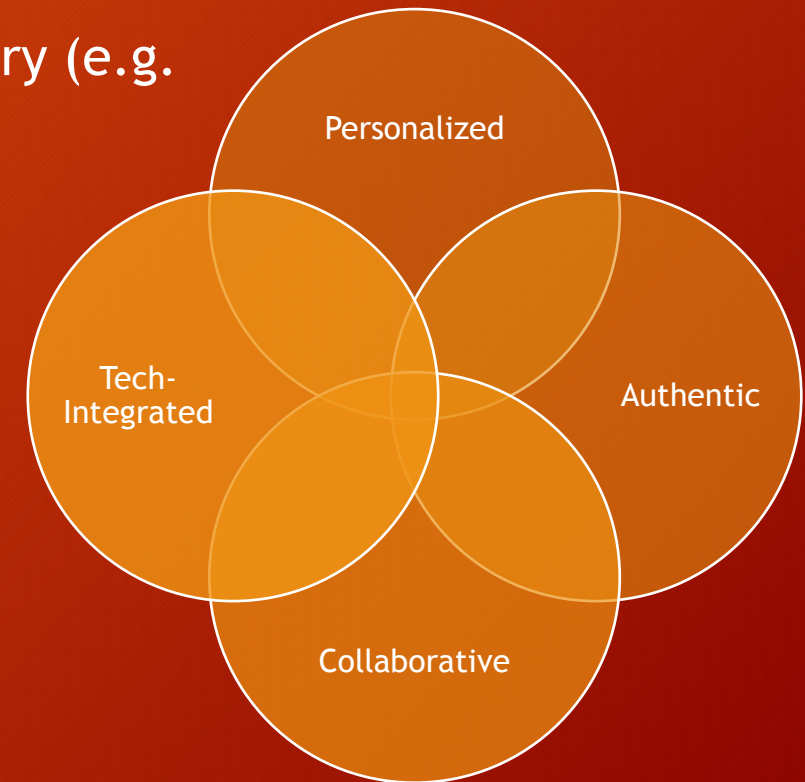    - Frequency – how often?
    - Duration – how long?

# Domain 1: Measuring Dosage

| Student Surveys | Teacher Surveys | Observations and archival |
|---|---|---|
| How often are you in a 1TWO1 classroom where there is a computer for every student in the classroom? (frequency) | How much time do your students spend on a computer of any type during a typical school day? | Documentation of time spent on computers during observation period |
| How much time do you spend on a computer of any type during school hours? (duration) | How often do you personalize learning to fit a student's learning style? | Data on data usage from server |
| How often do your assignments require you to collaborate with others face-to-face? How often does your teacher connect what you are learning to life outside the classroom? | In the past school semester, what percentage of all your classroom tasks and lessons required students to collaborate with peers online? | Approximately how much time was the teacher observed facilitating/coaching student work related to research, a project, product, or performance? |

# Domains 2 and 3: Quality and Fidelity

- *HOW WELL?*
  - Quality refers to the qualitative aspects of program delivery (e.g. teacher enthusiasm)
  - Fidelity refers to adherence to the program model

  - The district was looking for <u>fidelity</u> to <u>quality</u> instruction
  - PAC-Tech

Personalized

Tech-Integrated

Authentic

Collaborative

# Domains 2 & 3: Measuring Quality and Fidelity

| Student Surveys | Teacher or Principal Surveys | Observations and archival |
|---|---|---|
| The things I learn in school are relevant for my life outside of school | [Teacher] Please describe an exemplar lesson that you taught this school year that used 1TWO1 devices, engaged students, and effectively met instructional objectives. | Describe any problems with downtown (quality of technology) |
| I have choices in the way I learn. . | [Teacher] What percentage of your lessons involved technology? | Data on downtime from server |
| Students in my classes work on different assignments | [Principal survey]: What percentage of teachers in your school are enthusiastic and excited about 1TWO1? | If collaboration is observed, who did students collaborate with? |

# Domain 4: Participant Responsiveness

- *Are students receiving the innovation?*
  - Refers to student participation, engagement, and involvement of students in the 1TWO1 initiative.
  - In order to reach outcomes, the learning environment associated with 1TWO1 must hold the interest and attention of students.

  - *Engagement was also an outcome measure of 1TWO1.

# Domain 4: Measuring Participant Responsiveness

| Student Surveys | Teacher or Principal Surveys | Observations and focus groups |
|---|---|---|
| Validated scales for student engagement. | Validated scales on student engagement (e.g. Martin scales) | Observations of "off task" behavior |
| How satisfied are you with using a computer for learning in your classes? | Satisfaction using computers in the classroom | Ratings of enthusiasm during observations |
| The amount of time we spend on computers in school is: too much, just right, not enough. | Ratings of student interest in learning since the introduction of technology | [Focus Groups] Discussions of satisfaction using computers during student and teacher focus groups. |

# Domain 5: Reach

- *Is 1TWO1 reaching all students?*
  - Are there subpopulations with whom 1TWO1 is having the greatest effect?

- Measurement:
  - Reach is assessed through statistical interactions in regression analyses
  - E.g., Do the effects of 1TWO1 on student learning differ between boys and girls or for special education students?

# Domain 6: Adaptations

- This process evaluation data (along with other data) was also used formatively.  When potential pitfalls were identified through process evaluation data, certain adaptations were made and documented.

- E.g. Changes to the middle school roll-out plan were made after data on quality of 1TWO1 was reported (e.g. teachers did not feel prepared and enthusiastic so rollout was postponed).

# Domain 7: Differentiation

- This domain was given less weight in our plan.

- 1TWO1 is intended to be integrated into all aspects of education (becoming the new "education as usual"). In this way, there is no differentiation.

- However, all measurement for process and outcome evaluation had to take into consideration the differentiation between 1TWO1 and simply having computers in classrooms.

# Reflections

- The comprehensive plan:

  - Allows for a much more nuanced look at implementation
    - Fidelity to aims of quality instruction in and of itself needed to be monitored
    - variability in strengths across schools

  - Provides a better picture of what is going on in the classroom

# Plugging our next session!

## Results of the Process Evaluation:

TITLE:
A Formative and Summative Evaluation of Integrating Technology into Education: Using Getting to Outcomes to Support Implementation and to Evaluate Outcomes of 1TWO1 Computing

Panel Session 223 to be held in Piscataway on Thursday, Oct 17, 1:00 PM to 2:30 PM