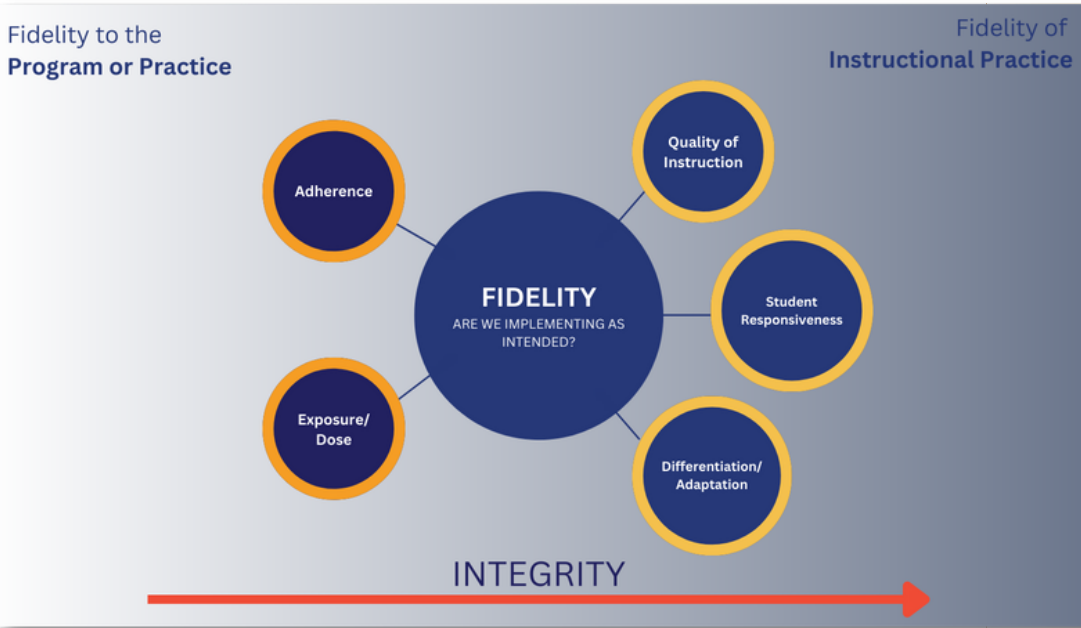# FIDELITY - YOUR QUESTIONS ANSWERED

As a follow-up to the "What is Fidelity" Brief and Webinar, the SISEP Center compiled several questions from the field regarding fidelity. Below are our responses to your questions and additional resources to assist you.



**Visit the following for more information on fidelity:**

**What is Fidelity? Brief**

**What is Fidelity? Webinar Recording**

## What are different ways to measure the fidelity of clinical practices as well as new operational programs and/or processes (i.e. the non-clinical stuff)?

Fidelity can be measured by observation, self-reporting, asking others questions via semi-structured interviews, and reviewing products or administrative data (lesson plans, schedules, etc.). We strongly recommend and encourage the use of observations as a gold standard. Self-reporting methods have many limitations to them. Limitations include:

- overestimation
- the inability to measure if staff have a common understanding of the practice
- missing inter-rater reliability

## How do you design implementation fidelity evaluations?

You can learn more about designing fidelity assessments by visiting the AI Hub.

Regardless of the methods used to collect the data, it should meet the following criteria:

- The process of collecting the data is just as necessary as the tool itself.
- The measurement needs to be contextualized to fit the district's parameters and be feasible.
- Avoid collecting the data just to collect the data. How do you anticipate using the information?

The SISEP Center is a project of the National Implementation Research Network (NIRN). NIRN is a network of the University of North Carolina at Chapel Hill.

NIRN | NATIONAL IMPLEMENTATION RESEARCH NETWORK
FRANK PORTER GRAHAM CHILD DEVELOPMENT INSTITUTE

1

**Is there a fidelity tool for the implementation of a system or is it fidelity of the processes within the system?**

Fidelity of the processes within the system. Within one system you may have different measurements of fidelity for the following:

- fidelity of coaching plans
- fidelity of coaching observations
- fidelity of your problem-solving process

But you would not have to do all of them.

**How do you find an appropriate level of measurement to have confidence in the fidelity tools without measuring every dimension?**

This takes trial and learning through the use of PDSA cycles and examining data carefully for positive, strong relationships between fidelity scores and intended outcomes.

The more observations, the better. Aim for two 10-minute observations per month for each teacher—one per month at a minimum.

**Can we use the OTISS?**

Training and inter-observer agreement is needed prior to using the OTISS. Please get in touch with SISEP at sisep@unc.edu for more information.

**How do you effectively use the data gathered from measuring fidelity in a continuous improvement process?**

Remember the purpose of collecting fidelity data....
Ask your team:

- Is fidelity increasing over time? If not, why not? (System problem)
- If fidelity is increasing, how does it correlate with student outcome data? (Program may not be the right match - revisit the Hexagon Tool/Selection process)
- If the fidelity is increasing but not correlating with student outcome data, do we need to adapt based on student needs?

TIP: Training on a data utilization process, such as the four-step problem-solving process or Plan Do Study Act Cycle is needed, with guiding questions to determine the use of the fidelity data. See this resource page for example questions and guidance.

**What are examples of data dashboards?**

Contact the New Jersey Department of Education to see a live example: Chimaobi Amutah
Contact the Kentucky Department of Education to see a live example: Amanda Waldroup
Visit DASY- The Center for IDEA Early Childhood Data Systems Data Visualization Toolkit

The SISEP Center is a project of the National Implementation Research Network (NIRN).
NIRN is a network of the University of North Carolina at Chapel Hill.

NIRN | NATIONAL IMPLEMENTATION RESEARCH NETWORK
FRANK PORTER GRAHAM CHILD DEVELOPMENT INSTITUTE

2

**What tips do you have to support maintaining fidelity when doing large-scale growth of services w/partners self-reporting?**

Create a data collection schedule for assessing fidelity. The frequency of data collection should be based on the level of fidelity demonstrated and reached. For example, if a building, department, or grade level has consistently met fidelity benchmarks at least three times, the frequency of data collection can be decreased. For those who have not met fidelity, systematic data collection of fidelity is needed. Fidelity data collection never stops, but it can decrease once established to support maintenance.

Have regular sessions to review data collected and action-plan/improve your implementation plan and support for staff.

**Is there a research base about changing people's beliefs? (We will often talk about changing knowledge, skills, and beliefs; how do we measure the beliefs part?)**

Beliefs can often be measured through surveys or empathy interviews.  Here are a few resources that may assist you in your work:
- Empathy Interview Protocol (CASEL)
- Appreciative Inquiry
- SCARF Assessment

**When writing and overseeing a grant (that LEAs apply for), how do you design it to ensure fidelity?**

Require, as part of the RFP, the identification and use of a fidelity measure and reporting of the fidelity data (e.g., % of teachers who met fidelity criteria).
- Add for the program or practice a list of criteria of the fidelity tool and expectations of timeline, benchmarks, etc.
- Require logic models with associated measures.

**How can State Education Agencies (SEAs) partner with Institutes of Higher Education (IHEs) to develop valid and reliable fidelity measures?**

IHEs usually have the programmatic content knowledge and measurement development knowledge. Think about partnering with them on grant initiatives to support funding their engagement. Alternatively, explore how the partnership could be mutually beneficial, such as the provision of data for the research experiences of graduate students, assistant faculty, etc. The MN team has done an excellent job of partnering with the University of Minnesota to support the development of a fidelity measure and a system for a mentoring intervention. Contact Ellen Nacik or John Gimpl, from the Minnesota Department of Education, to learn more about how this worked!

The SISEP Center is a project of the National Implementation Research Network (NIRN).
NIRN is a network of the University of North Carolina at Chapel Hill.

NIRN | NATIONAL IMPLEMENTATION RESEARCH NETWORK
FRANK PORTER GRAHAM CHILD DEVELOPMENT INSTITUTE

3

**Do you have any novel and effective ways to describe the work to help conceptualize for others?**

Imagine we conceptualize this notion of fidelity through baking. I want to bake a 3-layer chocolate cake. I have found a recipe with great reviews (more likely to be successful - there is evidence it works), and that is easy to understand (spelled out with the core components/ingredients, and operationalized with how to use each ingredient, laid out step by step). As the baker, I will follow that recipe to the letter - no substitutions, no changes to baking time, and adding ingredients in the order suggested. I am going to implement that recipe with fidelity and integrity.

How do I measure that I baked this cake with fidelity? I can self-report to my family or friends that I followed the recipe by going back through each step and ensuring I was accurate. I could have had someone who had made the cake before observe me baking the cake. Additionally, I can measure 'responsiveness.' Did my family and friends think it was great tasting? What if I reported that I did every step and was even observed, but it still didn't come out as well as I had hoped - still tasty, but not the BEST chocolate cake I have ever had? It isn't that my skill as a baker is called into question. It is that I want to be the best baker I can be. I could seek out baking classes or an individual coach/tutor. I might find that, for this cake, I should have the butter and eggs at room temperature before mixing, let the batter sit for 10 minutes before putting it in the oven, etc. In other words, I could make minor tweaks to get the best outcome possible. But wait. For the next party, I want to make this cake but realize that one of the guests is gluten intolerant. I know this ahead of time. I know I have to have the same core ingredients - some chocolate flavoring, eggs, some type of flour, etc. for it to be a chocolate cake still. But, I need to adapt the recipe to ensure that it is gluten-free and that my friend won't get sick.

**How to balance flexibility and "adherence"?**

Demonstrate fidelity to core components (what is essential first) and then flex or adapt. Build fluency and knowledge first so you can adapt or be flexible with confidence and collect data on whether that is a good adaptation or not.

**What does research say related to critical levels of fidelity to result in child outcomes? What's the tipping point?**

This depends upon the measure and what has been found for that specific measure. When determining this, the general rule of thumb is 70-80% of fidelity indicators being demonstrated until validated with data.
O'Donnell, C. L. (2008). Defining, conceptualizing, and measuring fidelity of implementation and its relationship to outcomes in K–12 curriculum intervention research. *Review of Educational Research, 78*(1), 33–84. https://doi.org/10.3102/0034654307313793

Related Article: Improving the feasibility of fidelity measurement for community-based quality assurance: Partial- versus full-session observations of supervisor adherence and competence

The SISEP Center is a project of the National Implementation Research Network (NIRN). NIRN is a network of the University of North Carolina at Chapel Hill.

NIRN | NATIONAL IMPLEMENTATION RESEARCH NETWORK
FRANK PORTER GRAHAM CHILD DEVELOPMENT INSTITUTE

4

**Do you have tips for making fidelity definition and measurement practical in PRACTICE.**

- Create shared understanding with staff on the why and how (data collected and used) of fidelity. Build trust and understanding of the process's importance and the system's role in supporting improved instruction.
- Keep measurement simple and doable - a few items, built over time as established routines.
- Support people to use the data. They need training and coaching on demonstrating the data's feasibility and usability.
- Give the data back to those observed - reporting, etc. Show how it was used, what actions were planned, and the result.
- Get feedback from those involved on the process for improvement.

**What are some easy assessments for tracking and celebrating early on in the implementation cycle?**

Ideas:
- peer checks
- recording (video or audio)
- setting up a count on the phone (i.e, opportunities to respond - pennies in the pocket, paper clip chain, etc.)
- student exit tickets (did you get to...)

**Is there a list of educational programs or practices which have a fidelity assessment available that the SISEP can share, or even where that kind of information can be found? (Not like the WWC; fidelity is listed there in terms of the quality of research used, but it doesn't address actual fidelity assessments like the OTISS, KMIT, or other things like the PBIS Tiered Fidelity Inventory. Are there others?)**

The SISEP Center does not have a master list of programs or practices that have fidelity assessments. To obtain this information, we recommend working with the purveyor, company, or organization that is supporting the evidence-based practice or program. Additionally, think about asking these questions when completing the Hexagon Tool before selecting a program.

**What other validated fidelity measures are there? Is there a repository of them somewhere?**

Sorry, but we are unaware of a list that is available at this time. This depends upon the intervention developer or purveyor—great idea and suggestion for resources needed.

SISEP and NIRN will explore this as a potential support and include it in future publications.

The SISEP Center is a project of the National Implementation Research Network (NIRN).
NIRN is a network of the University of North Carolina at Chapel Hill.

**NIRN** | NATIONAL IMPLEMENTATION RESEARCH NETWORK
FRANK PORTER GRAHAM CHILD DEVELOPMENT INSTITUTE

5

# FIDELITY SUPPORT CONTACTS

**New Jersey Department of Education**
*Chimaobi Amutah*
Data Visualization Expert
State Transformation Specialist
*chimaobi.amutah@doe.nj.gov*

**Kentucky Department of Education**
*Amanda Waldroup*
Assistant Director
Division of Learning Services
*amanda.waldroup@education.ky.gov*

**Minnesota Department of Education**
*John Gimpl*
State Transformation Specialist
*john.gimpl@state.mn.us*

*Ellen Nacik*
State Transformation Specialist
*ellen.nacik@state.mn.us*

**OTISS Training & Support**
*SISEP Center*
*sisep@unc.edu*

# REFERENCES

O'Donnell, C. L. (2008). Defining, conceptualizing, and measuring fidelity of implementation and its relationship to outcomes in K–12 curriculum intervention research. *Review of Educational Research, 78*(1), 33–84. https://doi.org/10.3102/0034654307313793

Hattie, J. C. (2009). *Visible learning: A synthesis of over 800 meta-analyses relating to achievement*. Routledge.

Hemmeter, M. L., & Fox, L. (2009). The Teaching Pyramid: A model for the implementation of classroom practices within a program-wide approach to behavior support. *NHSA DIALOG, 12*(2), 133–147.

Hill, H. C., & Erickson, A. (2019). Using implementation fidelity to aid in interpreting program impacts: A brief review. *Educational Researcher, 48*(9), 590–598. https://doi.org/10.3102/0013189x19891436

Ryan Jackson, K., Gau, J., Smolkowski, K., & Ward, C. (2021). *Improved mathematics outcomes using active implementation: Kentucky's effective and durable change* [Brief]. National Implementation Research Network, University of North Carolina at Chapel Hill.

The SISEP Center is a project of the National Implementation Research Network (NIRN).
NIRN is a network of the University of North Carolina at Chapel Hill.

NIRN | NATIONAL IMPLEMENTATION RESEARCH NETWORK
FRANK PORTER GRAHAM CHILD DEVELOPMENT INSTITUTE

6