![National Center for Systemic Improvement logo — ncsi — national center for systemic improvement — Transforming State Systems to Improve Outcomes for Children with Disabilities]

Supporting MTSS Implementation: The Integrated MTSS Fidelity Rubric (IMFR)

Research to Practice Spotlight Series: Session 3

Jennifer Pierce, Ph.D. (AIR/NCSI)

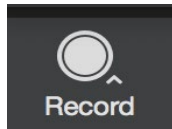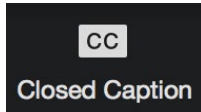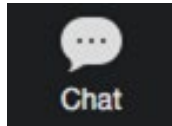Laura Berry Kuchle, Ph.D., and Lauren Artzi, Ph.D. (NCSI)

June 2024

Thank you for joining us today!

While we wait to start, feel free to share what brings you to this event and any questions you may have.

Zoom Housekeeping

- Microphones and videos are off for this event.

- Look for the flashing orange alert, which will take you to the chat box when it is active.

- Closed captions are available.

- This webinar is being recorded.

Agenda

- Welcome and Overview

- Background: Integrated Multi-Tiered Systems of Support (I-MTSS) and the Need for the Integrated MTSS Fidelity Rubric (IMFR)

- Study Overview, Key Findings, and Implications
  - Discussion: Questions and SEA Considerations

- Suite of IMFR Materials
  - Discussion: Questions and SEA Considerations

- Closing and Additional Resources

Welcome and Introduction to NCSI

The National Center for Systemic Improvement (NCSI) supports states to transform systems to improve outcomes for students with disabilities.

Series Overview

- Unpacks key evidence-based practices to promote learning for students with disabilities and others struggling to learn reading and math

- Shares considerations for SEAs and LEAs to support educators with implementation

- https://ncsi.wested.org/research-to-practice-webinar-series/

Introducing the Handout

Note-Taking Guide

Supporting MTSS Implementation: *The Integrated MTSS Fidelity Rubric (IMFR)*

During the webinar, note key takeaways from each section (what), connections or implications for your role (so what), and key actions you might take (now what). Also, determine whether there are questions you would like to put in the chat for discussion during the webinar.

Session Topic	Key Takeaways (What?)	Connections to Make (So What?)	Actions to Take (Now What?)
1. Background: I-MTSS and the Need for the IMFR			

Meet Jennifer Pierce, Ph.D.

- Senior Technical Assistance Consultant/Researcher at American Institutes for Research (AIR)

- Project Director of the IMFR Study

- NCSI Staff

Setting the Stage: A Few Ways SEAs Can Support Local Implementation

- Define MTSS so that LEAs understand the key domains of the framework

- Offer guidance to LEAs on how to accurately measure MTSS

- Support LEAs with advancing MTSS implementation

Guiding Questions

- What questions do you have about I-MTSS, the IMFR, or how SEAs can support their use?

- Do you have relevant experiences to share?
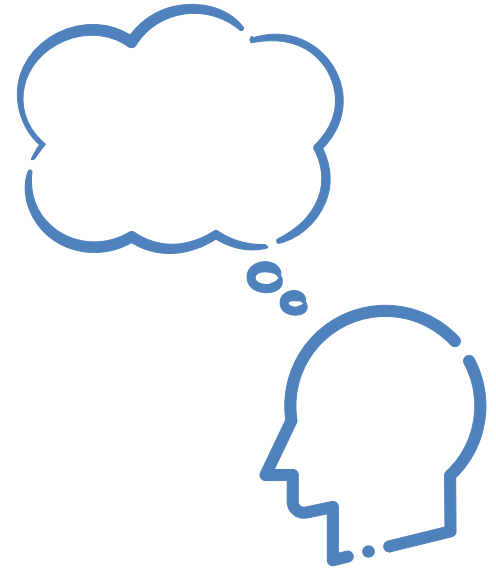
Background

Defining Integrated MTSS and the Need for the IMFR

Defining Integrated MTSS

"An integrated MTSS model provides all students with the best opportunities to succeed both academically and behaviorally in school. MTSS focuses on providing high-quality instruction and interventions matched to student need across domains and monitoring progress frequently to make decisions about changes in instruction or goals. It is not simply the implementation of both academic RTI and PBIS systems. ***There is a systematic and careful integration of these systems to enhance the efficiency and effectiveness of all school systems.***"

McIntosh & Goodman, 2016

McIntosh, K., & Goodman, S. (2016). *Integrated multi-tiered systems of support: Blending RTI and PBIS*. Guilford Publications.

Goal = Purposeful Integration
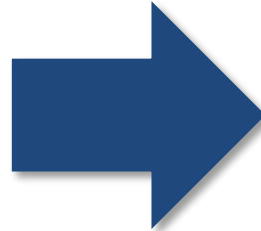
Intentionally combined

The Need for the IMFR

- Many tools exist for measuring tiered systems or aspects of tiered systems.

- Some tools have been examined for psychometric properties (e.g., do they yield data that is consistently accurate and measures what is intended to be measured?).

- There was a lack of a valid, reliable measure of *integrated* MTSS.

Meeting the Needs of Students, Schools, and Researchers

- **Schools** need a valid, reliable measure of I-MTSS to better understand what I-MTSS "looks like," their current implementation status, and ways to improve implementation so that **students'** increasingly complex needs are better met.

- **Researchers** need a valid and reliable tool to measure I-MTSS.

Students' Increasingly Complex Needs
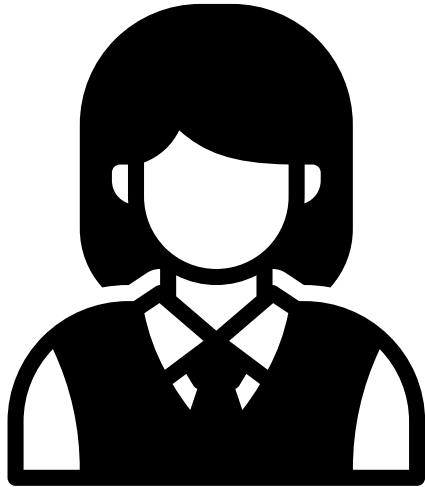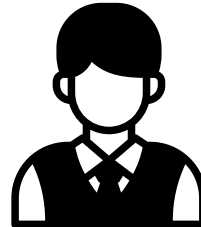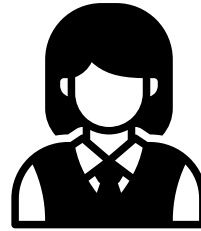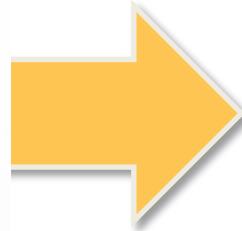

Reading Needs **Math Needs** **Behavior Needs**
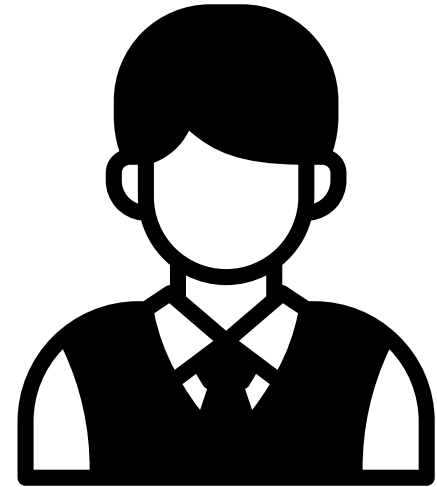
Meeting Students' Complex Needs

Siloed Practices
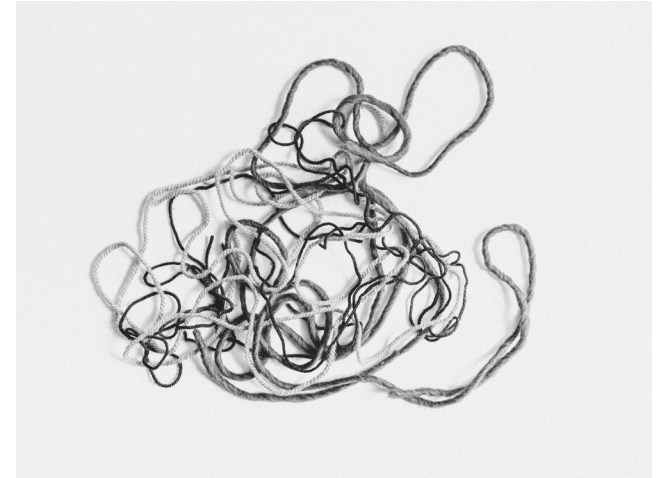
"Combined" Practices

Purposeful Integration

Intentionally Combined Practices

The IMFR Study

Study Overview

Key Findings

Implications

The IMFR Study at a Glance

- 5-year study (2019–2024)

- Up to 114 schools in 26 districts in 9 states

- Funded by the National Center for Special Education Research (NCSER), Institute of Education Sciences (IES), U.S. Department of Education

- AIR & University of Missouri (UM)

IMFR Research Team

Dr. Allison Gandhi
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The I-MTSS Research Network

I·MTSS
RESEARCH NETWORK

The Meadows Center
FOR PREVENTING EDUCATIONAL RISK

This project involves a related set of investigations that evaluate whether self-regulation strategies, embedded within reading and math interventions, have positive effects on academic and behavioral skills.

Ci3T +ENHANCE

In Project ENHANCE, we partner with districts to develop professional learning structures to install Comprehensive, Integrated, Three-tiered (Ci3T) models to meet students' academic, behavioral, and social well-being needs.

iMFR
INTEGRATED MTSS FIDELITY RUBRIC

This project aims to develop a fully validated rubric for schools to use as a self-assessment and researchers to use in studies about integrated MTSS.

I·MTSS UCONN
NEAG SCHOOL OF EDUCATION

The UConn I-MTSS Project evaluates the effects of three tiers of integrated reading and behavior support on student outcomes in K-2 classrooms.

https://mtss.org/

3 Research Questions (RQs)
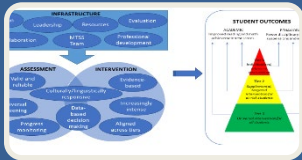
 1. What are the essential components of an integrated MTSS framework?

 2. Does analytic evidence support the validity and reliability of the IMFR?

- Content, substantive, and structural validity
- Predictive validity
- Generalizability
- Concurrent validity

 3. What is the cost of the IMFR relative to its perceived benefit?

- Usability and cost

Source. Dollar bills Photo by Alexander Grey on Unsplash https://unsplash.com/photos/1-usa-dollar-banknotes-8lnbXtxFGZw

IMFR Development and Testing Process

Develop IMFR → Test IMFR with schools → Test IMFR with schools → Test IMFR with schools → Final version of the IMFR

Refine IMFR

Refine IMFR

Refine IMFR
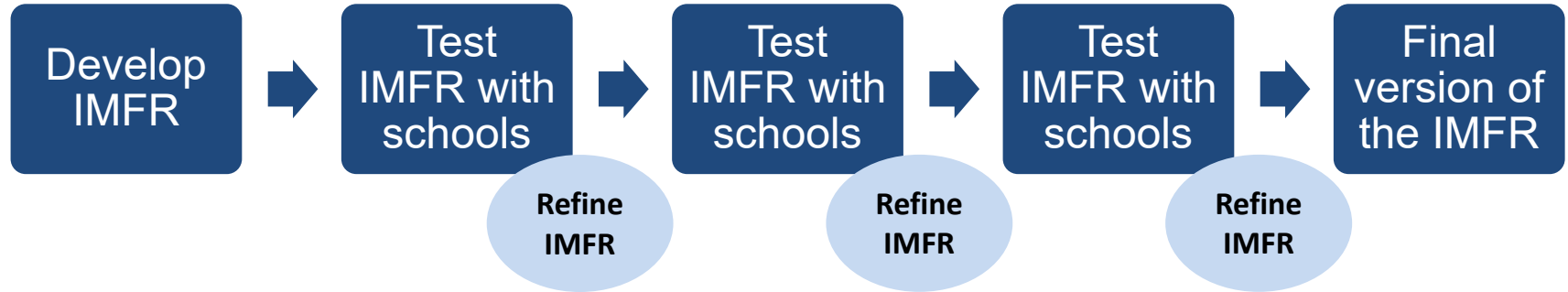
Sample (N=Districts)

- Connecticut (N=1)

- Massachusetts (N=2)

- Michigan (N=4)

- Missouri (N=5)

- Montana (N=1)

- Nebraska (N=1)

- Nevada (N=1)

- Ohio (N=2)

- Washington (N=3)

Key Findings at a Glance

Integrated MTSS Fidelity Rubric Study

Jennifer D. Pierce, PhD and Allison Gandhi, PhD

Study Purpose
- To develop and test the psychometric properties of the Integrated MTSS Fidelity Rubric (IMFR)
- Rubric aims to measure the degree to which schools strategically combine academic areas and social, emotional, and behavioral well-being (SEBW) supports for students

Research Questions
- Does analytic evidence support the validity and reliability of the IMFR?
- What are the costs and benefits associated with the IMFR?

Method
- Many-facet Rasch analytic model (Linacre, 1989)
- Confirmatory factor analysis
- Usability focus groups

Participants
- N =up to 114 schools in 26 districts in 9 states across 3 years
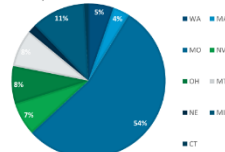
Rubric Development
- Reviewed existing tiered systems measures
- Compiled, sorted, refined, and resorted items to identify domains and constructs
- Identified scales and scale categories
- Consulted with tiered systems experts on domains, constructs, and scale categories
- Created support materials and beta tested
- Refined materials in preparation for testing

Three Testing Cycles
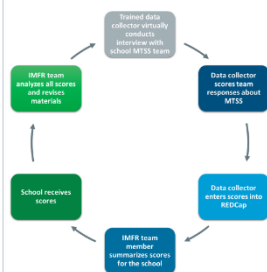
IMFR Materials
- IMFR (the Rubric), Interview Protocol, Scoring Worksheet, IMFR Manual, and IMFR Training Modules

Key Findings
- Strong content validity (14/15 items < 1.5 for infit weighted and outfit unweighted MS)

Item	Admin 1 Infit MS	Admin 2 Infit MS	Admin 3 Infit MS	Admin 1 Outfit MS	Admin 2 Outfit MS	Admin 3 Outfit MS
Tier One	0.86	1.32	1.1	0.81	1.36	1.13
Tier Two	0.89	0.85	0.79	0.87	0.83	0.77
Tier Three	1.08	0.87	0.96	1.11	0.82	0.8
Universal Screening	1.08	0.94	0.77	1.03	0.89	0.76
Diagnostic Assessment	0.94	1.32	1.01	0.91	1.19	0.98
Progress Monitoring	0.94	0.81	0.77	0.89	0.78	0.75
Universal DBDM	NA	1.14	0.88	NA	0.97	0.76
Targeted DBDM	NA	0.69	0.81	NA	0.62	0.69
Intensive DBDM	NA	0.85	1.12	NA	0.75	1.2
Continuous Improvement	1.16	1.21	1.03	1.22	1.47	0.85
District Leadership	0.96	1.11	0.95	0.88	1.23	0.92
School Leadership	0.91	1.02	1.77	0.81	1.55	2.36
Schoolwide Culture	1.06	0.63	0.91	1.09	0.54	0.94
Professional Learning	0.87	0.93	0.88	0.81	0.9	0.8
Resources	1.13	1.33	1.48	0.98	1.44	1.49

- Improved substantive validity, but *aligning* did not show up as a meaningful scale category
- Improved structural validity (CFA results close to fit index goals)

Admin 2 RMSEA fit index < .05	Admin 3 RMSEA fit index < .05	Admin 2 Goodness of Fit > .90	Admin 3 Goodness of Fit > .90	Admin 2 Comparative Fit > .90	Admin 3 Comparative Fit > .90
.071	.058	.870	.868	.947	0.940

- Strong IRR, with Kappa increasing from .587 in year 1, to .681 in year 2, to .752 in year 3.

Implications
- The IMFR is a psychometrically adequate tool for measuring elementary school I-MTSS.
- Schools looking to move toward an effective, efficient system that supports students with both academic
- and SEBW needs, can use the IMFR.
- The IMFR may serve as a meaningful measure for researchers conducting studies on I-MTSS implementation.

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The research reported here was supported in part by the Institute of Education Sciences, U.S. Department of Education, through Grant Number R324N190007-20 to American Institutes for Research. The opinions expressed are those of the authors and do not represent views of the Institute or the U.S. Department of Education.

RQ 2. Does analytic evidence support the validity and reliability of the IMFR?

	Test 1	Test 2	Test 3
Content Validity: Do we have the right *items* (i.e., domains and constructs)?	✔	✔	✔
Substantive Validity: Do we have the right rubric rating *scale*?	🚧	❓	✔
Structural Validity: Do we have the right level of *score reporting*? Can we collapse domains and constructs into 1 score? 4 scores?	🚧	✔	✔
Generalizability: Do we have *consistency* in scores and interpretations across populations, items, time, setting, and raters?	🚧	✔	✔

RQ3. What is the cost of the IMFR relative to its perceived benefit?

Benefits	Costs
• IMFR ratings provided **valuable** information to the school about their implementation of I-MTSS. • Ratings were a **fair representation** of I-MTSS implementation. • Schools would **recommend** using the IMFR to other schools.	• Schools need **additional guidance** on using IMFR ratings. • The total **time** required to participate (i.e., 3–4 hours annually) was challenging.

The Final Tool: Domains of Integrated MTSS

Domain	Items
Domain 1. Instruction and Intervention	• 1.1 Tier 1 • 1.2 Tier 2 • 1.3 Tier 3
Domain 2. Assessment	• 2.1 Universal Screening • 2.2 Diagnostic Assessment • 2.3 Progress Monitoring
Domain 3. Data-Based Decision Making (DBDM)	• 3.1 Universal DBDM • 3.2 Targeted DBDM • 3.3 Intensive DBDM • 3.4 Continuous Improvement
Domain 4. Infrastructure	• 4.1 District Leadership • 4.2 School Leadership • 4.3 Schoolwide Culture • 4.4 Professional Learning

Areas Measured:
- ✓ Academics: Reading & Math
- ✓ Social-Emotional Behavioral (SEB) Supports

Rating Scale for Instruction, Assessment, and Data-Based Decision Making

Beginning	Exploring	Aligning	Integrating	Sustaining
A *Beginning* rating on an item indicates that a school does not meet all criteria in any academic or SEB area.	An *Exploring* rating on an item indicates that a school meets all criteria in at least one academic area or at least one SEB area.	An *Aligning* rating on an item indicates that a school meets all criteria in at least one academic area **and** at least one SEB area, **but** academic and SEB areas are not combined (i.e., they operate separately).	An *Integrating* rating on an item indicates that a school meets all criteria in at least one academic area **and** at least one SEB area, **and** academic and SEB areas are intentionally combined.	A *Sustaining* rating on an item indicates that for at least two years, a school has met all criteria in at least one academic area **and** at least one SEB area, **and** academic and SEB areas are intentionally combined and documented in policies and procedures.

Rating Scale for Infrastructure

Initial	Developing	Proficient	Advanced
An *Initial* rating on an item indicates that a school <u>does not</u> <u>meet all criteria</u> in any academic **or** SEB area.	A *Developing* rating on an item indicates that a school <u>meets</u> <u>all criteria</u> in at least <u>one academic area</u> **or** at least <u>one SEB area</u>.	A *Proficient* rating on an item indicates that a school <u>meets all</u> <u>criteria</u> in at least <u>one</u> <u>academic area</u> **and** at least <u>one SEB area</u>.	An *Advanced* rating on an item indicates that for at least two years, a school has <u>met all</u> <u>criteria</u> in at least <u>one</u> <u>academic area</u> **and** at least <u>one SEB area</u>, **and** <u>documented in policies</u> <u>and procedures</u>.

Support for integration

Implications

1. The IMFR is a psychometrically adequate tool for measuring elementary school I-MTSS.

   – *Recommendation: Administer the IMFR by a trained person who does not work at the school.*

2. Schools looking to better understand what I-MTSS "looks like" and their current implementation status and to improve I-MTSS implementation as a pathway for supporting students' comprehensive needs can use the IMFR.

3. The IMFR can serve as a meaningful measure for researchers conducting studies on I-MTSS implementation.

Frequently Asked Questions

Does the IMFR replace other fidelity tools for tiered systems?

- No. The IMFR has a specific purpose: To measure the integration of tiered systems. If your need matches that purpose, you may find the IMFR useful.

Why does it take so long to administer the IMFR?

- The study team found that several hours were needed to fully understand tiered system implementation in schools and to gather adequate information to accurately rate the implementation effort.

Can a school MTSS team member and/or school-based coach administer the IMFR?

- Yes, however the IMFR was not formally tested in these conditions. Results may or may not be accurate.

Questions and Reflections

- What questions do you have about the study, findings, and/or implications?

- How might your SEA use or support the use of the IMFR?

- Do you have relevant experiences to share?

The Suite of IMFR Materials

Three Main Items

The Materials Packet

The Administration Manual

Training Series

The Materials Packet

The IMFR ("the rubric")

Scoring Worksheet

Interview Protocol

Planning Guide

The Administration Manual

- Designed to **_supplement_** the online training series

- Contains three sections
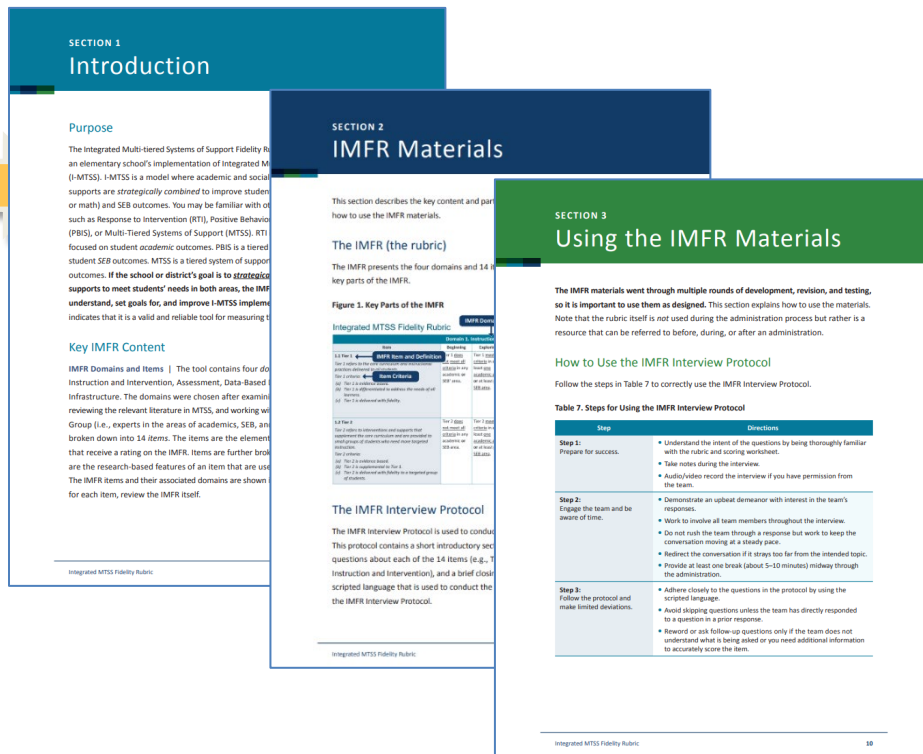
Self-Paced Online Training Series

- Mimics the training used during the study

- Features 11 modules on the key content of the IMFR, the materials, and how to use them

- Includes written content, videos, checks for understanding, and practice opportunities

Important! Completing the training series supports correct IMFR administration and scoring.

Activity 5a: IMFR Interview Practice

Practice using the IMFR protocol and respond to the questions belo[w]

> Find a partner.
> Review roles.
> Practice using IMFR Protocol.

Interview Practice

Scoring Practice

Let's Explore!

https://www.air.org/resource/guidetoolkit/integrated-mtss-fidelity-rubric-imfr

Accessing the Suite of Materials

1. Go to the IMFR website

2. Scroll to the section called *"Where Can I Get the IMFR"?* (located at the bottom of the page).

3. Click on *"complete this short form"* and complete the form.

Where Can I Get the IMFR?

Please complete this short form to gain access to the IMFR materials. You will be asked to provide your name, email address, role, and whether you will be using the IMFR for research purposes. After submitting the form, you will receive an email with the IMFR tool, interview protocol, scoring worksheet, planning guide, and self-paced training course.

Automated Email from Airtable

- You will then receive an email from Airtable Automations, Subject Line: IMFR Suite of Materials.

- Click on the link *"Click to download the IMFR materials."*

  – You do **not** need to login to Dropbox to download the materials.

Thank you for your interest in the IMFR! This emails contains the following items:

-The IMFR Materials Packet and

-The IMFR Administration Manual, which is intended to supplement the IMFR Training Series.

Click to download the IMFR materials. You will be prompted to login or you can download the materials without logging in by scrolling down *to continue with download only.*

Access to the online, self-paced the IMFR Training Series:

-An IMFR team member will use your name and email address (previously provided) to enroll you in the online, self-paced IMFR Training Series. Please allow 3-5 business days to be enrolled.

-Once enrolled, you will receive an email from Moodle, our learning management system, with your login credentials.

-Please note that you may want to check your spam or junk folder in case the email is routed there.

-When you login for the first time, you will be prompted to change your password.

-Once enrolled in the course, please watch all training videos and complete their required activities prior to conducting IMFR administrations or disseminating IMFR materials and information. Completing the training series will ensure the IMFR ratings are valid and reliable.

Please email IMFR@AIR.org if you have questions or require additional support.

The IMFR Team

The IMFR Training Series

- You will automatically be enrolled in the IMFR Training Series once you complete the website form to access the materials.

  – Expect an email from Moodle within 3–5 business days.

  – Additional directions (e.g., checking spam folder, changing your password) are in the Airtable Automations email you originally received.

- Let's preview the modules!

Questions and Reflections

- How does your SEA currently support LEAs' implementation and/or measurement of I-MTSS?

- What questions do you have about the IMFR and/or its associated materials (e.g., the Training Series, the Scoring Worksheet)?

- Do you have relevant experiences to share?

Wrap-Up

3-2-1 Reflection

- What are 3 big ideas from today's session?

- What lingering 2 questions do you have now?

- What is 1 next step you will take after the session?

Other I-MTSS Research Network Resources

ncsi
national center for systemic improvement

Transforming State Systems
to Improve Outcomes for
Children with Disabilities

Supporting Resources

This is a companion resource for the June 5, 2024, webinar, **Supporting MTSS Implementation: The Integrated MTSS Fidelity Rubric (IMFR)**, the third in the National Center for Systemic Improvement (NCSI) Research to Practice Spotlight Series (https://ncsi.wested.org/research-to-practice-webinar-series/). The following open-access materials from the Integrated Multi-Tiered Systems of Support (I-MTSS) Research Network support understanding and application of I-MTSS.

What Is the I-MTSS Research Network?

The Institute of Education Sciences, U.S. Department of Education, funds I-MTSS Research Network to examine elementary school MTSS that integrate behavioral and academic support systems. In addition to the IMFR, the Network's projects include the following:

- Behavior and Academic Supports: Integration and Cohesion (Project BASIC)
- Enhancing Ci3T: Building a Professional Capacity for High Fidelity Implementation to Support Students' Educational Outcomes (Project ENHANCE),
- Evaluating the Impact of Integrated Behavior and Reading MTSS in Elementary Schools.

More to Come!

Stay updated with the NCSI newsletter:
https://ncsi.wested.org/subscribe-ncsi-news/

Other Questions?

- Jennifer Pierce jpierce@air.org

- Lauren Artzi lartzi@air.org

- Laura Kuchle lkuchle@air.org

Thank you

IDEAs that Work
Office of Special Education Programs

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WestEd.org

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NASDSE
GUIDING CHANGE
National Association of State Directors of Special Education

The Meadows Center
FOR PREVENTING EDUCATIONAL RISK

NCSI includes staff from the OSEP-funded Parent Training and Information Center and Regional Parent TA Centers and the OESE-funded Statewide Family Engagement Centers.