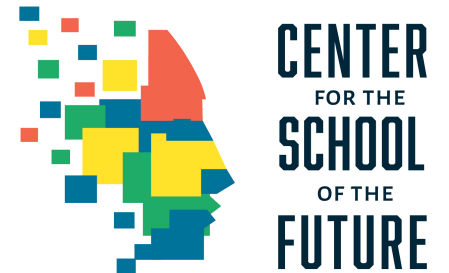


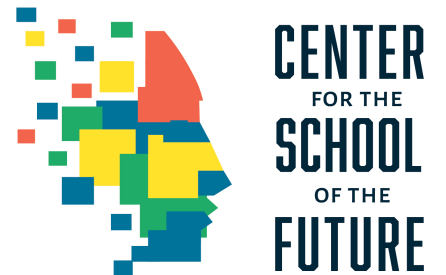
Any Job Worth Doing: Practical Approaches to Fidelity of Implementation

Ronnie Detrich



Session Outcomes

1. Describe the importance of fidelity of implementation
2. Describe the dimensions of fidelity
3. Learn the value of implementation planning
4. Describe practical strategies for maintaining high levels of fidelity



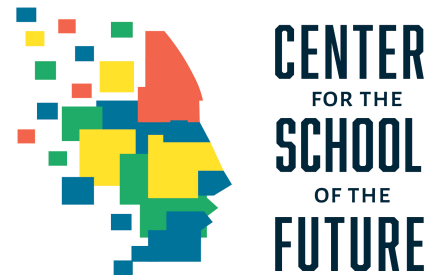
Parental Wisdom

- All parents everywhere:

Any job worth doing is worth doing well.

Fidelity Defined

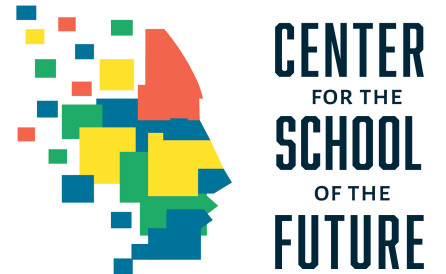
Implementing an intervention as planned



A Bit of Wisdom from Dean Fixsen

Students Don't Benefit from Interventions they Don't Experience

- If we fail to implement interventions as planned students will not benefit from them.
- Fidelity of implementation is necessary for students to benefit but it is not sufficient.
 - It is also necessary adopt interventions that have evidence of effectiveness.



We Have Met the Enemy and it is Us

88%

The proportion of staff who did not wash their hands before and after patient contact

84%

The proportion of staff who did not wash their hands before and after contact with an MRSA patient

86%

The incidence of staff not washing their hands before wound care, such as changing dressings

25%

The proportion of staff who failed to wash their hands after contact with faeces



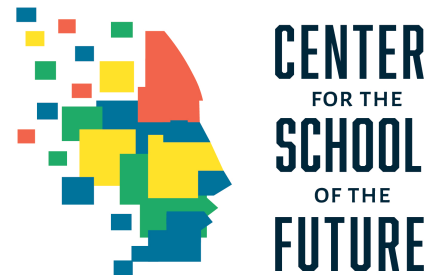
- 2,000,000 people infected annually in hospital.
- 90,000 die from these infections.
- Hand washing consistently halts spread of infection.
- Hospital personnel wash hands only 33%-50% of the time they should.



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The Story in Education

- It is estimated that drug prevention programs are implemented with fidelity only 19% of the time (Hallfors & Godette, 2002).
 - Programs have extensive research base as being effective.
 - This may be a generous estimate.
- No reason to assume that other programs are immune to poor implementation.



The Rest of the Story

- Teacher ratings tend to overestimate accuracy of implementation (Wickstrom, Jones, Lafleur, & Witt, 1998).
 - Teachers rated integrity at 54% accurate.
 - Direct observation= 4%.
- It isn't just a lack of training.



Training and Fidelity of Implementation

- Training is necessary but it is not sufficient to assure fidelity of implementation.
- It is necessary to have a system in place to assure trained skills maintain over time.

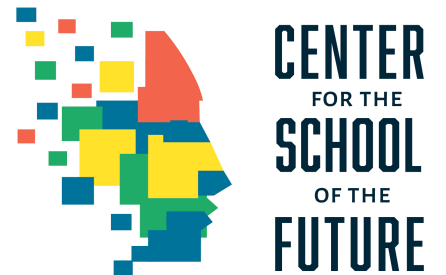
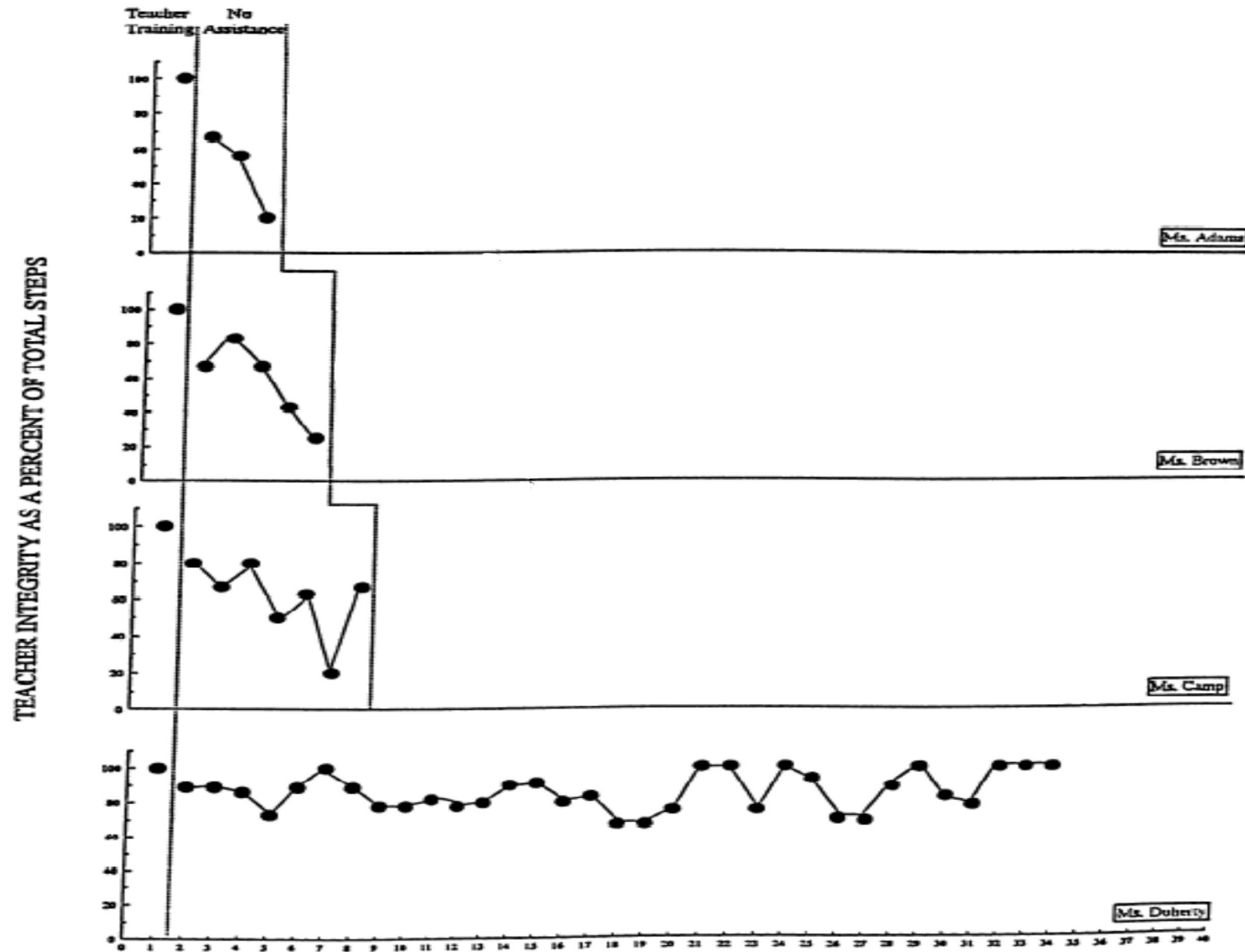


Figure 1. Teacher treatment integrity recorded as percent of total steps completed daily with arrows indicating performance feedback meetings.



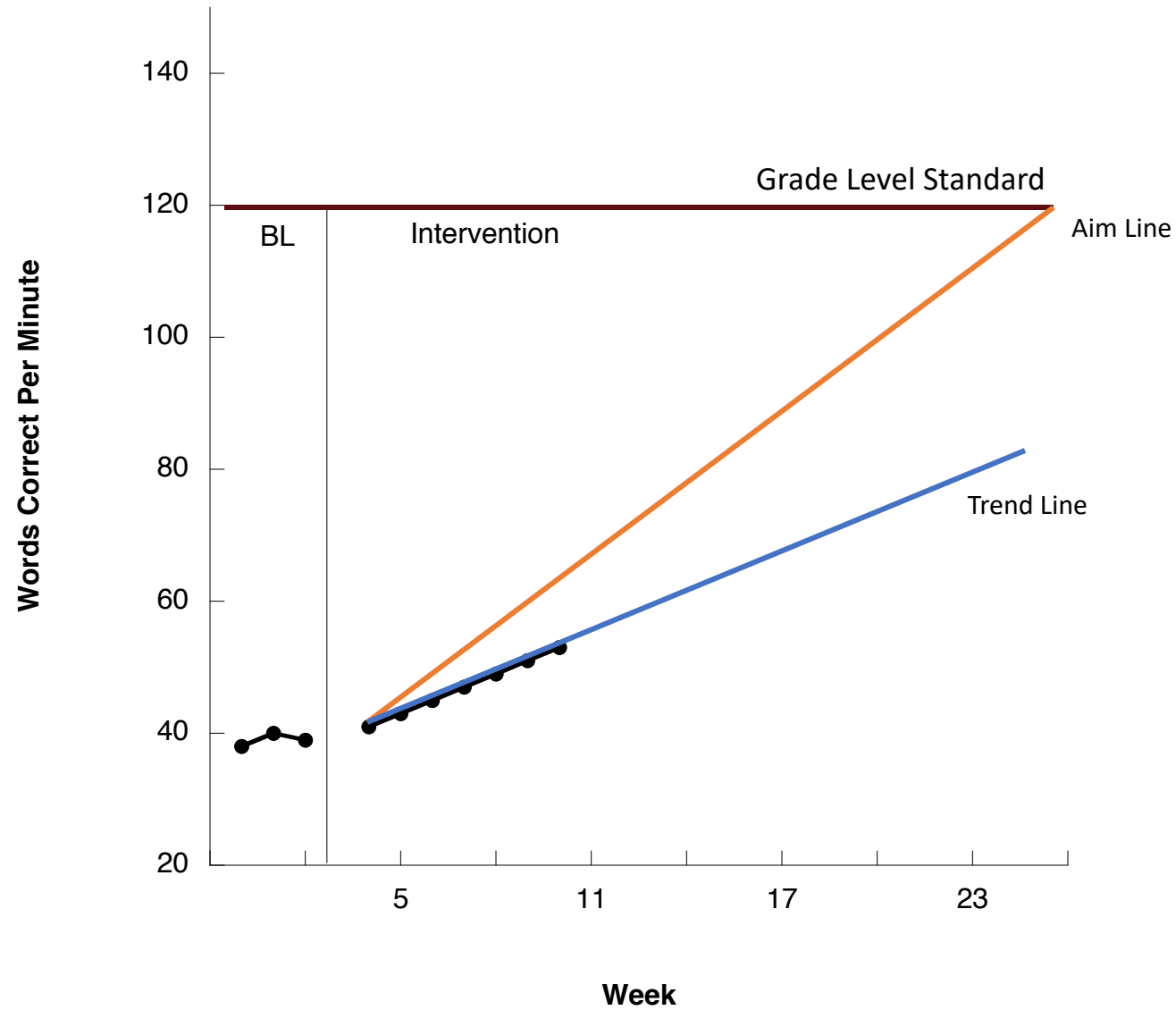
Fidelity of Implementation and Decision-Making

- Data-based decision making is at the heart of modern education.
- The impact of evidence-based practices depends on the fidelity of implementation.
- The quality of decisions about effects of an intervention is directly linked to the quality of implementation.



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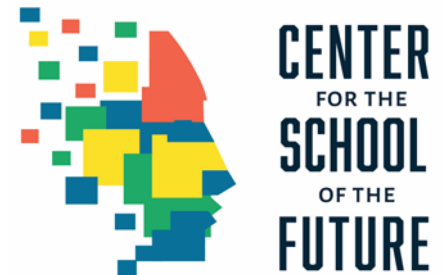
Data-based Decision Making and Fidelity of Implementation



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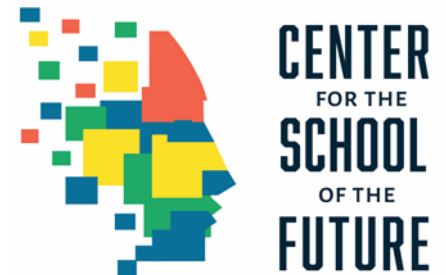
Dimensions of Fidelity

- **Exposure (Dosage):** the extent to which participants are exposed to the intervention as prescribed.
 - Interventions usually prescribe frequency and duration of exposure that is necessary for benefit.
 - Ex: 3/week for 30 minutes/session.
 - Failing to satisfy either can impact student benefit.
 - Ex: 1/week for 30 minutes.



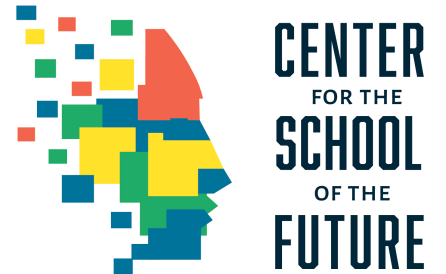
Dimensions of Fidelity

- Quality of delivery: qualitative measure of how well the intervention is implemented.
 - Importance has been acknowledged for years.
 - ✓ Have not developed good measures or how to influence it.
 - Possible measures through social validity methods:
 - ✓ Enthusiasm
 - ✓ Sincerity
 - ✓ Variations in inflection and content of speech.



Fidelity of Implementation in Practice

- Survey of school psychologists (Cochrane & Laux, 2008)
 - 97% agreed that it was key factor to consider
 - 11% reported monitoring with individual cases
 - 1.9% reported monitoring for group/team consultation.



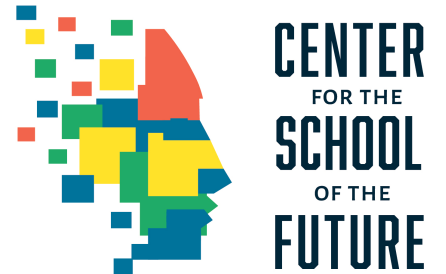
Practical Approaches to Increasing Fidelity: Prior to Implementation

- Implementation Planning Protocol

Intervention component	Who Responsible	When Implemented	Resources Required	Barriers	Solutions
Work materials prepared before session	Instructional Assistant	At beginning of instructional period	Pencil, worksheet	Lack of work-sheets	Prepare day before
Allow student to choose reinforcer	Teacher	At beginning of lesson	Array of activity reinforcer	Reinforcer availability	Inventory weekly
Praise working on task	Teacher	Throughout lesson	None	Low rate of praise	Teach monitor praise during session
If problem behavior prompt use of escape card	Teacher	Throughout lesson	Break card and location to take break	Location for break that interesting	Prior to beginning of intervention determine with student

Practical Approach to Monitoring Fidelity of Implementation

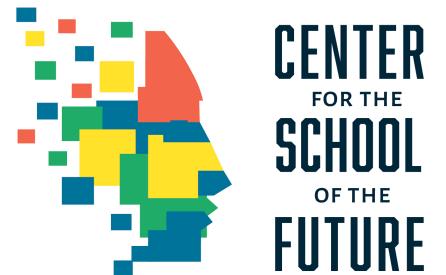
1. Assess dosage: if low dosage then other dimensions become irrelevant.
 - Relatively low effort-does not always require direct observation.
 - Determine if organizational features constrain treatment integrity.



Practical Approach to Monitoring Fidelity of Implementation

2. Assess adherence: if low, determine reasons

- Can't do vs won't do
 - Can't do= performance deficit-increase training and coaching.
 - Won't do= may be motivational-feedback may improve performance.



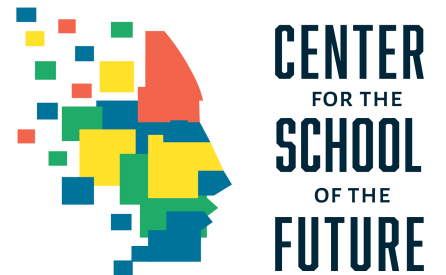
Practical Approach to Monitoring Fidelity of Implementation

3. Assess quality of delivery.

- Is student more responsive to some staff or contexts relative to others?
 - ✓ What are distinguishing features of exemplar staff performance?

4. Assess student responsiveness

- Is student engaged in instruction?



Practical Approaches to Increasing Fidelity of Implementation

- Checklists make sure we get the routine things right.

Gawande (2009)

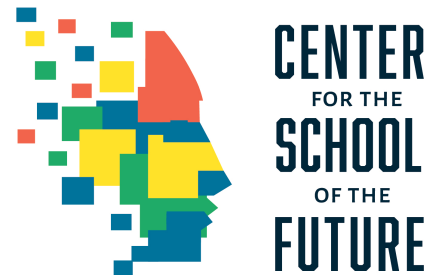
- Specify what to do when:
 - Before instructional session
 - During session
 - Following session
- Most effective if require some type of active confirmation step has occurred.



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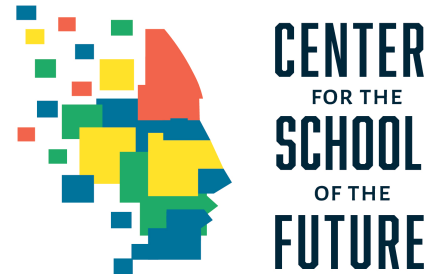
Practical Approaches to Increasing Fidelity: Checklists

- Advantages:
 - Standardized implementation
 - Increase integrity, especially adherence.
- Limitations
 - Upfront effort to develop
 - Often has low acceptability



Practical Approaches to Increasing Fidelity

- Teacher rate their own implementation.
 - Teacher ratings tend to overestimate accuracy of implementation (Wickstrom, Jones, Lafleur, & Witt, 1998).
 - Teachers rated integrity at 54% accurate.
 - Direct observation= 4%.
 - Integrity may be increased by rating immediately following intervention session.
 - Integrity may be improved by having teacher score video tape.



What Do We Know About Fidelity of Implementation and Student Behavior?

- Different levels of integrity result in different levels of student behavior.

(Wilder, Atwell, & Wine, 2006)

- High integrity followed by declines in integrity has limited disruptive effect on student behavior.

(Northup, Fisher, Kahng, Harrel, & Kurtz, 1997)

- Low levels of integrity followed by increases in integrity do not produce the same level of student response as when integrity high from the beginning.

(Groskreutz,, Groskreutz, & Higbee, 2011)

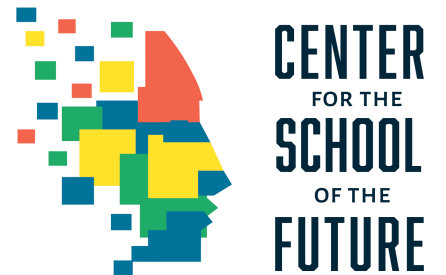


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What Do We Know About Fidelity of Implementation and Student Behavior?

- Implications

- Make sure that integrity is high at the beginning of intervention.
 - ✓ It is better to start with high levels of integrity and let it decline than to start with low integrity and try to increase it.
 - ✓ Maximizes impact of intervention.



Summary

- Interventions developed to solve a perceived problem
- Fidelity of implementation is necessary to solve the problem
- Fidelity does not come easily nor can it be taken for granted
 - It must be monitored actively and regularly
 - If we don't do those things we are likely not going to solve the problem and waste implementers time and resources.
 - ✓ Ultimately, a poor return on our investment.