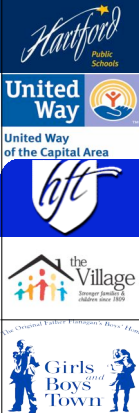


**19th Annual RTC Conference
Presented in Tampa, February 2006**



**Intervention Fidelity,
Dosage, and Related Student
Outcomes in High-Risk
Elementary Schools**

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Introduction

- Effective interventions implemented with high fidelity results in positive outcomes (Fixsen, Naoom, Blasé, Freidman, & Wallace, 2005)
- Fidelity: Is intervention implemented as designed?
- Dosage: How much of the intervention is provided?
 - Most school-based professional development is "train and hope"
 - 6 reviews involving > 1600 experimental studies published between 1968 and 1990 found that 6%-20% monitored and reported treatment fidelity
 - When assessed, implementation fidelity varies substantially
 - Factors associated with high fidelity:
 - Skill-based training with practice, coaching to application, program evaluation (Fixsen et al., 2005; Joyce & showers, 2002)

Method

- **Research question**
Is there a relationship between implementation fidelity and dosage of a school-wide classroom management and social skills program and student social and academic outcomes?
- **Design**
Using a posttest-only comparison group design, the study examined the effects of low and high doses of GBT WMC components on student classroom behavior, suspension rates, and student academic performance.
- **Participants**
56 teachers from 8 Partnership Project elementary schools' 2nd, 3rd, and 4th grades participated in the study. School enrollment ranged from 358 to 780.

Hartford, CT

The Community

- Hartford population – 121,578; 38% Latino, 35% African American, 26% Euro-American, 1% Asian/Pacific Islander
- 2nd poorest medium-sized city in America (2000 US Census)
- 71% of children live in single-parent households
- Per capita crime rate is among 10 highest for U.S. medium-sized cities
- Birth rate for unwed mothers is 30% above the rate in 50 major cities studied including NY, Chicago, LA, and Detroit

The District

- 32 schools with an enrollment of >22,000 students in K-12 classrooms
- >96% are members of historically underserved and underrepresented groups in US education, primarily Latino and African American
- >95% qualify for free/reduced price meals
- >50% from families where English is not the home language
- Highest district dropout rate in CT
- High rate of arrests in school, threats to staff, suspensions, expulsions, and students in alternative education programs

Girls and Boys Town Well-Managed Classroom

<p>Teacher Training</p> <p>Goal: Create positive learning climate</p> <ul style="list-style-type: none"> • Establish consistent rules, procedures, consequences • Prevent problem behaviors • Teach social skills • Praise prosocial behaviors • Correct problem behaviors 	<p>Administrator Training</p> <p>Goal: Reduce ODR and suspensions Increase school-wide WMC use</p> <ul style="list-style-type: none"> • Measure implementation and effects • Deal with office referrals • Evaluate discipline strategies • Implement school-wide discipline plan • Support staff with implementation
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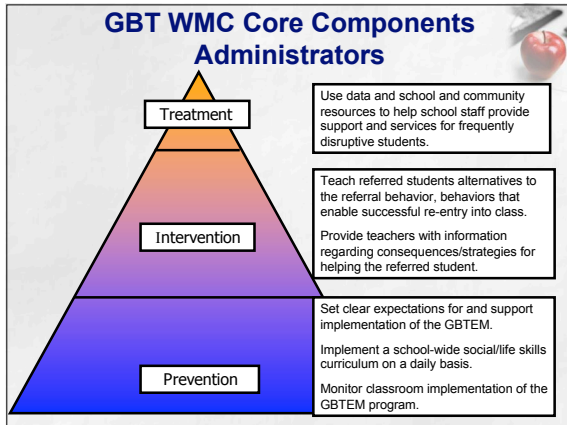
Coaching

Goal: Increase WMC implementation

- Coaching provided by HPS district and school and GBT staff
- Assess implementation progress via class observations
- Review w/ staff implementation data and improvement goals
- Identify challenging staff, students, and situations
- Devise strategies to address problems

GBT WMC Core Components Teachers

- Explain expectations for student social and academic performance.
 - Post classroom and school rules, procedures, and consequences
 - Teach behavioral expectations
- Implement a social/life skills curriculum on a daily basis.
- Frequently tell students when they do well academically and socially.
 - Recommended praise-to-correction ratio is 4:1
- Correct student misbehavior and practice appropriate behavior.
 - Use consequences immediately; avoid repeated warnings
- Develop and evaluate strategies using classroom and school discipline data.
 - Focus efforts on frequently disruptive students



Fidelity Measures

Measure	Description
Structured Classroom Observation VI	<ul style="list-style-type: none"> Praise rate Preventive prompt rate Praise-to-Correction ratio Percent of student compliance with teacher correction
Teacher surveys	<ul style="list-style-type: none"> 23-items (4-point Likert scale) Teachers rate: <ul style="list-style-type: none"> Their use of GBT WMC techniques Student classroom behavior Admin. use of GBT WMC techniques
Administrator surveys	<ul style="list-style-type: none"> 17-items (4-point Likert scale) Administrators rate: <ul style="list-style-type: none"> Teacher use of GBT WMC techniques Student classroom behavior

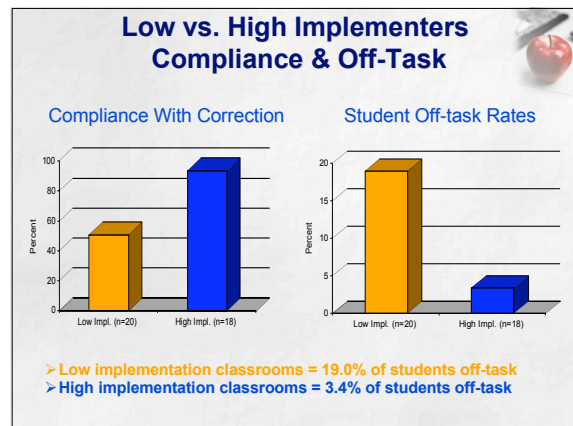
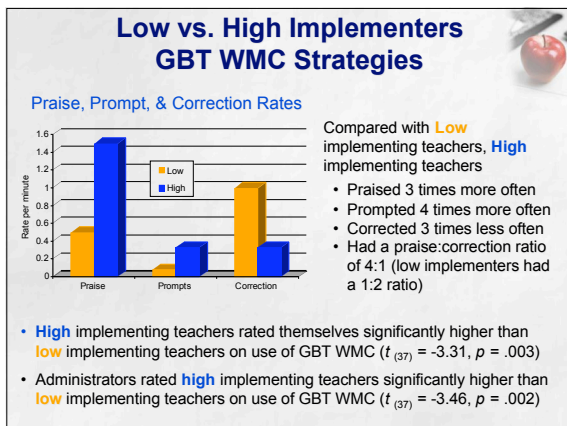
GBT WMC Dosage and Assignment to Implementation Groups

Points received	Prompts: Minute	Praise: Minute	Praise: Correction	% Compliance
0	0	0 - .8	0 - .9	0 - 66%
1	.1 - .2	.9 - 1.2	1.0 - 2.7	67% - 99%
2	.3 - 1.1	1.3 - 2.4	2.8 - 18.0	100%

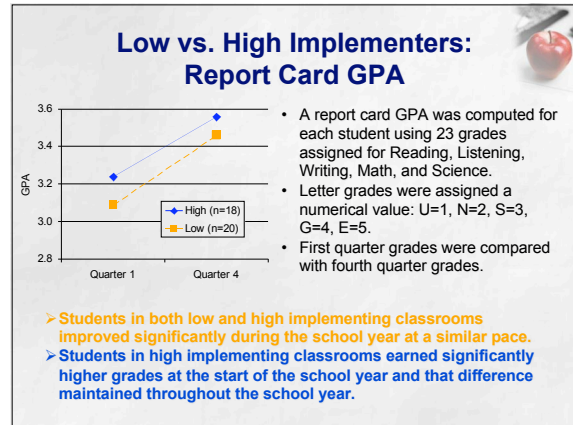
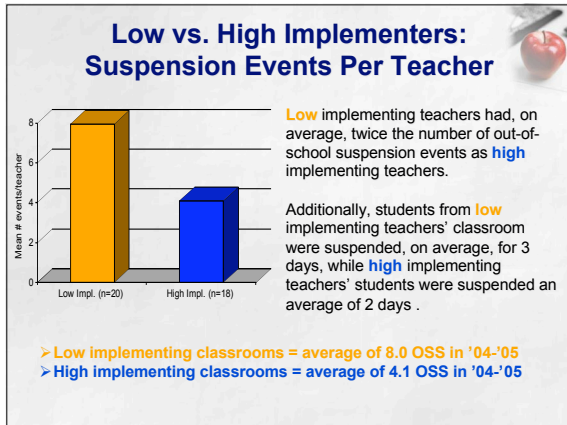
- Points assigned based on teacher use of components
- Total score from 0-3 → **low** implementation group (n=20)
- Total score from 6-8 → **high** implementation group (n=18)
- Inter-rater agreement for group assignment was 81%

Dependent Measures

Measure	Description
Structured Classroom Observation VI	<ul style="list-style-type: none"> 56 classrooms observed Academic engagement <ul style="list-style-type: none"> % of students on-task at every 1-min observation interval Inter-rater agreement for off-task rate was 100%
District reported out-of-school suspension records	<ul style="list-style-type: none"> Frequency of events Days per suspension
Student Report Card Grade Point Average (GPA)	<ul style="list-style-type: none"> Compared 1st & 4th quarter GPA GPA a composite of 23 grades: <ul style="list-style-type: none"> Reading Listening Writing Math Science



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- ### Low vs. High Implementers: Alternative Explanations
- Assignment bias**
 - At the start of the school year, students were systematically enrolled in either high or low implementing classrooms
 - Happenstance**
 - By chance, higher performing students were enrolled in high implementing classrooms, lower performing students were enrolled in low implementing classrooms
 - Teacher perceptions**
 - Teachers in high implementing classrooms perceive that their students are doing better, focus more on the positive things students do in class, and give them higher grades at the first quarter and throughout the school year
 - Teacher quality**
 - Before training in GBTEM, high implementing teachers were inherently different than low implementing teacher


- ### Conclusions
- Findings suggest that teachers who provide higher doses of GBT WMC core components (i.e., prevention strategies, praise, effective correction, and a positive praise:correction ratio) have:
- a higher percentage of students who are on-task,
 - fewer students who are suspended, and
 - students with higher GPAs at the start and end of the school year.
- Limitations... this was a retrospective evaluation project, not a prospective experimental design so we cannot rule out alternative explanations for our findings.

- ### Implications
- Improve our understanding of low and high implementers.**
- Do they differ on:
 - Knowledge of effective classroom management strategies?
 - Willingness to use effective classroom management strategies?
 - Ability to recognize situations in which to use effective classroom management strategies?
 - What is the path from low to high implementation?
 - How did high implementing teachers perform prior to the intervention?
 - Can we identify personal and environmental characteristics that set the stage for high implementation?
- Improve our understanding of how to help low implementing teachers implement effective classroom management strategies at a high level.**
- Assess low implementers' readiness to change (Prochaska, Norcross, & DiClemente, 1994) and devise strategies based on change stage
 - Assess environmental factors associated with teacher implementation, e.g., administrative support and direction
 - Test various coaching strategies with low implementers

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**Review of Treatment Integrity
Literature 1970-1990**



Author	Years	Setting	# Studies	% Op. definit.	% Rx. Integrity
Gresham, Gansle, & Noell, 1993	1980-90	Experimental studies assessing treatment effects with children	158	34%	16%
Gresham, Gansle, Noell, Cohen, & Rosenblum, 1993	1980-90	Intervention studies in school settings	181	35%	14%
Kazdin, Bass, Ayers, & Rodgers, 1990	1970-88	Research on child and adolescent psychotherapy	223	56%	19%
Moncher & Prinz, 1991	1980-88	Outcome studies in clin. psych., psychiatry, beh. ther., & mar. & fam. therapy	359	32%	18%
Peterson, Homer, & Wonderlich, 1982	1968-80	Experimental studies	536	>80%	<20%
Rogers Wiese, 1992	1975-90	Case studies and large group designs, parent effectiveness training	148	77 (c.s.) 45 (grp.)	12 (c.s.) 6 (grp.)