

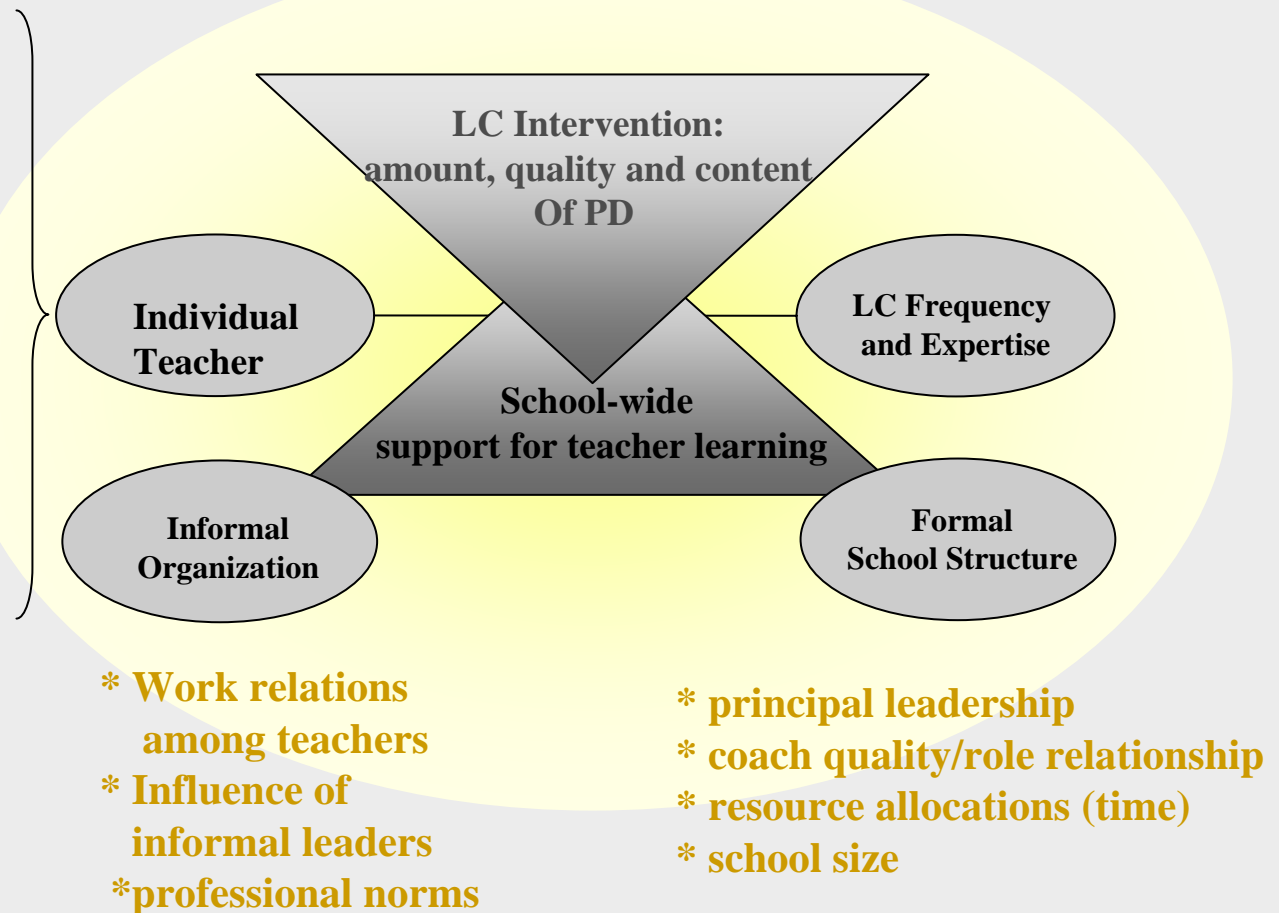
Measuring Change in the Practice of Teachers Engaged in Literacy Collaborative Professional Development

**Heather Hough
Gay Su Pinnell
Anthony Bryk
David Kerbow**

Theory of Change in Teachers' Classroom Practice

Background

- **Willingness to engage innovation**
 - Experiment with new practices in their classroom
 - Commitment to improving school
- **Literacy Expertise**
 - Prior experiences in comprehensive literacy teaching



Measure of Frequency of Implementation

- How often in a week does each teacher implement each element of the framework? (never, once, 2-3 times, every day or almost everyday)
 - Interactive read aloud
 - Shared reading
 - Guided reading
 - Interactive writing
 - Writing workshop
 - Word study

An Observation System to Chart Expertise Development in Teacher Language and Literacy Practice (DLLT)

- Represents a specific instantiation of teaching standards which emerges from a theory of student literacy development and a theory of teacher expertise development

Structure of the Observation System

□ Six rubrics, one for each core instructional activity:

- interactive read aloud
- shared reading
- guided reading
- interactive writing
- writing workshop
- word study

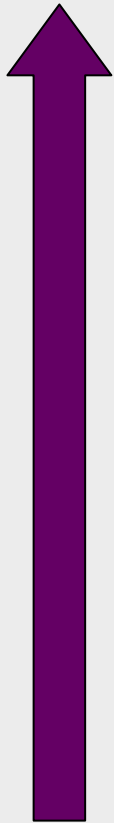
Each rubric contain ratings of the salient dimensions within each instructional activity

□ Two integrative rubrics:

- Foundational aspects of teaching (including organization, student talk, classroom community)
- Teaching for strategies (including literal thinking, inferential and analytic thinking, word solving, fluency and phrasing)

Model of Teacher Expertise Development Embedded within Each Rubric

Expertise development



- Facilitation of student talk and sharing that creates opportunities to deepen their thinking and understanding
- Strategic selection of specific teaching points based on student reading and writing behaviors in the context of various activities
- A general explication and demonstration of principles underlying the reading and writing process as scaffolding for students
- Focus on the organizing routines and materials for the practice

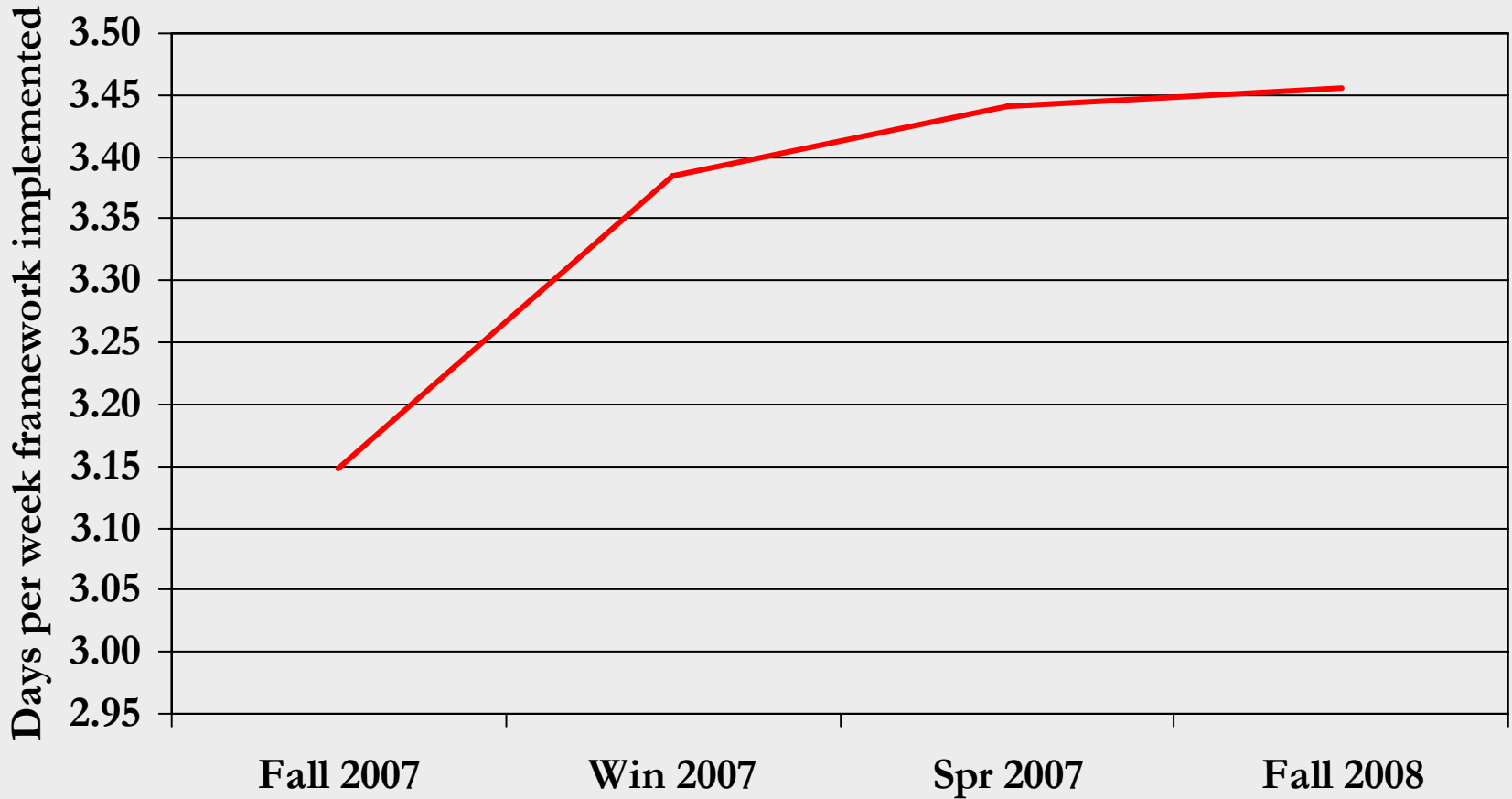
Psychometrics of Measuring Changes in Teacher Literacy and Language Practice

- Item Response Theory (IRT) – Rasch Model
 - A scaling of the dimensions of instruction from less to more frequently observed (item difficulty)
 - Consistency of this item map across teachers (“limited misfit”)
 - A conceptual progression of the items that is coherent and demonstrates increasing levels of sophistication

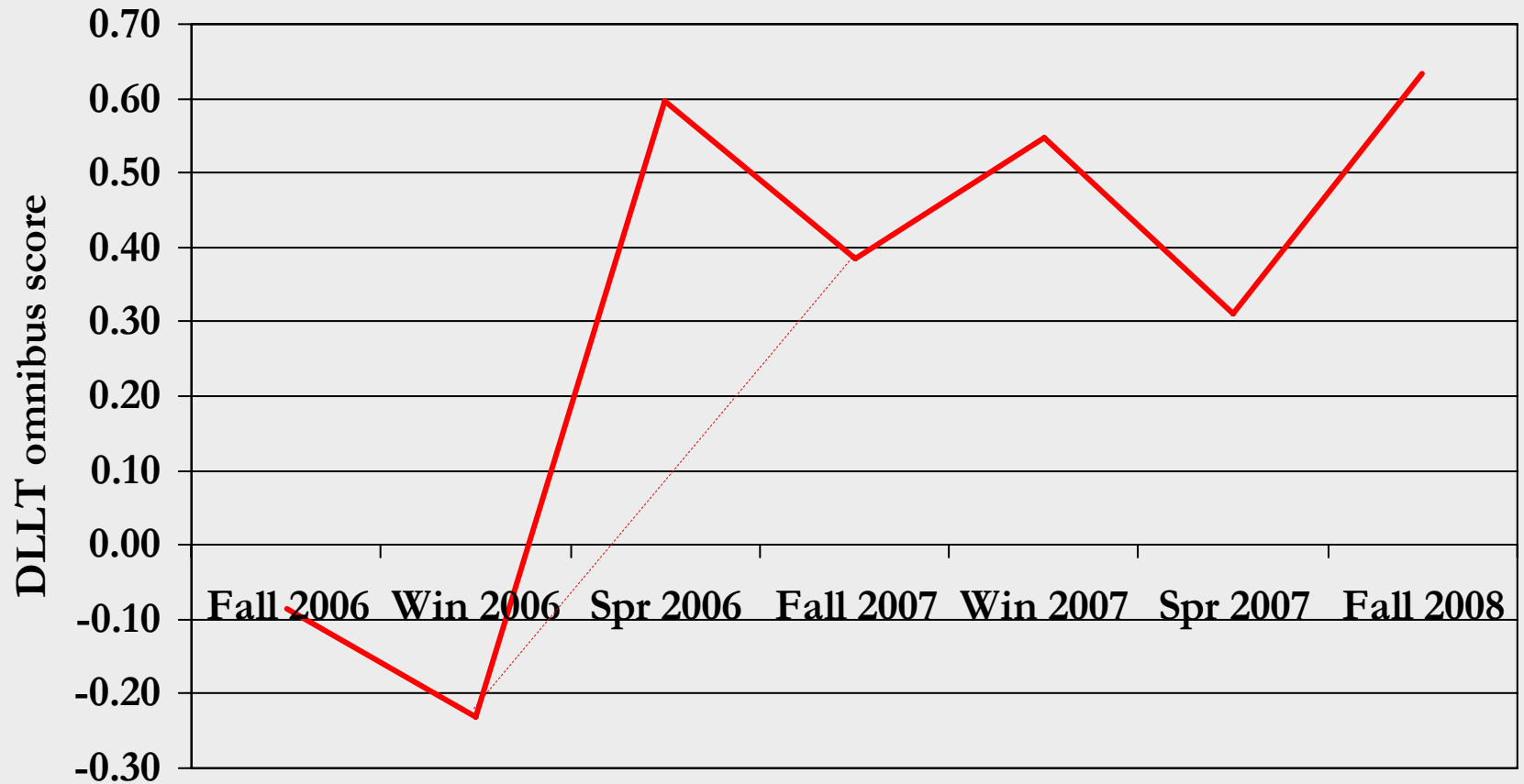
Data Collection

- Coaches as data collectors
- Collection initiated when a teacher actually begins Literacy Collaborative professional development
- Data collection:
 - 18 Schools
 - 236 Teachers
 - 1045 Observations
 - 3 years of data collection (year 3 in progress)

Mean Growth in Frequency of Implementation



Mean Growth in Expertise in Enactment



Teacher-Level Variables (considered so far)

- Teacher average exposure to PD
 - Average number of workshops and coaching sessions attended in each semester
 - Mean = 7.3 workshops and coaching sessions per semester
 - Means in schools ranges from 1.9 to 12.7

- Prior use of reform literacy practices
 - A high score on this measure indicates that a teacher has adopted some key procedural and decision-making aspects of reform literacy practices. (4 survey items, person reliability: 0.54).

- Teacher orientation toward innovation
 - A high score on this measure indicates that this teacher is strongly inclined to *independently* engage with innovations and to spread news of them to others (7 survey items, person reliability 0.79).

- School commitment
 - A high score on this measure indicates that this teacher is deeply committed to the school (4 survey items, anchored).

School- and Coach-Level Variables

- Coach experience as a professional development provider
 - Measure created using coach's survey and interview responses
- Coverage: Average proportion of teachers who attended workshops or coaching sessions in each semester
 - Mean = 80% of teachers exposed
 - School means range from 12% to 100%

3-level HLM Analyses

- Outcomes:
 - Level of implementation
 - Expertise in enactment

- Level 1: Repeated observations over time within teachers

- Level 2: Teachers nested within schools (how teacher background characteristics effect status at beginning of year 3 and change over time)

- Level 3: Schools (how characteristics of school context, coaching activity, and coach characteristics effect status and growth)

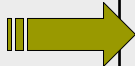
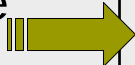



What predicts end status?

| | Frequency | Expertise |
|---|-----------|-----------|
| <u>Teacher Level</u> | | |
| Participation in coaching | ★ | |
| Previous experience with comprehensive literacy | ★ | |
| Orientation to engaging innovation | | ★ |
| School commitment | ★ | ★ |
| <u>School/coach level</u> | | |
| Coach's previous experience as PD provider | ★ | |
| Teacher coverage | | |

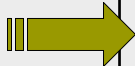

What predicts growth?

| | Frequency | Expertise |
|---|---|---|
| <u>Teacher Level</u> | |  |
| Participation in coaching | | |
| Previous experience with comprehensive literacy | | |
| Orientation to engaging innovation | | |
| School commitment | | |
| <u>School/coach level</u> | | |
| Coach's previous experience as PD provider | | |
| Teacher coverage |  | |

Relationship between predictors and end status

| | Frequency | Expertise |
|--|-----------------|-----------------|
| <u>Teacher Level</u> | | |
| 1 SD ↑ in participation in coaching  | .20 SD increase | - |
| 1 SD ↑ in previous experience with comprehensive literacy  | .09 SD increase | - |
| 1 SD ↑ in orientation to engaging innovation  | - | .13 SD increase |
| 1 SD ↑ in school commitment  | .11 SD increase | .09 SD increase |
| <u>School/coach level</u> | | |
| 1 SD ↑ in coach's previous experience as PD provider  | .31 SD increase | - |

Relationship between predictors and growth

| | Frequency | Expertise |
|--|-----------------|-----------------|
| <u>Teacher Level</u> 1 SD ↑ in participation in coaching  | - | .69 SD increase |
| <u>School/coach level</u> 1 SD ↑ in teacher coverage  | .36 SD increase | - |

Interpretations and Caveats

- Preliminary analysis shows that:
 - Teachers' individual characteristics play an important role in their uptake of and success with the intervention.
 - Previous experiences in literacy and school commitment seem to be particularly important
 - The proportion of teachers treated in a school seems particularly important for the frequency of implementation.
- Teachers growth seems to be related to the level of treatment they receive, but this result is preliminary
 - Possible LC effects still emerging, and PD selection mechanisms complex and appear to vary across sites.
- Future areas of study:
 - Analysis of development of teacher practice will strengthen as we have more complete data.
 - Difficult to parse out individual school effects so far as there appears to be some between-school bias in the trends data due to the coaches also being the raters.
- Final cycles of data collection is critical for these analyses.

Analyses Ahead

- Investigating teachers' changes in practice
 - Teacher background
 - School context

- Integrating the selection effect (understanding who is coached and why)

- Sort out reliability of LC scores to understand between school differences

- Examine individual elements of the rubric as our outcome
 - Explore how coach focus influences growth on specific framework elements