



Conceptualizing and Measuring the Effects of Curriculum in Classroom Settings: A Focus on Quality of Delivery

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Proximal indicators of curricular implementation

- **Dosage** – number, length, and frequency of curricular activities
- **Fidelity**– are program components delivered as described
- **Quality of delivery** – ??????



Definitions of Quality of Delivery

- The quality of interaction and the degree to which interactive activities focus attention on desired elements (Dusenbury et al., 2003, p. 244)
- The affective nature or degree of engagement of the implementers when delivering the program (Greenberg et al., 2005, p. 30).
- Quality of delivery is synonymous with good teaching (O'Donnell, 2008)



**How can we more clearly
conceptualize and measure quality of
delivery?**



Working Definition

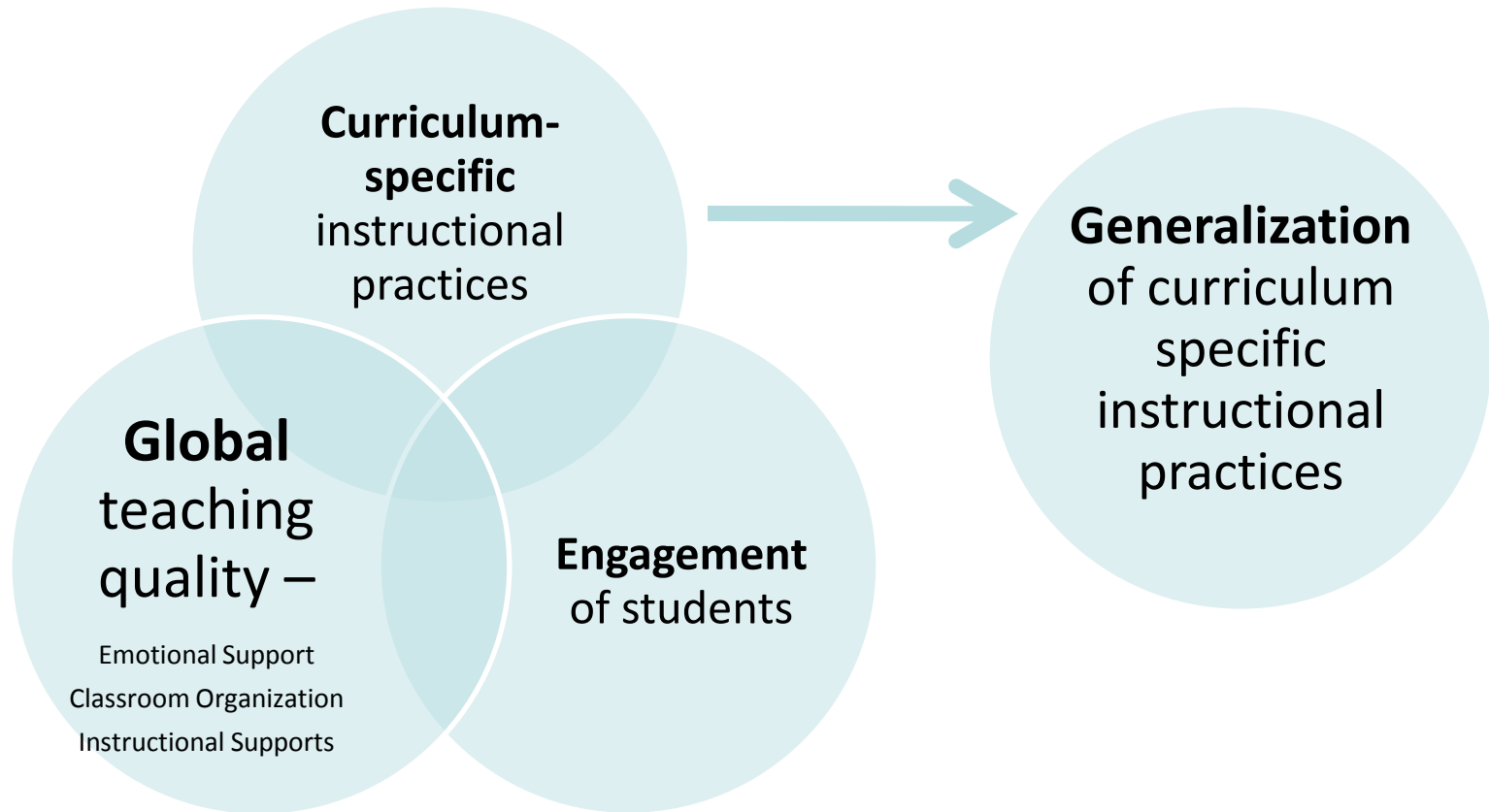
- **Quality of delivery** focuses on classroom interactions, during delivery of activities and in extensions throughout the day, that foster intended outcomes through the provision of curriculum-specific instructional practices and effective and engaging teacher-student interactions



Proposed Components of Quality of Delivery

During Lesson

Throughout Day





MyTeachingPartner – Literacy and Language Activities

- RCT examining effects of curricula (MTP-Literacy and Language Activities and Preschool PATHS) and varying levels of teacher supports for implementation (e.g. none, web-based, coaching) – see Pianta et al 2008; Mashburn et al., in press
- This study focuses on variation in implementation of literacy and language curriculum and associations with children’s development (Hamre et al., 2010)



Participants

- 154 pre-k teachers in state pre-k program
 - All BA degree; 34% MA degree
 - 11 years teaching experience
- 680 4 year old children
 - 19% ELL
 - 12.8 years average maternal education
 - Ethnically diverse



Implementation Measures

- **Dosage** – teacher reported minutes spent per week; observed length of videotaped sessions=
- **Adherence** – Observed 4-item checklist
 - language was in accordance with the lesson
 - teacher has all listed materials available and easily accessible
 - all listed materials are used in general accordance with the activity
 - and all components of the lesson are completed
- **Quality of Delivery**
 - Global: CLASS – Global teaching quality (10 dimensions)
 - Curriculum specific: CLASS – Language Modeling and Literacy Focus



Descriptives

- Quality of delivery somewhat low, especially targeted practices, despite high adherence

	Mean	SD	Min	Max
Dosage – Teacher reported minutes per week	100.5	58.11	15	300
Dosage- Observed minutes per activity	24.58	5.06	10.08	39.69
Adherence – Observed	.81	.18	.25	1.0
Quality of Delivery- Language Modeling	2.73	.71	1.0	6.0
Quality of Delivery- Literacy Focus	2.46	.86	1.0	5.33
Global Teaching Quality	4.42	.55	2.81	5.44



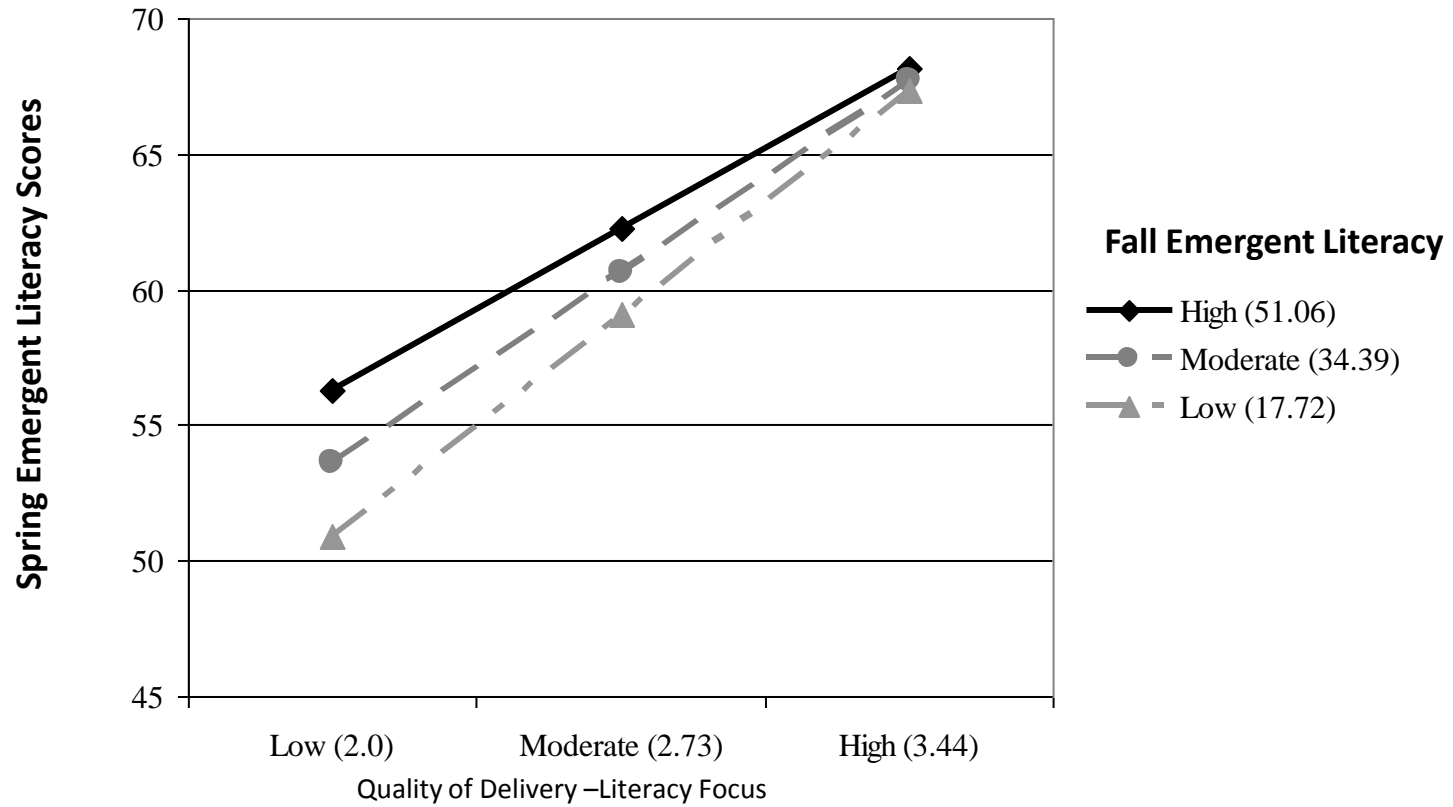
Unique Aspects of Implementation

	Dosage – Teacher Reported Minutes per Week	Dosage – Observed Minutes per Activity	Adherence - Observed	Quality of Delivery - Language Modeling	Quality of Delivery - Literary Focus
Dosage – Teacher Reported Minutes per Week					
Dosage – Observed Minutes per Activity	.03				
Adherence - Observed	.01	-.10			
Quality of Delivery - Language Modeling	.11	.04	.08		
Quality of Delivery - Literary Focus	.13	.02	.12	.11	
Generalized Teaching Quality (CLASS)	.04	.01	.08	.32**	.08



Main Effects – Gains fall to spring

	Receptive Vocabulary	Phonological Awareness	Print Awareness	Emergent Literacy
Dosage – Teacher reported minutes per week				
Dosage- Observed minutes per activity				*
Adherence – Observed				
Quality of Delivery- Language Modeling	(interaction with ELL status– predict gains for ELLs only)			
Quality of Delivery- Literacy Focus			**	** (additional interaction with fall scores– predict more gains for those who start low)
Global Teaching Quality		*		





Summary

- Targeted instructional practices seem to be most closely aligned with specific child outcomes, at least as measured in this study
- Need better measure of adherence?
- Did not include measures of student engagement or generalization



Generalization and Engagement

- Findings from Head Start REDI (Domitrovich et al., 2010)
 - Measured dosage, adherence (fidelity), child engagement, and generalization
 - Some associations between adherence and child engagement and gains in child performance – generalization not associated with outcomes
 - Other papers from this study suggest effects on child outcomes from both targeted and global instructional practices



Issues to consider in measurement

- What to measure?
 - Curricular materials need to clearly describe targeted instructional practices
- When to measure?
 - Dominitrovich et al (2010) showed some increases in generalization and children's engagement over time; Odom et al (2010) did not
 - Observations of global teaching quality show declines at end of year
- How to measure?
 - Little variance in teacher report
 - Observation – independent or intervention staff?
 - Student report (particularly for engagement in older grades)
- Study specific measures vs. standardized?



More information

- Center for Advanced Study of Teaching and Learning –
www.curry.edschool.virginia.edu/castl/home/index.html
- CLASS – www.teachstone.org

Thanks!