

A Systematic Review and Meta-Analysis of a Measure of Staff/Child Interaction Quality (the Classroom Assessment Scoring System) in Early Childhood Education and Care Settings and Child Outcomes

Supplemental Information 4 Systematic Review Results: All Outcomes

Table A. CLASS Predicting all Approach, Cognitive, and Math Outcomes													
CLASS Measurement Level		STUDY^{a,b}	APP^c	COGNITIVE					MATH				
			Galileo	Backward Digit Span	FACES - Social Awareness Task	Forward Digit Span	Identifying Colours	Working Memory Task	Counting Task	ECLS-B Math	Identifying Numbers ^d	WJ Applied Problems	
Total Score	Factor Version	Burchinal 2011 ³ - NCEDL ^A										■ ■ %	
	9 scale Version	Sabol 2013 ^{4,A}										★ ○	
CLASS Domains	Classroom Organization	Aikens 2012 ^{5,M}								■ ■ ■ ■ ■ ■ ■ ■		■ ■ ■ ■ ■ ■ ■ ■ ↓	
		Bulotsky-Shearer 2014 ⁶										★ ■	
		Burchinal 2014 ⁷						★ ■ ■ ■ ●				★ ■ ■ ■ ●	
		Dominguez 2010 ⁸	■ ■										
		Downer 2012 ⁹ - DLL ^A											■
		Downer 2012 ⁹ - Latino ^A											■
		Hamre 2014 ¹⁰		■									
		Peisner-Feinberg 2008 ¹¹ - NC 07/08				◆				◆			◆
		Peisner-Feinberg 2013 ¹²				■				■			■
		Weiland 2013 ¹³			■ ■ ■			■ ■ ■					
	Emotional Support	Bulotsky-Shearer 2014 ⁶											★ ■
		Burchinal 2014 ⁷						★ ■ ■ ■ ●					★ ■ ■ ■ ●
		Curby 2013 ^{14,A}											★ ■ ■
		Dominguez 2010 ⁸	■ ■										
		Downer 2012 ⁹ - DLL ^A											■

A Systematic Review and Meta-Analysis of a Measure of Staff/Child Interaction Quality (the Classroom Assessment Scoring System) in Early Childhood Education and Care Settings and Child Outcomes

		Burchinal 2012 ¹⁹ - Whole Sample ^A									■
		Burchinal 2012 ¹⁹ - Spanish-English Testing ^A									★
		Burchinal 2012 ¹⁹ - Spanish-Spanish Testing ^A									★
		Dang 2011 ²⁵ - NCEDL ^A									■
		Dotterer 2012 ^{20,A}								■	■
		Early 2006 ^{21,A}					★			★	★
		Howes 2008 ^{22,A}									■★
		Keys 2013 ²⁶ - NCEDL ^A									■
		Mashburn, Pianta 2008 ^{23,A}									■
Subscales	Language Modeling	Aikens 2010 ^{16,B}							○○○○		○○○○
		Aikens 2012 ^{5,M}							■/■/■		■/■/■/■/■/■↓
Legend for Table											
Significant & Positive			Significant & Negative			Nonsignificant			Statistic		
★			★			★			r - Zero Order Pearson's Correlation		
○			○			○			Beta		
■			■			■			B (Unstandardized Coefficient)		
❖			❖			❖			T-Test		
⌘			⌘			⌘			Partial Correlation		
●			●			●			F-Ratio		
↓			↓			↓			Effect Size		

Abbreviations: APP=Approaches to Learning; Total Score (factor ver.) = Total Score for Emotional Climate and Instructional Climate; Total Score (9 scale ver.)=Total Score with Language Modeling, Literacy Focus subscales not included. For more details please see Table 2 in the manuscript.

^aThis paper is one of a series of Meta-Analyses and Systematic Reviews assessing the relationship between child care quality and children's outcomes; therefore, superscript letters below are in reference to various large databases that samples in these papers were drawn from. These letters have been kept consistent across the series for our readers.

^bSamples within papers are described in more detail in the manuscript in Table 2.

^cAcronyms for child outcomes are listed in Supplemental Information 2.

^dIdentifying Numbers (also refers to as Naming Numbers).

^ANational Center for Early Development and Learning Dataset (NCEDL); ^BHead Start Family and Children Experiences Survey (FACES) 2006 Cohort; ^MHead Start Family and Children Experiences Survey (FACES, 2009) Cohort.

A Systematic Review and Meta-Analysis of a Measure of Staff/Child Interaction Quality (the Classroom Assessment Scoring System) in Early Childhood Education and Care Settings and Child Outcomes

Supplemental Information 4 Systematic Review Results: All Outcomes

Table B. CLASS Predicting all Language Outcomes A to P			LANGUAGE^c															
CLASS Measurement Level	STUDY^{a, b}																	
		ARS - Language & Literacy	Expressive One - Picture Vocabulary	Identifying Letters ^d	Language (PPVT+ WJ PV)	MUBI	Narrative Assessment Protocol	OWLS- Oral Expression Scale	OWLS- Total Scale	PALS Pre-K	PALS Pre-K - lower case recognition	PPVT - Vocabulary	Pre-CTOPP -Phonological Awareness	Pre-CTOPP -Print Awareness	Pre-CTOPP -Receptive Vocabulary	Print Awareness (PWPA and PALS Pre-K)	Print Knowledge (PWPA and PALS Pre-K)	
Total Score	Factor Version	Burchinal 2011 ³ - NCEDL ^A							⌘					⌘ ■				
	11 Scale Version	McGinty 2012 ^{27,X}															■	
	9 Scale Version	Sabol 2013 ^{4,A}			○ ★				○ ★					○ ★				
	8 Scale Version	Hamre 2010 ²⁸								■				■	■	■		
CLASS Domains	Classroom Organization	Aikens 2012 ^{5,M}		■ ■ ■ ■ ■ ←										■ ■ ■ ■ ■ ←				
		Burchinal 2014 ⁷												★				

A Systematic Review and Meta-Analysis of a Measure of Staff/Child Interaction Quality (the Classroom Assessment Scoring System) in Early Childhood Education and Care Settings and Child Outcomes

Support	Aikens 2012 ⁵		■ ■ ■ ■ ■ ■ ↓								■ ■ ■ ■ ■ ■ ↓					
	Burchinal 2014 ⁷										★ ■ ■ ■ ● ●					
	Gosse 2014 ³¹					■										
	Guo 2010 ^{30,A}										■ ■				■ ■	
	Hamre 2014 ¹⁰				■											
	Logan 2011 ³² - Head Start						■									
	Logan 2011 ³² - State Funded					■										
	Peisner-Feinberg 2008 ¹¹ - NC 07/08											◇				
	Peisner-Feinberg 2013 ¹²				■											
	Weiland 2013 ¹³											■ ■ ■ ■				
	West 2010 ^{17,B}											○ ○				
	Xu 2014 ²⁹									○		○				
	Instructional Support (Language Modeling not included)	Downer 2012 ⁹ - DLL ^A	■		■											
Downer 2012 ⁹ - Latino ^A		■		■												
Reid 2013 ^{15,A}								○			○					
CLASS Factors	Emotional Climate	Burchinal 2010 ^{18,A}						■ ■ ◇ ◇			■ ■ ◇ ◇					
		Burchinal 2012 ¹⁹ - Whole Sample ^A									■					
		Burchinal 2012 ¹⁹ - Spanish-English										★				

A Systematic Review and Meta-Analysis of a Measure of Staff/Child Interaction Quality (the Classroom Assessment Scoring System) in Early Childhood Education and Care Settings and Child Outcomes

		Testing ^A																	
		Burchinal 2012 ¹⁹ - Spanish-Spanish Testing ^A											★						
		Dotterer 2012 ^{20,A}	■		■				■				■						
		Early 2006 ^{21,A}			★				★				★						
		Howes 2008 ^{22,A}	■★		■★				■★				■★						
		Mashburn, Pianta 2008 ^{23,A}			■				■				■						
		Mashburn 2009 ^{33,A}							■				■						
Instructional Climate		Burchinal 2008 ^{24,A}	★						★				★						
		Burchinal 2010 ^{18,A}							■ ■ ◆ ◆				■ ■ ◆ ◆						
		Burchinal 2011 ³ - NCEDL ^A											⌘						
		Burchinal 2012 ¹⁹ - Whole Sample ^A											■						
		Burchinal 2012 ¹⁹ - Spanish English Testing ^A												★					
		Burchinal 2012 ¹⁹ - Spanish-Spanish Testing ^A												★					
		Burchinal 2012 ¹⁹ - Whole Sample ^A												■					
		Dang 2011 ²⁵ - NCEDL ^A												■					
		Dotterer 2012 ^{20,A}	■		■					■				■					
		Early 2006 ^{21,A}			★					★				★					
		Howes 2008 ^{22,A}	■★		■★					■★				■★					
		Keys 2013 ²⁶ - NCEDL ^A												■					
		Mashburn, Pianta 2008 ^{23,A}			■					■				■					

A Systematic Review and Meta-Analysis of a Measure of Staff/Child Interaction Quality (the Classroom Assessment Scoring System) in Early Childhood Education and Care Settings and Child Outcomes

Subscales	Behaviour Management	Dobbs-Oates 2011 ^{34,X}											■ ■ ■ ■					■	
		Guo 2014 ^{35,U}												■					
	Language Modeling	Aikens 2010 ^{16,B}												○ ○					
		Aikens 2012 ⁵		■ ■ ■ ■										■ ■ ■ ■					
		Hamre 2010 ²⁸		■ ■										■ ■					
	Hamre 2010 ²⁸		↓									↓							
	Literacy Focus	Hamre 2010 ²⁸																	
		Hamre 2010 ²⁸																	
Legend for Table																			
Significant and Positive					Significant and Negative					Nonsignificant					Statistic				
★					★					★					r - Zero Order Pearson's Correlation				
○					○					○					Beta				
■					■					■					B (Unstandardized Coefficient)				
❖					❖					❖					T-Test				
⌘					⌘					⌘					Partial Correlation				
●					●					●					F-Ratio				
↓					↓					↓					Effect Size				

Abbreviations: Total Score (factor ver.) = Total Score for Emotional Climate and Instructional Climate; Total Score (9 scale ver.) = Total Score with Language Modeling and Literacy Focus subscales not included. Total Score (8 scale ver.) = Total score with Regard for Student Perspectives, Language Modeling, and Literacy Focus subscales not included. For more details please see Table 2 in the manuscript.

^aThis paper is one of a series of Meta-Analyses and Systematic Reviews assessing the relationship between child care quality and children's outcomes; therefore, superscript letters below are in reference to various large databases that samples in these papers were drawn from. These letters have been kept consistent across the series for our readers.

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^dIdentifying Letters (also refers to Letter Knowledge, Letter-Naming Test, and Naming Letters).

^eHamre, 2014¹⁰ used only Phonological Awareness and Print Knowledge subscales.

^ANational Center for Early Development and Learning Dataset (NCEDL, 2002, 2004); ^BHead Start Family and Children Experiences Survey (FACES, 2006) Cohort; ^MHead Start Family and Children Experiences Survey (FACES, 2009) Cohort; ^XOhio Virginia (2005-2006, 2006-2007).

A Systematic Review and Meta-Analysis of a Measure of Staff/Child Interaction Quality (the Classroom Assessment Scoring System) in Early Childhood Education and Care Settings and Child Outcomes

CLASS Factors	Instructional Support	Peisner-Feinberg 2008 ¹¹ - NC 07/08		❖	❖	❖							
		Peisner-Feinberg 2013 ¹²				■	■		■			■	
		Xu 2014 ²⁹	○○○										
		Aikens 2010 ^{16,B}				○○							
		Aikens 2012 ⁵				■ ■ ■ ■ ■ ↓					■ ■ ■ ■ ■		
		Bulotsky-Shearer 2014 ⁶	▲			■ ★	■ ★						
		Burchinal 2014 ⁷		■ ■ ● ● ★		■ ■ ● ● ★							
		Hamre 2014 ¹⁰	■										
		Peisner-Feinberg 2008 ¹¹ - NC 07/08		❖	❖	❖							
		Peisner-Feinberg 2013 ¹²				■	■		■			■	
	West 2010 ^{17,B}				○○								
	Xu 2014 ²⁹	○											
	Emotional Climate	Burchinal 2010 ^{18,A}				■ ■ ❖ ❖							
		Burchinal 2012 ¹⁹ - Whole Sample ^A				■							
		Burchinal 2012 ¹⁹ - Spanish-English Testing ^A				★							
		Burchinal 2012 ¹⁹ - Spanish-Spanish Testing ^A				★							
		Dotterer 2012 ^{20,A}							■				
		Early 2006 ^{21,A}							★				
		Howes 2008 ^{22,A}											
		Mashburn, Pianta 2008 ^{23,A}							■				
Instructional Climate	Burchinal 2010 ^{18,A}				■ ■ ❖ ❖								
	Burchinal 2011 ³ - NCEDL ^A				⌘								
	Burchinal 2012 ¹⁹ - Whole Sample ^A				■								
	Burchinal 2012 ¹⁹ - Spanish English Testing ^A				★								
	Burchinal 2012 ¹⁹ - Spanish-Spanish Testing ^A				★								
	Dotterer 2012 ^{20,A}							■					
	Early 2006 ^{21,A}							★					
	Mashburn, Pianta 2008 ^{23,A}							■					

A Systematic Review and Meta-Analysis of a Measure of Staff/Child Interaction Quality (the Classroom Assessment Scoring System) in Early Childhood Education and Care Settings and Child Outcomes

Subscale	Language Modeling	Aikens 2010 ^{16,B}				○○				
		Aikens 2012 ⁵				■ ■ ■ ■ ■ ↓			■ ■ ■ ■ ■	
Legend for Table										
Significant and Positive			Significant and Negative			Nonsignificant			Statistic	
★			★			★			r - Zero Order Pearson's Correlation	
○			○			○			Beta	
■			■			■			B (Unstandardized Coefficient)	
❖			❖			❖			T-Test	
⌘			⌘			⌘			Partial Correlation	
↓			↓			↓			Effect Size	
●			●			●			F-Ratio	

Abbreviations: Total Score (factor ver.) = Total Score for Emotional Climate and Instructional Climate; Total Score (9 scale ver.) = Total Score with Language Modeling and Literacy Focus subscales not included. Total Score (8 scale ver.) = Total score with Regard for Student Perspectives, Language Modeling, and Literacy Focus subscales not included. For more details please see Table 2 in the manuscript.

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A Systematic Review and Meta-Analysis of a Measure of Staff/Child Interaction Quality (the Classroom Assessment Scoring System) in Early Childhood Education and Care Settings and Child Outcomes

Supplemental Information 4 Systematic Review Results: All Outcomes

Table D. CLASS Predicting all Social Emotional Outcomes, Positive Behaviour and Problem Behaviour																		
CLASS Measurement Level	STUDY ^{a, b}	Positive Behaviour ^c								Problem Behaviour								
		ASBI-Prosocial Behaviour	ECLS-K Approaches to Learning	Learning Self-Efficacy	Pencil Tapping Task	Social Skills (author created)	SSIS/SSRS – Social Skills	SSBPS – Social Competence	STRS - Closeness	TCRS – Social Competence	Behaviour Problems (author_created)	SSIS – Internalizing Problems	SSIS – Externalizing Problems	SSIS/SSRS - Behaviours Problems	SSBPS – Behaviour Problems	STRS - Conflict	TCRS – Behaviour Problems	
Total Score	Factor Version	Burchinal 2011 ³ – NCEDL ^A								■ ■ %							■ ■ %	
	9 Scale Version	Sabol 2013 ^{4,A}								○ ★							○ ★	
CLASS Domains	Classroom Organization	Aikens 2012 ^{5,M}	■ ■ ■ ■ ■ ■ ↓		■ ■ ■ ■ ■ ■ ↓					■ ■ ■ ■ ■ ■ ↓							■ ■ ■ ■ ■ ■ ↓	
		Burchinal 2014 ⁷				★ ● ● ■ ■				★ ● ● ■ ■								
		Downer 2012 ⁹ – DLL ^A								■								■
		Downer 2012 ⁹ – Latino ^A								■								■

A Systematic Review and Meta-Analysis of a Measure of Staff/Child Interaction Quality (the Classroom Assessment Scoring System) in Early Childhood Education and Care Settings and Child Outcomes

		Hamre 2014 ¹⁰			■			■						■	
		Hestenes 2015 ³⁶		■			■			■	■				
		Peisner-Feinberg 2008 ¹¹ - NC 07/08					◆					◆			
		Peisner-Feinberg 2013 ¹²					■					■			
		Weiland 2013 ¹³			■ ■ ■										
Emotional Support		Aikens 2012 ^{5,M}	■ ■ ■ ■ ■ ↓	■ ■ ■ ■ ■ ■ ■ ↓	■ ■ ■ ■ ■ ↓					■ ■ ■ ■ ■ ↓					
		Burchinal 2014 ⁷			★ ● ● ■ ■					★ ● ● ■ ■					
		Curby 2013 ^{14,A}							★ ■ ■						■ ★
		Downer 2012 ⁹ – DLL ^A							■						■
		Downer 2012 ⁹ – Latino ^A							■						■
		Hamre 2014 ¹⁰			■			■							■
		Hestenes 2015 ³⁶		■			■			■	■				
		Johnson 2013 ³⁷	■												
		Peisner-Feinberg 2008 ¹¹ - NC 07/08						◆					◆		
		Peisner-Feinberg 2013 ¹²						■					■		
		Reid 2013 ^{15,A}							○						
		Weiland 2013 ¹³				■ ■ ■									
Instructional Support		Aikens 2010 ^{16,B}					○ ○					○ ○			
		Burchinal 2014 ⁷				★ ● ●						★ ●			

A Systematic Review and Meta-Analysis of a Measure of Staff/Child Interaction Quality (the Classroom Assessment Scoring System) in Early Childhood Education and Care Settings and Child Outcomes

Subscales	Language Modeling	Aikens 2010 ^{16,B}					○○					○○					
	Positive Climate	Aikens 2012 ^{5,M}		■ ■ ■ ↓		■ ■ ■ ↓		■ ■ ■ ■ ↓				■ ■ ■ ■ ↓					
Legend for Table																	
Significant & Positive			Significant & Negative			Nonsignificant			Statistic								
★			★			★			r - Zero Order Pearson's Correlation								
○			○			○			Beta								
■			■			■			B (Unstandardized Coefficient)								
❖			❖			❖			T-Test								
⌘			⌘			⌘			Partial Correlation								
●			●			●			F-Ratio								
↓			↓			↓			Effect Size								

Abbreviations: Total Score (factor ver.) = Total Score for Emotional Climate and Instructional Climate; Total Score (9 scale ver.) = Total Score with Language Modeling, Literacy Focus subscales not included. For more details please see Table 2 in the manuscript.

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A Systematic Review and Meta-Analysis of a Measure of Staff/Child Interaction Quality (the Classroom Assessment Scoring System) in Early Childhood Education and Care Settings and Child Outcomes

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A Systematic Review and Meta-Analysis of a Measure of Staff/Child Interaction Quality (the Classroom Assessment Scoring System) in Early Childhood Education and Care Settings and Child Outcomes

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A Systematic Review and Meta-Analysis of a Measure of Staff/Child Interaction Quality (the Classroom Assessment Scoring System) in Early Childhood Education and Care Settings and Child Outcomes

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A Systematic Review and Meta-Analysis of a Measure of Staff/Child Interaction Quality (the Classroom Assessment Scoring System) in Early Childhood Education and Care Settings and Child Outcomes

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