



2010–2011 Adams 50 Instructional Model Study

Prepared by Marzano Research Laboratory

for

Adams County School District 50

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2010–2011 Adams 50 Instructional Model Study

During the 2010–2011 school year, Marzano Research Laboratory (MRL) partnered with Adams County School District 50 to create a unique, learner-centered, standards-based model of instruction.

The purpose of the project was to develop a model of instruction that is specific to standards-based schooling (SBS) as practiced in Adams County School District 50. Once developed, the instructional model will form the basis for: (1) feedback to teachers regarding their use of effective instructional strategies, (2) teacher interaction and discussion regarding effective pedagogy, (3) professional development within the district regarding classroom instructional techniques, and (4) teacher evaluation.

The project included three phases:

Phase I involved the development of an initial instructional model, specific to Adams County School District 50. During this phase, Adams 50 educators (teachers and administrators) were trained in the instructional model, *The Art and Science of Teaching* (ASOT), to establish an initial, common way of conceptualizing effective classroom instruction.

Additionally, Marzano Research Laboratory (MRL) worked with a team of Adams 50 educators to adapt the ASOT model to the special requirements of SBS. An initial Adams 50 Instructional Model was created and distributed in December 2010.

Phase II involved the validation and revision of the Adams 50 Instructional Model. During this phase the validity of the Adams 50 Instructional Model was examined using survey data collected from teachers and students, video-recordings of classrooms, and student achievement data. Based on this validity study, the Adams 50 Instructional Model will be revised.

Phase III involves the development of the final version of the Adams 50 Instructional Model. Additionally, protocols for the use of the Adams 50 Instructional Model for walkthroughs, comprehensive observations, instructional rounds, and teacher self-evaluation will be developed.

This report focuses on the student and teacher surveys administered during Phase II of this project along with some preliminary findings on the validity study.

Student and Teacher Surveys

Please note that the data collected for this study cannot be used to identify any individual teacher’s patterns of instruction or student perceptions. Only MRL staff members have access to the database and no names are used in the database for any specific teacher or specific school. In short, the data is completely anonymous with no possibility of being traced to individuals or schools.

Teacher Surveys

The teacher survey consisted of 44 questions. A 5-point Likert scale was used for question responses with 1 indicating “not at all,” and 5 indicating “to a great extent.” Teachers were also asked to identify what level they taught (primary, intermediate, middle school, or high school).

Figures 1–44 provide a comparison of teacher responses for each of the 44 questions. The first column indicates the level taught; the second column displays the number of valid responses for that question; the third column displays the number of blank responses; the fourth column indicates the frequencies for each possible response (1–5); and the fifth and sixth columns indicate the mean and standard deviation respectively. The bottom row shows the overall results for all four levels of teachers combined. The survey question is indicated before each figure.

Survey Question 1: I provide a clearly stated learning target accompanied by a capacity matrix or scoring guide that describes levels of performance relative to the learning target.

Figure 1. Teacher Survey Descriptives (Survey Question 1)

School Level	# of Valid Responses	# of Blank Responses	Frequencies					Mean	Std. Deviation
			1	2	3	4	5		
Primary	178	5	5	43	87	38	5	2.97	.826
Intermediate	98	2	2	15	41	35	5	3.27	.856
Middle School	85	3	1	8	29	37	10	3.55	.866
High School	115	9	3	17	48	31	16	3.35	.983
Overall	476	19	11	83	205	141	36	3.23	.903

Survey Question 2: I facilitate tracking of student progress on one or more learning targets using a formative and/or summative approach to assessment.

Figure 2. Teacher Survey Descriptives (Survey Question 2)

School Level	# of Valid Responses	# of Blank Responses	Frequencies					Mean	Std. Deviation
			1	2	3	4	5		
Primary	177	6	1	13	54	72	37	3.74	.892
Intermediate	98	2	1	4	26	54	13	3.76	.774
Middle School	86	2	0	1	23	39	23	3.98	.767
High School	115	9	2	11	41	38	23	3.60	.972
Overall	476	19	4	29	144	203	96	3.75	.874

Survey Question 3: I provide descriptive feedback relative to the learning target.

Figure 3. Teacher Survey Descriptives (Survey Question 3)

School Level	# of Valid Responses	# of Blank Responses	Frequencies					Mean	Std. Deviation
			1	2	3	4	5		
Primary	179	4	0	16	67	63	33	3.63	.886
Intermediate	98	2	1	2	39	45	11	3.64	.750
Middle School	86	2	1	4	24	44	13	3.74	.814
High School	115	9	1	10	37	42	25	3.70	.938
Overall	478	17	3	32	167	194	82	3.67	.859

Survey Question 4: I provide students with recognition of their current status and their knowledge gain relative to the learning target.

Figure 4. Teacher Survey Descriptives (Survey Question 4)

School Level	# of Valid Responses	# of Blank Responses	Frequencies					Mean	Std. Deviation
			1	2	3	4	5		
Primary	177	6	1	15	58	73	30	3.66	.879
Intermediate	98	2	1	2	33	45	17	3.77	.797
Middle School	84	4	1	1	27	34	21	3.87	.847
High School	114	10	1	11	38	38	26	3.68	.964
Overall	473	22	4	29	156	190	94	3.72	.880

Survey Question 5: I review expectations regarding classroom code of conduct and/or classroom procedures to ensure their effective execution.

Figure 5. Teacher Survey Descriptives (Survey Question 5)

School Level	# of Valid Responses	# of Blank Responses	Frequencies					Mean	Std. Deviation
			1	2	3	4	5		
Primary	179	4	0	2	15	70	92	4.41	.692
Intermediate	98	2	0	1	15	40	42	4.26	.750
Middle School	86	2	1	3	10	40	32	4.15	.847
High School	114	10	0	4	24	41	45	4.11	.860
Overall	477	18	1	10	64	191	211	4.26	.783

Survey Question 6: I organize the physical layout of the classroom to facilitate movement and focus on learning.

Figure 6. Teacher Survey Descriptives (Survey Question 6)

School Level	# of Valid Responses	# of Blank Responses	Frequencies					Mean	Std. Deviation
			1	2	3	4	5		
Primary	178	5	0	2	21	67	88	4.35	.731
Intermediate	97	3	0	0	10	40	47	4.38	.668
Middle School	85	3	1	1	12	31	40	4.27	.836
High School	115	9	0	2	18	41	54	4.28	.790
Overall	475	20	1	5	61	179	229	4.33	.753

Survey Question 7: I identify a lesson or part of a lesson as involving important information on which students should focus.

Figure 7. Teacher Survey Descriptives (Survey Question 7)

School Level	# of Valid Responses	# of Blank Responses	Frequencies					Mean	Std. Deviation
			1	2	3	4	5		
Primary	179	4	0	3	24	105	47	4.09	.676
Intermediate	98	2	0	0	13	54	31	4.18	.648
Middle School	85	3	2	0	7	47	29	4.19	.779
High School	115	9	0	2	9	62	42	4.25	.673
Overall	477	18	2	5	53	268	149	4.17	.690

Survey Question 8: I organize students into small groups to facilitate the processing of new information.

Figure 8. Teacher Survey Descriptives (Survey Question 8)

School Level	# of Valid Responses	# of Blank Responses	Frequencies					Mean	Std. Deviation
			1	2	3	4	5		
Primary	179	4	2	6	30	82	59	4.06	.856
Intermediate	98	2	0	3	22	52	21	3.93	.750
Middle School	85	3	0	8	24	29	24	3.81	.957
High School	115	9	0	4	37	41	33	3.90	.862
Overall	477	18	2	21	113	204	137	3.95	.858

Survey Question 9: I engage students in activities that help them link what they already know to the new content about to be addressed and facilitate these linkages.

Figure 9. Teacher Survey Descriptives (Survey Question 9)

School Level	# of Valid Responses	# of Blank Responses	Frequencies					Mean	Std. Deviation
			1	2	3	4	5		
Primary	177	6	0	5	51	79	42	3.89	.794
Intermediate	98	2	0	1	26	58	13	3.85	.648
Middle School	85	3	0	2	19	39	25	4.02	.786
High School	115	9	0	2	33	51	29	3.93	.780
Overall	475	20	0	10	129	227	109	3.92	.761

Survey Question 10: Based on student needs, I break the content into small chunks (i.e., digestible bites) of information that can be easily processed by students.

Figure 10. Teacher Survey Descriptives (Survey Question 10)

School Level	# of Valid Responses	# of Blank Responses	Frequencies					Mean	Std. Deviation
			1	2	3	4	5		
Primary	179	4	0	2	27	82	68	4.21	.732
Intermediate	98	2	0	0	20	48	30	4.10	.711
Middle School	85	3	0	0	9	43	33	4.28	.648
High School	115	9	0	4	10	63	38	4.17	.729
Overall	477	18	0	6	66	236	169	4.19	.712

Survey Question 11: During breaks in the presentation of content, I engage students in actively processing new information.

Figure 11. Teacher Survey Descriptives (Survey Question 11)

School Level	# of Valid Responses	# of Blank Responses	Frequencies					Mean	Std. Deviation
			1	2	3	4	5		
Primary	178	5	0	11	62	82	23	3.66	.781
Intermediate	97	3	1	5	38	44	9	3.57	.776
Middle School	85	3	0	3	26	44	12	3.76	.734
High School	115	9	0	5	34	55	21	3.80	.786
Overall	475	20	1	24	160	225	65	3.69	.776

Survey Question 12: I ask questions or engage students in activities that require elaborative inferences that go beyond what was explicitly taught.

Figure 12. Teacher Survey Descriptives (Survey Question 12)

School Level	# of Valid Responses	# of Blank Responses	Frequencies					Mean	Std. Deviation
			1	2	3	4	5		
Primary	178	5	1	16	68	69	24	3.56	.857
Intermediate	98	2	1	8	46	32	11	3.45	.839
Middle School	85	3	0	5	24	42	14	3.76	.797
High School	115	9	0	6	37	45	27	3.81	.857
Overall	476	19	2	35	175	188	76	3.63	.852

Survey Question 13: I engage students in activities that help them record their understanding of new content in linguistic ways and/or represent the content in nonlinguistic ways.

Figure 13. Teacher Survey Descriptives (Survey Question 13)

School Level	# of Valid Responses	# of Blank Responses	Frequencies					Mean	Std. Deviation
			1	2	3	4	5		
Primary	177	6	1	24	58	70	24	3.52	.911
Intermediate	97	3	0	5	46	39	7	3.49	.709
Middle School	85	3	1	7	22	46	9	3.65	.827
High School	114	10	2	6	35	45	26	3.76	.925
Overall	473	22	4	42	161	200	66	3.60	.866

Survey Question 14: I engage students in activities that help them reflect on their learning and the learning process.

Figure 14. Teacher Survey Descriptives (Survey Question 14)

School Level	# of Valid Responses	# of Blank Responses	Frequencies					Mean	Std. Deviation
			1	2	3	4	5		
Primary	177	6	0	14	64	74	25	3.62	.824
Intermediate	98	2	1	9	31	48	9	3.56	.826
Middle School	85	3	1	3	19	51	11	3.80	.753
High School	115	9	0	5	39	51	20	3.75	.793
Overall	475	20	2	31	153	224	65	3.67	.807

Survey Question 15: I engage students in a brief review of content that highlights the critical information.

Figure 15. Teacher Survey Descriptives (Survey Question 15)

School Level	# of Valid Responses	# of Blank Responses	Frequencies					Mean	Std. Deviation
			1	2	3	4	5		
Primary	179	4	0	8	47	94	30	3.82	.760
Intermediate	98	2	0	5	24	50	19	3.85	.791
Middle School	85	3	0	2	15	42	26	4.08	.759
High School	115	9	0	4	27	55	29	3.95	.793
Overall	477	18	0	19	113	241	104	3.90	.778

Survey Question 16: I use grouping in ways that facilitate practicing and deepening knowledge.

Figure 16. Teacher Survey Descriptives (Survey Question 16)

School Level	# of Valid Responses	# of Blank Responses	Frequencies					Mean	Std. Deviation
			1	2	3	4	5		
Primary	179	4	1	7	40	84	47	3.94	.833
Intermediate	98	2	0	5	26	51	16	3.80	.773
Middle School	85	3	1	7	24	30	23	3.79	.977
High School	115	9	1	7	40	43	24	3.71	.896
Overall	477	18	3	26	130	208	110	3.83	.866

Survey Question 17: When appropriate (as opposed to routinely), I design homework to deepen students' knowledge of informational content or practice a skill, strategy, or process.

Figure 17. Teacher Survey Descriptives (Survey Question 17)

School Level	# of Valid Responses	# of Blank Responses	Frequencies					Mean	Std. Deviation
			1	2	3	4	5		
Primary	178	5	15	25	64	56	18	3.21	1.077
Intermediate	98	2	6	11	28	37	16	3.47	1.086
Middle School	84	4	6	11	22	34	11	3.39	1.098
High School	115	9	12	21	32	37	13	3.16	1.167
Overall	475	20	39	68	146	164	58	3.28	1.108

Survey Question 18: When the content is informational, I help students deepen their knowledge by examining similarities and differences.

Figure 18. Teacher Survey Descriptives (Survey Question 18)

School Level	# of Valid Responses	# of Blank Responses	Frequencies					Mean	Std. Deviation
			1	2	3	4	5		
Primary	178	5	0	13	60	87	18	3.62	.767
Intermediate	98	2	0	7	47	33	11	3.49	.790
Middle School	85	3	0	7	23	39	16	3.75	.858
High School	115	9	1	5	44	40	25	3.72	.884
Overall	476	19	1	32	174	199	70	3.64	.820

Survey Question 19: When content is informational, I help students deepen their knowledge by examining their own reasoning or the logic of the information as presented to them.

Figure 19. Teacher Survey Descriptives (Survey Question 19)

School Level	# of Valid Responses	# of Blank Responses	Frequencies					Mean	Std. Deviation
			1	2	3	4	5		
Primary	177	6	0	26	73	70	8	3.34	.782
Intermediate	98	2	1	9	45	35	8	3.41	.810
Middle School	85	3	0	8	26	42	9	3.61	.803
High School	115	9	3	9	47	39	17	3.50	.931
Overall	475	20	4	52	191	186	42	3.44	.833

Survey Question 20: When the content involves a skill, strategy, or process, I engage students in practice activities that help them develop fluency.

Figure 20. Teacher Survey Descriptives (Survey Question 20)

School Level	# of Valid Responses	# of Blank Responses	Frequencies					Mean	Std. Deviation
			1	2	3	4	5		
Primary	178	5	1	1	36	82	58	4.10	.772
Intermediate	98	2	0	1	17	54	26	4.07	.692
Middle School	85	3	0	2	11	43	29	4.16	.738
High School	115	9	0	1	17	54	43	4.21	.719
Overall	476	19	1	5	81	233	156	4.13	.737

Survey Question 21: I engage students in revision of previous knowledge about content addressed in previous lessons.

Figure 21. Teacher Survey Descriptives (Survey Question 21)

School Level	# of Valid Responses	# of Blank Responses	Frequencies					Mean	Std. Deviation
			1	2	3	4	5		
Primary	178	5	0	8	54	94	22	3.73	.733
Intermediate	98	2	0	4	30	53	11	3.72	.715
Middle School	84	4	0	7	15	38	24	3.94	.896
High School	114	10	0	1	36	53	24	3.88	.742
Overall	474	21	0	20	135	238	81	3.80	.766

Survey Question 22: I use strategies to provide closure to activities and lessons.

Figure 22. Teacher Survey Descriptives (Survey Question 22)

School Level	# of Valid Responses	# of Blank Responses	Frequencies					Mean	Std. Deviation
			1	2	3	4	5		
Primary	179	4	0	7	68	75	29	3.70	.784
Intermediate	98	2	0	14	35	39	10	3.46	.864
Middle School	83	5	0	5	25	33	20	3.82	.872
High School	114	10	1	10	31	49	23	3.73	.915
Overall	474	21	1	36	159	196	82	3.68	.854

Survey Question 23: I organize the class in such a way as to facilitate students working on cognitively complex tasks that require them to generate and test hypotheses.

Figure 23. Teacher Survey Descriptives (Survey Question 23)

School Level	# of Valid Responses	# of Blank Responses	Frequencies					Mean	Std. Deviation
			1	2	3	4	5		
Primary	177	6	9	45	75	40	8	2.96	.932
Intermediate	98	2	4	29	35	28	2	2.95	.912
Middle School	83	5	5	12	36	23	7	3.18	.990
High School	113	11	6	22	46	29	10	3.13	1.004
Overall	471	24	24	108	192	120	27	3.04	.958

Survey Question 24: I engage students in complex tasks (e.g., decision making, problem solving, experimental inquiry, investigation) that require them to generate and test hypotheses.

Figure 24. Teacher Survey Descriptives (Survey Question 24)

School Level	# of Valid Responses	# of Blank Responses	Frequencies					Mean	Std. Deviation
			1	2	3	4	5		
Primary	176	7	9	38	81	40	8	3.00	.913
Intermediate	98	2	3	24	37	28	6	3.10	.947
Middle School	83	5	2	14	29	30	8	3.34	.954
High School	114	10	4	18	44	32	16	3.33	1.019
Overall	471	24	18	94	191	130	38	3.16	.963

Survey Question 25: I act as a resource provider and guide for students as they engage in cognitively complex tasks.

Figure 25. Teacher Survey Descriptives (Survey Question 25)

School Level	# of Valid Responses	# of Blank Responses	Frequencies					Mean	Std. Deviation
			1	2	3	4	5		
Primary	178	5	3	15	63	74	23	3.56	.883
Intermediate	98	2	0	8	36	39	15	3.62	.844
Middle School	84	4	1	2	14	35	32	4.13	.861
High School	113	11	1	8	17	58	29	3.94	.879
Overall	473	22	5	33	130	206	99	3.76	.897

Survey Question 26: I scan the room, making note of when students are not engaged, and take overt action.

Figure 26. Teacher Survey Descriptives (Survey Question 26)

School Level	# of Valid Responses	# of Blank Responses	Frequencies					Mean	Std. Deviation
			1	2	3	4	5		
Primary	178	5	2	5	17	63	91	4.33	.847
Intermediate	98	2	0	0	5	41	52	4.48	.596
Middle School	84	4	0	1	3	33	47	4.50	.631
High School	114	10	0	0	13	49	52	4.34	.676
Overall	474	21	2	6	38	186	242	4.39	.726

Survey Question 27: I use academic games and inconsequential competition to maintain student engagement.

Figure 27. Teacher Survey Descriptives (Survey Question 27)

School Level	# of Valid Responses	# of Blank Responses	Frequencies					Mean	Std. Deviation
			1	2	3	4	5		
Primary	178	5	3	4	34	80	57	4.03	.869
Intermediate	98	2	2	4	24	49	19	3.81	.869
Middle School	84	4	3	5	24	32	20	3.73	1.010
High School	114	10	2	27	33	35	17	3.33	1.053
Overall	474	21	10	40	115	196	113	3.76	.977

Survey Question 28: I use response rates techniques to maintain student engagement in questions.

Figure 28. Teacher Survey Descriptives (Survey Question 28)

School Level	# of Valid Responses	# of Blank Responses	Frequencies					Mean	Std. Deviation
			1	2	3	4	5		
Primary	178	5	6	12	71	63	26	3.51	.940
Intermediate	96	4	0	6	35	44	11	3.62	.771
Middle School	84	4	8	3	29	34	10	3.42	1.067
High School	113	11	6	21	46	29	11	3.16	1.014
Overall	471	24	20	42	181	170	58	3.43	.963

Survey Question 29: I use physical movement to maintain student engagement.

Figure 29. Teacher Survey Descriptives (Survey Question 29)

School Level	# of Valid Responses	# of Blank Responses	Frequencies					Mean	Std. Deviation
			1	2	3	4	5		
Primary	179	4	2	8	26	62	81	4.18	.921
Intermediate	98	2	0	4	24	52	18	3.86	.760
Middle School	84	4	1	5	12	34	32	4.08	.934
High School	114	10	0	14	22	44	34	3.86	.986
Overall	475	20	3	31	84	192	165	4.02	.918

Survey Question 30: I use pacing techniques to maintain student engagement.

Figure 30. Teacher Survey Descriptives (Survey Question 30)

School Level	# of Valid Responses	# of Blank Responses	Frequencies					Mean	Std. Deviation
			1	2	3	4	5		
Primary	178	5	0	6	40	81	51	3.99	.806
Intermediate	97	3	0	3	26	50	18	3.86	.750
Middle School	84	4	0	2	16	36	30	4.12	.798
High School	114	10	0	6	38	48	22	3.75	.826
Overall	473	22	0	17	120	215	121	3.93	.806

Survey Question 31: I use student choice and voice to maintain student engagement.

Figure 31. Teacher Survey Descriptives (Survey Question 31)

School Level	# of Valid Responses	# of Blank Responses	Frequencies					Mean	Std. Deviation
			1	2	3	4	5		
Primary	179	4	1	5	51	72	50	3.92	.851
Intermediate	97	3	0	2	34	40	21	3.82	.791
Middle School	82	6	0	4	16	47	15	3.89	.754
High School	113	11	1	12	24	47	29	3.81	.972
Overall	471	24	2	23	125	206	115	3.87	.853

Survey Question 32: I demonstrate intensity and enthusiasm for the content in a variety of ways.

Figure 32. Teacher Survey Descriptives (Survey Question 32)

School Level	# of Valid Responses	# of Blank Responses	Frequencies					Mean	Std. Deviation
			1	2	3	4	5		
Primary	178	5	0	1	22	81	74	4.28	.697
Intermediate	98	2	0	0	13	49	36	4.23	.670
Middle School	84	4	0	2	5	38	39	4.36	.705
High School	114	10	0	1	12	50	51	4.32	.698
Overall	474	21	0	4	52	218	200	4.30	.692

Survey Question 33: I use friendly controversy techniques to maintain student engagement.

Figure 33. Teacher Survey Descriptives (Survey Question 33)

School Level	# of Valid Responses	# of Blank Responses	Frequencies					Mean	Std. Deviation
			1	2	3	4	5		
Primary	178	5	7	21	52	65	33	3.54	1.048
Intermediate	97	3	2	15	30	33	17	3.49	1.022
Middle School	82	6	1	6	18	38	19	3.83	.914
High School	114	10	3	11	28	44	28	3.73	1.024
Overall	471	24	13	53	128	180	97	3.63	1.019

Survey Question 34: I provide students with opportunities to make connections between the content and themselves.

Figure 34. Teacher Survey Descriptives (Survey Question 34)

School Level	# of Valid Responses	# of Blank Responses	Frequencies					Mean	Std. Deviation
			1	2	3	4	5		
Primary	178	5	0	1	34	89	54	4.10	.714
Intermediate	97	3	0	0	20	46	31	4.11	.720
Middle School	84	4	0	5	14	39	26	4.02	.850
High School	114	10	0	2	20	52	40	4.14	.763
Overall	473	22	0	8	88	226	151	4.10	.751

Survey Question 35: I use unusual or intriguing information about the content in a manner that enhances student engagement.

Figure 35. Teacher Survey Descriptives (Survey Question 35)

School Level	# of Valid Responses	# of Blank Responses	Frequencies					Mean	Std. Deviation
			1	2	3	4	5		
Primary	178	5	0	18	59	73	28	3.62	.869
Intermediate	98	2	0	10	35	40	13	3.57	.849
Middle School	83	5	1	5	21	36	20	3.83	.908
High School	114	10	1	8	25	55	25	3.83	.882
Overall	473	22	2	41	140	204	86	3.70	.880

Survey Question 36: I use behaviors associated with “withitness” to maintain adherence to rules and procedures.

Figure 36. Teacher Survey Descriptives (Survey Question 36)

School Level	# of Valid Responses	# of Blank Responses	Frequencies					Mean	Std. Deviation
			1	2	3	4	5		
Primary	174	9	7	8	70	52	37	3.60	1.002
Intermediate	94	6	2	8	41	38	5	3.38	.805
Middle School	81	7	1	4	25	32	19	3.79	.904
High School	109	15	7	14	39	34	15	3.33	1.072
Overall	458	37	17	34	175	156	76	3.52	.977

Survey Question 37: I apply consequences for not following classroom code of conduct and/or classroom procedures consistently and fairly.

Figure 37. Teacher Survey Descriptives (Survey Question 37)

School Level	# of Valid Responses	# of Blank Responses	Frequencies					Mean	Std. Deviation
			1	2	3	4	5		
Primary	178	5	2	2	19	88	67	4.21	.766
Intermediate	98	2	0	0	12	56	30	4.18	.632
Middle School	84	4	0	2	8	32	42	4.36	.755
High School	114	10	0	3	23	54	34	4.04	.780
Overall	474	21	2	7	62	230	173	4.19	.746

Survey Question 38: I consistently and fairly acknowledge adherence to classroom code of conduct and/or classroom procedures.

Figure 38. Teacher Survey Descriptives (Survey Question 38)

School Level	# of Valid Responses	# of Blank Responses	Frequencies					Mean	Std. Deviation
			1	2	3	4	5		
Primary	178	5	1	0	20	82	75	4.29	.708
Intermediate	98	2	0	1	12	56	29	4.15	.664
Middle School	84	4	1	0	8	37	38	4.32	.747
High School	114	10	0	5	26	46	37	4.01	.857
Overall	474	21	2	6	66	221	179	4.20	.753

Survey Question 39: I use students' interests and background to produce a climate of acceptance and community.

Figure 39. Teacher Survey Descriptives (Survey Question 39)

School Level	# of Valid Responses	# of Blank Responses	Frequencies					Mean	Std. Deviation
			1	2	3	4	5		
Primary	178	5	0	2	26	77	73	4.24	.739
Intermediate	98	2	0	0	20	50	28	4.08	.699
Middle School	84	4	1	2	12	45	24	4.06	.797
High School	114	10	0	1	26	48	39	4.10	.775
Overall	474	21	1	5	84	220	164	4.14	.752

Survey Question 40: When appropriate, I use verbal and nonverbal behavior that indicates caring for students.

Figure 40. Teacher Survey Descriptives (Survey Question 40)

School Level	# of Valid Responses	# of Blank Responses	Frequencies					Mean	Std. Deviation
			1	2	3	4	5		
Primary	179	4	0	1	7	60	111	4.57	.599
Intermediate	98	2	0	0	6	35	57	4.52	.613
Middle School	84	4	0	1	2	32	49	4.54	.610
High School	115	9	0	0	6	45	64	4.50	.598
Overall	476	19	0	2	21	172	281	4.54	.602

Survey Question 41: I behave in an objective and controlled manner.

Figure 41. Teacher Survey Descriptives (Survey Question 41)

School Level	# of Valid Responses	# of Blank Responses	Frequencies					Mean	Std. Deviation
			1	2	3	4	5		
Primary	171	12	0	1	11	66	93	4.47	.644
Intermediate	95	5	0	0	6	43	46	4.42	.612
Middle School	82	6	0	1	6	36	39	4.38	.678
High School	106	18	0	0	8	53	45	4.35	.618
Overall	454	41	0	2	31	198	223	4.41	.638

Survey Question 42: I exhibit behaviors that demonstrate value and respect for both high expectancy and struggling students.

Figure 42. Teacher Survey Descriptives (Survey Question 42)

School Level	# of Valid Responses	# of Blank Responses	Frequencies					Mean	Std. Deviation
			1	2	3	4	5		
Primary	171	12	0	1	8	53	109	4.58	.612
Intermediate	95	5	0	0	2	36	57	4.58	.538
Middle School	82	6	0	1	0	29	52	4.61	.561
High School	107	17	0	0	6	41	60	4.50	.605
Overall	455	40	0	2	16	159	278	4.57	.586

Survey Question 43: I ask questions of struggling students with the same frequency and depth as with high expectancy students.

Figure 43. Teacher Survey Descriptives (Survey Question 43)

School Level	# of Valid Responses	# of Blank Responses	Frequencies					Mean	Std. Deviation
			1	2	3	4	5		
Primary	170	13	2	8	20	70	70	4.16	.895
Intermediate	95	5	0	0	13	56	26	4.14	.629
Middle School	82	6	0	2	6	42	32	4.27	.704
High School	106	18	0	2	25	48	31	4.02	.780
Overall	453	42	2	12	64	216	159	4.14	.787

Survey Question 44: I probe incorrect answers of struggling students in the same manner as with high expectancy students.

Figure 44. Teacher Survey Descriptives (Survey Question 44)

School Level	# of Valid Responses	# of Blank Responses	Frequencies					Mean	Std. Deviation
			1	2	3	4	5		
Primary	170	13	2	6	34	73	55	4.02	.880
Intermediate	94	6	0	1	14	53	26	4.11	.679
Middle School	82	6	1	3	4	39	35	4.27	.817
High School	106	18	0	3	24	46	33	4.03	.810
Overall	452	43	3	13	76	211	149	4.08	.817

To obtain an overall picture of the teachers as a whole, it is useful to look at the highest and lowest average responses for the overall group on each question. The highest mean score occurred in Survey Question 42: *I exhibit behaviors that demonstrate value and respect for both high expectancy and struggling students.* The second highest mean score occurred in Survey Question 40: *When appropriate, I use verbal and nonverbal behavior that indicates caring for students.* The third highest mean score occurred in Survey Question 41: *I behave in an objective and controlled manner.* This may indicate three areas where teachers feel confident.

The lowest mean score was found in Survey Question 23: *I organize the class in such a way as to facilitate students working on cognitively complex tasks that require them to generate and test hypotheses.* The next lowest mean score was found in Survey Question 24: *I engage students in complex tasks (e.g., decision making, problem solving, experimental inquiry, investigation) that require them to generate and test hypotheses.* The third lowest mean score occurred in Survey Question 1: *I provide a clearly stated learning target accompanied by a capacity matrix or scoring guide that describes levels of performance relative to the learning target.* These are areas where teachers may feel less confident and may prove to be a starting place for professional development. It is interesting to note that the two lowest mean scores were in response to questions about “generating and testing hypotheses.”

It is also useful to look at each group independently of the other groups (please see Appendix). For example, note the difference between primary teachers’ responses and secondary-level

(middle and high school) teachers' responses on Question 1: *I provide a clearly stated learning target accompanied by a capacity matrix or scoring guide that describes levels of performance relative to the learning target.* This may indicate that this is not an area of focus for primary teachers in the way that it is for secondary-level teachers.

Conversely, primary teachers scored higher than secondary level teachers on Question 8: *I organize students into small groups to facilitate the processing of new information* as well as Survey Question 39: *I use students' interests and background to produce a climate of acceptance and community.* Again, this may indicate a difference in teaching styles/philosophies between primary-level teachers and secondary-level teachers.

Survey Question 17: *When appropriate (as opposed to routinely), I design homework to deepen students' knowledge of informational content or practice a skill, strategy, or process,* yielded different responses from each of the four levels. Primary teachers responded to this question with a mean of 3.21 while intermediate teachers responded with a mean score of 3.47. Middle school teachers responded with a mean score of 3.39 and high school teachers responded with a mean score of 3.16. The differences in the mean scores at each level may indicate that a discussion around the use of homework may prove fruitful.

Student Surveys

Student Demographics

Figures 45–48 report student demographic data as supplied by students who took the surveys in all schools participating in this portion of the study by level.

Primary (Grades K–2)

Note: 9 students did not record a Teacher ID on their surveys; data not included in figures.

Figure 45. Student Demographics (Primary)

Demographic Data		# of Responses
Gender	Boy	1011
	Girl	1041
	No Response	8
Language Other Than English	Yes	1126
	No	888
	No Response	46

Intermediate (Grades 3–5)

Note: 7 students did not record a Teacher ID on their surveys; data not included in figures.

Figure 46. Student Demographics (Intermediate)

Demographic Data		# of Responses
Gender	Male	1080
	Female	1019
	No Response	45
Language Other Than English	Yes	1215
	No	909
	No Response	20

Middle School (Grades 6–8)

Note: 12 students did not record a Teacher ID on their surveys; data not included in figures.

Figure 47. Student Demographics (Middle School)

Demographic Data		# of Responses
Gender	Male	814
	Female	715
	No Response	111
Language Other Than English	Yes	876
	No	589
	No Response	175

High School (Grades 9–12)

Note: 2 students did not record a Teacher ID on their surveys; data not included in figures. Data only reflects students with a designated performance level.

Figure 48. Student Demographics (High School)

Demographic Data		# of Responses
Gender	Male	410
	Female	351
	No Response	19
Language Other Than English	Yes	461
	No	308
	No Response	11
Performance Level	R	2
	1	116
	2	20
	3	12
	4	18
	5	25
	6	27
	7	53
	8	28
	9	43
	10	112
11	100	

Demographic Data		# of Responses
	12	38
	13	30
	14	39
	15	56
	16	61
	No Response	0
Grade Level	9	323
	10	188
	11	152
	12	89
	N/A	5
	No Response	23

Survey Responses

Areas with high mean scores are areas to celebrate while areas with low mean scores may indicate potential areas of focus.

Primary (Grades K–2)

The primary survey consisted of 10 questions (the first two questions were questions regarding student demographics). Students had two options for each question: yes or no. A *yes* response was scored as 1 and a *no* response was scored as 0.

Primary Student Survey Questions:

#3: My teacher cares about me.

#4: I feel safe in class.

#5: I know what my teacher wants me to do in class.

#6: My teacher lets me know how I am doing in class.

#7: My teacher makes learning fun.

#8: My teacher explains words so I can understand them.

#9: I work hard in this class.

#10: I do my best to learn something new.

#11: I work well with others.

#12: I know my classroom routines and what I need to do next.

Figure 49. Student Survey Descriptives (Primary)

Survey Question	# of Valid Responses	# of Blank Responses	Frequencies		Mean	Std. Deviation
			No (0)	Yes (1)		
3	2027	33	110	1917	.95	.227
4	2043	17	117	1926	.94	.232
5	2032	28	95	1937	.95	.211
6	2030	30	107	1923	.95	.224
7	2042	18	110	1932	.95	.226
8	1995	65	97	1898	.95	.215
9	2047	13	81	1966	.96	.195
10	2038	22	54	1984	.97	.161
11	2028	32	126	1902	.94	.241
12	2023	37	128	1895	.94	.244

For every question in the primary survey, there were more ‘yes’ responses than ‘no’ responses. Question #10, *I do my best to learn something new*, exhibited the highest mean score. Questions 4, 11, and 12 had the lowest mean scores but there was a .03 difference between the highest and lowest mean scores.

Intermediate (Grades 3–5)

The intermediate survey consisted of 20 questions (the first two questions were demographic questions) with a 3-point Likert scale for responses where a 1 indicated *I do not agree* and a 3 indicated *I strongly agree*. Two questions (#9 and #16) required a yes/no response.

Intermediate Student Survey Questions:

#3: My teacher treats everyone fairly.

#4: My teacher cares about me.

#5: I am motivated and interested to learn.

#6: I feel safe in this class.

#7: I know what my teacher wants me to do in class.

#8: *Students in this class respect each other most of the time.*

#9: *I cooperate well with others in this class.*

#10: *I can explain to others how I am doing in this class.*

#11: *My teacher encourages me to learn as much as I can in this class.*

#12: *My teacher makes learning interesting.*

#13: *I understand the words my teacher uses.*

#14: *I work hard to learn what is taught in this class.*

#15: *I have done my very best work in this class.*

#16: *I sometimes hold back from doing my best in class because of what others might think.*

#17: *My teacher and I talk about how I am doing in class.*

#18: *In this class, even if the lessons are hard, I do my best to learn something new.*

#19: *When the work gets hard, I know how to get help.*

#20: *My teacher re-teaches material I don't learn right away.*

#21: *I am allowed to 'double dip' (work on multiple content areas at the same time).*

#22: *I participate in class discussions.*

Figure 50. Student Survey Descriptives (Intermediate)

Survey Question	# of Valid Responses	# of Blank Responses	Frequencies					Mean	Std. Deviation
			1	2	3	No (0)	Yes (1)		
3	2108	36	101	1027	980	--	--	2.42	.582
4	2122	22	64	984	1074	--	--	2.48	.557
5	2118	26	70	944	1104	--	--	2.49	.562
6	2120	24	104	833	1183	--	--	2.51	.590
7	2116	28	68	1060	988	--	--	2.43	.557
8	2119	25	479	1227	413	--	--	1.97	.648
9	2106	38	--	--	--	128	1978	.94	.239
10	2125	19	225	1208	692	--	--	2.22	.619
11	2135	9	46	667	1422	--	--	2.64	.522
12	2129	15	129	985	1015	--	--	2.42	.604
13	2122	22	140	1158	824	--	--	2.32	.592
14	2115	29	56	929	1130	--	--	2.51	.550
15	2122	22	110	919	1093	--	--	2.46	.594

Survey Question	# of Valid Responses	# of Blank Responses	Frequencies					Mean	Std. Deviation
			1	2	3	No (0)	Yes (1)		
16	2109	35	--	--	--	1331	778	.37	.483
17	2112	32	340	1148	624	--	--	2.13	.662
18	2117	27	57	796	1264	--	--	2.57	.547
19	2115	29	116	948	1051	--	--	2.44	.597
20	2079	65	134	120	556	--	--	3.80	1.191
21	2074	70	244	214	549	--	--	3.50	1.348
22	2104	40	166	1106	832	--	--	2.32	.612

For the intermediate student survey, Question 20, *My teacher re-teaches material I don't learn right away*, exhibited the highest mean score and Question 21, *I am allowed to 'double dip' (work on multiple content areas at the same time)*, exhibited the next highest mean score.

Question 8, *Students in this class respect each other most of the time*, exhibited the lowest mean score and Question 17, *My teacher and I talk about how I am doing in class*, exhibited the next lowest mean score for the 3-point Likert scale responses.

Middle School (Grades 6–8)

The middle school survey consisted of 27 questions (the first two questions were demographic questions) and used a 5-point Likert scale with 1 indicating *I do not agree* and 5 indicating *I strongly agree*.

Middle School Student Survey Questions:

#3: The teacher is fair in this class.

#4: The teacher in this class cares about me.

#5: I am recognized for being successful in this class.

#6: I am motivated to learn in this class.

#7: The teacher clearly communicates rules, routines and expectations for students.

#8: The teacher does not allow inappropriate behavior.

#9: I can explain to others how I am doing in class.

#10: I feel safe in this class.

#11: I cooperate well with others in this class.

#12: I know what the teacher expects of me in this class.

#13: Students in this class are generally respectful of each other.

#14: My teacher and I talk about how I am doing in class.

#15: The teacher provides me opportunities to evaluate my work.

#16: The teacher encourages me to learn as much as I can in this class.

#17: The teacher makes lessons interesting in this class.

#18: I understand the vocabulary used in this class.

#19: I try hard to learn in this class.

#20: I do my best work in this class.

#21: The teacher in this class encourages me to do my best.

#22: Even if the lessons are difficult in this class, I know how to get help and learn something new.

#23: The teacher doesn't let students give up when the work gets hard in this class.

#24: My teacher re-teaches material I don't learn right away.

#25: I am allowed to 'double dip' (work on multiple content areas at the same time).

#26: I actively participate in class discussions.

#27: I feel comfortable reporting bad behavior to my teachers.

#28: I sometimes hold back from doing my best in class because of what others might think.

#29: The teacher is able to manage discipline while staying focused on the lesson.

Figure 51. Student Survey Descriptives (Middle School)

Survey Question	# of Valid Responses	# of Blank Responses	Frequencies					Mean	Std. Deviation
			1	2	3	4	5		
3	1627	13	50	71	408	486	612	3.95	1.037
4	1621	19	40	110	416	456	599	3.90	1.054
5	1620	20	86	209	483	465	377	3.52	1.137
6	1623	17	56	120	328	536	583	3.91	1.077
7	1627	13	25	68	249	460	825	4.22	.957
8	1614	26	34	51	166	395	968	4.37	.939
9	1614	26	88	139	410	552	425	3.67	1.117
10	1610	30	42	81	245	423	819	4.18	1.032
11	1610	30	40	70	266	552	682	4.10	.989

Survey Question	# of Valid Responses	# of Blank Responses	Frequencies					Mean	Std. Deviation
			1	2	3	4	5		
12	1613	27	22	42	218	500	831	4.29	.892
13	1617	23	112	207	514	495	289	3.40	1.127
14	1624	16	192	258	472	394	308	3.23	1.258
15	1624	16	47	110	372	550	545	3.88	1.041
16	1625	15	40	70	293	488	734	4.11	1.007
17	1611	29	109	167	400	459	476	3.64	1.198
18	1617	23	47	122	351	573	524	3.87	1.043
19	1610	30	29	51	258	524	748	4.19	.938
20	1611	29	30	92	292	565	632	4.04	.984
21	1617	23	44	89	286	469	729	4.08	1.042
22	1612	28	40	122	272	558	620	3.99	1.039
23	1608	32	55	120	350	502	581	3.89	1.084
24	1607	33	98	163	403	492	451	3.64	1.166
25	1601	39	160	189	434	424	394	3.44	1.255
26	1606	34	88	184	427	490	417	3.60	1.148
27	1602	38	301	240	452	322	287	3.03	1.349
28	1605	35	620	287	300	226	172	2.40	1.393
29	1615	25	60	132	411	520	492	3.78	1.082

In the middle school survey, Question 8, *The teacher does not allow inappropriate behavior*, exhibited the highest mean score and Question 12, *I know what the teacher expects of me in this class*, exhibited the next highest mean score.

Question 27, *I feel comfortable reporting bad behavior to my teachers*, exhibited the lowest mean score and Question 14, *My teacher and I talk about how I am doing in this class*, exhibited the next lowest mean score. Although a low mean score is reported for Question 28, the wording of the question, *I sometimes hold back from doing my best in class because of what others might think*, makes a low mean score desirable.

High School (Grades 9–12)

The high school survey consisted of 28 questions (the first four questions were demographic questions) and used a 5-point Likert scale with 1 indicating *I do not agree* and 5 indicating *I strongly agree*.

High School Student Survey Questions:

- #5: The teacher of this class is fair.*
- #6: The teacher of this class cares about me.*
- #7: I am recognized for my successes in this class.*
- #8: I am motivated to learn in this class.*
- #9: I cooperate well with others in this class.*
- #10: Inappropriate behavior is not tolerated in this class.*
- #11: My teacher is able to manage discipline while maintaining the focus of the lesson.*
- #12: I know what the teacher expects of me in class.*
- #13: Students in this class are generally respectful of each other.*
- #14: My teacher and I talk about how I am doing in class.*
- #15: The teacher of this class evaluates me fairly.*
- #16: The teacher encourages me to learn as much as I can in this class.*
- #17: I understand the vocabulary used in our classroom lessons.*
- #18: I try very hard to understand what is being taught in class.*
- #19: I have done my best work in this class.*
- #20: I actively participate in class discussions.*
- #21: The teacher of this class encourages me to do my best.*
- #22: Even if the learning is difficult in this class, I know how to get help and learn something new.*
- #23: The teacher doesn't let students give up when the work gets hard in this class.*
- #24: I sometimes hold back from doing my best in class because of what others might think.*
- #25: My teacher re-teaches material I don't learn right away.*
- #26: I am allowed to "double dip" (work on multiple content areas at the same time).*
- #27: I am given multiple opportunities to be successful on assessments.*
- #28: My teacher provides a variety of ways to learn.*
- #29: My teacher helps me know what kind of learner I am.*
- #30: My teacher takes time to build a relationship.*
- #31: I know the classroom procedures and their order.*
- #32: I can explain to others how I am doing in class.*

Figure 52. Student Survey Descriptives (High School)

Survey Question	# of Valid Responses	# of Blank Responses	Frequencies					Mean	Std. Deviation
			1	2	3	4	5		
5	777	3	26	30	191	233	297	3.96	1.041
6	779	1	45	64	205	229	236	3.70	1.152
7	774	6	87	96	236	208	147	3.30	1.231
8	777	3	56	89	216	225	191	3.52	1.185
9	776	4	25	45	141	265	300	3.99	1.045
10	773	7	29	64	183	243	254	3.81	1.096
11	775	5	40	74	174	285	202	3.69	1.112
12	774	6	13	33	118	284	326	4.13	.937
13	773	7	63	106	220	245	139	3.38	1.166
14	776	4	101	114	209	219	133	3.22	1.261
15	778	2	28	52	189	267	242	3.83	1.057
16	777	3	38	65	173	244	257	3.79	1.135
17	776	4	33	56	189	283	215	3.76	1.066
18	778	2	23	50	180	282	243	3.86	1.025
19	773	7	44	95	190	241	203	3.60	1.164
20	774	6	64	111	227	225	147	3.36	1.181
21	774	6	48	65	161	244	256	3.77	1.175
22	776	4	33	58	176	251	258	3.83	1.101
23	772	8	64	90	196	224	198	3.52	1.223
24	774	6	421	115	119	76	43	1.97	1.262
25	766	14	75	112	266	178	135	3.24	1.191
26	772	8	91	101	261	188	131	3.22	1.216
27	772	8	33	80	193	248	218	3.70	1.114
28	779	1	52	93	204	244	186	3.54	1.169
29	773	7	80	128	267	171	127	3.18	1.195
30	776	4	117	144	214	188	113	3.05	1.270

Survey Question	# of Valid Responses	# of Blank Responses	Frequencies					Mean	Std. Deviation
			1	2	3	4	5		
31	774	6	39	58	210	249	218	3.71	1.106
32	774	6	47	53	207	235	232	3.71	1.143

For the high school survey, Question 12, *I know what the teacher expects of me in class*, exhibited the highest mean score and Question 9, *I cooperate well with others in this class*, exhibited the next highest mean score.

Question 30, *My teacher takes time to build a relationship*, exhibited the lowest mean score and Question 29, *My teacher helps me know what kind of learner I am*, earned the next lowest mean score. Although a low mean score is reported for Question 24, the wording of the question, *I sometimes hold back from doing my best in class because of what others might think*, makes a low mean score desirable.

Validity Study

The validity study focused on the relationship between teacher performance on the model and student academic achievement and growth. The first part of the validity study addressed the overall model. The second part addressed the individual design questions.

Overall Model Validity

The overall validity of the Adams 50 Instructional Model was analyzed by examining the correlation between teachers' overall scores on the model with 31 different measures of student achievement that included CSAP status and growth scores and SCANTRON status scores¹. The total score for each teacher was computed as the average score across the 41 elements of the Adams 50 Instructional Model as measured by the teacher survey. Teachers' total scores were then correlated with the 31 measures of student achievement to form a distribution of correlations. The characteristics of this distribution of correlations are reported in figure 53.

Figure 53: Correlation Distribution for Total on the Adams 50 Instructional Model and 31 Measures of Student Achievement

	N	Range	Minimum	Maximum	Mean	Significance
Correlation	31	.19	.10	.29	.18	< .001

As indicated in figure 53, the average correlation between teachers' total scores on the Adams 50 Instructional Model and student achievement was .18, which is significant at the .001 level. The minimum correlation was .10 (i.e., no correlations were below zero) and the maximum was .29. At face value, these findings would indicate that the more strategies teachers use within the Adams 50 Instructional Model and the better they execute them, the greater their students' achievement in terms of both status and growth. The correlations in this distribution are all positive and range from low to moderate in strength.

¹ Achievement status and growth data were used from 2010. Although such data was available from 2011, the number of teachers for whom this data could be attached to teacher surveys and video data was so small as to render meaningful analysis impractical.

Specific Design Questions

In addition to the relationship between a teacher’s overall performance on the model and student achievement, correlations were computed for specific designs questions and student achievement. Those design questions are reported in figure 54.

Figure 54: Design Questions in the Adams 50 Instructional Model

1. What will I do to establish and communicate learning targets, track learner progress, pace content, and celebrate success?
2. What will I do to help learners effectively interact with new knowledge?
3. What will I do to help learners practice and deepen their understanding of new knowledge?
4. What will I do to help learners generate and test hypotheses about new knowledge?
5. What will I do to engage learners?
6. What will I do to establish and maintain classroom code of conduct and classroom procedures?
7. What will I do to recognize and acknowledge adherence or lack of adherence to classroom code of conduct and classroom procedures?
8. What will I do to establish and maintain effective relationships with learners?
9. What will I do to communicate high expectations for all learners?

The relationship between teacher performance on the design questions of the Adams 50 Instructional Model and students’ academic achievement and growth was examined in two ways for each design question: (1) teacher scores from the teacher survey were correlated with the status and growth scores provided by the district and (2) teacher scores from the video analyses were correlated with the status and growth scores provided by the district.

Descriptive statistics on the teacher survey are provided in the first section of this report.

Descriptive statistics for the video analyses are provided in figure 55.

Figure 55. Descriptive Statistics for Video Analysis

Design Question	N	Minimum	Maximum	Mean	Std. Deviation
1	33	1.50	3.50	2.45	.63
2	20	2.00	3.00	2.45	.48
3	48	2.00	3.50	2.38	.51
4	33	2.00	3.00	2.41	.49

Design Question	N	Minimum	Maximum	Mean	Std. Deviation
5	56	1.50	3.00	2.42	.52
6	56	1.50	3.00	2.65	.49
7	56	1.50	3.00	2.62	.49
8	57	2.00	3.50	2.70	.47
9	55	2.00	3.00	2.67	.47

The scale used to analyze teachers' performance as indicated in the video-recordings was taken directly from the performance scales in the Adams 50 Instructional Model: (4) Innovating, (3) Applying, (2) Developing, and (1) Beginning. All teacher videos were scored by a single rater blind (i.e., without access to status or growth scores). To establish reliability of scoring for each design question, 10 videos were randomly selected and scored twice by the rater, one week apart. The lowest percentage of agreement (i.e., 70%) was for design question 8; the highest percentage of agreement (i.e., 90%) was for design question 4.

Significant correlations ($p < .05$) between design questions and student achievement status and growth are reported in figure 56.

Figure 56. Significant Correlations Between Design Questions and Student Achievement Status and Growth

Design Question		N	Minimum	Maximum	Average	Std. Deviation
1	Survey					
	Video	20	.00	.40	.30	.09
2	Survey	21	.01	.26	.18	.07
	Video	20	.12	.45	.35	.08
3	Survey	20	.01	.23	.15	.06
	Video					
4	Survey	22	.01	.26	.18	.07
	Video	19	.04	.58	.40	.10
5	Survey	21	.03	.28	.20	.06
	Video					
6	Survey					
	Video					
7	Survey					
	Video					
8	Survey					
	Video					
9	Survey					
	Video					

Note: Only significant correlations are reported here. Blank cells indicate that correlations were not significant.

Of note in figure 56 is the fact that design questions 6, 7, 8, and 9 did not exhibit statistically significant correlations with student achievement status or growth for the teacher surveys or video analyses. This is not to say that some correlations with individual assessments were not significant. Indeed, design question 6 had a significant correlation of .69 with one of the assessments and the teacher score for this question based on the video analysis. Design question 7 had a significant correlation of .60 with one assessment and the teacher score based on the video analysis. Design question 8 had a significant correlation of .36 with one assessment and the teacher score based on the teacher survey. Finally, design question 9 had a significant correlation of .36 with one assessment and the teacher score based on the video analysis. Despite some relatively high correlations with some of the assessments, each of these design questions had negative correlations and correlations near or equal to zero rendering the average correlations for these design questions across the different status and growth measures so low as to be nonsignificant.

Relative to design questions 6, 7, 8, and 9, the video analysis disclosed a potentially important aspect of design questions 6, 7, 8, and 9 as they relate to standards-based schooling. As currently described in the Adams 50 Instructional Model, these design questions refer to whole class instruction. That is, the teacher behaviors for these questions spell out how a teacher would elicit the following student perceptions when interacting with students in a whole group setting:

- A perception by students that the teacher has clear rules and procedures (design question 6),
- A perception by students that the teacher is aware of and acknowledges adherence to and lack of adherence to classroom code of conduct and classroom procedures (design question 7),
- A perception on the part of students that the teacher has a positive and caring relationship with them (design question 8),
- A perception on the part of students that the teacher has high expectations for each student (design question 9).

The video analyses indicated that teacher interaction with students on these more interpersonal issues is most commonly manifested in one-to-one interactions with students as opposed to whole class interactions. To test this hypothesis, each video was reanalyzed from the perspective

of one-to-one interactions. Correlations between teacher behaviors and student status and growth were then recomputed. The results are depicted in figure 57.

Figure 57. Significant Correlations Between Design Questions 6, 7, 8, and 9 and Student Achievement Status and Growth Recomputed for One-to-One Interactions

Design Question	N	Minimum	Maximum	Average	Std. Deviation
6 & 7	18	.12	.44	.38	.05
8	17	.05	.58	.41	.07
9	18	.10	.38	.31	.07

Note: Design questions 6 and 7 were analyzed together.

Figure 57 implies different conclusions from those that might be inferred from figure 56. Specifically, when teachers' one-to-one interactions with students are analyzed, design questions 6, 7, 8, and 9 have a relatively strong positive relationship with students' achievement status and growth.

Conclusions and Implications

One general conclusion that is supported by the findings is that the overall Adams 50 Instructional Model is validated in terms of its relationship to student academic status and growth. Not only is a teacher's overall score on the model correlated with student status and growth (see figure 53), but so are the various design questions (see figures 56 and 57).

As noted before, of particular interest in the findings is that in a standards-based system, design questions 6, 7, 8, and 9 manifest more in a teacher's one-to-one interactions with students than they do in whole class interactions.

Finally, it appears that some of the teacher behaviors that are positively related to student academic status and growth are not widely practiced by teachers. Specifically, as indicated in figure 56, design questions 1 and 4 had relatively strong correlations with students' achievement status and growth. However, as indicated in figures 1, 2, 3, and 24, these design questions were rated lowest on the teacher survey.

Two fairly straightforward implications can be inferred from the study findings.

First, design questions 6, 7, 8, and 9 as currently stated in the Adams 50 Instructional Model should be amended to include teacher behaviors when interacting with students on a one-to-one basis.

Second, training in providing clear learning targets and capacity matrices so that students can track their progress (design question 1) and training in providing students with opportunities to generate and test hypotheses (design question 4) should be seriously considered by the district.

Appendix

Figure A1. Teacher Survey Descriptives (Primary)

Survey Question	# of Valid Responses	# of Blank Responses	Frequencies					Mean	Std. Deviation
			1	2	3	4	5		
1	178	5	5	43	87	38	5	2.97	.826
2	177	6	1	13	54	72	37	3.74	.892
3	179	4	0	16	67	63	33	3.63	.886
4	177	6	1	15	58	73	30	3.66	.879
5	179	4	0	2	15	70	92	4.41	.692
6	178	5	0	2	21	67	88	4.35	.731
7	179	4	0	3	24	105	47	4.09	.676
8	179	4	2	6	30	82	59	4.06	.856
9	177	6	0	5	51	79	42	3.89	.794
10	179	4	0	2	27	82	68	4.21	.732
11	178	5	0	11	62	82	23	3.66	.781
12	178	5	1	16	68	69	24	3.56	.857
13	177	6	1	24	58	70	24	3.52	.911
14	177	6	0	14	64	74	25	3.62	.824
15	179	4	0	8	47	94	30	3.82	.760
16	179	4	1	7	40	84	47	3.94	.833
17	178	5	15	25	64	56	18	3.21	1.077
18	178	5	0	13	60	87	18	3.62	.767
19	177	6	0	26	73	70	8	3.34	.782
20	178	5	1	1	36	82	58	4.10	.772
21	178	5	0	8	54	94	22	3.73	.733
22	179	4	0	7	68	75	29	3.70	.784
23	177	6	9	45	75	40	8	2.96	.932
24	176	7	9	38	81	40	8	3.00	.913
25	178	5	3	15	63	74	23	3.56	.883

Survey Question	# of Valid Responses	# of Blank Responses	Frequencies					Mean	Std. Deviation
			1	2	3	4	5		
26	178	5	2	5	17	63	91	4.33	.847
27	178	5	3	4	34	80	57	4.03	.869
28	178	5	6	12	71	63	26	3.51	.940
29	179	4	2	8	26	62	81	4.18	.921
30	178	5	0	6	40	81	51	3.99	.806
31	179	4	1	5	51	72	50	3.92	.851
32	178	5	0	1	22	81	74	4.28	.697
33	178	5	7	21	52	65	33	3.54	1.048
34	178	5	0	1	34	89	54	4.10	.714
35	178	5	0	18	59	73	28	3.62	.869
36	174	9	7	8	70	52	37	3.60	1.002
37	178	5	2	2	19	88	67	4.21	.766
38	178	5	1	0	20	82	75	4.29	.708
39	178	5	0	2	26	77	73	4.24	.739
40	179	4	0	1	7	60	111	4.57	.599
41	171	12	0	1	11	66	93	4.47	.644
42	171	12	0	1	8	53	109	4.58	.612
43	170	13	2	8	20	70	70	4.16	.895
44	170	13	2	6	34	73	55	4.02	.880

Figure A2. Teacher Survey Descriptives (Intermediate)

Survey Question	# of Valid Responses	# of Blank Responses	Frequencies					Mean	Std. Deviation
			1	2	3	4	5		
1	98	2	2	15	41	35	5	3.27	.856
2	98	2	1	4	26	54	13	3.76	.774
3	98	2	1	2	39	45	11	3.64	.750
4	98	2	1	2	33	45	17	3.77	.797
5	98	2	0	1	15	40	42	4.26	.750
6	97	3	0	0	10	40	47	4.38	.668
7	98	2	0	0	13	54	31	4.18	.648
8	98	2	0	3	22	52	21	3.93	.750
9	98	2	0	1	26	58	13	3.85	.648
10	98	2	0	0	20	48	30	4.10	.711
11	97	3	1	5	38	44	9	3.57	.776
12	98	2	1	8	46	32	11	3.45	.839
13	97	3	0	5	46	39	7	3.49	.709
14	98	2	1	9	31	48	9	3.56	.826
15	98	2	0	5	24	50	19	3.85	.791
16	98	2	0	5	26	51	16	3.80	.773
17	98	2	6	11	28	37	16	3.47	1.086
18	98	2	0	7	47	33	11	3.49	.790
19	98	2	1	9	45	35	8	3.41	.810
20	98	2	0	1	17	54	26	4.07	.692
21	98	2	0	4	30	53	11	3.72	.715
22	98	2	0	14	35	39	10	3.46	.864
23	98	2	4	29	35	28	2	2.95	.912
24	98	2	3	24	37	28	6	3.10	.947
25	98	2	0	8	36	39	15	3.62	.844
26	98	2	0	0	5	41	52	4.48	.596

Survey Question	# of Valid Responses	# of Blank Responses	Frequencies					Mean	Std. Deviation
			1	2	3	4	5		
27	98	2	2	4	24	49	19	3.81	.869
28	96	4	0	6	35	44	11	3.62	.771
29	98	2	0	4	24	52	18	3.86	.760
30	97	3	0	3	26	50	18	3.86	.750
31	97	3	0	2	34	40	21	3.82	.791
32	98	2	0	0	13	49	36	4.23	.670
33	97	3	2	15	30	33	17	3.49	1.022
34	97	3	0	0	20	46	31	4.11	.720
35	98	2	0	10	35	40	13	3.57	.849
36	94	6	2	8	41	38	5	3.38	.805
37	98	2	0	0	12	56	30	4.18	.632
38	98	2	0	1	12	56	29	4.15	.664
39	98	2	0	0	20	50	28	4.08	.699
40	98	2	0	0	6	35	57	4.52	.613
41	95	5	0	0	6	43	46	4.42	.612
42	95	5	0	0	2	36	57	4.58	.538
43	95	5	0	0	13	56	26	4.14	.629
44	94	6	0	1	14	53	26	4.11	.679

Figure A3. Teacher Survey Descriptives (Middle School)

Survey Question	# of Valid Responses	# of Blank Responses	Frequencies					Mean	Std. Deviation
			1	2	3	4	5		
1	85	3	1	8	29	37	10	3.55	.866
2	86	2	0	1	23	39	23	3.98	.767
3	86	2	1	4	24	44	13	3.74	.814
4	84	4	1	1	27	34	21	3.87	.847
5	86	2	1	3	10	40	32	4.15	.847
6	85	3	1	1	12	31	40	4.27	.836
7	85	3	2	0	7	47	29	4.19	.779
8	85	3	0	8	24	29	24	3.81	.957
9	85	3	0	2	19	39	25	4.02	.786
10	85	3	0	0	9	43	33	4.28	.648
11	85	3	0	3	26	44	12	3.76	.734
12	85	3	0	5	24	42	14	3.76	.797
13	85	3	1	7	22	46	9	3.65	.827
14	85	3	1	3	19	51	11	3.80	.753
15	85	3	0	2	15	42	26	4.08	.759
16	85	3	1	7	24	30	23	3.79	.977
17	84	4	6	11	22	34	11	3.39	1.098
18	85	3	0	7	23	39	16	3.75	.858
19	85	3	0	8	26	42	9	3.61	.803
20	85	3	0	2	11	43	29	4.16	.738
21	84	4	0	7	15	38	24	3.94	.896
22	83	5	0	5	25	33	20	3.82	.872
23	83	5	5	12	36	23	7	3.18	.990
24	83	5	2	14	29	30	8	3.34	.954
25	84	4	1	2	14	35	32	4.13	.861
26	84	4	0	1	3	33	47	4.50	.631

Survey Question	# of Valid Responses	# of Blank Responses	Frequencies					Mean	Std. Deviation
			1	2	3	4	5		
27	84	4	3	5	24	32	20	3.73	1.010
28	84	4	8	3	29	34	10	3.42	1.067
29	84	4	1	5	12	34	32	4.08	.934
30	84	4	0	2	16	36	30	4.12	.798
31	82	6	0	4	16	47	15	3.89	.754
32	84	4	0	2	5	38	39	4.36	.705
33	82	6	1	6	18	38	19	3.83	.914
34	84	4	0	5	14	39	26	4.02	.850
35	83	5	1	5	21	36	20	3.83	.908
36	81	7	1	4	25	32	19	3.79	.904
37	84	4	0	2	8	32	42	4.36	.755
38	84	4	1	0	8	37	38	4.32	.747
39	84	4	1	2	12	45	24	4.06	.797
40	84	4	0	1	2	32	49	4.54	.610
41	82	6	0	1	6	36	39	4.38	.678
42	82	6	0	1	0	29	52	4.61	.561
43	82	6	0	2	6	42	32	4.27	.704
44	82	6	1	3	4	39	35	4.27	.817

Figure A4. Teacher Survey Descriptives (High School)

Survey Question	# of Valid Responses	# of Blank Responses	Frequencies					Mean	Std. Deviation
			1	2	3	4	5		
1	115	9	3	17	48	31	16	3.35	.983
2	115	9	2	11	41	38	23	3.60	.972
3	115	9	1	10	37	42	25	3.70	.938
4	114	10	1	11	38	38	26	3.68	.964
5	114	10	0	4	24	41	45	4.11	.860
6	115	9	0	2	18	41	54	4.28	.790
7	115	9	0	2	9	62	42	4.25	.673
8	115	9	0	4	37	41	33	3.90	.862
9	115	9	0	2	33	51	29	3.93	.780
10	115	9	0	4	10	63	38	4.17	.729
11	115	9	0	5	34	55	21	3.80	.786
12	115	9	0	6	37	45	27	3.81	.857
13	114	10	2	6	35	45	26	3.76	.925
14	115	9	0	5	39	51	20	3.75	.793
15	115	9	0	4	27	55	29	3.95	.793
16	115	9	1	7	40	43	24	3.71	.896
17	115	9	12	21	32	37	13	3.16	1.167
18	115	9	1	5	44	40	25	3.72	.884
19	115	9	3	9	47	39	17	3.50	.931
20	115	9	0	1	17	54	43	4.21	.719
21	114	10	0	1	36	53	24	3.88	.742
22	114	10	1	10	31	49	23	3.73	.915
23	113	11	6	22	46	29	10	3.13	1.004
24	114	10	4	18	44	32	16	3.33	1.019
25	113	11	1	8	17	58	29	3.94	.879
26	114	10	0	0	13	49	52	4.34	.676

Survey Question	# of Valid Responses	# of Blank Responses	Frequencies					Mean	Std. Deviation
			1	2	3	4	5		
27	114	10	2	27	33	35	17	3.33	1.053
28	113	11	6	21	46	29	11	3.16	1.014
29	114	10	0	14	22	44	34	3.86	.986
30	114	10	0	6	38	48	22	3.75	.826
31	113	11	1	12	24	47	29	3.81	.972
32	114	10	0	1	12	50	51	4.32	.698
33	114	10	3	11	28	44	28	3.73	1.024
34	114	10	0	2	20	52	40	4.14	.763
35	114	10	1	8	25	55	25	3.83	.882
36	109	15	7	14	39	34	15	3.33	1.072
37	114	10	0	3	23	54	34	4.04	.780
38	114	10	0	5	26	46	37	4.01	.857
39	114	10	0	1	26	48	39	4.10	.775
40	115	9	0	0	6	45	64	4.50	.598
41	106	18	0	0	8	53	45	4.35	.618
42	107	17	0	0	6	41	60	4.50	.605
43	106	18	0	2	25	48	31	4.02	.780
44	106	18	0	3	24	46	33	4.03	.810