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Differences in Reading Teaching Strategies in High and Low Performing Secondary Schools

Beverly M. Klecker

Mary Anne Pollock

Morehead State University

Morehead, Kentucky

b.klecker@morehead-st.edu

Abstract

Kentucky's school reform accountability goal of each school reaching an academic measure of "proficiency" by 2014 illuminated the findings in recent statewide reading test scores: 44.30% of middle and 71.25% of high school students scored below "proficient." The research question for this exploratory, descriptive study was, "Do teaching practices in secondary schools with high reading achievement scores differ from those in schools with low reading achievement scores?" High school reading scores were first stratified by region. Regions seven and eight— western and eastern Kentucky—were selected for the study. Next, the reading scores were sorted by score from highest to lowest within the two regions. Five secondary schools were randomly selected from each of the resulting four strata (N=20). Feeder schools for the 20 secondary schools were identified and added (N=19) for a total sample of 39 schools. 70.5% of the 8th-10th grade teachers within these schools completed surveys, developed by using research-based reading strategies. A random sample of five teachers within each school was selected to be observed then interviewed. Finally, a content analysis of each school's Comprehensive School Improvement Plan identified strategies planned to improve reading. Quantitative and qualitative data analyses were used to identify differences between instructional strategies in high and low achieving schools.

Differences in Reading Teaching Strategies in High and Low Performing Secondary Schools

Reading is assessed by the *Kentucky Core Content Tests* (KCCT) at the middle school level in the 8th grade and at the high school level in the 10th grade. Framing the following data with Kentucky's goal of getting to proficiency by 2014 illuminated the problem. Statewide, 44.30% of the middle school students' 2002 KCCT Reading scores were below "Proficient." Alarmingly, this jumped to 71.25% of high school students' Reading score falling below "Proficient." (Kentucky Department of Education). Since teachers certified to teach in middle schools are required to complete at least one course in reading pedagogy and high school teachers are not required to complete any courses in reading pedagogy, high school teachers may not be using research-based reading strategies in their classrooms. The research questions guiding this study were:

1.   Do teaching practices in schools with high reading achievement scores differ from teaching practices in schools with low reading achievement scores?

2.   Are there differences in the inclusion of literacy goals in the Comprehensive School Improvement Plan between schools with high reading achievement scores and schools with low reading achievement scores?

Methods

Sampling Plan

A stratified random sampling plan was used to identify school districts in two geographic areas of the state: (1) Western Kentucky, defined as the school districts in Kentucky's Regional Service Centers 1 and 2; and (2) Eastern Kentucky, defined as the school districts in Kentucky's Regional Service Centers 7 and 8.

The 2002 10th grade Kentucky Core Content Reading scores were stratified first by Western and Eastern Kentucky. The scores were then sorted from highest to lowest within each of the two geographical regions. The 25 highest scoring schools and 25 lowest scoring schools within each region served as the target sample group. A random sample of five (5) high schools was selected from each of the four strata. The 20 high schools, with all of the schools identified as their feeder schools constituted the randomly selected sample for this study. A feeder school was identified as any school, which sends students on to a high school; this includes middle schools as well as elementary schools, which contain grades 7 and 8. Three of the 20 high schools are K-12 schools so have no feeder schools; one high school has three feeder schools, and the remaining 16 schools have middle schools which feed into them. A total of 39 schools (20 high schools, 16 middle schools, and three K-8) participated in the study. Only classrooms in grades 8, 9, and 10, within the high schools and feeder schools were included in the study. After the 20 high schools were selected through the sampling technique described above, the *Kentucky School Directory* was used to identify their feeder schools.

Procedure

After the high schools and their feeder schools had been identified, letters describing the study and asking for permission to participate in the study were sent to district superintendents. All of the superintendents granted permission for the principals of identified schools to be contacted. Principals were contacted to obtain permission to participate; however, four of the high school principals chose not to participate in the study. To replace these schools, the Principal Research used the original stratified sampling frame and the same random number to randomly select replacement schools. Superintendents of the replacement schools were contacted as described above, and then principals were contacted; all agreed to participate in the study.

The researchers traveled to the 39 schools to administer the survey to teachers during faculty meetings. The researchers described the study and invited teachers of the 8th, 9th, and 10th grade students to participate through surveys, classroom observations, and interviews. A signed consent form to participate in the study was obtained from teachers; only teaches who signed the consent form participated in the study.

Measurement Instruments.

The validity of the instruments used in this study was established through review by two professors who are experts in the field of reading to verify that they are based on current research. Both experts, who were not members of the research team, agreed that the instruments were indeed based on current research.

Training of raters.

Members of the research team from Morehead State University, Pikeville College, and Murray State University met in Elizabethtown, Kentucky for two days in July, 2003 to be trained in classroom observation, interview procedures, and analysis if the Comprehensive School Improvement Plan (CSIP). They used the *Teacher Observation in Content Area Lesson Instrument* as they watched video clips of classroom scenarios to assure that they would all be responding in like manner during classroom observations. This training resulted in an inter-rater reliability of for the *Teacher Observation in Content Area Lesson Instrument* r_{xx}=.83.

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Data Collection, Data Analysis, and Results

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This section of the report is organized in four sub-sections around the four instruments: (1) Teacher Survey *My Practices in Content Area Lessons*, (2) *Teacher Observation in Content Area Lessons*, (3) *Teacher Interview*, and (4) *The Comprehensive School Improvement Plan*

(CSIP) (see Appendix). The presentation within each of the four sections includes descriptions of the data collection, data analysis, and results.

Teacher Survey

Data collection with teacher survey.

In the spring of 2003, the teacher survey was distributed to all eighth through tenth grade teachers in the 39 schools in the sample. Members of the research team visited the schools and collected the data at a regularly scheduled teachers' meeting. Six hundred and fifty-six forms were returned. Of these 656 forms, 180 were blank, resulting in 476 completed survey forms. Four hundred and fifty forms were usable, that is, the consent form for the teacher was present and the data were complete. (No data were received from one middle school, thus the N for the school level analyses is 38.) Table 1 presents the number of responding teachers by content area within these 38 schools. Table 2 presents the grade levels taught by teachers responding to the surveys. From the data in these two tables, it is clear that the study was truly across content areas and included teachers in grades eight through ten.

Table 1. *Content Areas Taught by Teachers Responding to the Teacher Survey*

Content Area(s) Taught	N
Foreign Language	13
Science	45
Arts & Humanities	16
Mathematics	73
Social Studies	63
English/Language Arts	80
Health/Physical Education	16
Special Education	26
Agriculture	6
Business Education	7
Family/Consumer Science	10
Practical Living	5
Technical Education	11
Reading	8
Music	9
Welding	1
Media Specialist	1
Not Identified	60
Total	450

Table 2. *Grade Level(s) Taught by Teachers Responding to the Teacher Survey*

Grade Level(s) Taught	N
Eighth Grade	115
Eighth and Ninth Grade	2
Eighth, Ninth, and Tenth Grade	15
Ninth Grade	41
Ninth and Tenth Grade	177
Tenth Grade	60
Not Identified	40
Total	450

Data analysis for teacher survey.

The responses of 450 teachers to Teacher Survey were aggregated by school--the unit of analysis for this study. The number of teacher responses within schools ranged from two to 45. The mode was seven per school. the Teacher Survey data were entered into an Excel spreadsheet and uploaded into Statistical Analysis Software (SAS) for analysis on a PC. Cronbach's alpha reliability was calculated for the Teacher Survey using the data from the study. The internal consistency reliability was 0.85. Means and standard deviations were then calculated from the data collected five-point Likert-type item rating scales for the 20 items of the survey. Independent sample *t*-tests were used to test for statistically significant ($p<.05$) differences between the measures for the High Scoring High Schools and Low Scoring Schools (as defined by scores on the 2002 KCCT Reading tests).

Results of teacher survey analysis.

The data for the Teacher Survey are presented in Table 3. The Likert-type, five-point, item rating scale ranged from 1="Not at all," 3="To some extent," to 5="A great deal." The differences in the means in Table 3 are all of degree rather than of kind; that is, all of the mean ratings are above the 3.00 "To some extent" rating. The mean ratings for the High Scoring Schools (N=22) in Table 3 indicate that the highest rated item by teachers within these schools was Item 12, "Students increase their knowledge by responding to questions either orally or in writing" (*M*=4.58, *SD*=0.31. The item with the highest mean rating in the Low Scoring Schools (N=16) was Item 8, "I give students a specific task to accomplish during the lesson" (*M*=4.74, *SD*=0.28).

Table 3.   Responses to Teacher Survey Items by High Scoring and Low Scoring Schools

Teacher Survey Item	High Scoring Schools N=22		Low Scoring Schools N=16		Test for Statistically Significant Differences	
	Mean	SD	Mean	SD	t value	p value
1. I alter the list of vocabulary words provided by the textbook.	3.39	0.75	3.05	0.50	1.519	p=0.1147
2. I take time to develop vocabulary at the beginning of the lesson.	3.79	0.50	3.90	0.48	-0.744	p=0.4578
3. The vocabulary strategies I use actively involve students.	3.83	0.59	3.84	0.41	-0.068	p=0.9459
4. I think about the degree and accuracy of prior knowledge my students have before planning the lesson.	4.24	0.50	4.17	0.49	0.389	p=0.6993
5. I choose a pre-lesson strategy based on the students' prior knowledge.	3.73	0.43	3.66	0.49	0.418	p=0.6786
6. I involve students in some type of pre-lesson strategy.	3.58	0.53	3.61	0.57	-0.188	p=0.8520
7. I establish a purpose or motivation for learning before students are asked to read/learn.	4.20	0.50	4.17	0.40	0.231	p=0.8121
8. I give students a specific task to accomplish during the lesson.	4.51	0.50	4.74	0.28	-1.816	p=0.0782
9. I provide students with a strategy to keep them actively involved during the lesson.	4.26	0.40	4.30	0.37	-0.378	p=0.7075
10. I loop discussion back to pre-lesson activities.	4.27	0.49	4.12	0.50	0.894	p=0.3770
11. I encourage students to increase their knowledge by sharing.	4.26	0.42	4.09	0.48	1.126	p=0.2677
12. Students increase their knowledge by responding to questions either orally or in writing.	4.58	0.31	4.59	0.37	-0.172	p=0.8643
13. Students increase their knowledge by consulting texts or other sources.	4.13	0.37	4.14	0.43	-0.108	p=0.9148
14. I provide the opportunity for students to reflect on their learning.	3.90	0.64	3.97	0.38	-0.384	p=0.7036
15. I provide the opportunity for students to reflect on the effectiveness of any strategies they used in the lesson.	3.52	0.66	3.38	0.50	0.720	p=0.4761
16. I involve students in writing at some point during the lesson.	4.08	0.57	3.87	0.40	1.234	p=0.2251
17 I use grouping (pairs to small groups) successfully to engage students in learning.	4.01	0.35	3.59	0.51	2.973	p=**0.0052***
18. I engage students in using context clues for the vocabulary words at some point during the lesson.	3.76	0.50	3.49	0.48	0.828	p=0.4130
19. I engage students in using context clues to guide their reading.	3.78	0.51	3.59	0.65	1.054	p=0.2991
20. I read aloud to students from a variety of sources.	3.72	0.57	3.72	0.66	-0.022	p=0.9830

Note: *Statistically significant p<.05

The item with the lowest mean rating by the High Scoring Schools was Item 1, "I alter the list of vocabulary words provided by the textbook" (*M*=3.39, *SD*=0.75). This was also the item with the lowest mean rating by the Low Scoring Schools (*M*=3.05, *SD*=0.50). This finding was indicative of the findings from the data presented in Table 3. There were not large differences in the mean ratings of the survey items by school achievement level.

Statistically significant difference (p<.05).

There was a statistically significant difference (*p*<.05) between the ratings of school achievement level groups on only one item, Item 17: "I use grouping (pairs to small groups) successfully to engage students in learning." On this item, the mean rating for the High Scoring Schools (*M*=4.01, *SD*=0.35) was statistically significantly higher than the mean rating for the Low Scoring Schools (*M*=3.59, *SD*=0.51) [*t* (36)=2.793, *p*<.05].

Teacher Observation

Data collection with teacher observations.

A random sample of five teachers was selected from each of the schools from which Teacher Survey data were obtained. Members of the research team contacted the teachers and arranged for (1) an observation of the teacher's classroom, and (2) a follow-up interview after the observation. Structured forms were used for both the observation and the interview. The teacher observations and interviews were conducted from fall 2003 through spring 2004.

Despite the research design, real-life events including school scheduling, faculty attrition, and weather realities limited the number of observations that the team was able to complete.

- In nine of the 38 schools, five teacher observations were completed (N=45).

- In six of the 38 schools, four teacher observations were completed per school (N=24).

- In seven of the 38 schools, three teacher observations were completed per school (N=21).

- In ten of the 38 schools, two observations were completed per school (N=20).

- In six of the 38 schools, only one teacher observation was completed in each school (N=6). Thus, from the target sample of five teachers in each of 38 schools (N=190), 116 teacher observations in 38 schools were completed (61% of the target sample).

Table 4 presents the number of observed teachers by content area within these 38 schools. Table 5 presents the grade levels taught by observed teachers. From the data in these two tables, it is clear that the study was truly cross content areas and included teachers in grades eight through ten.

Table 4. *Content Areas Taught by Teachers Observed in Their Classrooms*

Content Area(s) Taught	N
Foreign Language	4
Science	17
Arts & Humanities	3
Mathematics	21
Social Studies	21
English/Language Arts	26
Health/Physical Education	5
Special Education	2
Agriculture	2
Business Education	1
Family/Consumer Science	3
Practical Living	1
Technical Education	1
Reading	4
Music	1
Not Identified	4
Total	116

Table 5.   *Grade Level(s) Taught by Teachers Observed in Their Classrooms*

Grade Level(s) Taught	*N*
Eighth Grade	50
Ninth Grade	20
Ninth and Tenth Grade	20
Tenth Grade	18
Not Identified	8
Total	116

Data analysis for teacher observations.

The observation instrument, Teacher *Observation in Content Area Lesson* (see

Appendix), contained 20 items. Each item had a three point rating scale. This rating scale was

categorical, 1="No, I did not observe;" 2="Not sure;" and, 3="Yes, I did observe." Space was

provided for the observer to record "Comments." The data from the 116 teacher observations

were entered into an Excel spreadsheet. They were then aggregated by school by using the modal

observation (most frequent value) within each school. The "Not sure" category was selected very

infrequently by the observers. Because this category added no meaning to the analysis, it was

dropped before proceeding with the data analysis. The categorical school-level data were then

uploaded into SAS in a PC and were analyzed using frequencies and percentages. Chi-square

tests were used to compare the "No, I did not observe" and "Yes, I did observe" categorical

frequencies and percentages with the High Scoring Schools and Low Scoring Schools categories.

Alpha level was set *a priori* at .05.

Results of teacher observation analysis.

Table 6 presents the 20 items of the teacher observation instrument with the total

percentage observed overall, the percentage observed in the High Scoring Schools, the

percentage observed in the Low Scoring Schools, the computed Chi-square statistic, and the *p*

value. Items 6, 7, and 10 were the most frequently observed (87%) in the total sample of schools. The least observed practice in the total sample of schools was Item 17, "Teacher engages students in using context clues to guide their reading." This was observed in only 28% of the schools in the overall sample.

Descriptive differences within the High Scoring Schools.

The most frequently observed strategies in the High Scoring Schools were Items 6, "Teacher gives students a specific task to accomplish during the lesson" and Item 7, "Teacher provides students with a strategy/activity to keep them actively involved during the lesson;" each was observed in 90% of the schools. The least frequently observed strategies in the High Scoring Schools, each observed in 19% of the schools, were Item 13, "Teacher provided the opportunity for students to reflect on the effectiveness of any strategies they used in the lesson" and Item 17, "Teacher engages students in using context clues to guide their reading."

Descriptive differences within the Low Scoring Schools.

The most frequently observed strategies in the Low Scoring Schools (observed in 88% of the schools) were Item 5, "Teacher establishes a purpose or motivation for learning before students are asked to read/learn;" Item 10, "Students increase their knowledge by responding to questions either orally or in writing;" and Item 14, "Teacher involves students in writing at some point during the lesson." The least frequently observed practice (35%) in the Low Scoring Schools was Item 15, "Teacher uses group (pairs to small groups) successfully to engage students in learning."

Statistically significant differences (p<.05).

In two of the observed items, there were statistically significant ($p<.05$) differences between the observed frequencies of teacher practices in the High Scoring Schools and the Low

Scoring Schools. Item 1, "Teacher takes time to develop vocabulary at the beginning of the lesson," was observed more frequently (76%) in the Low Scoring Schools than in the High Scoring Schools (43%) [X^2(1)=4.35,p<.05]. Additionally, Item 16, "Teacher engages students in using context clues for the vocabulary words at some point during the lesson" was observed statistically significantly (p<.05) more frequently in Low Scoring Schools (65%) than in High Scoring Schools (24%) [X^2(1)=6.45, p<.05].

Table 6.   *Percentages of Teacher Strategies Observed in High Scoring and Low Scoring Schools*

Observation Instrument Item	*% Obsvd All N=38*	*%Obsvd H Score N=21*	*%Obsrd L Score N=17*	*Chi-Square*	*p value*
1. Teacher takes time to develop vocabulary at the beginning of the lesson.	58%	43%	76%	4.35	*p=0.0369**
2. Teacher uses vocabulary development strategies/activities that actively involve students.	45%	33%	59%	2.47	*p=0.1161*
3. Teacher chooses a pre-reading activity based on the students' knowledge.	50%	38%	65%	2.66	*p=0.1028*
4. Teacher involves students in some type of pre-lesson strategy.	61%	47%	76%	3.27	*p=0.0704*
5. Teacher establishes a purpose or motivation for learning before students are asked to read/learn.	82%	76%	88%	0.91	*p=0.3409*
6. Teacher gives students a specific task to accomplish during the lesson.	87%	90%	82%	0.54	*p=0.4614*
7. Teacher provides students with a strategy/activity to keep them actively involved during the lesson.	87%	90%	82%	0.54	*p=0.4614*
8 Teacher loops discussion back to pre-lesson activities.	55%	62%	47%	0.84	*p=0.3601*
9. Teacher encourages students to increase their knowledge by sharing.	74%	67%	82%	1.19	*p=0.2749*
10. Students increase their knowledge by responding to questions either orally or in writing.	87%	86%	88%	0.05	*p=0.8192*
11. Students increase their knowledge by consulting texts or other sources.	74%	67%	82%	1.19	*p=0.2749*
12. Teacher provided the opportunity for students to reflect on their learning.	50%	38%	65%	2.66	*p=0.1028*
13. Teacher provided the opportunity for students to reflect on the effectiveness of any strategies they used in the lesson.	32%	19%	47%	3.41	*p=0.0647*
14. Teacher involves students in writing at some point during the lesson.	82%	76%	88%	0.90	*p=0.3409*
15. Teacher uses group (pairs to small groups) successfully to engage students in learning.	37%	38%	35%	0.03	*p=0.8587*
16. Teacher engages students in using context clues for the vocabulary words at some point during the lesson.	42%	24%	65%	6.45	*p=0.0111**
17. Teacher engages students in using context clues to guide their reading.	28%	19%	41%	2.23	*p=0.1348*
18. Teacher reads aloud to students.	55%	48%	65%	1.11	*p=0.2922*
19. Teacher asks students to read aloud.	50%	48%	53%	0.10	*p=0.7475*
20. Teacher uses technology during the lesson.	66%	67%	65%	0.02	*p=0.8992*

*Note: *p* values in bold significant .05

Teacher Interviews

   Data collection for teacher interviews.

Following the teacher observation, the observer interviewed the teacher using the

structured *Teacher Interview* form (see Appendix). One hundred and sixteen teachers were

interviewed, 59 taught in the High Scoring Schools and 57 taught in the Low Scoring Schools.

   Qualitative data analysis of teacher interviews.

The unit of analysis for the qualitative data was the teacher as it was not realistic to

aggregate the statements of individual teachers to the school level. The interview data were

entered into a database in Microsoft Word format. Statements were coded by item number and

by teacher ID number. The statements were then sorted by High Scoring Schools and Low

Scoring Schools for each of the 25 items of the *Teacher Interview*. The statements were then

coded by emerging categories within the items. Frequencies and percentages were calculated for

the emergent categories within each question. Differences were noted by comparing the

percentage of teachers making the statement within the High Scoring Schools and the Low

Scoring Schools. When examining Table 7, it is important to note that a teacher's single

statement often contained more than one category mentioned. Thus, the Ns cannot be easily

interpreted. They are presented to allow the calculation of the frequencies and percentages of the

mention of the categories. The highest percentages for each question for both the High Scoring

and the Low Scoring Schools have been shaded with a gray-tone highlight.

Table 7 (A).   Teacher Interview Results by High and Low Scoring Schools (Qualitative Data Analysis)

Question	High Scoring Schools		Low Scoring Schools	
	N	%	N	%
1. Where did you learn the classroom practices you used today?				
• **College or university**	**36**	**31%**	**30**	**31%**
• **Professional development**	**20**	**17%**	**18**	**19%**
• **Experience**	**14**	**12%**	**18**	**19%**
• **Mentors**	**14**	**12%**	**10**	**11%**
• **Trial and Error**	**11**	**9%**	**4**	**4%**
• **Professional literature**	**8**	**7%**	**5**	**5%**
• **Professional organizations/conferences**	**6**	**5%**	**0**	**0%**
• **Observations**	**4**	**3%**	**2**	**2%**
• **Internet**	**1**	**1%**	**4**	**4%**
• **Reflection**	**1**	**1%**	**3**	**3%**
• **Other**	**3**	**2%**	**1**	**1%**
Totals for Question 1	**118**	**100%**	**95**	**100%**
2. How does this lesson compare to a typical day?				
• **Consistent with a typical day**	**33**	**51%**	**35**	**67%**
• **Not typical**	**12**	**19%**	**8**	**15%**
• **Not responsive to question**	**19**	**30%**	**9**	**17%**
Totals for Question 2	**64**	**100%**	**52**	**100%**
3. How does this lesson relate to a previous lesson? Describe				
• **Sequence implied**	**56**	**88%**	**42**	**81%**
• **No sequence implied**	**5**	**8%**	**7**	**13%**
• **Starting a new unit**	**2**	**3%**	**3**	**6%**
• **Not responsive to question**	**1**	**1%**	**0**	**0%**
Totals for Question 3	**64**	**100%**	**52**	**100%**

Table 7. (B) Teacher Interview Results by High and Low Scoring Schools (Qualitative Data Analysis)

Question	High Scoring Schools		Low Scoring Schools	
	N	%	N	%
4. Tell me about some specific strategies you use in your classroom.				
• **Mentioned instructional practices that are not really strategies**	33	51%	33	65%
• **Specific strategies stated**	21	32%	11	21%
• **Hinted at strategies but not stated**	8	12%	5	10%
• **Classroom instruction/management**	1	1%	2	4%
• **Doesn't use/could not name**	2	3%	0	0%
• **Not responsive to question**	1	1%	0	0%
Totals for Question 4	66	100%	51	100%
5. Which strategies do you observe your students using independently?				
• **Identified instructional activities that are not strategies**	44	64%	32	68%
• **Identified strategies students use independently**	12	17%	10	21%
• **Indicated that students don't use strategies independently**	10	15%	2	4%
• **Not responsive to question**	3	4%	3	6%
Totals for Question 5	69	100%	47	100%
6. How do you introduce a new lesson to your students?				
• **The fact that teacher accounts for prior knowledge is directly stated.**	17	16%	10	13%
• **Teacher accounts for prior knowledge.**	4	4%	10	13%
• **Preview/overview of lesson given**	9	8%	7	8%
• **Specific strategies are stated.**	7	7%	1	1%
• **Relate to real life/personal experiences**	10	9%	8	10%
• **Teacher uses hook/anticipatory set/prompt/bell ring or other focusing activities.**	16	15%	2	3%
• **Vocabulary is addressed**	11	10%	10	13%
• **Essentials/objectives/other questions used**	7	7%	8	10%
• **Discussion**	7	7%	3	4%
• **Prewriting in journals/other prewriting**	4	4%	1	2%
• **Handouts/worksheets/study guides**	2	2%	1	2%
• **Teacher tells students why they need to learn/how it will be helpful to know**	1	1%	3	4%
• **Skills are developed**	2	2%	1	2%

Table 7. (C) Teacher Interview Results by High and Low Scoring Schools (Qualitative Data Analysis)

Question	High Scoring Schools		Low Scoring Schools	
6. How do you introduce a new lesson to your students? (Continued)	**N**	**%**	**N**	**%**
• Read/discuss/answer	2	2%	4	5%
• Review previous lesson	2	2%	4	5%
• Lecture	0	0%	2	3%
• Not responsive to question	4	4%	3	4%
Totals for Question 6	105	100%	74	100%
7. What instructional materials do you use?				
• Textbooks	47	22%	38	24%
• Newspapers/journals/articles/magazines/flyers/brochures	40	18%	26	17%
• Internet/other technology	37	17%	26	17%
• Resource Material: History Alive, library, supplemental books	24	11%	9	6%
• Literature: plays, poems, novels, picture books	20	9%	20	13%
• Teaching tools, dice, maps, music, dictionary	19	9%	10	6%
• Books on tape, films/videos, TV	12	5%	15	9%
• Handouts, workbooks, notebooks, worksheets	12	5%	12	7%
• Limited/no use of textbooks	9	4%	2	1%
Totals for Question 7	220	100%	158	100%
8. Tell me how you integrate reading into your content area. Give examples.				
By having my students read:				
• Periodicals, magazines, newspapers, journals, brochures	30	28%	19	25%
• Narrative texts: novels, plays, poems, trade books	23	22%	16	21%
• The assignment/chapter	18	17%	20	28%
• Technology: Internet, software, PowerPoint, Web Quests	10	9%	5	7%
• Accelerated Reader books	3	3%	0	0%
• Procedural text: directions, labs, instructions	4	4%	7	9%
• Expository material other than the textbook	4	4%	6	8%
• Mentioned lesson organization, and instructional activities but not materials.	8	8%	1	1%
• Everything is reading/English so it is in everything	5	5%	1	1%
Totals for Question 8	105	100%	75	100%

Table 7. (D) Teacher Interview Results by High and Low Scoring Schools (Qualitative Data Analysis)

Question	High Scoring Schools		Low Scoring Schools	
9. Are your lessons structured to incorporate some reading each day? For example, reading lab, instructions, directions, etc. Give examples.	**N**	**%**	**N**	**%**
• **Yes**	**55**	**85%**	**45**	**80%**
• **No**	**6**	**9%**	**8**	**14%**
• **Most of the time but not everyday**	**4**	**6%**	**1**	**2%**
• **Not responsive to question**	**0**	**0%**	**2**	**4%**
Totals for Question 9	**65**	**100%**	**56**	**100%**
10. Do you read aloud to your students?				
• **Yes**	**56**	**86%**	**49**	**90%**
• **Sometimes**	**3**	**5%**	**3**	**5%**
• **No**	**6**	**9%**	**3**	**5%**
Totals for Question 10	**65**	**100%**	**55**	**100%**
11. What do you read to them?				
• **Textbook**	**29**	**26%**	**29**	**32%**
• **Novels/other literature**	**25**	**23%**	**20**	**23%**
• **Articles/newspapers/maps**	**20**	**18%**	**15**	**16%**
• **Instructional procedures (directions, etc.)**	**19**	**17%**	**16**	**18%**
• **Expository texts other than textbook**	**11**	**10%**	**5**	**5%**
• **Technology/e-mail**	**0**	**0%**	**2**	**2%**
• **Students' writing**	**2**	**2%**	**0**	**0%**
• **Teachers' writing**	**2**	**2%**	**1**	**1%**
• **Does not read to students**	**1**	**1%**	**1**	**1%**
• **Not responsive to question**	**1**	**1%**	**2**	**2%**
Totals for Question 11	**110**	**100%**	**91**	**100%**

Table 7. (E) Teacher Interview Results by High and Low Scoring Schools (Qualitative Data Analysis)

Question	High Scoring Schools		Low Scoring Schools	
12. Please describe the various ways you use this practice.				
• **To assure students comprehend**	24	41%	13	23%
• **To share new information/to inform**	10	17%	17	30%
• **To model**	10	17%	5	9%
• **To motivate**	4	6%	4	7%
• **To emphasize a point**	3	5%	2	4%
• **To entertain**	1	2%	3	5%
• **To support poor readers**	1	2%	5	9%
• **Not responsive to question**	6	10%	8	13%
Totals for Question 12	59	100%	57	100%
13. How do your students benefit from this practice?				
• **Helps them understand**	30	39%	22	47%
• **Skill related/builds skills**	13	17%	10	21%
• **Motivates/creates interest for pleasure**	10	14%	3	6%
• **For pleasure**	5	6%	3	6%
• **From my modeling**	7	9%	3	6%
• **Leads to better discussion**	6	8%	1	2%
• **Builds confidence/self concept**	0	0%	2	5%
• **NA because they don't read to students**	5	6%	2	5%
• **Not responsive to question.**	1	1%	1	2%
Totals for Question 13	77	100%	47	100%
14. Do your students read aloud during class?				
• **Yes**	57	89%	44	85%
• **No**	7	11%	8	15%
Totals for Question 14	64	100%	52	100%

Table 7. (F). Teacher Interview Results by High and Low Scoring Schools (Qualitative Data Analysis)

Question	High Scoring Schools		Low Scoring Schools	
	N	%	N	%
15. Please describe the various ways you use this practice.				
• **Response indicates that text is read aloud in a routine manner to cover material.**	16	23%	10	21%
• **Procedural texts/directions/problems/labs**	14	20%	8	18%
• **Students are given time to prepare prior to reading aloud.**	6	9%	5	10%
• **Students volunteer**	8	11%	4	8%
• **Teacher calls on students**	7	10%	2	4%
• **In small groups/pairs**	4	6%	6	13%
• **To assess reading ability**	1	1%	2	4%
• **As a support for poor readers.**	0	0%	3	6%
• **Reading is done in turn-taking/round robin**	4	6%	3	6%
• **Oral reading for skill development**	3	4%	0	0%
• **Not responsive to the question**	7	10%	5	10%
Totals for Question 15	70	100%	48	100%
16. How do your students benefit from this practice?				
• **They get the information/understand it better/comprehension**	30	41%	20	39%
• **Skill development, fluency, articulation.**	17	23%	10	20%
• **To keep on track/pay attention**	5	7%	2	4%
• **For pleasure/appreciation/interest in reading**	5	7%	2	4%
• **Builds confidence/self-esteem**	5	7%	8	15%
• **Helps them understand their writing/share their writing**	1	1%	1	2%
• **NA because they don't have their students read aloud**	5	7%	4	8%
• **Not responsive to the question.**	5	7%	4	8%
Totals for Question 16	73	100%	51	100%

Table 7. (G). Teacher Interview Results by High and Low Scoring Schools (Qualitative Data Analysis)

Question	High Scoring Schools		Low Scoring Schools	
17. Is time provided for your students to read for pleasure? Describe.				
• **Yes**	**33**	**57%**	**34**	**64%**
o SSR/DEAR Specific school reading time	(8)		(3)	
o Accelerated Reader	(4)		(5)	
o Can read for pleasure when work is finished	(6)		(9)	
o Time is provided, but specific structure is not provided	(15)		(16)	
• **No**	**25**	**43%**	**19**	**36%**
Totals for Question 17	**58**	**100%**	**53**	**100%**
18. What do you do while your students are reading for pleasure?				
• **Teacher reads**	**18**	**38%**	**10**	**27%**
• **NA because students not provided reading time.**	**12**	**26%**	**9**	**24%**
• **Teacher reads sometimes**	**6**	**13%**	**3**	**8%**
• **Teacher grades or performs other teaching tasks**	**7**	**15%**	**6**	**16%**
• **Teacher monitors students' reading**	**1**	**2%**	**5**	**14%**
• **Teacher works with individual students**	**2**	**4%**	**3**	**8%**
• **Not responsive to the question.**	**1**	**2%**	**1**	**3%**
Totals for Question 18	**47**	**100%**	**37**	**100%**
19. What are some things you read?				
• **Biographies/fiction**	**35**	**42%**	**23**	**36%**
• **Professional literature, journals, books**	**19**	**22%**	**20**	**32%**
• **Non-fiction**	**11**	**13%**	**4**	**6%**
• **Anything/everything/indication they are avid readers.**	**9**	**11%**	**7**	**11%**
• **Materials/novels that students would/could read**	**9**	**11%**	**6**	**9%**
• **Bible**	**0**	**0%**	**2**	**3%**
• **Do not read/no time to read**	**1**	**1%**	**2**	**3%**
Totals for Question 19	**84**	**100%**	**64**	**100%**

Table 7. (H). Teacher Interview Results by High and Low Scoring Schools (Qualitative Data Analysis)

20. How do you use technology in your classroom? For example, Internet, Power Point, Web Quests, VCR, calculators, digital cameras, e-mail.				
• **Internet**	**42**	**40%**	**31**	**38%**
• **Moderate use/three to five types of technology mentioned**	**23**	**22%**	**12**	**15%**
• **Little use/one to two types of technology mentioned**	**21**	**20%**	**22**	**27%**
• **High use/many types of technology mentioned**	**18**	**16%**	**12**	**15%**
• **Do not use**	**2**	**2%**	**3**	**4%**
• **Not responsive to question**	**0**	**0%**	**1**	**1%**
Totals for Question 20	**106**	**100%**	**81**	**100%**
21. How has the use of technology had an impact on your students' reading achievement?				
• **Exposure to greater world/information/experience**	**18**	**31%**	**11**	**20%**
• **Creates interest/motivation/holds attention**	**16**	**28%**	**18**	**32%**
• **Increased reading achievement**	**10**	**18%**	**2**	**4%**
• **Not much increase in reading achievement/don't know**	**6**	**10%**	**4**	**6%**
• **Skill development has increased**	**4**	**7%**	**9**	**16%**
• **It interferes with reading/library use**	**2**	**3%**	**6**	**11%**
• **Has helped, students are now reading as needed**	**2**	**3%**	**6**	**11%**
Totals for Question 21	**58**	**100%**	**56**	**100%**
22. Would you like to tell me anything else?				
• **Responses were not relevant to the study.**				
23. Observations noted in classroom: Time is provided for follow-up discussion--Describe.				
• **Yes**	**34**	**60%**	**30**	**57%**
o In-depth discussions	(8)		(7)	
o Limited discussions	(1)		(3)	
o Question and Answer session related to reading/assignments	(10)		(3)	
o Grouped/paired discussions among students	(1)		(1)	
• **No**	**23**	**40%**	**23**	**43%**
Totals for Question 23	**57**	**100%**	**53**	**100%**

Table 7. (I) Teacher Interview Results by High and Low Scoring Schools (Qualitative Data Analysis)

24. Observations noted in the classroom: Reading materials in classroom? List.				
• **Yes**	**52**	**96%**	**46**	**87%**
○ Supplemental texts/workbooks/dictionaries/encyclopedias	(44)		(41)	
○ Posters/Bulletin Boards	(30)		(22)	
○ Periodicals	(27)		(15)	
○ Tradebooks/poetry/novels/plays	(20)		(25)	
○ Jr. Great Books	(3)		(0)	
○ Accelerated Reader Books	(0)		(2)	
• **No**	**2**	**4%**	**7**	**13%**
Totals for Question 24	**54**	**100%**	**53**	**100%**
25. Observations noted in the classroom: Quality of these materials: High Average Poor				
• **High**	**15**	**26%**	**9**	**17%**
• **High Average**	**2**	**3%**	**3**	**5%**
• **Average**	**38**	**65%**	**31**	**57%**
• **Low Average**	**0**	**0%**	**1**	**2%**
• **Poor**	**2**	**3%**	**5**	**9%**
• **Don't know**	**0**	**0%**	**2**	**4%**
• **Non-existent, no reading materials**	**0**	**0%**	**1**	**2%**
• **Not responsive to question**	**2**	**3%**	**2**	**4%**
Totals for Question 25	**59**	**100%**	**54**	**100%**

Comprehensive School Improvement Plan (CSIP)

  Data collection and analysis for CSIP

   The Comprehensive School Improvement Plans (CSIP) were obtained from the schools in the study. The researchers used the *Comprehensive School Improvement Plan Instrument* (see Appendix) to conduct a content analysis of each school's CSIP. Qualitative data resulted from the content analysis. The data were entered into a Microsoft Word database, sorted by High Scoring and Low Scoring Schools, and then summarized by frequencies and percentages.

  Results for CSIP analysis.

   The results of the content analysis of the CSIP documents are presented in Table 8. Another version of this Table, complete with the listing of the statements in the CSIP documents can be found in the Appendix. The Comprehensive School Improvement Plans are designed to indicate how each school will address areas of weakness identified by test scores. The CSIPs analyzed in this study were written by school committees in response to the KCCT 2002 test scores. The researchers for this study reviewed only the literacy goals mentioned in the CSIP documents for 38 schools in the study. Thus, it might be expected that the schools with lower reading KCCT scores would have stronger strategies identified in the CSIP documents. An analysis of the data presented in Table 8 shows that this was not, in general, the case. Item 5, "Is there evidence of Professional Development to improve support for reading," 67% of the CSIPs for the high scoring schools had evidence, 79% of the low scoring schools had evidence. It seems logical that the low scoring schools would plan more professional development in reading.

Table 8.   *Comprehensive School Improvement Plan Content Analysis by School Reading Achievement Levels*

Comprehensive School Improvement Plan Item	*High Scoring Schools N=21*		*Low Scoring Schools N=14*	
	"No"	*"Yes"*	*"No"*	*"Yes"*
1. Evidence that all teachers use reading strategies across the curriculum.	67%	33%	71%	29%
2. Examples of strategies used to improve reading across content area identified.	57%	43%	64%	36%
3. Research-based instructional strategies are used.	52%	48%	62%	38%
4. Content area reading strategies are monitored in some way.	67%	33%	64%	36%
5. Is there evidence of Professional Development to improve support for reading?	33%	67%	21%	79%
6. Does the schedule provide time for independent reading?	81%	19%	71%	29%
7. Support materials are provided for reading instruction.	48%	52%	29%	71%
8 Intervention for students of low reading ability is included.	33%	67%	43%	57%

Summary of Results

Findings.

The two research questions that drove the study were:

1.   Do teaching practices in schools with high reading achievement scores differ from

teaching practices in schools with low reading achievement scores?

2.   Are there differences in the inclusion of literacy goals in the Comprehensive School

Improvement Plan between schools with high reading achievement scores and schools

with low reading achievement scores?

Question one. There were differences found in teaching practices in schools with high

reading achievement scores teaching practices in schools with low reading scores. Only one

statistically significant (*p*<.05) difference was found by the *Teacher Survey*. Item 17: "I use

grouping (pairs to small groups) successfully to engage students in learning." On this item, the

mean rating for the High Scoring Schools (*M*=4.01, *SD*=0.35) was statistically significantly

higher than the mean rating for the Low Scoring Schools (*M*=3.59, *SD*=0.51) [*t* (36)=2.793,

p<.05]. The means for both groups were above the scale midpoint of 3.00.

However, comparing this "self-report" survey data with the Teacher Observation data in Table 6, Item 15 should be noted for comparison. Grouping was observed in only 38% of the High Scoring Schools and 35% of the Low Scoring Schools. This can be accounted for by considering the frequency of the observations in the classroom. That is, the limitation of one day of observation per classroom.

Additionally, from the *Teacher Observation* section of the study, there were two statistically significant ($p<.05$) differences between the observed frequencies of teacher practices in the High Scoring Schools and the Low Scoring Schools. However, these differences were in an unexpected direction. On both items, the teaching practices were observed more often in the Low Scoring Schools. Item 1, "Teacher takes time to develop vocabulary at the beginning of the lesson," was observed more frequently (76%) in the Low Scoring Schools than in the High Scoring Schools (43%) [$X^2(1)=4.35, p<.05$]. Additionally, Item 16, "Teacher engages students in using context clues for the vocabulary words at some point during the lesson" was observed statistically significantly ($p<.05$) more frequently in Low Scoring Schools (65%) than in High Scoring Schools (24%) [$X^2(1)=6.45, p<.05$].

In general, in the *Teacher Interview* data (Table 7) the "flatness" of the data, that is, the lack of difference in measures between high achieving and low achieving schools was the most remarkable observation. In response to Question 4 (Table 7 B), "Tell me about some specific strategies you use in your classroom," 51% high scoring schools and 65% of low scoring schools had responses that were not descriptive of *strategies*. In most cases, they were descriptive of *best teaching practices*, for example, "hands-on activities," but did not fit the definition of reading strategies. However, teachers in 32% of high scoring schools and 21% of low scoring schools identified specific strategies that they used.

In the following question (Question 5, Table 7) "Which strategies do you observe your students using independently," 64% of high scoring schools and 68% of low scoring schools had responses that were not *strategies*. Teachers in 17% of the high scoring schools and 21% of the low scoring schools mentioned specific reading strategies. On Question 10, Table 7, "Do you read aloud to your students?" 91% of teachers in high scoring schools answered either "Yes" or "Sometimes": 95% of teachers in low scoring schools answered either "Yes" or "Sometimes." Responses to Question 11, "What do you read to them?" were varied. The most frequent response for both categories of schools was "Textbook," (26% and 32%).

Question two. There were few differences apparent in the *Comprehensive School Improvement Plans* of High Scoring and Low Scoring Schools (Table 8). The "Evidence that all teachers use reading strategies across the curriculum," was present in the CSIPs of only 33% or the High Scoring Schools and 29% of the Low Scoring Schools. "Examples of strategies used to improve reading across content area identified," in 43% of the High Scoring Schools and 36% of the Low Scoring Schools. The plans for monitoring the content area reading strategies was (slightly) more frequently mentioned in the Low Scoring Schools CSIPs (36%) than in the those of the High Scoring Schools (33%).

Professional development to improve support for reading instruction was higher in Low Scoring Schools, however, many of the CSIPs indicated that professional development was to be for English/Language Arts teachers rather than for all teachers in the schools. The Low Scoring Schools mentioned "Support materials are provided for reading instruction," more frequently (71%) than did the CSIPs of High Scoring Schools (52%). Sixty-seven percent of the High Scoring Schools planned to provide intervention for students of low reading ability while 57% of the Low Scoring Schools planned intervention for students of low reading ability. Low Scoring Schools may be focusing on increasing the reading ability of all of their students because their overall scores are so much lower.

Additional findings.

As the final report for this study was being written, the researchers decided to look at the individual "High Scoring" and "Low Scoring" (determined by the 2002 KCCT 10th Grade Reading scores) high school scores on the KCCT 2003 10th Grade Reading test. Table 9 presents the school code, the group category for the school (high/low), and the numerical change from the 2002 to the 2003 score.

Table 9.   *Change in KCCT 10th Grade Reading Scores by Schools Within Categories*

(N=20 High Schools)

School Code	Category Based on 2002 KCCT 10th Grade Reading Scores	Change from 2002 to 2003 KCCT 10th Grade Reading Scores
9290	High	-5.8305*
9590	High	3.2795
9790	High	-5.1651*
5330	High	12.0759
490	High	10.7705
5130	High	-5.2591*
3640	High	3.4339
3240	High	5.2107
3540	High	10.6661
90	High	13.0938
190	Low	12.2326
9090	Low	7.1087
9490	Low	28.9004
390	Low	7.7358
3440	Low	-3.8882**
5230	Low	9.5153
5030	Low	2.4338
3340	Low	5.8634
9390	Low	19.7156
3040	Low	13.3749

Note: * Schools in the High Scoring Group with a decrease from 2002 to 2003
**Schools in the Low Scoring Group with a decrease from 2002 to 2003

Table 9 is presented in this special section identified as "*Additional Findings*" as it may help to explain why there were not large differences in the use of strategies used or large differences in the

Comprehensive School Improvement Plans. The underlying assumption for choosing the sample for this study was that High Scoring and Low Scoring schools had "status" differences in the way they taught reading. On the whole, these differences were not apparent from the design. However, the school level data for this study could easily be re-coded and sorted by "change" values.

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