

Impact of Scheduling Configurations on State-Mandated Social Studies Test Scores

Kenneth E. Vogler¹ & Susan Schramm-Pate²

Abstract

This study compared the academic performance of seventh-grade students on a state-mandated social studies accountability test by scheduling configuration used, explored principals' perceptions regarding the impact scheduling configurations have on social studies instruction and student preparedness for the next grade level in social studies, and examined the barriers affecting time allocated for social studies. Results of South Carolina's accountability assessment system's social studies seventh-grade test scores in 117 schools, as well as a survey completed by the principals of those schools, were analyzed. After controlling for poverty, no significant difference was found between student social studies accountability test performance and scheduling configuration used. However, findings showed statistically significant differences between scheduling configuration used and principals' perceptions of its impact on social studies instruction and students' preparedness for the next grade level in social studies. Additionally, results exposed no clear consensus among principals regarding barriers affecting time allocated for social studies.

Keywords: instructional time, middle level education, scheduling, social studies, testing

How to make the best use of instructional time for student learning is a question which has stymied educational leaders, teachers, and policymakers for the last 300 years (Zepeda & Mayers, 2006). Most states have laws that define the minimum number of days per year, hours per day that students must attend school, and the minimum amount of instructional time. However, the way time is allocated is neither defined nor prescribed and thus enables school leaders to have considerable flexibility in instructional time configurations based specifically on their own prioritized instructional needs and non-instructional activities (Zepeda & Mayers, 2006). It is this flexibility, combined with a lack of specific guidelines regarding scheduling configurations, which has generated incessant criticism and been a driving issue in a succession of movements to reform education (Powell, Farrar, & Cohen, 1985).

Opportunity to Learn

The important connection between time and student learning is clearly illustrated in opportunity to learn (OTL) research (Blai, 1986; Kurz, 2011; Kurz, Elliott, Kettler, & Yel, 2014). OTL, defined as the amount of time allowed for learning (Carroll, 1963), is a research strand first introduced by Carroll as a part of his model of school learning (Kurz, 2011). The model has two components: time needed for learning and time devoted to learning. Carroll theorized that time needed for learning would be subject to students' aptitude and quality of instruction. In addition, he postulated time devoted to learning would be contingent on time allocated to task and student determination (Blai, 1986; Carroll, 1963).

Carroll's (1963) focus on the importance of time in his model of school learning was influential in another OTL model: Bloom's (1976) mastery of learning approach to student learning. Bloom reasoned that the most efficient way to bring all students to a specific standard of achievement, for a specific learning task, was to recognize differences in both time and instructional needs and effectively utilize instructional resources to reduce the time differential needed between the quickest and slowest learners to achieve mastery (Blai, 1986; Block, 1971; Bloom, 1976). At about the same time, Wiley and Harnischfeger (1974) presented "time-in-learning" models. Their research focus was to investigate: 1) how aggregate exposure to schooling affects student achievement, and 2) how specific types of instructional time differ in their effects on student achievement (Blai, 1986; Wiley, 1976; Wiley & Harnischfeger, 1974).

¹ Department of Instruction and Teacher Education, College of Education, University of South Carolina, Wardlaw 107B, Columbia, SC 29208. Office: (803) 777-3093; Fax: (803) 777-7970; Email: kvogler@mailbox.sc.edu

² Department of Instruction and Teacher Education, University of South Carolina.

An influential study on academic learning time (ALT) conducted in the 1970s found that the total instructional time in a specific curriculum area is positively related to student achievement in that area, and proportion of ALT in which students are engaged is positively associated with learning (Fisher et al., 1980). A number of studies found the amount of time dedicated to instruction is a predictor for student achievement (Carroll, 1989; Denham & Lieberman, 1980; Fisher & Berliner, 1985; Kurz et al., 2014; Vannest & Parker, 2010; Walberg, 1988). Additionally, Scheerens and Bosker (1997) conducted a meta-analysis of 21 studies and found that allocated time was an important predictor for student achievement.

Scheduling Configurations

The latest flare-up of the scheduling configuration reform issue began the early 1980s (Zepeda & Mayers, 2006); stoked by publications such as *A nation at risk: The imperative for education reform* (National Commission on Excellence in Education, 1983), *A Place Called School: Prospects for the Future* (Goodlad, 1984), and *Prisoners of time: Report of the National Education Commission on Time and Learning* (National Education Commission on Time and Learning, 1994), elected leaders and educational reformers demanded the restructuring of instructional time. In response, an unprecedented wave of schools moved away from traditional schedules and adopted different configurations touted as a way to maximize instructional time (Canady & Rettig, 1996). For example, in Texas, the number of high schools using block scheduling rose from 4 percent to over 40 percent in a four-year span between 1992 and 1995 (Texas Education Agency, 1999).

Proponents of block scheduling see it as an instrument to maximize instructional time by (1) reducing the number of students for whom teachers must prepare and with whom teachers interact each day and/or each term; (2) reducing the number of classes, and assignments, tests, and projects that teachers must address during any single day of term; (3) reducing the fragmentation in traditional schedules, a complaint especially pertinent to classes requiring extensive practice and laboratory work; (4) providing teachers with lots of time that allow and encourage the use of active teaching strategies promoting greater student involvement; and (5) allowing students variable amounts of time for learning without lowering standards, and without punishing those who need more or less time to learn (Hottenstein, 1998). In addition, researchers Canady and Rettig (2000) noted fewer school discipline problems, higher achievement rates for students, and more school productivity as reasons why educational leaders adopted block schedules.

The following are descriptions of the most commonly used scheduling configurations:

Traditional schedules

Traditional schedules are those with “a fixed number of daily periods of uniform length, with delivery of instruction strictly adhering to departmental classifications” (Hackmann & Valentine, 1998, p. 6). Traditional schedules generally contain from five to ten instructional periods (Hackmann & Valentine, 1998).

Flexible schedules

Flexible schedules are those that are characterized by a shift from fixed-time instructional periods (e.g., 40-50 minutes) towards longer instructional periods (e.g., 75-150 minutes). These extended amounts of time within flexible instructional time configurations are often associated with inquiry or constructivist pedagogies rather than didactic lecture (Bevevino, Snodgrass, Adams, & Dengel, 1999; Daniel, 2007). The two most commonly used flexible instructional time configurations are known as block scheduling and alternate day class scheduling or what is referred to as the A/B schedule (Daniel, 2007).

Block schedules

Block scheduling uses blocks of time created from combining instructional time allotted for a traditionally scheduled period (45-minutes) into two or more combined periods (Hackmann, 2002). This can include periods of all the same length (e.g., 90 minutes) or can adjust the length of time devoted to each time block according to the instructional needs of students (e.g., core academic subjects such as math and language arts may be assigned longer blocks of time while subjects not considered core or academic such as physical education and art may be assigned shorter blocks of time). The length of time of a block can also vary from day to day and week to week. Common block instructional time configurations in middle-level use what is referred to as a 4x4 (four-by-four) schedules where students take four classes for half an academic year and then four different classes the second half of the academic year (Daniel, 2007).

A/B schedule

Flexible instructional time configurations may also utilize an alternating day schedule. In this arrangement, classes may be assigned to meet on an every-other-day basis with even-numbered and odd-numbered class periods meeting on alternating days (Hackmann, 2002). For example, students may attend one set of classes on certain days of the week and another set of classes on the remaining days.

Impact of Accountability Testing on Social Studies

Educational accountability is another reform effort designed to improve student achievement by holding public education accountable for results. Generally speaking, the reform has two parts: First, devise curriculum standards and expectations; and second, create assessments (accountability tests) designed to measure how well students meet the curriculum standards and expectations (student achievement) (Madaus & Russell, 2009/2010). The federally mandated legislation the *No Child Left Behind Act* (NCLB, 2002), and continuing with the *Every Student Succeeds Act* (ESSA, 2015), has been at the forefront of this effort. However, the primary focus of the legislation is on the content areas of reading/language arts and mathematics. It does not mandate standardized testing in social studies nor does it include social studies in its school performance calculations. Because of this omission, the legislation has had a dramatic impact on social studies instruction. In addition, the adoption of Common Core State Standards in many states added even more pressure on teachers' curricular decisions. These more rigorous standards have caused teachers to focus additional attention on implementing and teaching the English Language Arts and Literacy Standards and Mathematics Standards at the expense of other subject areas (Alberti, 2012/2013).

Past studies show the pressure on schools to perform well in the tested subjects of reading/language arts, mathematics, and science impacts both the schedule (i.e., time allocated to instruction) and the actual amount of time spent teaching social studies (Abrams, Pedulla, & Madaus, 2003; Bailey, Shaw, & Hollifield, 2006; Burroughs, Groce, & Webeck, 2005; Heafner, 2018; Houser, Krutka, Roberts, Pennington, & Coerver, 2017; Kavanagh & Fisher-ari, 2018; Leming, Ellington, & Schug, 2006; Lintner, 2006; Pace, 2012; Pascopella, 2005; Pedulla et al., 2003; Segail, 2003; VanFossen, 2005; Vogler, 2003; Vogler & Virtue, 2007; vonZastrow & Janc, 2004; Zamosky, 2008). Lintner (2006) found in a study of Kindergarten through fifth-grade social studies in South Carolina that "with such a tremendous emphasis being placed on reading, writing, and math, social studies has to fight for instructional time" (p.3). Bailey et al. (2006) determined that the actual amount of instructional time spent on social studies in Kindergarten through fifth-grade, self-contained classrooms in Title I schools in the state of Alabama confirmed the assault on social studies' instructional time reported by Lintner (2006). Bailey et al. (2006) also found that not only was the instructional time spent on social studies reduced in Alabama's elementary schools, but the amount of time actually spent on social studies on average was far less than the amount of time allocated by the school district and mandated by the state. In fact, there were weeks in some schools when social studies was not taught at all (Bailey et al., 2006).

South Carolina's Testing Program

Before the national education accountability legislation NCLB (2002) and its successor the ESSA (2015), the state legislature passed the South Carolina Education Accountability Act in 1998 which enacted a review process for evaluating K-12 schools in South Carolina (South Carolina Department of Education, 2009a). The primary instrument for measuring student progress according to this law was the Palmetto Achievement Challenge Test (PACT). In 1999, the PACT was first administered to students in grades 3-8 and scores were categorized as Advanced, Proficient, Basic, or Below Basic. The tests first included only sections in mathematics and English, but in spring 2003 the assessment was expanded to include science and social studies. However, in spring 2007 the state cutback on its testing program and introduced the census testing of social studies and science in grades four and seven; This meant that only students in grades four and seven would be required to take both the social studies and science tests. For students in grades three, five, six, and eight, they would take either the social studies or science test but not both. In June 2008, the assessment system was renamed the Palmetto Assessment of State Standards (PASS). The only major difference between the PACT and the PASS was the categories used to report student scores. Whereas the PACT categorized student scores as Advanced, Proficient, Basic, or Below Basic, student scores on the PASS were to be reported as Exemplary, Met, or Not Met. Individual student scores on these tests would be used to help determine a ranking for the state's School Report Card that rates schools as Excellent, Good, Average, Below Average, and Unsatisfactory (South Carolina Department of Education, 2009a). In 2014, the PASS was changed to the South Carolina Palmetto Assessment of State Standards (SCPASS).

At the time this study was conducted, the PASS was the state's testing program and the social studies portion consisted of 45 items for third grade up to 60 items for eighth grade. Each item was a 1-point, four-option, multiple-choice question aligned to the standards for that particular grade level (South Carolina Department of Education, 2009a). In addition, the test contained 6 to 12 embedded field test items. These items were for test development purposes only and were not included in the calculation of student scores (South Carolina Department of Education, 2009a).

Educational Framework- Modern Learning Theory

A fundamental tenet of modern learning theory, that different or expanded learning goals require different approaches to instruction, also suggests that expanded opportunities to learn may also be required (Bransford, Brown, & Cocking, 1999). Because prior knowledge forms the foundation needed to efficiently acquire new knowledge (Wanzek, Roberts, Vaughn, Swanson, & Sargent, 2019) and a student's level of background knowledge can predict future academic achievement (Cromley & Azevedo, 2007; Taboada, Tonks, Wigfield, & Guthrie, 2009), the relevancy of allocating appropriate amounts of instructional time is particularly significant (Dochy, Segers, & Buehl, 1999).

Scheduling configurations have the power to not only compromise a teacher's ability to provide time to ensure their students have an in-depth coverage of a subject such as social studies, but also their ability to provide the type of quality of instruction necessary for their students to learn the material and relate it to their past experiences and everyday lives. These types of relevant connections to the skills and to other areas of the curriculum are essential to prepare elementary and middle-level students for future studies at the secondary-level (Abrams et al, 2003; Bloom, 1974; Carroll, 1963; Hirsch, 2006; Leming et al, 2006; National Education Commission on Time and Learning, 1994; Slavin, 1994; Walberg, 1988). This is especially true in the era of high-stakes testing when developmentally-appropriate practices for students seem not to coincide with the standards-based summative accountability expectations of academic rigor within content-discreet oriented curriculum and instruction (Anfara & Waks, 2001). Therefore, the challenge for educators is how to allocate, organize, and employ instruction time so that curriculum content and pedagogy can be aligned in ways that are integrated, relevant, exploratory, and engaging, while simultaneously enabling students do well on standardized state-sanctioned tests (Thompson, 2000).

Statement of the Problem

The federally mandated NCLB and later ESSA legislation's focus on reading/language arts and mathematics testing outcomes has forced administrators and teachers to allocate more instructional time to these content areas at the expense of other content areas. However, 28 states, including South Carolina, still include social studies as part of their accountability system and mandate scores in this content area to be included as part of a school's review (Mullen & Woods, 2018). If students are expected to score within a particular range in the area of social studies on the state's accountability test, in spite of the pressure and focus on reading/language arts and mathematics, it stands to reason that there needs to be a re-examination in the ways in which instructional time is allocated vis-à-vis scheduling configurations to teach these content areas.

Purpose of Study

The purpose of this study was to compare the academic performance of middle school students by the scheduling configuration used, explore principals' perceptions regarding the impact scheduling configurations have on social studies instruction and student preparedness for the next grade level in social studies, and examine the barriers affecting time allocated for social studies.

Research Questions

The following were the study's research questions:

1. How do scheduling configurations affect seventh-grade social studies test scores on a state-mandated accountability test?
2. What are middle-level principals' perceptions of the impact scheduling configurations have on social studies instruction and student preparedness for the next grade level in social studies?
3. What are middle-level principals' perceptions of barriers affecting the amount of time allocated to teaching social studies?

This article continues with a description of the study's method followed by an examination of the results of the research questions and concludes with information about the study's limitations and directions for future research.

Method

Participants

The target population for this study was principals in traditional public middle-level schools (excluding charter schools and schools with multiple elementary and secondary grades) in South Carolina who had seventh grade students who took the PASS social studies test in Spring 2009.¹ There were 210 principals (schools) in 73 school districts that met these criteria and were contacted for possible participation in this study. After contacting these principals (schools) and school districts, 117 principals (schools) representing 58 districts agreed to participate. Meaning, there was a 56% response rate from principals (schools) eligible to participate in the study and a 79% response rate from the eligible districts in the state (South Carolina Department of Education, 2009b).

Instruments

The data to answer the research question was obtained through: (1) an examination of 2009 seventh-grade PASS social studies test scores (at the aggregate school level) of the middle-level schools of the 117 participating principals, (2) South Carolina Poverty Index data,² and (3) the results of a survey instrument given to the 117 South Carolina middle-level participant principals designed to elicit information about the instructional time configuration used at their school and their perceptions of social studies instruction.³

PASS and Poverty Index Data

We obtained the aggregate school level data set of the 2009 spring administration of the social studies seventh-grade PASS test from the South Carolina State Department of Education (SCSDOE). The data set included information about each school's aggregated average seventh-grade student's social studies PASS test score. We only used the part of the data set containing information about the middle-level schools of the 117 participating principals. In addition, Poverty Index data for 2009 was retrieved from the SCSDOE's data website archives. Each school in South Carolina is given a poverty index rating based on a calculation of student demographic characteristics including free and reduced-price lunch data and Medicaid eligibility data. Again, we only used the poverty index ratings of the middle-level schools of the 117 participating principals. The Poverty Index was used to control for poverty (covariate) in this study.

Survey Instrument

A survey instrument was used to collect data on scheduling configurations and principals' perception data. The instrument asks for demographic information and includes 10 likert item questions. The validity of the survey instrument was previously established through a longitudinal study that began in 2003 (see Rock et al., 2006). Survey questions were developed by university social studies education professors and reviewed by preservice elementary-level and middle level education teachers, practicing teachers, and other university faculty. The questions were edited to improve clarity, reduce bias, and guarantee consistency in interpretation. Survey questions were pilot tested with 25 preservice and 25 practicing teachers. The questions were then redesigned to accommodate recommendations in order to insure the validity of the instrument. Permission to use the survey instrument and to modify questions for the present study was received from the developing researchers and the review board of the University of South Carolina.

An internal consistent reliability analysis was used to assess the reliability of scores yielded by the survey instrument. Cronbach's alpha was used to assess score reliability of the survey instrument. The survey instrument had an alpha of .73, this is slightly above the .70 suggested as being indicative of adequate score reliability (Nunnally & Bernstein, 1994).

Procedure

The 117 participating middle-level principals completed the survey instrument. This survey instrument, as previously mentioned, elicited information regarding the instructional time configuration used at the school and their perceptions of social studies instruction. This information, in combination with the data set containing the school level aggregate results of the 2009 spring administration of the social studies seventh-grade PASS test, provided the necessary data to answer the research questions.

Results

Research Question 1

1. *How do scheduling configurations affect seventh-grade social studies test scores on a state-mandated accountability test?*

To answer this research question, the first step was to construct frequency distributions and to calculate the mean and standard deviation for each schedule configuration.

Table 1 Number of Schools, Percentage, Mean Score, and Standard Deviation by Schedule Configuration

Schedule Configuration	<i>N</i>	%	<i>M</i>	<i>SD</i>
Traditional 45-60 minute block all year	73	62.4	615.76	14.83
61-79 minute block all year	25	21.4	616.23	15.04
80-90 minute block all year	10	8.5	607.79	14.08
A/B 80-90 minute block all year	7	6.0	617.72	21.10
A/B 45-60 minute block all year	1	0.9	599.00	
Other	.1	0.9	599.00	

As shown in Table 1, of the 117 responding principals, 73, or 62.4%, reported their school using a traditional 45-60 minute yearlong block instructional schedule. Twenty-five principals (21.4%) reported using a 61-79 minute yearlong block instructional schedule. Ten principals, representing 8.5% of the census population, reported their school using an 80-90 minute yearlong block instructional schedule. Seven principals, representing 6% of the census population, used an A/B 80-90 minute yearlong block instructional schedule. The remaining two principals reported their school using either an A/B 45-60 minute yearlong block instructional schedule or another schedule configuration not identified.⁴ The highest mean score was associated with the A/B 80-90 minute block all year configuration ($M = 617.72$) followed by the 61-79 minute block all year schedule configuration. The standard deviation for all schedule configuration groups indicated high levels of variation among the PASS social studies mean scores.

The next step was to run an ANCOVA (analysis of covariance) to compare schedule configurations to PASS social studies achievement (average mean) using a covariate (Poverty Index) to control for poverty level. Poverty has been identified by other researchers as a variable with potential to significantly impact achievement (Anderson, 1993; Bracey, 1999; Duncan, Brooks-Gunn, Klebanov, 1994; Farkas, 2006; Guo & Harris, 2000; Haycock, 2001; Lee & Burkam, 2002). However, results of the schedule configuration frequency distribution—namely, the unequal distribution of scheduling configurations—demanded a verification of the assumptions of an ANCOVA. Besides for making sure there were no univariate outliers or multivariate outliers detected after an examination of the data—which there were none—a basic assumption for an ANCOVA is equal group variance (Levene, 1960). Since the unequal distribution of scheduling configurations violated this assumption, the researchers ran Levene's Test of Equality of Error Variances to verify that an ANCOVA could be used. Results of the analysis showed the variance of PASS social studies test scores was equal across all scheduling configurations which indicated the ANCOVA assumptions had been met, $F(3, 111) = 1.163, p = .327$.

Table 2. Analysis of Covariance for Schedule Configuration as a Function of PASS Social Studies Test Scores, Using Poverty Level as a Covariate

Source	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>	eta ²
Poverty Level	1	14455.21	140.85	.000	.56
Schedule Configuration	3	38.38	.37	.772	.01
Error	110	102.63			

As shown in Table 2, an ANCOVA was used to assess whether using a particular instructional scheduling configuration improves PASS social studies test scores after controlling for differences in poverty level. Results indicate that after controlling for poverty, there was not a significant difference among scheduling configurations and PASS social studies test scores, $F(3, 110) = .37, p = .772, \text{partial } \eta^2 = .01$.

Table 3. Unadjusted and Adjusted Schedule Configuration Means and Variability for PASS Social Studies Test Scores Using Poverty Level as a Covariate

Schedule Configuration	N	Unadjusted		Adjusted	
		M	SD	M	SE
Traditional 45-60 minute block all year	73	615.77	14.83	615.40	1.19
61-79 minute block all year	25	616.24	15.04	616.46	2.03
80-90 minute block all year	10	607.79	14.08	613.33	3.23
A/B 80-90 minute block all year	7	617.72	21.10	612.84	3.85

Table 3 presents the means and standard deviations for the four different instructional scheduling configurations on PASS social studies test scores before and after controlling for poverty. As is evident from this table, only minimal differences among scheduling configurations remain after poverty level was controlled.

Research Question 2

2. *What are middle-level principals' perceptions of the impact scheduling configurations have on social studies instruction and student preparedness for the next grade level in social studies?*

A survey instrument was used to answer the question. A cross tabulation was conducted between principals' opinion of how the schedule configuration has positively or negatively impacted social studies instruction (Survey Item 6) and schedule configuration used at their school.

Table 4 *Cross-Tabulation for Schedule Configuration Used and Perception of Impact on Social Studies Instruction*

Schedule Configuration	Impact on social studies instruction		
	% Positive	% Negative	% No Impact
Traditional 45- to 60-minute block all year	65.3	6.9	27.8
61- to 79-minute block all year	56.0	8.0	36.0
80- to 90-minute block all year	80.0	0.0	20.0
A/B 80- to 90-minute block all year	28.6	57.1	14.3

As shown in Table 4, 65.3% of principals using the traditional 45- to 60-minute all-year schedule considered the configuration to positively impact social studies instruction; whereas only 6.9% of principals using the traditional 45- to 60-minute all-year schedule indicated that the configuration negatively impacted social studies instruction; 27.8% said it had no impact on instruction. Of principals in middle schools using the 61- to 79-minute, all-year schedule, 56% expressed the opinion that the schedule was a positive impact on social studies instruction, whereas only 8% believed that it was a negative impact; 36% felt it had no impact on social studies instruction. For the 80- to 90-minute block all-year scheduling category, 80% of the principals reported the schedule was positive, 0% indicated the configuration was negatively impacting social studies instruction, and 20% considered the configuration to have no impact on social studies instruction.

However, for the A/B 80- to 90-minute block all-year configuration, only 28.6% of principals using this scheduling configuration believed that it was positively impacting social studies instruction, whereas 57.1% considered it to be a negative impact on social studies instruction, and 14.3% indicated it had no impact in instruction. Overall, 71 (62.3%) principals expressed the opinion that the schedule configuration currently used at their school positively impacted social studies instruction. Results of a chi-square test revealed a statistically significant relationship between the two variables, $X^2 = 21.26$, $df = 6$, $N = 114$, $p = .002$, $\phi = .43$.

A cross tabulation also was conducted between principals' perceptions of student preparedness for next grade level in social studies (Survey Item 9) and schedule configuration used at their school.

Table 5 *Cross-Tabulation for Schedule Configuration Used and Perception of Student Preparedness for Next Grade Level in Social Studies*

Schedule Configuration	Student preparedness		
	% Well	% Adequate	% Unprepared
Traditional 45- to 60-minute block all year	34.7	59.7	5.6
61- to 79-minute block all year	40.0	52.0	8.0
80- to 90-minute block all year	20.0	70.0	10.0
A/B 80- to 90-minute block all year	14.3	28.6	57.1

As shown in Table 5, 94.4% of principals using the traditional 45- to 60-minute block all-year schedule considered their students to be either well or adequately prepared for the next grade level in social studies, whereas 5.6% of principals considered their students to be unprepared. Of principals using the 61- to 79-minute block all-year schedule, 92% indicated that their students were either well or adequately prepared and 8% believed that their students were unprepared for the next grade level. The results were similar for principals using an 80- to 90-minute block all-year configuration, with 90% of these principals believing that their students were either well or adequately prepared for the next grade level in social studies. For principals using the A/B 80- to 90-minute block all-year schedule, the results were statistically significantly different, with only 42.9% of these principals considering their students to be either well or adequately prepared for the next grade level in social studies, whereas 57.1% considered their students to be unprepared. Results of a chi-square test also showed a statistically significant relationship between the two variables, $X^2 = 20.85$, $df = 6$, $N = 115$, $p = .002$, $\phi = .43$.

Research Question 3

3. *What are middle-level principals' perceptions of barriers affecting the amount of time allocated to teaching social studies?*

The survey instrument also was used to answer this question. Item 8 asked principals about barriers that affected time allocated for social studies at their school. A list of seven possible barriers, as well as a "no barriers" option, was provided. The seven barriers were as follows: (a) testing mandates for content areas such as English and mathematics, (b) perceived value of social studies in the curriculum compared to other subject areas, (c) student perceptions of social studies as a valuable subject, (d) teacher perceptions about the importance of social studies instruction, (e) principal/administration team perception of the importance of social studies instruction, (f) district office perception of the value of social studies when compared to other tested subject areas, and (g) non-inclusion of social studies in federal accountability mandates. Principals were asked to indicate which barrier(s) they believed affected time allocated for social studies at their school. Frequency distributions were constructed based on their responses.⁵

Table 6 Number of Principals and Percentage who Agreed Barrier Affected Time Allocated for Social Studies

Barrier	N	%
Testing mandates	42	35.9
No barriers	40	34.2
Non-inclusion of social studies	38	32.5
Perceived value of social studies	37	31.6
Student perceptions	24	20.5
District office perceptions	12	10.3
Teacher perceptions	9	7.7
Principal/Admin team perceptions	6	5.1

As shown in Table 6, 35.9% of the principals believed that “testing mandates for content areas such as English and math” was the greatest barrier affecting time allocated for social studies. This was followed by “no barriers” at 34.2%. The “non-inclusion of social studies in federal accountability mandates” and “perceived value of social studies in the curriculum compared to other subject areas” were third and fourth, at 32.5% and 31.6%, respectively. Principals indicated that the four “perception” barriers were least likely to affect time allocated for social studies: “student perceptions of social studies as a valuable subject” (20.5%), “district office perception of the value of social studies when compared to other tested subject areas” (10.3%), “teacher perceptions about the importance of social studies instruction” (7.7%), and “principal/administration team perception of the importance of social studies instruction” (5.1%).

Cross-tabulations then were conducted between principals’ responses and schedule configuration used at their school.

Table 7. Cross-Tabulation for Schedule Configuration Used and Percentage who Agreed Barrier Affected Time Allocated for Social Studies

Schedule Configuration	Barrier							
	Testing Mandates	Perceived Value of Social Studies	Student Perceptions	Teacher Perceptions	Principal/Admin Team	District Office Perceptions	Non-Inclusion of Social Studies	No Barriers
Traditional 45- to 60-minute block all year	41.1%	30.1%	17.8%	5.5%	4.1%	9.6%	30.1%	35.6%
61- to 79-minute block all year	28.0%	36.0%	24.0%	8.0%	4.0%	8.0%	28.0%	36.0%
80- to 90-minute block all year	20.0%	40.0%	40.0%	30.0%	20.0%	10.0%	60.0%	30.0%
A/B 80- to 90-minute block all year	42.9%	32.2%	14.3%	7.8%	0.0%	14.3%	42.9%	14.3%

Table 7 shows that principals in schools using a 80- to 90-minute block all-year schedule configuration had a greater belief that the barriers “perceived value of social studies in the curriculum compared to other subject areas,” “student perceptions of social studies as a valuable subject,” “teacher perceptions about the importance of social studies instruction,” “principal/administration team perception of the importance of social studies instruction,” and “non-inclusion of social studies in federal accountability mandates” affected the time allocated for social studies than did their colleagues using other scheduling configurations. Additionally, 36% of principals using a 61- to 79-minute block all-year schedule configuration had a greater belief that there were “no barriers” affecting the time allocated for social studies than did their colleagues. Principals using the traditional 45- to 60-minute block all-year schedule configuration, the most popular scheduling configuration, although not having a greater belief in any one barrier affecting the time allocated for social studies than did their colleagues using other scheduling configurations, still had a relatively strong belief in the barriers “testing mandates for content areas such as English and math,” “perceived value of social studies in the curriculum compared to other subject areas,” “non-inclusion of social studies in federal accountability mandates,” and “no barriers” affecting the time allocated for social studies.

Chi-square tests were conducted between the variables scheduling configuration used at the school and each (individual) barrier affecting the time allocated for social studies. Results of these analyses showed no statistically significant relationships: testing mandates for content areas such as English and mathematics, $X^2 = 2.74$, $df = 3$, $N = 115$, $p = .433$, $\phi = .15$; perceived value of social studies in the curriculum compared to other subject areas, $X^2 = 0.63$, $df = 3$, $N = 115$, $p = .890$, $\phi = .07$; student perceptions of social studies as a valuable subject, $X^2 = 2.96$, $df = 3$, $N = 115$, $p = .397$, $\phi = .16$; teacher perceptions about the importance of social studies instruction, $X^2 = 7.57$, $df = 3$, $N = 115$, $p = .057$, $\phi = .24$; principal/administration team perception of the importance of social studies instruction, $X^2 = 5.06$, $df = 3$, $N = 115$, $p = .167$, $\phi = .21$; district office perception of the value of social studies when compared to other tested subject areas, $X^2 = 0.25$, $df = 3$, $N = 115$, $p = .969$, $\phi = .05$; non-inclusion of social studies in federal accountability mandates, $X^2 = 4.16$, $df = 3$, $N = 115$, $p = .245$, $\phi = .19$; and no barriers, $X^2 = 1.42$, $df = 3$, $N = 115$, $p = .702$, $\phi = .11$.

Discussion

Research Question 1

How do scheduling configurations affect seventh-grade social studies test scores on a state-mandated accountability test? Results indicated, while controlling for students’ poverty level, there was no statistically significant effect for schedule configuration associated with PASS mean social studies achievement. Therefore, the present study confirms the findings of numerous previous studies that also conclude there are no significant differences in student performance with regard to the scheduling configuration used at the school (Bateson, 1990; Cobb, Abate, & Baker, 1999; Duel, 1999; Lare, Jablonski, & Salvaterra, 2002; Lockwood, 1995; Snyder, 1997; Veal & Schreiber, 1999; Wild, 1998) and refutes findings of previous studies that either conclude block-scheduled students perform better on standardized tests than traditionally scheduled students (Evans, Tokarczyk, Rice, & McCray, 2002; Hess, Wronkovich, & Robinson, 1999; Mattox, Hancock, & Queen, 2005; Payne & Jordan, 1996; Queen, Algozzine, & Eaddy, 1996) or traditionally scheduled students outperform block-scheduled students (Arnold, 2002; Gruber & Onwuegbuzie, 2001; Knight, DeLeon, & Smith, 1999; Lawrence & McPherson, 2000; Pisapia & Westfall, 1997).

Interestingly, of the four variations of schedule configurations analyzed, the schedule with the largest amount of instructional time (80-90 minute yearlong block schedule) had the second lowest aggregate student social studies test score (613.33) while the A/B 80-90 minute yearlong schedule had the lowest (612.84). While the research literature addressing the relationship of achievement and A/B flexible scheduling impacts is sparse with regard to middle-level high-stakes testing scenarios, the findings of the present study support those of similar studies (Gainey & Brucato, 1999; Lewis et al., 2003). Evidence that longer instructional periods fail to adequately support average attention spans or the retention of general knowledge in core areas (Gould, 2003) supports the present study’s finding that the schedule with the greatest amount of instructional time allocated to social studies (80-90 minute yearlong block) has the lowest achievement levels of all schedule configuration types.

Research Question 2

What are middle-level principals’ perceptions of the impact scheduling configurations have on social studies instruction and student preparedness for the next grade level in social studies? Results revealed both a statistically significant relationship between principals’ perceptions of how the schedule configuration has positively or negatively impacted social studies instruction and schedule configuration used at their school, and principals’ perceptions of student preparedness for the next grade level in social studies and the schedule configuration used at their school.

These results support findings of similar research focused on documenting principals' perceptions about the commitment of time and resources needed to teach social studies (Balls, 2008; Bernhardt, 2004; Burroughs, 2002; Chang, 1992; Fedore, 2006; Fink & Resnick, 2001; Leming et al., 2006; Pedulla et al., 2003; Vogler, 2003; von Zastrow & Janc, 2004).

The finding of statistically significant relationships between principals' opinion of how the schedule configuration has positively or negatively impacted social studies instruction and schedule configuration used at their school, and principals' perceptions of student preparedness for the next grade level in social studies and the schedule configuration used at their school are very interesting to note because they provide more examples of how acutely aware principals are of their students' needs (Balls, 2008; Bernhardt, 2004; Fedore, 2006; Fink & Resnick, 2001; Miller, 1981). The greatest percentage of principals who believed the schedule configuration has negatively impacted social studies instruction and their students are unprepared for the next grade level in social studies are those whose schools are using an A/B 80- to 90-minute block all-year schedule configuration. On the surface, this seems very confusing: As shown in Table 1, and previously discussed, the A/B 80- to 90-minute block all-year schedule configuration, compared to the other most frequently used configurations, had the highest mean score (617.72) on the social studies accountability test. Couple this with the fact that the A/B 80- to 90-minute block all-year schedule configuration, compared to all the other most frequently used schedule configurations, had the least amount instructional time devoted to social studies. These facts should make this configuration, in terms of efficiency and productivity, especially in today's climate of accountability, the most beneficial one for schools to use. However, as shown in Table 3, after controlling for student poverty level, the A/B 80- to 90-minute block all-year schedule configuration has the lowest mean score (612.84) on the social studies accountability test. Principals might strongly believe that the longer instructional periods used in an A/B 80- to 90-minute block all-year schedule configuration fail adequately to support average attention spans or the retention of general knowledge in core areas (Gould, 2003; Gullatt, 2006). In addition, the A/B block system was designed to provide flexibility for the individual instructional needs of students; still, the fact that students meet only every other day for a particular class in an A/B scheduling configuration, might, for some principals, mean less time for instructional reinforcement—and, therefore, less learning—than students might otherwise have received from a more traditional scheduling configuration where they meet every day.

Research Question 3

What are middle-level principals' perceptions of barriers affecting the amount of time allocated to teaching social studies? Results showed that of the seven barriers and "no barriers" option listed on the survey instrument, 35.9% of the principals believed that "testing mandates for content areas such as English and math" was the greatest barrier affecting time allocated for social studies. This was closely followed by "no barriers" at 34.2%, "non-inclusion of social studies in federal accountability mandates" at 32.5%, and "perceived value of social studies in the curriculum compared to other subject areas" at 31.6%. What is interesting is the lack of agreement that principals had regarding the perceived barriers affecting time allocated for social studies. Much has been made about the negative impact that federal and state-mandated testing has had on non-tested subjects such as social studies (Abrams et al., 2003; Bailey et al., 2006; Burroughs et al., 2005; Heafner, 2018; Houser et al., 2017; Kavanagh & Fisher-ari, 2018; Leming et al. 2006; Lintner, 2006; Pace, 2012; Segail, 2003; VanFossen, 2005; Vogler, 2003; Vogler & Virtue, 2007; Zamosky, 2008); but for all that has been written about this unintended consequence of high-stakes testing (Au, 2009; Grant, 2006; Jones, Jones, & Hargrove, 2003; Madaus, 1988; McNeil, 2000; Popham, 2001; Smith, 1991), not even 40% of principals believed that this was an issue. As a matter of fact, the "no barriers" response was only 1.7% less than was the "testing mandates for content areas such as English and math" response and 1.7% greater than was the "non-inclusion of social studies in federal accountability mandates" response. Based on these results, it is possible that federal and state testing mandates focusing on English and mathematics might not have had as much impact on principals as it has had on teachers, and the respondents might consider it as a sort of convenient justification for a lack of social studies instruction or for low scores in states that test social studies.

What has become clear from these responses is the overall lack of agreement with any of the provided "barrier" choices. As shown in Table 6, the barrier with the greatest support had only 35.9% agreement that it does affect time allocated for social studies. But if one then concludes that there are no "real" barriers affecting time allocated for social studies, one would be incorrect as well. The "no barriers" response was only supported by 34.2% of the principals. This lack of agreement also is reiterated when examining Table 7, a cross tabulation for schedule configuration used and percentage agree barrier affected time allocated for social studies. Therefore, what has occurred is no clear consensus among principles regarding the barriers, if any, affecting the amount of time allocated to teaching social studies.

However, as unclear as to what barriers there are, if any, affecting time allocated for social studies instruction, Table 6 makes it abundantly clear what barriers are not affecting time allocated for social studies instruction—perceptions. Whether it is principals/administrative team (5.1%), teachers (7.7%), district office (10.3%), or students (20.5%), the perceptions of these groups, according to the respondents, are of little consequence for decisions relating to time allocated to social studies instruction. Also, with regard to these “perception” barriers, data indicate that the percentage of respondents who think that the perceptions of a specific group as a barrier grows, the further away that group is from their immediate influence (principals 5.1%, teachers 7.7%, district office personnel 10.3%, and students 20.5%). This result, according to psychologists, indicates a strong sense of community among respondents (Hughey, Speer, & Peterson, 1999; McMillian & Chavis, 1986; Peterson et al., 2006).

Limitations

The scope of this study was limited to South Carolina public middle-level schools meeting the criteria for inclusion in this study and whose principal completed the survey instrument. Only schools designated as public middle-level schools that contained Grade 7 were eligible for inclusion in the target population. Schools classified as charter schools and schools with multiple elementary and/or secondary grades were not included. Because South Carolina assesses social studies state-mandated test results as part of a school’s report card calculation, caution must be used in making generalizations about social studies achievement in states that either do not assess social studies or do not assess it at the middle-level.

Further, because the results of this study considered instructional time configurations and achievement in social studies only at the seventh grade, results could not be generalized beyond this grade level. Additionally, because this study was an initial study, only how instruction time is configured over the course of a school year was considered. The analysis was limited to the most commonly used instructional time configurations. Finally, data only were available at the school level. Therefore, intervening variables such as differences in how time was used within schedules/classrooms, instructional strategies, teacher quality, teacher experience and training, skill in teaching social studies, or the amount of engaged learning time were not addressed.

Conclusion and Future Research

The study’s first research question, comparing schools’ seventh-grade social studies accountability test scores by scheduling configuration used, results of an ANCOVA yielded no statistically significant difference. Findings pertaining to the second research question, principals’ perceptions of the impact scheduling configurations have on social studies instruction and student preparedness for the next grade level in social studies, revealed a statistically significant relationship between principals’ perceptions of how the schedule configuration has positively or negatively impacted social studies instruction and schedule configuration used at their school, and principals’ perceptions of student preparedness for the next grade level in social studies and the schedule configuration used at their school. Findings relating to the study’s third research question, middle-level principals’ perceptions of barriers affecting the amount of time allocated to teaching social studies, indicated no clear consensus regarding the barriers, if any, affecting the amount of time allocated to teaching social studies.

Although this study has provided valuable information about the impact of scheduling configurations on schools’ middle-level social studies test scores and “barriers” affecting time allocated for social studies, many questions still remain. For example, what are teachers’ perspectives regarding traditional and block instructional time configuration and student achievement on state-mandated tests? What differences are there in the instructional practices used by teachers in meeting state standards in block and traditional instructional time configurations? Finally, what differences are there in students’ grades and state-mandated testing performance in block instructional time configurations compared with a traditional time configuration? These and other questions should be the subject of future investigations.

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Footnotes

¹Seventh grade was the only middle-level grade in which all students were tested in social studies. Students were randomly assigned to be tested in either science or social studies in all the other middle-grade levels.

²The South Carolina Poverty Index is a calculation that ensures that student achievement among districts and schools across the state are being compared with districts and schools with similar student and demographic characteristics. The index is based on free and reduced-price lunch data and Medicaid eligibility data. It was developed in direct response to a mandate of the Code of Laws of South Carolina, Section 59-18-900(C) which

required the state to set criteria for academic performance ratings and performance indicators and to establish guidelines for statistical analysis for data-reporting purposes.

³The survey instrument used in this study is available upon request from Kenneth Vogler, Department of Instruction and Teacher Education, University of South Carolina, Columbia, SC 29208. E-mail: kvogler@mailbox.sc.edu.

⁴Because the frequency analysis showed that only 1 school used an A/B 45-60 minute configuration and 1 school used an “other” configuration, these scheduling configurations were removed from further calculations.

⁵Because responses might have included more than one barrier, each was calculated individually.