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ABSTRACT

Students in about 100 schools in 10 states attend classes 4 days a week, for all or part of the school year. A growing number of rural schools, faced with declining enrollments and diminishing state aid, are experimenting with this schedule. Benefits of the schedule include lower energy and transportation costs and lower absenteeism among students and teachers. Holding classes 7.5 hours a day, 4 days a week, provides the same amount of instructional time as the traditional schedule, but with more time-on-task and less wasted time. Students have had no real problems adjusting to the longer day. Teacher, student, and parent attitudes toward the 4-day week have been generally positive. The 10 New Mexico school districts operating on the 4-day week reported cost savings of 10-25% on fuel, electricity, and transportation; standardized achievement test scores comparable to state norms; and a collective dropout rate of 3.3% (versus 8.1% statewide). In the 12 Colorado districts on the 4-day schedule, students showed some gains and some losses in academic achievement, with no clear evidence that student achievement was suffering. This report contains 11 references and the third, fifth, and eighth grade scores on the Comprehensive Tests of Basic Skills for 16 small New Mexico school districts (including 7 on the 4-day schedule) from 1982-83 to 1985-86. (SV)

The Four Day School Week:

An Investigation and Analysis

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Running Head: 4 Day

The Four-Day School Week--

Do Test Results Support It?

On a national level, there are students in approximately 100 schools in ten states that attend classes four days a week for all or part of the school year. There seems to be a growing number of rural schools that are experimenting with this schedule. Louise Hazard says that several small districts have implemented a longer school day within a shorter week due to the fact that they are "faced with less state aid because of a declining enrollment and with rising costs of operating a school" (1986, p. 56).

According to Robert Richberg, who has done extensive research with the Colorado schools involved in the four-day-school week, the experiment has been financially motivated for the most part. "The districts are faced with declining enrollments and decreased state revenues at a time when double digit inflation is already taking a heavy toll on school budgets" (1983, p. 60). Richberg goes on to point out that after reducing extracurricular activities, reducing elective academic course offerings, and even reducing staff, there seems to be few remaining options

for these small school districts. Consolidation is one option which is abhorrent to many school boards.

Cost Efficiency

It has been proven that districts using the four-day schedule have saved energy and transportation costs. "School buses get approximately five miles per gallon of gasoline; therefore, cutting mileage by one-fifth means a great savings. Heating a building to a comfortable 68-70 degree F. for four days instead of five decreases utility expenditures" (Hazard, 1986, p. 656). In some instances, due to extracurricular activities, parts of the buildings may need to be heated on the fifth day but even after adjustments have been made, heating fuel usage decreases.

By giving teachers and students an opportunity to make medical and other necessary appointments of the "fifth" day instead of on a regular school day, not only do the districts save salaries for substitute teachers but they cut both students and teacher absenteeism at the same time. Those who live in smaller, isolated communities often must travel long distances for appointments that are only available on weekdays(Richberg, 1983). This has even proved to be cost efficient for the parents when they are able to

accomplish all tasks in one trip versus several trips during the week.

Length of Day

It was found that "by holding classes for seven and a half hours a day, four days a week, the same amount of instructional time would be provided as with a traditional schedule of six hours a day for five days" (Richberg, 1983, p. 61). While they actually had the same amount of time each week, less time was wasted, leaving more time for instruction. Also, one school district documented that students were in school (class) the equivalent of a week more per student for the year by using the four-day schedule (Richberg, 1983, p. 62).

The added length of the school day was of great concern for several years, but it has been found that students have not had any real problems adjusting to the extra time in school. Some of the schools helped younger children adjust to a longer day by providing breakfast to the elementary students; lunch was then served later in the day (Hazard, 1986).

Extra-Curricular Activities

Another way in which the four day schedule may facilitate a better instructional situation involves

the scheduling of extra-curricular activities. Often, because of the distances involved for competition and activities with other schools, significant amounts of instructional time are lost. Several districts have worked to hold all extra-curricular activities on the day when no classes are held. Some districts are even scheduling activities such as ski trips, field trips, and swimming lessons on that day.

General Approval

It has been found that there is general approval for the four-day school week among teachers, students and parents. Teachers in the junior-senior high school like the longer class periods. Teachers in three elementary grades report an eagerness for school on Monday morning--and the younger students seem to have adjusted well.

Richberg reports that the four-day schedule has improved children's attitudes and performance in school and focused on academic learning to a greater extent that the traditional schedule (Richberg, 1983).

The parents have approved because there is more time for home chores and family togetherness. And, the working mothers who needed sitters have found available

and willing high school sitters on the day there is no school.

Academic Achievement

Somewhat to the surprise of the districts, even though there has been significant declines in energy costs under the new school calendar, there have been no declines in students' academic achievement and interest in school. "School people report the condensed school week hasn't lowered the quality of education, as some had feared it would. In fact, some evidence shows the four-day setup actually can improve student learning" (Blankenship, 1984, p. 32).

During the four-year pilot period for the Custer County Consolidated School in Colorado, achievement test scores went up every year(Blankenship, 1984). Where it was possible, test scores on standardized tests administered were compared under both kinds of school calendars. Teachers and administrators feel that the improvements in each case are fairly contributed to an increase in time on task.

One physical education teacher noted 25 percent greater gains on the president's Physical Fitness Test than on the previous five-day week scores. It was

contributed to the added length to the class period each day.

Teachers and students both apply themselves to tasks more efficiently when they know they only have four days in which to complete work. Teachers generally take advantage of their time by pushing the kids to learn more; the kids, in turn, are willing to do more homework(Blankenship, 1984, p. 32).

The Four-Day Week in New Mexico

There are ten school districts in the State of New Mexico that are currently operating on a four-day school week schedule. Eight of these schools are on the schedule during the entire school year; the other two during the winter months only. Those schools who enjoy the advantages of the four-day schedule are:

Cimarron Public Schools

Dora Consolidated Schools

Grady Municipal Schools

House Municipal Schools

Jemez Springs Municipal Schools

Maxwell Municipal Schools

Quemado Independent Schools

Roy Municipal Schools

San Jon Municipal Schools

Springer Municipal Schools

The main reason that New Mexico school districts choose to implement a four-day school week is to reduce operating costs, primarily through reduced energy consumption. Available data indicates that not only are fuel and electricity costs decreased by 10 to 25 percent when the district switches to four-day week, but many districts are reporting a reduction of 10 to 20 percent in transportation costs.

The primary concern for the four-day week in New Mexico has been that students should not suffer academically. According to A Summary Report On The Four-Day School Week In New Mexico, available evidence indicates that student achievement is not adversely effected by a switch to the four-day school week; in fact, several of these districts report overall gains in student achievement test scores when the four-day week is implemented (McCoy, 1983, p. 2). As stated earlier, the districts feel these gains are due to an increase in non-interrupted instructional time during the four-day schedule.

According to this same report, the standardized achievement test (CTBS) scores of four-day week students for 1982-83 were comparable to statewide

norms, and slightly to substantially better than national norms on the average (McCoy, 1983).

During this same year in seven of the ten districts on the four-day schedule, 100% of the students tested passed the New Mexico High School Proficiency Examination. In the other three districts, 99%, 96%, and 80% of the students tested earned passing scores on this test (McCoy, 1983).

When looking at the dropout rate in 1982-83 for those seven schools on the four-day school week, the collective dropout rate was 3.3% compared to a statewide rate of 8.1% (McCoy, 1983).

To look at just one of New Mexico schools, let's look at the "Grandfather" of the four-day schedule--Cimarron Public Schools. As expected, their cost efficiency has risen, the students, teachers and parents support the new schedule, and most importantly, the students have not suffered academically. According to a 1981 report, Cimarron made comparisons on the Stanford Achievement Tests in grades two through eight for the 1972-75 school years. The results showed more gains annually on the four-day schedule than they had made on the five-day schedule. On other tests Cimarron

students scored above the New Mexico and national norms.

In summary, based on a review of the available evidence, students who attend New Mexico schools four days a week appear to perform at least as well as their counterparts on a five-day schedule. Further, there is no reason to believe that student achievement or the quality of education is hindered when school districts switch to a four-day schedule (McCoy, 1983, p. 35).

The Four-Day Week in Colorado

Colorado patterned their four-day school week after the Cimarron Public School in New Mexico for basically the same reasons. The districts in Colorado are rural in nature. While these districts cover large geographic areas, they have small enrollments. All face declining enrollments and decreasing state revenues, and the primary reason for implementing the four-day schedule is to reduce energy consumption (Summary, 1983, p. 8). The results they have found prove to be comparable with the results in New Mexico.

The twelve school districts in Colorado that were approved by the State Board of Education decided to coordinate their evaluation efforts. They arranged for the Office for Rural Education at Colorado State

University to conduct the study, with Robert Richburg as principal investigator (Richburg, 1982, p. 622).

In order to gauge student achievement, they used scores on the standardized tests administered by each school district. They used comparison scores when possible under both kinds of school calendar. Reliable data was located for 13 comparisons of student achievement on both a five-day and a four-day schedule. After making many comparisons, with similar results, it was found that students under a four-day schedule show some achievement gains and some losses. The pattern was not consistent and more research is needed, but Richberg found no clear evidence that student achievement suffers under a four-day schedule (1982, p. 623).

The CTBS Test in New Mexico

In New Mexico, public schools strive to develop in their students a set of skills, abilities, and attitudes which will be of use to the students throughout life. Our schools work to enhance student achievement in areas such as reading, language, mathematics, reference skills, science, and social studies.

Each year, the New Mexico State Department of Education, through the Evaluation, Testing, and Data Management Unit, undertakes an objective assessment of student skills in these areas. This assessment is accomplished through the implementation of a statewide standardized achievement testing program which uses the Comprehensive Tests of Basic Skills (CTBS) to test students each spring. This testing program is intended to provide an objective overview of the extent and nature of student achievement in these content areas. The testing program provides parents, students, and educators with assessment information which can be used to enhance future achievement of students and future performance of schools.

The New Mexico statewide testing program began in 1971 when all public school students enrolled in grades 5 and 8 were given the Comprehensive Tests of Basic Skills (CTBS) published by CTB/McGraw-Hill. The testing program has been conducted each year with scores from the district reported to parents, students, and schools prior to summer recess. Through the years, various forms have been used, with new forms replacing old forms as they became available. The most recent

changes in the form of CTBS used occurred between 1980-81 and 1982-83 when Form U was introduced.

Each New Mexico school district is required to administer the reading, spelling, language, mathematics, and reference skills content area tests from the CTBS, Form U to all students enrolled in grades 3 (Level E), 5 (Level G), and 8 (Level H). Most districts supplement this partial battery with the science and social studies content area tests to provide a full battery of scores at the required grade levels. Statewide scoring reporting services were provided by CTB/McGraw-Hill under contract with the State Department of Education.

The Comprehensive Tests of Basic Skills Form U was published in 1981. The CTBS/U is norm-referenced, standardized achievement test designed to provide basic skills assessment information related to broad content areas commonly found in state and district elementary and secondary school curricula. The content areas include: reading, spelling, language, mathematics, and reference skills to form the basic battery; and science and social studies to form the complete battery.

Each Form U battery is composed of a number of subtests; for a complete battery which assesses seven

content areas, ten subtests are required. Some of the content areas require only one subtest to adequately assess that content area--spelling, reference skills, science, and social studies. The other content areas--reading, language, and mathematics--require two subtests for adequate coverage. When two subtests are needed to cover a content area, the scores are combined to produce a total score. For example, a total reading score is derived by combining scores from the reading vocabulary and reading comprehension tests. Additionally, a total battery score is derived by combining scores from the reading, language, and mathematics content areas (NM Standardized Testing Program Report, 1987).

In the pages following this report, I have included CTBS test results for some of the schools in New Mexico. Those sixteen schools included have an enrollment of 250 students or less and those on the four-day week have been marked.

Conclusion

In general, this innovation in education--the four-day school week--has worked. The four-day week might not work in urban areas, but it has proven to be very effective in rural school districts. More years

of testing will tell whether students can actually learn as much in four days of instruction as in five days, but the results so far are very positive and encouraging.

I am very inclined to agree with Ted Blankenship. He said, "Teaching 'smart'--that is, making more efficient use of available learning time--is the best way to promote more effective learning" (1984, p. 32). From the sounds of it, this is the attitude that has been taken by those teachers who have been challenged by the four-day schedule.

1982-83 New Mexico School District Profile

	3rd Grade				5th Grade				8th Grade			
	RD	LG	MT	BT	RD	LG	MT	BT	RD	LG	MT	BT
STATE	49	53	56	54	51	52	59	54	51	56	57	52
Corona	46	51	58	52	50	47	59	51	52	53	50	50
Des Moines	42	38	50	44	49	32	51	43	42	52	44	44
Dora *	74	81	82	81	64	56	59	59	39	46	31	39
Elida	68	72	86	76	65	63	63	64	31	51	44	40
Floyd	72	58	79	71	51	35	63	47	64	59	61	62
Grady *	66	65	90	76	85	95	89	89	81	89	75	84
Ho. Jo	63	74	66	69	56	68	56	59	33	46	33	36
House *	76	90	81	86	32	29	61	35	74	67	85	72
Lake Arthur	37	47	50	45	44	42	56	44	39	39	33	36
Maxwell *	66	76	77	74	63	48	59	57	48	43	44	43
Mosquero	36	28	56	40	60	51	71	59	15	29	15	16
Quemado *	65	45	46	55	50	60	51	55	74	72	57	68
Roy *	52	35	48	46	53	49	56	51	53	50	55	51
San Jon *	42	41	46	45	51	38	59	47	63	63	53	59
Vaughn	35	50	37	42	40	42	29	47	38	40	41	36
Wagon Mound	39	32	30	37	65	66	58	63	45	36	46	40
*Four-Day School Week--			64.8				58.1				62.1	

RD--Reading, LG--Language, MT--Math, BT--Battery

1983-84 New Mexico School District Profile

	3rd Grade				5th Grade				8th Grade			
	RD	LG	MT	BT	RD	LG	MT	BT	RD	LG	MT	BT
STATE	51	57	61	57	52	56	59	54	53	59	59	55
Corona	49	50	58	52	46	71	50	51	70	64	71	66
Des Moines	63	72	86	75	51	68	74	61	74	62	59	61
Dora *	80	88	89	90	57	51	51	54	45	53	53	48
Elida	70	88	83	84	66	74	71	68	83	79	67	79
Floyd	58	53	58	57	49	59	45	50	64	57	57	56
Grady *	82	88	91	91	75	86	78	79	80	85	75	81
Hondo	48	68	60	59	56	50	58	54	63	61	46	57
House *	73	81	82	81	38	31	30	33	95	90	93	93
Lake Arthur	74	77	67	75	57	67	61	60	48	53	39	46
Maxwell *	63	68	75	70	79	86	91	84	54	69	59	59
Mosquero	42	60	61	54	49	39	50	44	60	64	71	62
Quemado *	61	71	60	65	84	86	88	85	68	70	57	64
Roy *	62	77	68	71	85	75	90	83	71	70	65	68
San Jon *	75	99	01	99	55	47	5-	5-	50	73	57	57
Vaughn	49	68	37	53	39	48	31	38	33	34	27	32
Wagon Mound	73	86	74	81	51	60	59	55	43	54	57	47
*Four-Day School				81				64				68

RD--Reading, LG--Language, MT--Math, BT--Battery

1984-85 New Mexico School District Profile

	3rd Grade				5th Grade				8th Grade			
	RD	LG	MT	BT	RD	LG	MT	BT	RD	LG	MT	BT
STATE	52	60	61	58	55	58	61	57	55	61	59	56
Corona	54	49	47	52	63	61	63	62	45	54	41	45
Des Moines	70	66	66	69	55	29	56	44	65	65	65	64
Dora *	84	91	90	92	77	63	50	66	65	65	61	63
Elida	82	89	87	90	78	92	89	86	49	50	41	46
Floyd	66	77	71	72	57	47	66	55	74	76	65	72
Grady *	82	91	92	92	80	85	91	85	72	92	84	84
Hondo	58	58	80	64	63	66	63	64	59	59	46	55
House *	70	83	77	79	83	90	87	86	71	63	69	66
Lake Arthur	54	50	61	55	48	58	61	54	33	40	36	35
Maxwell *	82	86	86	88	82	83	90	85	71	71	61	68
Mosquero	28	31	76	41	33	39	34	33	26	29	15	24
Quemado *	59	71	70	66	64	66	63	64	70	73	65	68
Roy *	65	78	73	73	72	62	59	66	69	76	65	69
San Jon *	61	80	70	72	39	37	36	37	63	65	65	63
Vaughn	49	66	30	50	39	53	50	44	33	39	22	33
Wagon Mound	65	85	74	78	55	56	51	54	2'	39	26	32
*Four-Day School				79				67				68

RD--Reading, LG--Language, MT--Math, BT--Battery

1985-86 New Mexico School District Profile

	3rd Grade				5th Grade				8th Grade			
	RD	LG	MT	BT	RD	LG	MT	BT	RD	LG	MT	BT
STATE	54	62	64	60	47	60	63	59	56	63	61	57
Corona	27	30	34	32	45	46	58	47	59	64	55	57
Des Moines	60	47	66	58	80	66	82	76	51	50	63	51
Dora *	77	93	89	91	79	73	63	74	54	60	65	57
Elida	66	78	68	62	7-	78	86	75	48	39	34	41
Floyd	74	79	88	83	61	59	56	59	48	61	50	51
Grady *	68	79	93	83	88	92	95	91	87	90	82	88
Hondo	61	66	74	63	51	62	45	53	43	48	24	40
House *	59	68	88	72	84	80	77	82	71	61	63	64
Lake Arthur	30	46	45	41					38	63	67	51
Maxwell *	71	68	93	81	49	60	56	54	52	47	44	47
Mosquero	56	97	47	78	43	60	48	45	63	67	63	63
Quemado *	62	62	44	59	67	78	63	69	60	65	59	61
Roy *	51	39	61	50	68	73	71	69	37	41	57	40
San Jon *	70	91	65	84	68	60	59	63	54	50	44	50
Vaughn	55	80	67	60	64	62	56	6-	54	67	55	57
Wagon Mound	67	64	40	50	76	74	80	65	48	53	57	50
*Four-Day School				73				75				60

RD--Reading, LG--Language, MT--Math, BT--Battery

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