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AUTHOR Marockie, Henry; And Others
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ABSTRACT

Investigating the effects of a 1984 West Virginia State Board of Education (WVBE) policy which specified the use of instructional time, a study examined the effects of this policy on reading instruction in the primary grades by surveying a random representative sample of primary teachers and principals in West Virginia. In September 1986, 410 teachers and 298 principals completed a questionnaire which asked for comparisons between how primary students were currently spending their instructional time, how they spent instructional time in the past, and how they would spend instructional time in an ideal instructional day. Other questions concerned the opportunity to learn to read, satisfaction with students' achievement, and ability to meet individual needs. Results indicated no statistically significant differences among teachers' and principals' reports of past, current, and ideal use of instructional time for reading. However, both teachers and principals expressed higher satisfaction under past and ideal use of instructional time than under current use. (Fifty-five tables and six figures are included, and a copy of the Principal and Teacher Version of West Virginia Association of School Administrators Survey on Reading and Instructional Time is appended.) (MM)

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WVASA-AEL

A Study on the Use of Time for Reading Instruction in Grades One, Two, and Three in West Virginia Schools

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WVASA-AEL Study Group

Henry Marockie, Chair

David Acord
William Baker
Shirley Ball
Joseph Basile, II
Martha Dean
Jack Dulaney
Jackson Flanigan
Robert Griffis
Donald Haskins
Robert Kittle
Sandra Orletsky, AEL Staff
Beth Sattes, AEL Staff
William Staats
Harry Stansbury

Consultants to WVASA-AEL Study Group:

David A. Puzzouli, Private Consultant
Merrill L. Meehan, AEL Staff
Barbara Merrill, AEL Staff

For more information, contact:

West Virginia Association of School Administrators
200 Elizabeth St., Charleston, WV 25311

or

Appalachia Educational Laboratory
P.O. Box 1348, Charleston, WV 25325

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P.O. Box 1348, Charleston, WV 25325

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EXECUTIVE SUMMARY

Researchers have looked at the issue of instructional time from many perspectives. But what happens when a state agency mandates how much time should be spent on reading? Do teachers change how they divide the day? Do they need to? Does the mandate affect teachers' and principals' sense of control? Are they pleased with student achievement? Do teachers and principals have different perceptions of the issue?

These are among the questions addressed in research conducted by a study group sponsored jointly by the West Virginia Association of School Administrators (WVASA) and the Appalachia Educational Laboratory (AEL). The study group held a series of meetings from April 14-June 26, 1986, to determine the course of the investigation.

Study Background

Policy 2321, Section 6.5d, of the West Virginia State Board of Education established standards in May 1984 for the use of instructional time. The policy states:

> Instructional time allocations (315 minues, 180 days) are provided for grades 1-4 to meet or exceed the following: art, 3-5%; health and science, 5-7%; language arts, 35-50%; mathematics, 16-19%; music, 3-5%; physical education, 3-5%; social studies, 5-7%; and discretionary time, 2-30%.

To investigate the effects of this policy on reading instruction in the primary grades (i.e., grades 1-3), the WVASA-AEL study group surveyed teachers and principals.

The group decided to base their survey on a random sample that would be representative of all primary teachers and principals in the state. Development work included a pilot study to improve the survey questionnaire.

The revised questionnaire was completed by 410 teachers and 298 principals in September 1986. WVASA received the completed questionnaire in late October, and the returns confirmed the randomness of the sample.

The questionnaire asked principals and teachers to give information about how primary students are currently spending their instructional time, how they spent instructional time in the past, and how, if teachers and principals could design an ideal instructional day, students would spend their instructional time. Under each category of time (i.e., current, past, and ideal), the survey asked respondents how much time was spent teaching each subject and which person or agency had the most influence on their own decisions (as reported on the questionnaire) about instructional time. Other questions concerned the opportunity to learn to read, satisfaction with students' achievement, and ability to meet individual needs.

Results

First, teachers and principals reported a use of time that does conform to the standards of the new policy on use of instructional time (Policy 2321). They reported a use of time that did conform to those standards in the past (before the adoption of the policy). They also reported a use of time that, if they could specify an ideal use of instructional time, would conform to those standards.

Second, the study found no statistically significant differences among teachers' and principals' reports of past, current, and ideal use of instructional time for reading. Both groups--under all circumstances--view 50 percent (+/- 2 percent) as the correct proportion of total instructional time to devote to language arts at the primary level, while they view about

30 percent (+/- 2 percent) as the correct proportion of total instructional time to use for reading instruction. It should be noted again that the West Virginia standards mandate 35-50 percent of instructional time be devoted to language arts.

Third, the study documents teachers' and principals' perceptions that local persons or agencies had (in the past) or would have (ideally) the greatest influence over their use of instructional time, but that at present state agencies have the greatest influence.

Fourth, a large proportion of both teachers and principals reported that they are or would be satisfied or very satisfied with student achievement under all circumstances (i.e., current, past, or ideal). The study found some significant differences in level of satisfaction, however, between teachers and principals under different circumstances.

Other results indicate that principals believe students could reach their reading achievement potential better under ideal circumstances than under current or past circumstances and that both teachers and principals believe individual needs would be best met under ideal circumstances.

Conclusions

A representative sample of West Virginia's primary level teachers and principals seem to believe that the state standards on use of instructional time would be met even in the absence of state policy. Because they consider the strong influence of local agencies or persons to be ideal, teachers and principals appear to be dissatisfied, not with the standards of the policy, but with the extent of influence over their own decisions that they believe the policy gives state agencies.

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INTRODUCTION

The use of instructional time in West Virginia public schools was addressed by the West Virginia Board of Education (WVBE) in May 1984, when they adopted Policy 2510. A section of the policy (2.1.A.4) established the "percentage range" of instructional time to be spent in programs of study (subject matter) in grades K-12. At its meeting of March 14, 1986, the WVBE approved a revision, Policy 2321 (Standards for Educational Quality), which again addressed the topic of the use of instructional time in the classroom.

Policy 2321, Section 6.5, states, "Adequate time is provided during classroom periods, the instructional day, and the instructional term for teaching and learning to occur." As related to this study, Policy 2321, Section 6.5d, states:

> Instructional time allocations (315 minutes, 180 days) are provided for grades 1-4 to meet or exceed the following: art, 3-5%; health and science, 5-7%; language arts and reading, 35-50%; mathematics, 16-19%; music, 3-5%; physical education, 3-5%; social studies, 5-7%; discretionary time, 2-30%.

Policy 2510 defines discretionary time as time that "may be used for (a) additional time for programs of study, (b) bus/school safety, (c) additional learning outcomes, (d) remediation, and (e) addressing individual and group interests and needs."

WVASA Study Group

On April 14, 1986, AEL convened a study group of the West Virginia Association of School Administrators (WVASA) to select a statewide issue which would be appropriate for in-depth investigation and study. AEL provided a small grant to the WVASA to support study group expenses.

During the spring of 1986, the group met several times to select the focus of their work. The group expressed an interest in basic skills achievement--specifically reading achievement in the primary grades. More particularly, they were interested in the effect on reading achievement of the recent state board policies which mandated the specific times to be spent for teaching and learning of many subjects. The WVASA study group agreed that the issue would be studied by data collected from surveys to be administered to teachers (grades 1-3) and principals of schools containing grades 1-3. In a series of working meetings, the WVASA study group planned and developed the questionnaire to meet the objectives of the proposed study. The final versions of the teacher and principal questionnaires are presented as Appendix A.

Objectives and Questions

The WVASA study was designed to retrieve data and opinions relative to general objectives and specific questions developed by the WVASA-AEL study group on basic skills achievement and its relationship to the use of instructional time in grades one through three.

Objectives. The study's objectives were:

(1) to determine how much time (in total minutes per week and percent of total minutes per week) students currently spend in reading; how much time first-third graders used to spend (before 1984); and how much time, in teachers' and principals' opinions, would be optimum in grades one, two, and three, for students to spend learning to read;

(2) to determine if a statistically significant difference exists between and among the past, current, and ideal use of instructional time in reading;

(3) to determine if, in the opinion of teachers and principals, teachers are meeting the WVBE policies in the use of instructional time (grades 1-3); and

(4) to determine the past, current, and ideal (as perceived by teachers and principals) use of instructional time in all subject matter areas of grades one through three.

Questions. The study attempted to answer questions proposed by the WVASA study group. These questions were:

(1) What agency or person has, had, and should have the most influence in determining the use of instructional time in grades one through three?

(2) How satisfied are teachers and principals relative to student reading achievement? Does this level of satisfaction about achievement differ from current, past, and ideal use of time?

(3) Do the perceptions and opinions of the teachers and principals differ significantly?

Instructional Time Survey (ITS)

Each version of the ITS contains four sections. Section I asks for selected demographic data about respondents and their schools. Section II--referred to throughout this report as "current use of instructional time"--asks teachers (and principals) how students spend their time in school: how many minutes per week are spent on each subject area. Section III--"past use of instructional time"--asks teachers and principals how students used to spend their time prior to the initiation of Policy 2510, by minutes per week per subject area. The final section, Section IV--referred to as "ideal use of instructional time"--asks teachers and principals how they think students should spend time (per subject area) for optimum reading achievement results. Sections II, III, and IV are parallel in terms of questions asked; the major difference is the time frame in each section: current, past, and ideal. (See questionnaires in Appendix A.)

Pilot Study

The two versions of the ITS were administered in a pilot study during August 1986. A group of 33 teachers and 11 principals was identified to pilot test the ITSs. The purposes of the pilot study were: (1) to determine the average length of time required to complete each ITS, (2) to identify words and/or questions on the ITS that may have been ambiguous, and (3) to receive written comments about the ITS. Only minor changes were necessary, based on pilot test comments.

THE STUDY'S SAMPLE OF TEACHERS AND PRINCIPALS

Sampling Procedure for Principals

The sampling procedures for the principals in the study were designed to yield a truly random sample of those principals in the population of West Virginia building principals of grades one, two, three, or any combination thereof. Through the administrators' association, each West Virginia county superintendent of schools was asked to prepare a list of all grade one, two, and three building principals at the start of the 1986-87 school year. Through repeated phone calls and written requests, all 55 county superintendents responded with the requested lists. A total of 681 principals' names were provided by the superintendents: this was the population of principals in the study. Using information provided by Krejcie and Morgan (1970), a sample of 248 was determined to be representative of the population. Because there was no time for followups on nonrespondents nor time to draw a second sample, in case it was needed, it was decided to draw a large random sample at the beginning for the single data collection effort. Thus, it was decided to draw a random sample of 397 names from the population of 681.

Drawing he random sample of principals was performed at the Appalachia Educational Laboratory using established research procedures. First, after all the lists of principals' names were received, they were shuffled several times. Second, after shuffling, every individual name on the principal lists were assigned a unique three digit number. Third, using the table of random numbers in Blalock (1972) and procedures suggested in that text, a support staff employee having no connection

with the study determined the page and the exact spot on the page for the random number draw to start. Per instructions, the directions of movement within the table of random numbers were determined ahead of the spot selection and these directions were announced publicly. The whole procedure was witnessed for verification purposes. Fourth, with the starting position noted, a staff member proceeded in the predetermined directions on the page to find three digit numbers in the table which matched a three digit number in the population list. When a match was found, the number on the list was "flagged." Fifth, and last, when four hundred "flagged" principals' numbers were found, the drawing of the sample was completed and those principals in the study were listed by county name. Through these randomization procedures, it can be said with confidence that each principals' name, supplied by the county superintendents, had an equally likely chance to be in the sample chosen to receive a questionnaire.

Sampling Procedure for Teachers

The sampling procedures for the teachers in the study were very similar to those of the principals. The purpose was to yield a truly random sample of those teachers of grades one, two, or three in West Virginia who teach reading. Each West Virginia county superintendent of schools was asked to prepare a list of all grade one, two, or three teachers who taught reading at the start of the 1986-87 school year. As with principals, all 55 county superintendents responded with the requested lists. A total of 3,877 teachers' names were provided by the superintendents: this was the population of teachers in the study. Krejcie and Morgan (1970) recommend a sample of 351 to be representative

of this population. It was decided to draw a large sample to compensate for lack of opportunity for followups and call-backs. It was decided to draw a sample of 595 names from the population of 3,877 teachers.

Drawing the random sample of teachers was performed at the Appalachia Educational Laboratory using established research procedures. The process was very similar to that of the principals. First, all the lists of teachers' names were shuffled several times. Second, every individual teacher name on each list was given a unique three digit number. Third, using Blalock's table of random numbers and his suggested procedures, a support staff employee having no connection with the study determined both the page and the exact spot on the page for the random number draw to start. As before, the directions of movement within the table were determined ahead of time and announced publicly. Fourth, a staff member proceeded in the table of random numbers until a match with a teacher's number was made. Each such match was "flagged." Fifth, when six hundred "flagged" teachers' numbers were found, the drawing of the sample was completed and those teachers in the study were listed by county. Through these randomization procedures, it can be said with confidence that each grade one, two, or three reading teacher name supplied by the county superintendent had an equally likely chance to be in the sample to receive a questionnaire.

Teacher Sample

As stated above, 595 teachers were randomly selected to participate in the study. The size of the sample represented 15.4 percent of the total population of teachers (3,877). A total of 410 completed teacher surveys were returned; thus, 68.9 percent of the teacher sample returned

completed ITSs. The 410 completed ITSs represented 10.6 percent of the total teacher population (3,877).

The data displayed in Table 1 present the number and percent, by county, of the teacher population (grades 1-3), the sample of teachers, and the responding teachers. Table 1 data indicate that the sample of teachers was random across the state, and the completed surveys were approximately proportional, by county, to the total population and sample.

Principal Sample

As stated above, 397 principals were randomly selected to participate in the study. The size of the sample represented 58.3 percent of the total population of elementary principals (681). A total of 298 completed principal ITSs were returned; thus, 75.1 percent of the principal sample returned surveys. The 298 completed surveys represented 43.8 percent of the total principal population (681).

The data displayed in Table 2 present the number and percent, by county, of the total principal population, the sample of principals, and the respondents. The data presented in Table 2 indicate that the sample of principals was random, and the completed surveys were approximately proportional, by county, to the total population and sample.

Blalock, H. M., Jr. (2nd Edition) Social Statistics, McGraw-Hill, New York, 1972.

Krejcie, R. V., & Morgan, O. W. "Determining Sample Size for Research Activities." Educational and Psychological Measurement, 1970, 30, 607-610.

Table 1

Distribution of Teacher Population and Sample by County

County	Population: # of Teachers (Grades 1, 2, 3)	% of Population	# in Sample	% of Sample	# of Completed Surveys	% of Total Responses
Barbour	37	1.0	7	1.2	7	1.7
Berkeley	97	2.5	2	2.7	16	3.9
Boone	64	1.7	8	1.3	7	1.7
Braxton	28	0.7	2	0.3	2	0.5
Brooke	51	1.3	6	1.0	5	1.2
Cabell	182	4.7	31	5.2	26	6.3
Calhoun	21	0.5	4	0.8	2	0.5
Clay	30	0.8	5	0.8	4	1.0
Doddridge	20	0.5	2	0.3	2	0.5
Fayette	124	3.2	16	2.7	14	3.4
Gilmer	17	0.4	2	0.3	2	0.5
Grant	22	0.6	3	0.5	2	0.5
Greenbrier	79	2.0	15	2.5	11	2.7
Hampshire	31	0.8	4	0.7	4	1.0
Hancock	62	1.6	10	1.7	1	0.2
Hardy	20	0.5	1	0.2	0	0.0
Harrison	143	3.7	21	3.5	17	4.2
Jackson	56	1.4	6	1.0	6	1.5
Jefferson	73	1.9	15	2.5	12	2.9
Kanawha	419	10.8	59	9.9	11	2.7
Lewis	38	1.0	3	0.5	3	0.7
Lincoln	59	1.5	11	1.9	6	1.5
Logan	117	3.0	22	3.7	10	2.4
Marion	88	2.3	11	1.9	6	1.5
Marshall	74	1.9	12	2.0	8	2.0
Mason	60	1.6	16	2.7	13	3.2
McDowell	109	2.8	17	2.9	15	3.7
Mercer	139	3.6	0	0.0	0	0.0
Mineral	56	1.4	10	1.7	10	2.4
Mingo	100	2.6	16	2.7	5	1.2

Table 1 (continued)

County	Population: # of Teachers (Grades 1, 2, 3)	% of Population	# in Sample	% of Sample	# of Completed Surveys	% of Total Responses
Monongalia	116	3.0	17	2.9	15	3.7
Monroe	26	0.7	4	0.7	4	1.0
Morgan	29	0.7	2	0.3	2	0.5
Nicholas	66	1.7	12	2.0	9	2.2
Ohio	77	2.0	12	2.0	11	2.7
Pendleton	16	0.4	1	0.2	0	0.0
Pleasants	18	0.5	4	0.7	4	1.0
Pocahontas	20	0.5	2	0.3	0	0.0
Preston	68	1.8	8	1.3	2	0.5
Putnam	85	2.2	17	2.9	15	3.7
Raleigh	182	4.7	32	5.4	2	6.3
Randolph	62	1.6	10	1.7	9	2.2
Ritchie	23	0.6	4	0.7	2	0.5
Roane	33	0.9	3	0.5	1	0.2
Summers	32	0.8	5	0.8	2	0.5
Taylor	36	0.9	4	0.7	1	0.2
Tucker	15	0.4	1	0.2	1	0.2
Tyler	19	0.5	5	0.8	3	0.7
Upshur	52	1.3	8	1.3	8	2.0
Wayne	102	2.6	16	2.7	13	3.2
Webster	29	0.8	2	0.3	2	0.5
Wetzel	41	1.1	10	1.7	7	1.7
Wirt	12	0.3	4	0.7	2	0.5
Wood	216	5.6	41	6.9	33	8.1
Wyoming	86	2.2	14	2.4	11	2.7
Total	3,877	100.1	595	100.2	410	100.3

Table 2

Distribution of Principal Population and Sample by County

County	Population: # of Teachers (Grades 1, 2, 3)	% of Population	# in Sample	% of Sample	# of Completed Surveys	% of Total Responses
Barbour	6	0.9	4	1.0	4	1.3
Berkeley	14	2.1	9	2.3	8	2.7
Boone	16	2.4	8	2.0	7	2.3
Braxton	6	0.9	5	1.3	2	0.7
Brooke	9	1.3	8	2.0	5	1.7
Cabell	29	4.3	17	4.3	13	4.4
Calhoun	4	0.6	0	0.0	0	0.0
Clay	8	1.2	4	1.0	4	1.3
Doddridge	9	1.3	7	1.8	7	2.3
Fayette	22	3.2	14	3.5	14	4.7
Gilmer	5	0.7	4	1.0	3	1.0
Grant	4	0.6	3	0.8	3	1.0
Greenbrier	12	1.8	8	2.0	7	2.3
Hampshire	8	1.2	5	1.3	5	1.7
Hancock	9	1.3	7	1.8	5	1.7
Hardy	3	0.4	2	0.5	2	0.7
Harrison	23	3.4	16	4.0	15	5.0
Jackson	8	1.2	5	1.3	5	1.7
Jefferson	8	1.2	3	0.8	3	1.0
Kanawha	77	11.3	44	11.1	17	5.7
Lewis	9	1.3	5	1.3	4	1.3
Lincoln	15	2.2	10	2.5	6	2.0
Logan	25	3.7	15	3.8	9	3.0
Marion	16	2.3	10	2.5	8	2.7
Marshall	12	1.8	8	2.0	5	1.7
Mason	12	1.8	6	1.5	3	1.0
McDowell	21	3.1	11	2.8	10	3.4
Mercer	25	3.7	0	0.0	0	0.0
Mineral	10	1.5	4	1.0	4	1.3
Mingo	19	2.8	11	2.8	6	2.0

Table 2 (continued)

County	Population: # of Teachers (Grades 1, 2, 3)	% of Population	# in Sample	% of Sample	# of Completed Surveys	% of Total Responses
Monongalia	19	2.8	14	3.5	11	3.7
Monroe	5	0.7	3	0.8	2	0.7
Morgan	6	0.9	5	1.3	5	1.7
Nicholas	18	2.6	13	3.3	10	3.5
Ohio	9	1.3	7	1.8	7	2.3
Pendleton	5	0.7	4	1.0	4	1.3
Pleasants	2	0.3	1	0.3	1	0.3
Pocahontas	3	0.4	2	0.5	1	0.3
Preston	10	1.5	7	1.8	5	1.7
Putnam	15	2.2	10	2.5	6	2.0
Raleigh	29	4.3	12	3.0	9	3.0
Randolph	11	1.6	6	1.5	4	1.3
Ritchie	6	0.9		0.8	3	1.0
Roane	6	0.9	3	0.8	2	0.7
Summers	7	1.0	5	1.3	3	1.0
Taylor	6	0.9	3	0.8	3	1.0
Tucker	3	0.4	1	0.3	1	0.3
Tyler	2	0.3	2	0.5	2	0.7
Upshur	9	1.3	3	0.8	3	1.0
Wayne	16	2.4	11	2.8	9	3.0
Webster	4	0.6	4	1.0	4	1.3
Wetzel	4	0.6	3	0.8	1	0.3
Wirt	2	0.3	1	0.3	0	0.0
Wood	25	3.7	17	4.3	15	5.0
Wyoming	15	2.2	4	1.0	4	1.3
Total	681	100.3	397	100.8	298	100.0

PRESENTATION AND ANALYSIS OF TEACHER RESPONSES

Demographics

Section I of the teacher version of the ITS retrieved certain demographic data related to the responding teachers, their classrooms, and their schools. These data are presented in Tables 3 through 11.

Years of experience. Table 3 displays the years of teaching experience of the responding teachers. About one-tenth of the teachers (11.5 percent) had five or less years of teaching experience, and 42.8 had 10 or less years of experience. The mean number of years of teaching experience was 15.1 with a standard deviation of 6.53. The median number of years of experience was 12.3. Primary teachers in West Virginia are experienced teachers, averaging over 15 years in the classroom.

Table 3

Years of Teaching Experience of Teachers

Experience Categories	N	Percent of Total	Cumulative Percent
< 2 years	15	3.7	
2-5 years	32	7.8	11.5
6-10 years	128	31.3	42.8
11-20 years	170	41.6	84.4
> 20 years	64	15.7	100.1
Total	409	100.1	

Teachers by grade level. The teaching responsibility, by grade level, of the responding teachers is displayed in Table 4. Slightly more

than one-third teach the first grade (36.3 percent), and slightly less than one-third teach the third grade (29.5 percent).

Table 4

Number of First, Second, and Third Grade Teachers in the Sample Population

Teacher Grade Level	Sample N	Percent of Sample
First	159	36.6
Second	147	33.9
Third	128	29.5
Total	434*	100.0

*Exceeds total sample because of those teachers teaching in a split-grade classroom.

Number of teachers teaching reading. All responding teachers had the responsibility to teach reading. Approximately one-fifth (19.7 percent) of the teachers taught in a school in which they were the only teacher responsible for teaching reading at their grade level. (See Table 5.) Approximately one-third (31.6 percent) of the teachers taught in a school in which they and one other teacher taught reading at the same grade level. Thus, slightly more than one-half (51.3 percent) of the teachers taught in a school in which one or two teachers taught reading at the same grade level.

Classroom organization. The data displayed in Table 6 indicates that most primary teachers (95.6 percent) teach in a self-contained classroom. Eighty-seven percent of the teachers teach a single grade level, and 8.6 percent teach in a split-grade, self-contained classroom.

Very few teachers (4.4 percent) reported teaching in a team teaching classroom.

Table 5

Number of Teachers Teaching Reading in Teacher's School at the Same Grade Level

# of Other Teachers at Same Grade Level	N	Percent of Total	Cumulative Percent
0	81	19.7	
1	130	31.6	51.3
2	113	27.5	78.8
3	49	11.9	90.7
4	24	5.8	96.5
5	5	1.5	98.0
6	4	1.0	99.0
7	4	1.0	100.0
Total	410		

Table 6

Classroom Organizational Structure of Teachers

Classroom Organization	N	Percent of Total	Cumulative Percent
Self-Contained	376	87.0	
Split-Grade	37	8.6	95.6
Team Teaching	19	.4	100.0
Total	432	100.0	

Class size. Approximately three-fifths (57.8 percent) of the responding teachers' classrooms held 20 or less students. (See Table 7.) The mean class size was 19.5 students, with a standard deviation of

3.63. The median class size was 19.7 pupils; the range was 9 to 27 students. Very few classrooms (4.1 percent) exceeded 25 students.

Table 7

Class Size of Teachers

Class Size	N	Percent of Total	Cumulative Percent
<15 pupils	38	9.7	
16-20 pupils	188	48.1	57.8
21-25 pupils	149	38.1	95.9
>25 pupils	16	4.1	100.0
Total	391	100.0	

School organization. The data in Table 8 indicate that the teachers' schools were organized in a variety of administrative structures; they varied from K-2 to K-8. The majority of schools (55.8 percent) were organized in K-6 administrative structure. (See Table 8.)

Table 8

Organizational Structure of Schools, as Reported by Teachers

School Organization	N	Percent of Total
K-2	9	2.2
K-3	12	3.0
K-4	43	10.6
K-5	60	14.8
K-6	226	55.8
1-5	5	1.2
1-6	13	3.2
K-8	37	9.1
Total	405	99.9

School population. Approximately three-fifths (59.1 percent) of the teachers' schools were under 350 pupils. (See Table 9.) The mean school population was 312.7 pupils, with a standard deviation of 139.37. The median school population was 307.8 pupils. Approximately one-fourth (24.1 percent) of the schools had a population of 450 pupils or more.

Table 9

School Population, Reported by Teachers

School Population	N	Percent of Total	Cumulative Percent
< 150 pupils	52	14.7	
150-250 pupils	82	23.2	37.9
251-350 pupils	75	21.2	59.1
351-450 pupils	59	16.7	75.8
> 450 pupils	85	24.1	99.9
Total	353	99.9	

Assistance in teaching reading. A majority (63.3 percent) of the teachers receive assistance in teaching reading to their students. (See Table 10.)

Table 10

Number of Teachers Receiving Assistance in Teaching Reading

Receive Assistance	N	Percent of Total
Yes	260	63.3
No	151	36.7
Total	411	100.0

Type of assistance received. Table 11 lists the kinds of assistance teachers reported. Of those teachers receiving assistance, approximately nine of out ten (88.8 percent) received assistance from people connected with Chapter 1, remedial reading, or special education programs. Only one of the teachers (0.4 percent) mentioned volunteers as an assistant in teaching reading.

Table 11

Type of Assistance Received by Teachers in Teaching Reading

Type of Assistance	Frequency	Percent of Totals	Cumulative Percent
Chapter 1	143	57.8	
Remedial Teacher	56	20.3	72.1
Special Education Teacher	25	9.1	81.2
Learning Disabled Teacher	21	7.6	88.8
Tutor	19	6.9	95.7
Aide	5	1.8	97.5
Gifted Teacher	3	1.1	98.6
Resource Teacher	3	1.1	99.7
Volunteer	1	0.4	100.1
Total	276*	100.1	

*The total frequency exceeds the number of teachers receiving assistance (260) because some teachers received more than one type of assistance, e.g., Chapter 1 and aide.

Generalization of teacher demographics. From the demographic data in Section I of the ITS (teacher version), generalizations can be made about West Virginia teachers in grades one through three. The typical teacher in grades one, two, and three has approximately 15 years of teaching experience and teaches in a self-contained classroom of under 20 pupils, in a K-6 school of approximately 300 pupils. In the teaching of reading, the typical teacher receives some type of assistance either from Chapter I, remedial reading, or special education. In a typical school, there are one or two teachers at each grade level who teach reading. The reader is reminded that these generalizations of "typical" teachers and schools are based on means and majority percentages; individual teachers, classrooms, and schools will vary.

Current Use of Instructional Time

Remember that the purpose of Section II--"Current Use of Instructional Time"--was to determine teachers' perceptions of how much time students spend in grades 1-3, in an average week, by subject area. Table 12 lists the mean values of teacher reports for the following: the total number of instructional minutes per week, number of minutes per week per subject matter, and percent of total instructional time per subject area. The responses of all teachers (grades one through three) are combined. Teachers report that students currently spend one-half (49.2 percent) of their instructional time learning language arts (842.9 minutes/week out of an available 1713.2 instructional minutes/week). Approximately three-fifths (58.4 percent) of that language arts instructional time is used to teach reading (492.0 minutes/week) in

grades one through three. In other words, teachers report that students spend more than one-fourth (28.7 percent) of their total instructional week learning to read in grades one through three.

Table 12

Current Use of Instructional Time[1] as Perceived by Teachers

Subject Matter	Mean (minutes/week)	Standard Deviation	Percent of Total Time
Reading	492.0	161.9	28.7
Spelling	123.2	57.4	7.2
Handwriting	100.8	48.1	5.9
English	126.9	52.6	7.4
Total Language Arts	842.9	135.4	49.2[3]
Mathematics	284.3	51.2	16.6
Social Studies	104.1	41.2	6.1
Science and Health	140.6	68.0	8.2
Art	65.8	25.3	3.9
Music	70.0	26.0	4.1
Physical Education	91.0	40.1	5.3
Discretionary Time	114.5	92.0	6.7
Total Time[2]	1,713.2	126.0	100.1

[1]Instructional time per week expressed in minutes
[2]Sum of time per subject matter area, plus discretionary time
[3]Standard error = 2.5

When teacher reports of the current use of instructional time are compared with WVBE Policies 2510 and 2321 (see page 1), it seems evident that the policies are being met (and exceeded) in grades one through three. The WVBE policies state that the instructional day is 315 minutes (1575 minutes/week). Teachers report over 1700 minutes/week in 1986-87. The WVBE policies require a minimum of 35-50 percent of time to be used to teach language arts. The teachers report that language arts is taught 49.2 percent--a percentage that nearly reaches the upper limit of the WVBE requirement. In fact, considering that the teachers' reported instructional day is longer than the required 315 minutes, the 49 percent clearly exceeds the minimum standards established by the WVBE. The minimum standard for teaching language arts in grades one through three is 551.25 minutes/week (1575 x 0.35). It can be shown statistically that 96.6 percent of the surveyed teachers meet the minimum WVBE requirement for teaching language arts.*

Most influence on use of time. The teachers were asked, in their opinion, what person or agency has the most influence on decisions about how students currently spend instructional time. (See Question 1, Section II, of Teacher Questionnaire, Appendix A.) Their responses are presented in Table 13. Approximately three-fifths (60.8 percent) of the

*The mean minutes/week currently being used to teach language arts is 842.9, with a standard deviation of 135.4. Under conditions of a normal distribution, 48.3 percent of the distribution is 2.12 standard deviations from the mean score; thus, 842.9 - (2.12 x 135.4) = 555.9. Since 555.9 is greater than 551.25 (1575 x 0.35), approximately 96.6 percent of the teachers exceed the minimum requirement.

teachers perceive the West Virginia Department of Education as the person or agency having the most influence on the current use of instructional time. Only 13.3 percent of the teachers believe that teachers have the most influence in how much time students spend in different subjects for instruction.

Table 13

Person or Agency Having the Most Influence on Current Use of Instructional Time as Perceived by Teachers

Person or Agency	Frequency	Percent of Total	Cumulative Percent
Teacher	53	13.3	
Principal	19	4.8	18.1
Central Office	25	6.3	24.4
Superintendent	12	3.0	27.4
Local Board of Education	6	1.5	28.9
State Deptartment of Education	243	60.8	89.7
State Board of Education	42	10.5	100.2
Total	400	100.2	

For the purposes of reporting data, several responses were combined to form two categories: local control vs. state control. If responses were teachers, principals, central office staff, county superintendents, and local board of education, they were coded as "local" influence; the state department of education and the state board of education were combined to form "state" influence. Teachers clearly perceive the state

influence (71.3 percent) as greater than local influence (28.9 percent) in the current use of instructional time.

Opportunity to learn to read. The teachers in grades one through three were asked, "Do your students have the opportunity to learn to read at grade level under current use of instructional time?" The responses to this question are displayed in Table 14. Almost all teachers (97.3 percent) answered in the affirmative.

Table 14

Teacher Responses to "Do Your Students Have the Opportunity to Learn to Read at Grade Level?" Under Current Use of Instructional Time

Opportunity to Read at Grade Level	Frequency	Percent of Total
Yes	392	97.3
No	11	2.7
Total	403	100.0

Teacher satisfaction. Teachers were asked how satisfied they are that their students are reaching their reading achievement potential under the current use of instructional time. Their responses are displayed in Table 15. Most teachers (88.1 percent) were satisfied or very satisfied that their students are reaching their reading achievement potential under the current use of instructional time.

Individual learner differences. The last question in Section II asked teachers if they are able to meet individual learner differences in reading given the current allocation of instructional time. The teachers' responses are displayed in Table 16. Over two-thirds of the

teachers (70.8 percent) believe they can meet individual differences in reading, while 29.2 percent of the teachers believe they are not able to meet individual learner differences under the current use of instructional time.

Table 15

Teacher Satisfaction that Students are Reaching Their Reading Achievement Potential Under the Current Use of Instructional Time

Degree of Satisfaction	Frequency	Percent of Total
Very Satisfied	93	23.0
Satisfied	263	65.1
Dissatisfied	41	10.1
Very Dissatisfied	7	1.7
Total	404	99.9

Table 16

Under Current Time Allocation, Are Teachers Able to Meet Individual Learner Differences in Reading?

Meeting Individual Learning Differences	Frequency	Percent of Total
Yes	283	70.8
No	117	29.2
Total	400	100.0

Past Use of Instructional Time

Now we move to results from Section III--Past Use of Instructional Time. We asked teachers to think back several years, to 1984, and tell how students used to spend time per subject area in an average week. The year of "past use of time" preceded the implementation of the state policies regarding use of time.

Presented in Table 17 are the mean values of the total number of instructional minutes per week, the number of minutes per week per subject matter, and the percent of total instructional time per subject matter, reported by teachers as to how students used to spend time (past use of time). The responses indicate that, in the past, students spent approximately 50.0 percent of instructional time (1707.7 minutes/week) learning langage arts (853.6 minutes/week). Approximately three-fifths (59.7 percent) of the language arts instructional time was used to teach reading (509.6 minutes/week). That is, approximately 29.8 percent of the total instructional time used to be spent teaching reading in grades one through three.

When the comparison was made between the past use of instructional time for language arts and WVBE Policies 2510 and 2321, it was concluded that from teachers' perceptions, the policies were being met in grades one through three, even before they were written and implemented. Remember, the WVBE policies state that the instructional day is 315 minutes (1575 minutes/week), and 35-50 percent of that time should be used to teach language arts. That translates to between 551.25 and 787.50 minutes per week. The teachers of grades one through three report that the mean percent of instructional time used to teach language arts

Table 17

Past Use of Instructional Time[1] as Perceived by Teachers

Subject Matter	Mean (minutes/week)	Standard Deviation	Percent of Total Time
Reading	509.6	180.9	29.8
Spelling	121.8	78.7	7.1
Handwriting	98.3	37.2	5.8
English	123.9	61.0	7.3
Total Language Arts	856.6	138.7	50.0[3]
Mathematics	273.7	64.8	16.0
Social Studies	95.6	46.3	5.6
Science and Health	131.0	75.8	7.7
Art	65.7	29.8	3.9
Music	69.6	30.3	4.1
Physical Education	98.1	44.0	5.8
Discretionary Time	120.4	101.6	5.8
Total Time[2]	1,707.7	130.0	100.2

[1]Instructional time per week expressed in minutes
[2]Sum of time per subject matter area, plus discretionary time
[3]Standard error = 2.5

used to be 50.0 percent. That translates to 853.6 minutes per week, a mean that clearly exceeds the minimum state requirements. Further, statistically it can be shown that, according to teacher self-report, 96.6 percent of teachers in grades one through three were meeting the minimum WVBE requirement for teaching language arts,* before the policy was implemented.

Current vs. past use of time. To this point, it has been observed that teachers of grades one through three are in compliance with WVBE Policies 2510 and 2321 in both current and past practice. The t-test was applied to the differences in the mean minutes per week and mean percent of time used to teach language arts and reading under current and past use of instructional time. There were no significant differences found between current and past uses of instructional time, according to teacher reports.

Most influence on use of time. The teachers were asked to identify the person or agency they perceived as having had the most influence on how students used to spend instructional time; their responses are presented in Table 18. Approximately two-fifths (40.0 percent) of the teachers perceived that the state department of education had the most influence on past decisions about how instructional time was used.

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*The mean minutes/week used in the past to teach language arts was 853.6, with a standard deviation of 138.7. Under conditions of a normal distribution, 48.3 percent of the distribution is 2.12 standard deviations from the mean score; thus, 853 - (2.12 x 138.7) = 559.0. Since 559.0 is greater than 551.25 (1575 x 0.35., approximately 96.6 percent of the teachers exceeded the minimum requirement.

Table 18

Person or Agency Having the Most Influence on Past Use of Instructional Time as Perceived by the Teachers

Person or Agency	Frequency	Percent of Total	Cumulative Percent
Teacher	79	23.2	
Principal	31	9.1	32.3
Central Office	34	10.0	42.3
Superintendent	15	4.4	46.7
Local Board of Education	11	3.2	49.9
State Department of Education	136	40.0	89.9
State Board of Education	34	10.0	99.9
Total	340	99.9	

The data displayed in Table 18 were combined to form "local" influence and "state" influence. Teachers perceive the state influence (50.1 percent) and the local influence (49.9 percent) were approximately equal in determining the past use of instructional time.

A t-value (6.17) was calculated to determine if there was a significant difference between teachers' perceptions of state influence on current vs. past use of instructional time. The alculated t-value is significant beyond the 0.01 level of confidence.

A chi-square value (77.14) was calculated to determine if frequencies of choices of p· ·son or agency having most influence in current use of instructional time wa: significantly different from the

frequencies of choice of person or agency having most influence in past use of instructional time. The chi-square value was significant beyond the 0.01 level of confidence. The difference in the frequencies in the cells of state department of education, teacher, and principal were, in descending values, the highest contributions to the calculated chi-square value.

Opportunity to learn to read. The teachers in grades one through three were asked, "Did your students have the opportunity to learn to read at grade level?" under past use of instructional time. The responses are displayed in Table 19. It can be observed that 95.7 percent of the teachers answered in the affirmative. There was no significant difference between the responses to this question and the similar one in Section II (current use of time).

Table 19

Teacher Responses to "Did Your Students Have the Opportunity to Learn to Read at Grade Level?" Under Past Use of Instructional Time

Opportunity to Read at Grade Level	Frequency	Percent of Total
Yes	330	95.7
No	15	4.3
Total	345	100.0

Teacher satisfaction. The teachers were asked how satisfied they felt that their students were able to reach their reading achievement potential under the pas use of instructional time. Their responses are displayed in Table 20. Most teachers (88.5 percent) were satisfied or very satisfied that their students were reaching their reading achievement

potential under past use of instructional time. There was no significant difference in level of reported teacher satisfaction between current and past use of time.

Table 20

Teacher Satisfaction that Students Reached Their Reading Achievement Potential Under the Past Instructional Time Allocation

Degree of Satisfaction	Frequency	Percent of Total
Very Satisfied	74	21.4
Satisfied	232	67.1
Dissatisfied	35	10.1
Very Dissatisfied	5	1.4
Total	346	100.0

Individual learner differences. Teachers were asked if they were able to meet individual learner differences in reading, given allocations of time in previous years. As seen in Table 21, three-fourths of the teachers (75.7 percent) answered in the affirmative. There was no significant difference in responses to this question and a similar one in Section II dealing with current use of time.

Table 21

Under Past Time Allocation, Were Teachers Able to Meet Individual Learner Differences in Reading?

Meeting Individual Learning Differences	Frequency	Percent of Total
Yes	259	75.7
No	83	24.3
Total	342	100.0

Ideal Use of Instructional Time

The final section of the ITS, as you may recall, asks teachers how students would spend time in an instructional week, in the teachers' ideal world--one in which reading achievement was at a maximum. Table 22 presents the mean values of the total number of instructional minutes per week, number of minutes per week per subject matter, and percent of total instructional time as reported by teachers when asked for their ideal use of instructional time.

Teachers' ideal instructional week would be 1745.2 minutes/week. A majority of that time (51.9 percent) would be used to teach language arts (904.9 minutes/week). Approximately three-fifths (60.7 percent) of the language arts instructional time would be used to teach reading (549.3 minutes/week). In an ideal schedule, that represents 31.5 percent of the total instructional time to teach reading.

Teacher reports of ideal use of instructional time for language arts exceed the minimum standards of WVBE Policies 2510 and 2321. The WVBE policies state that the instructional day is 315 minutes (1575 minutes/week) and at least 35-50 percent should be used to teach language arts. As stated earlier, 35-50 percent of 575 minutes translates to 551.25-787.50 minutes per week. The teachers' ideal mean percent of total instructional time to teach language arts would be 51.9 percent--a percentage that exceeds the high level of the minimum standards. The teachers' ideal (mean) translated into minutes per week is 904.9 minutes/week--far above the minimum set by the policy. Further, it can

Table 22

Ideal Use of Instructional Time[1]
as Perceived by Teachers

Subject Matter	Mean (minutes/week)	Standard Deviation	Percent of Total Time
Reading	549.3	192.1	31.5
Spelling	125.1	82.2	7.2
Handwriting	102.0	57.1	5.8
English	128.5	54.5	7.4
Total Language Arts	904.9	146.5	51.9[3]
Mathematics	282.0	69.0	16.2
Social Studies	88.4	52.2	5.1
Science and Health	123.8	70.0	7.1
Art	68.3	28.4	3.9
Music	71.4	30.2	4.1
Physical Education	100.3	42.5	5.7
Discretionary Time	106.1	78.8	6.1
Total Time[2]	1,745.2	141.8	100.1

[1]Instructional time per week expressed in minutes
[2]Sum of time per subject matter area, plus discretionary time
[3]Standard error = 2.5

be shown statistically that 98.1 percent of teachers would meet the minimum policy standard for teaching language arts.*

Current vs. ideal use of time. Based on data from teachers' self-reports (see Tables 12, 17, and 22), teachers in grades one through three are in compliance with WVBE Policies 2510 and 2321 now, were in compliance before the policies were implemented, and would be in compliance if ideal use of time was in effect.

In comparing current use with ideal use of time (Section II vs. Section IV of the ITS), there was no significant difference in the percent of total time to be devoted to language arts (49.2 percent vs. 51.9 percent). However, there was a statistica significant difference, beyond the 0.01 level of confidence, between the two sections on the mean number of minutes per week to be devoted to language arts instruction (842.9 minutes/week as current use vs. 904.9 minutes/week reported as ideal use).

The same results held true when current use of time for reading is compared to teacher-reported ideal use of time for reading. The mean percents of total instructional time in current and ideal use were not significantly different (28.7 percent vs. 31.5 percent). However, the mean number of minutes per week of current instructional time used for reading (492.0) was significantly different from the mean number of

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*The ideal mean minutes/week to be used to teach language arts is 904.9, with a standard deviation of 146.5. Under conditions of a normal distribution, 49.1 percent of the distribution is 2.35 standard deviations away from the mean score; thus, 904.9 - (2.35) (146.6) = 560.6. Since 560.6 is greater than 551.25 (1575 x 0.35), approximately 98.1 percent of the teachers would exceed the minimum requirement.

minutes per week of ideal instructional time (549.3), beyond the 0.01 level of confidence.

There appears to be an inconsistency in the above findings relating to the ideal use of instructional time for language arts and reading when compared to current use of instructional time. That is, no significant differences were found in the mean percent of ideal and current use of instructional time for language arts and reading; however, the difference between the number of minutes used for language arts and reading in current and ideal use of instructional time was significant beyond the 0.01 level of confidence. The inconsistency is explained by differences in total instructional time in the current (1713.2 minutesw/week) and the ideal (1745.2 minutes/week) as reported by teachers. A t-value of -3.37 was calculated between the mean current total instructional time and the mean ideal total instructional time; the t-value of -3.37 is significant beyond the 0.01 level of confidence.

Most influence in use of time. The teachers were asked to identify the person or agency who, in their opinion, should have the most influence on the use of instructional time. Their responses are presented in Table 23. Approximately one-fifth (20.5 percent) of the teachers believe the state department of education should be the most influential; approximately three-fifths (64.5 percent) believe the teacher should have the most influence.

When data are combined into two larger categories--"local" influence and "state" influence--the results are conclusive. Teachers believe lc l influence (74.7 percent) should be the predominant influence; 25.3

percent of the teachers believe the state should have the greatest influence on the use of instructional time.

Table 23

Person or Agency Who Should Have the Most Influence on (Ideal) Use of Instructional Time, as Reported by Teachers

Person or Agency	Frequency	Percent of Total	Cumulative Percent
Teacher	233	64.5	
Principal	12	3.3	67.8
Central Office	16	4.4	72.2
Superintendent	4	1.1	73.3
Local Board of Education	5	1.4	74.7
State Department of Education	74	20.5	95.2
State Board of Education	17	4.7	99.9
Total	361	99.9	

The t-value (-13.0) was calculated to determine if the state influence on current use of instructional time (71.3 percent) was significantly different from state influence on ideal use of instructional time (25.3 percent). The calculated t-value is significant beyond the 0.01 level of confidence.

A Chi-Square value (755.06) was calculated to determine if frequencies of choices of the person or agency having the most influence in current use of instructional time were significantly different from

the frequencies of choices of person or agency who should have the most influence on ideal use of instructional time. The Chi-Square value was significant beyond the 0.01 level of confidence. The difference in the frequencies in the cells of teacher, state department of education, and state board of education, in descending values, were the highest contributors to the calculated Chi-Square value.

Opportunity to learn to read. The teachers were asked, "Given the time allotments in Chart C, would your students have the opportunity to learn to read at grade level?" The responses, displayed in Table 24, are clear; 100.0 percent of the teachers answered in the affirmative. There was no significant difference between responses to this question (ideal) and a similar question in the section on current use of time.

Table 24

Teacher Responses to "Will Your Students Have the Opportunity to Learn to Read at Grade Level?" Under Ideal Use of Instructional Time

Opportunity to Read at Grade Level	Frequency	Percent of Total
Yes	369	100.0
No	0	0.0
Total	369	100.0

Teacher satisfaction. The teachers were asked how satisfied they would be that their students could reach their reading achievement potential under ideal use of instructional time. As displayed in Table 25, 99.2 percent of the teachers would be satisfied or very satisfied. The difference (in teacher-reported level of satisfaction with student

reading achievement) between current and ideal use of time is significant beyond the 0.01 level of confidence.

Table 25

Teacher Satisfaction that Students Will Reach Their Reading Achievement Potential Under the Ideal Instructional Time Schedule

Degree of Satisfaction	Frequency	Percent of Total
Very Satisfied	220	59.5
Satisfied	147	39.7
Dissatisfied	1	0.3
Very Dissatisfied	2	0.5
Total	370	100.0

Individual learner differences. The teachers were also asked if they would be able to meet individual learner differences in reading with their ideal schedule of instructional time. The teachers (95.1 percent) responded in the affirmative. (See Table 26.) There is a significant difference in teacher response to this question between current and ideal use of time. The Chi-Square value (28.56) is significant beyond the 0.01 level of confidence.

Table 26

Under Ideal Use of Instructional Time, Would Teachers Be Able to Meet Individual Learner Differences in Reading?

Meeting Individual Learning Differences	Frequency	Percent of Total
Yes	353	95.1
No	18	4.9
Total	371	100.0

Summary of Teacher Data on Use of Instructional Time

The data in Table 27 represent teacher reports of past, current, and ideal uses of instructional time. (See also Tables 12, 17, and 22.) The data are the mean number of minutes per week per subject matter, the mean total minutes per week, and the mean percent of total time per subject matter.

As reported by teachers, the percent of total instructional time used to teach language arts under past, current, and ideal use of time was 50.3, 49.2, and 51.9, respectively. In all three cases, the public school teachers of West Virginia would be meeting the WVBE requirements relative to time for language arts. The differences of these three percentages are statistically insignificant. Reading follows the same pattern as language arts. The percent of total time for reading is slightly higher in the ideal schedule (31.5) than in the past (29.8); both are higher than the current schedule (28.7). The difference is not statistically significant.

Statistically significant differences, beyond the 0.01 level of confidence, were found between the ideal and current number of minutes per week for language arts, for reading, and for total instructional time.

Most influence on use of time. Table 28 is a summary of Tables 13, 18, and 23: teachers' perceptions of the person or agency having the most influence on use of instructional time. Figure 1 is a graphic representation of the data displayed in Table 28.

By use of the t-test and Chi-Square techniques, two comparisons were found to be statistically significant beyond the 0.01 level of confidence. Those comparisons are teacher perceptions of the most influential factors in the current vs. past and in the current vs. ideal uses of instructional time. Teachers perceive the state has a significant influence on the current use of

Table 27

Past, Current, and Ideal Use of Instructional Time as Perceived by Teachers*

Subject Matter	PAST Min./ Wk.	PAST Percent of Total	CURRENT Min./ Wk.	CURRENT Percent of Total	IDEAL Min./ Wk.	IDEAL Percent of Total
Reading	509.6	29.8	472.0	28.7	549.3	31.5
Spelling	121.8	7.1	123.2	7.2	125.1	7.2
Handwriting	98.3	5.8	100.8	5.9	102.0	5.8
English	123.9	7.3	126.9	7.4	128.5	7.4
Total Language Arts	853.6	50.3[1]	842.9	49.2[1]	904.9	51.9[1]
Mathematics	273.7	16.0	284.3	16.6	282.0	16.2
Social Studies	95.6	5.6	104.1	6.1	88.4	5.1
Science and Health	131.0	7.7	140.6	8.2	123.8	7.1
Art	65.7	3.9	65.8	3.9	68.3	3.9
Music	69.6	4.1	76.0	4.1	71.4	4.1
Physical Education	98.1	5.8	91.0	5.3	100.3	5.7
Discretionary Time	120.4	7.1	114.5	6.7	106.1	6.1
Total	1,707.7	100.2	1,713.2	100.1	1,745.2	100.1

*Data displayed as percent of total time
[1]Standard error = 2.5

Table 28

Summary of Teacher Perceptions of Person or Agency Having Most Influence on Past, Current, and Ideal Use of Instructional Time

Person or Agency	PAST N	PAST Percent	PAST Cum. Percent	CURRENT N	CURRENT Percent	CURRENT Cum. Percent	IDEAL N	IDEAL Percent	IDEAL Cum. Percent
Teacher	79	23.0		53	13.2		233	63.7	
Principal	33	9.6	32.6	22	5.5	18.7	16	4.4	68.1
Central Office	34	9.9	42.5	25	6.2	24.9	17	4.7	72.8
Superintendent	16	4.7	47.2	12	3.0	27.9	4	1.1	73.9
Local Board of Education	11	3.2	50.4	6	1.5	29.4	5	1.4	75.3
State Department of Education	136	39.7	90.1	242	60.1	89.5	74	20.2	95.5
State Board of Education	34	9.9	100.0	43	10.7	100.2	17	4.7	100.2
Total	343	100.0		403	100.2		366	100.2	

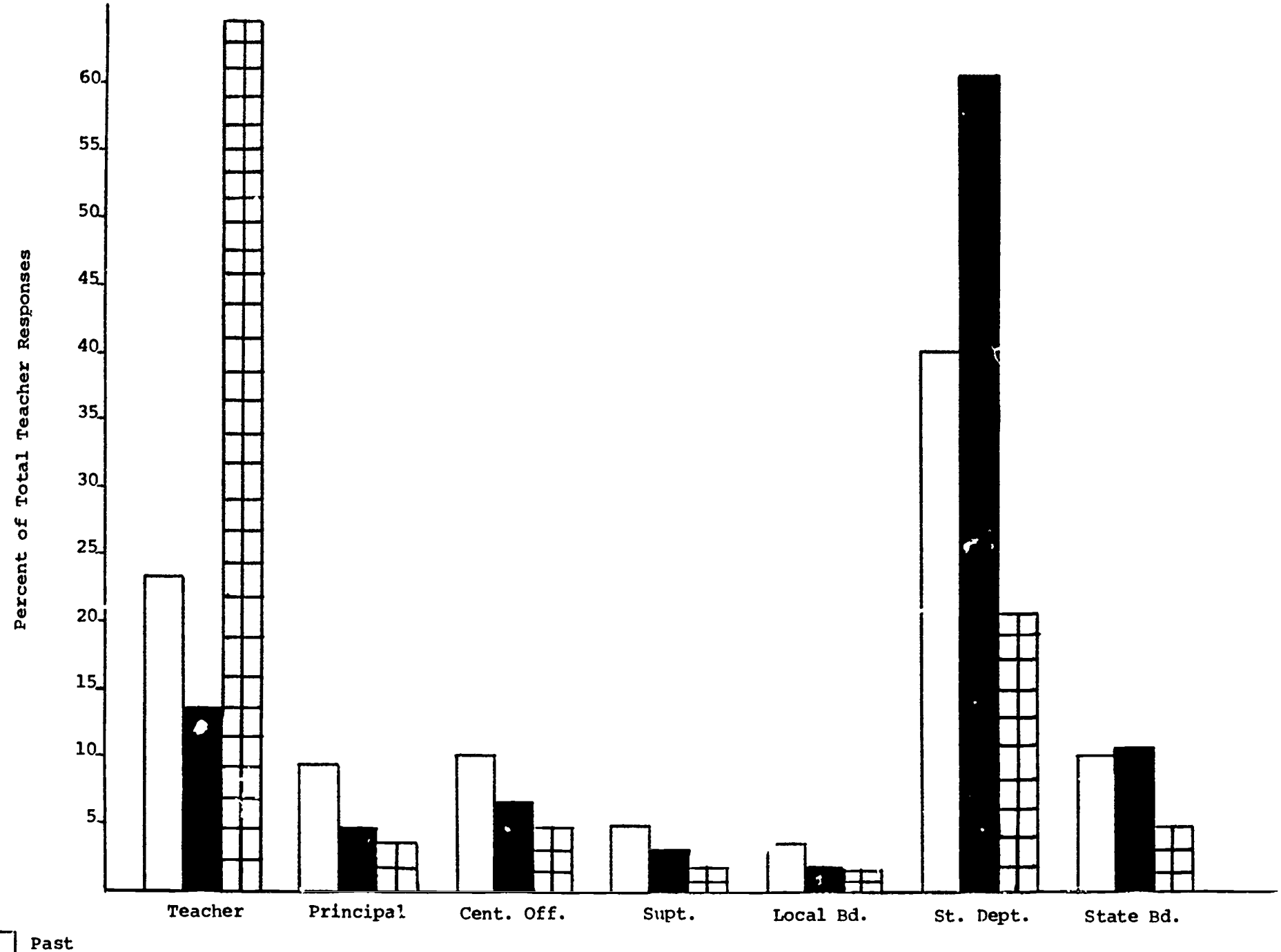

Figure 1

Agency or Individual Having Most Influence on Use of Instructional Time
(Teacher Responses)

instructional time; local persons and agencies would have a significantly greater influence in the ideal use of time, with teachers being the single most influencing factor.

Opportunity to learn to read. There were no significant differences in teachers' opinions about students' opportunities to learn to read at grade level under past, current, or ideal use of instructional time. It should be noted that the teachers were unanimous (100.0 percent) that students would have the opportunity to learn to read at grade level under the ideal use of instructional time.

Teacher satisfaction. Table 29 summarizes data from Tables 15, 20, and 25 about teacher satisfaction that students will reach their reading achievement potential under past, current, and ideal use of instructional time. No significant difference existed between the teachers' level of satisfaction with students under the current vs. past use of instructional time. A significant difference, beyond the 0.01 level of confidence, was found between the teachers' reported satisfaction levels with current vs. ideal use of instructional time. That is, teachers believe they would be more satisfied with student achievement under the ideal time schedule than under their present time schedule.

Individual learner differences. The data presented in Table 30 (from Tables 16, 21, and 26) are teacher responses to being able to meet individual learner differences in reading. No significant difference in teacher responses exist between current vs. past use of instructional time. There was a significant difference, beyond the 0.01 level of confidence, in teachers' responses about being able to meet individual differences between current vs. ideal uses of instructional time.

Table 29

Summary of Teacher Satisfaction That Students Will Reach Their Reading Achievement Potential Under Past, Current and Ideal Use of Instructional Time

Degree of Satisfaction	PAST f	PAST Percent	CURRENT f	CURRENT Percent	IDEAL f	IDEAL Percent
Very Satisfied	74	21.4	93	23.0	220	59.5
Satisfied	232	67.1	263	65.1	147	39.7
Dissatisfied	35	10.1	41	10.1	1	0.3
Very Dissatisfied	5	1.4	7	1.7	2	0.5
Total	346	100.0	404	99.9	370	100.0

Table 30

Summary of Teacher Responses to Being Able to Meet Individual Learning Differences in Reading Under Past, Current, and Ideal Use of Instructional Time

Response	PAST f	PAST Percent	CURRENT f	CURRENT Percent	IDEAL f	IDEAL Percent
Yes	259	75.7	283	70.8	353	95.1
No	83	24.3	117	29.2	18	4.9
Total	342	100.	400	100.0	371	100.0

PRESENTATION AND ANALYSIS OF PRINCIPAL RESPONSES

Demographics

Section I of the principal version of the ITS retrieved certain demographic data related to the responding principals and the physical environment of their schools and classrooms. These data are presented in Tables 31 through 36.

Years of experience. Table 31 displays the principals' years of experience as a principal or assistant principal in West Virginia. Approximately one-fifth (20.6 percent) of the principals had five or less years of experience; 44.3 percent had 10 or less years of experience; and 55.7 percent had more than 10 years of experience.

Table 31

Principals' Years of Experience in West Virginia as Vice-principal or Principal

Experience Categories	N	Percent of Total	Cumulative Percent
< 2 years	17	5.7	
2-5 years	44	14.9	20.6
6-10 years	70	23.7	44.3
11-20 years	131	44.3	88.6
> 21 years	34	11.5	100.1
Total	296	100.1	

The mean number of years of experience as a principal or assistant principal in West Virginia was 12.1 years, with a standard deviation of 5.75. The median number of years of administrative experience was 11.3.

Classroom organization. All the principals responded that reading was taught in their building in grades one through three (question 3 on the ITS). In 26.7 percent of the principals' schools, there are split-grade classrooms. (See Table 32.) And 95.0 percent of the principals indicated that grades one through three were self-contained classrooms. (See Table 33.) Approximately 5.0 percent were team teaching classrooms.

Table 32

Number and Percent of Split-Grade Situations: Responses of Principals

Response	N	Percent of Total
Yes	79	26.7
No	217	73.3
Total	296	100.0

Table 33

Organizational Classroom Structure of Principals' Responses

Classroom Organization	N	Percent of Total
Self-Contained	283	95.0
Team Teaching	15	5.0
Total	298	100.0

Class size. More than half the principals (51.3 percent) reported class size in one through three to be under 21 students. The mean class size was 19.6 students, with a standard deviation of 1.86. The median class size was 18.0. (See Table 34.)

Table 34

Class Size: Principals' Responses

Class Size	N	Percent of Total	Cumulative Percent
<15 pupils	34	11.4	
16-20 pupils	119	39.9	51.3
21-25 pupils	140	47.0	98.3
> 25 pupils	5	1.7	100.0
Total	298	100.0	

The mean class size reported by the principals (19.6) did not differ significantly from the mean class size reported by the teachers (19.5). The t-value was -0.47.

School organization. The data displayed in Table 35 indicate the principals' schools were organized in a variety of administrative structures; they varied from K-2 to K-12. Approximately three-fifths (59.6 percent) of the schools were organized in a K-6 administrative structure.

The percent of principals' schools organized K-6 (59.6) was not significantly different from the percent reported by the teachers (55.8). The t-value was -0.03.

Table 35

Organizational Structure of School:
Principals' Responses

School Organization	N	Percent of Total
K-2	1	0.4
K-3	6	2.1
K-4	23	8.0
K-5	41	14.3
K-6	171	59.6
K-8	38	13.2
K-12	3	1.1
1-8	4	1.4
Total	287	100.1

School population. The principals reported that approximately three-fourths (74.4 percent) of the schools held 350 students or less. (See Table 36.) The principals reported a mean school population of 265.1 students, with standard deviation of 129.77. The median school population was 210.7.

A t-value of 4.47 was calculated to determine if the mean school population reported by the principals (265.1) was significantly different from the mean school population reported by the teachers (312.7). The t-value was significant beyond the 0.01 level of confidence.

Table 36

School Population: Principals' Responses

School Population	N	Percent of Total	Cumulative Percent
<150 pupils	71	24.6	
150-250 pupils	74	25.6	50.2
251-350 pupils	70	24.2	74.4
351-450 pupils	34	11.8	86.2
> 450 pupils	40	13.8	100.0
Total	289	100.0	

Generalization of principal demographics. From the demographic data obtained in Section I of the principals' ITS, generalizations can be made about West Virginia elementary school principals. It appears that the "typical" principal surveyed has 12.0 years of school administration experience--either as an assistant principal or as a principal in West Virginia. The typical first-, second-, or third-grade classroom is self-contained and holds a single grade of students. The mean class size is 20 students. Typically, the school houses grades K-6 and has a student population of approximately 265 students.

Current Use of Intructional Time

The data displayed in Table 37 are the mean values for principal reports of the following: total instructional minutes per week, minutes per week per subject matter, and percent of total instructional time per subject matter. The data are presented by grade level (first, second, and third) and then as an average of all three grade levels. The

Table 37

Current Use of Instructional Time[1] as Perceived by Principals

Subject Matter	GRADE ONE Mean	GRADE ONE St. Dev.	GRADE ONE %	GRADE TWO Mean	GRADE TWO St. Dev.	GRADE TWO %	GRADE THREE Mean	GRADE THREE St. Dev.	GRADE THREE %	TOTAL Mean	TOTAL St. Dev.	TOTAL %
Reading	479.0	152.3	28.5	453.8	135.9	27.1	424.3	131.6	25.2	452.4	142.1	26.9
Spelling	118.4	70.5	7.1	126.8	63.7	7.6	125.5	46.8	7.5	123.6	63.3	7.4
Handwriting	106.2	37.3	6.3	103.8	36.3	6.2	101.1	38.2	6.0	103.7	37.6	6.2
English	122.5	48.8	7.3	133.3	46.3	8.0	146.1	50.8	8.7	134.0	48.8	8.0
Total Language Arts	826.1	132.2	49.2	817.7	121.4	48.8	797.0	119.5	47.4	813.7	127.6	48.4[3]
Mathematics	283.9	49.7	16.9	284.4	50.2	17.0	288.3	47.5	17.1	285.5	49.2	17.0
Social Studies	102.5	35.4	6.1	105.3	38.9	6.3	112.9	37.6	6.7	106.9	36.9	6.4
Science and Health	139.2	66.0	8.3	143.3	68.0	8.6	151.5	70.0	9.0	144.7	67.4	8.6
Art	64.0	24.1	3.8	63.4	22.3	3.9	63.1	22.9	3.8	63.5	23.2	3.8
Music	66.3	23.1	4.0	65.7	22.8	3.9	66.4	25.6	3.9	66.1	24.1	3.9
Physical Education	91.8	39.1	5.5	92.0	38.1	5.5	92.8	40.0	5.5	92.2	39.1	5.5
Discretionary Time	106.1	86.4	6.3	103.7	96.4	6.2	112.1	102.1	6.7	107.3	97.6	6.4
Total Time[2]	1,679.1	121.4	100.1	1,675.5	110.2	100.2	1,684.1	96.2	100.1	1,679.9	109.6	100.0

[1]Instructional time per week expressed in minutes
[2]Sum of time per subject matter area, plus discretionary time
[3]Standard error = 2.9

principals' responses indicate that approximately one-half (48.4 percent) of current instructional time (1679.9 minutes/week) in grades one through three is used to teach language arts (813.7 minutes/week). Approximately 55.6 percent of language arts time is used to teach reading (452.4 minutes/week) in grades one through three. Approximately 26.9 percent of total current instructional time is used to teach reading.

Teachers' vs. principals' use of current instructional time. The percent of total instructional time used to teach language arts reported by the principals (48.4 percent) was not significantly different from the percent reported by the teachers (49.2 percent). The percent of time to teach reading reported by the principals (26.9 percent) was not significantly different from the percent reported by the teachers (28.7 percent).

According to principal reports, the WVBE Policies 2510 and 2321 are being met in grades one through three. Based on principals' reports, the mean percent of total current instructional time used to teach language arts is 48.4 percent. This approaches the upper limit of the WVBE minimum requirement of 35-50 percent. Using language arts minimum time requirement of 551.25 minutes/week, it can be shown that approximately 95.4 percent of the classrooms of grades one through three, as reported by the principals, meet the minimum WVBE requirement for teaching language arts.*

*The mean minutes/week currently being used to teach language arts is 813.7 minutes/week, with a standard deviation of 127.6. Under conditions of normal distribution, 95.4 percent of the distribution is 2.00 standard deviations from the mean score; thus, 813.7 - (2.00 x 127.6) = 558.5 minutes/week. Since 558.5 minutes/week is greater than 551.25 minutes/week (WVBE minimum requirement), approximately 95.4 percent of the schools exceeded the minimum requirement.

Most influence on use of time. The principals were asked to identify the person or agency they perceive as having the most influence on the current use of instructional time; their responses are presented in Table 38. Approximately 56.0 percent of the principals perceive the state department of education as the person or agency having the most influence on the current use of instructional time. Approximately 10.3 percent of the principals perceive the teacher as having the most influence, and 8.3 perceive the principal as having the most influence.

Table 38

Person or Agency Having the Most Influence on Current Use of Instructional Time as Perceived by Principals

Person or Agency	Frequency	Percent of Total	Cumulative Percent
Teacher	30	10.3	
Principal	24	8.3	18.6
Central Office	30	10.3	28.9
Superintendent	4	1.4	30.3
Local Board of Education	6	2.1	32.4
State Deptartment of Education	163	56.0	88.4
State Board of Education	34	11.7	100.1
Total	291	100.1	

As was computed for teachers, the responses including teacher, principal, central office staff, county superintendent, and local board of education were combined to form "local" influence. The state

department of education and state board of education were combined to form "state" influence. The principals perceive the state influence (69.7 percent) is greater than the local influence (30.3 percent) in the current use of instructional time.

There were no significant differences between the principals' and teachers' perceptions of what person or agency has the most influence on current use of instructional time.

Principal satisfaction. Principals were asked how satisfied they are that students are reaching their reading achievement potential under the current use of instructional time. Their responses are displayed in Table 39. Most principals (79.5 percent) are satisfied or very satisfied that students are reaching their reading achievement potential under current use of instructional time.

Table 39

Principal Responses to "Are You Satisfied that Your Students are Reaching Their Reading Achievement Potential?" Under Current Use of Instructional Time

Degree of Satisfaction	Frequency	Percent of Total	Cumulative Percent
Very Satisfied	44	15.0	
Satisfied	189	64.5	79.5
Dissatisfied	56	19.1	98.6
Very Dissatisfied	4	1.4	100.0
Total	293	100.0	

A t-value of 3.07 was calculated to determine if the degree of principal satisfaction (79.5 percent satisfied) was significantly different from the degree of teacher satisfaction (88.1 percent satisfied). The t-value was found to be significant beyond the 0.01 level of confidence. The principals' level of satisfaction is significantly lower than the teachers', that under current use of instructional time, students are reaching their reading achievement potential.

Individual learner differences. The principals were asked if teachers are able to meet the needs of individual learner differences in reading under current use of instructional time. Table 40 shows that 72.5 percent of the principals responded that their teachers are able to meet the needs of individual learner differences in reading under current use of instructional time.

Table 40

Principal Responses: Are Teachers Meeting the Needs of Individual Learners Under Current Instructional Time Schedules?

Meeting Individual Learning Differences	Frequency	Percent of Total
Yes	213	72.5
No	81	27.6
Total	294	99.9

There was no statistically significant difference between principals' responses (72.5 percent) and teachers' responses (70.8 percent) that teachers are meeting the needs of individual learner differences in reading.

Past Use of Instructional Time

Section III of the Principals' ITS asked how students, in grades one, two, and three, used to spend their time--by subject area--prior to the 1984-85 school year. Table 41 displays the means of their responses: the number of minutes of instructional time per week, minutes per subject matter, and percent of total instructional time per subject matter in the past use of instructional time. The data are shown by grade level (first, second, and third) and then by an average of all three grade levels. Approximately one-half (49.1 percent) of total instructional time (1704.9 minutes/week) used to be spent in language arts (837.8 minutes/week). More than half (56.7) of the language arts time was used for reading (475.1 minutes/week) in grades one through three. Reading used to consume 27.9 percent of the total instructional time, according to principals' reports.

Teacher vs. principal use of past time. The percent of total past instructional time used to teach language arts reported by the principals (49.1 percent) was not significantly different from the percent reported by the teachers (50.0 percent); the t-value was 0.23. The percent of total past instructional time used to teach reading reported by the principals (27.9) was not significantly different from the percent reported by the teachers (29.8); the t-value was 0.54.

When the comparison was made between the past use of instructional time for language arts and WVBE Policies 2510 and 2321, it was concluded that, from the principals' perceptions, the policies were met in grades one through three even before they were implemented. The principals report that the mean percent of total past instructional time used to

Table 41

Past Use of Instructional Time[1] as Perceived by Principals

Subject Matter	GRADE ONE Mean	GRADE ONE St. Dev.	GRADE ONE %	GRADE TWO Mean	GRADE TWO St. Dev.	GRADE TWO %	GRADE THREE Mean	GRADE THREE St. Dev.	GRADE THREE %	TOTAL Mean	TOTAL St. Dev.	TOTAL %
Reading	502.6	165.8	29.3	481.8	152.3	28.3	441.0	148.5	26.0	475.1	156.2	27.9
Spelling	117.9	77.9	6.9	128.5	73.4	7.5	126.8	44.6	7.5	124.4	69.1	7.3
Handwriting	108.8	42.7	6.4	104.6	39.3	6.1	104.0	40.4	6.1	105.8	41.4	6.2
English	120.3	57.1	7.0	131.3	54.0	7.7	145.8	54.7	8.6	132.5	55.9	7.8
Total Language Arts	849.6	137.1	49.6[3]	846.2	131.9	49.7[3]	817.6	122.1	48.2[3]	837.8	132.6	49.1[3]
Mathematics	277.9	64.9	16.2	277.7	64.6	16.3	278.0	59.1	16.4	277.9	63.2	16.3
Social Studies	92.8	43.5	5.4	100.4	46.5	5.9	111.9	45.0	6.6	101.7	44.9	6.0
Science and Health	126.6	69.3	7.4	132.0	70.1	7.8	145.8	69.0	8.6	134.8	69.0	7.9
Art	66.3	27.8	3.9	64.1	26.1	3.8	63.3	25.6	3.7	64.6	27.1	3.8
Music	65.8	29.0	3.8	65.2	28.9	3.8	64.7	7.9	3.8	65.2	28.8	3.8
Physical Education	103.6	42.4	6.1	103.5	42.7	6.1	102.1	41.8	6.0	103.1	42.3	6.1
Discretionary Time	131.2	47.0	7.7	115.0	51.0	6.8	113.3	52.5	6.7	119.8	50.6	7.0
Total Time[2]	1,713.8	121.1	100.1	1,70'.1	124.7	100.2	1,696.7	112.4	100.0	1,704.9	120.6	100.0

[1] Instructional time per week expressed in minutes
[2] Sum of time per subject matter area, plus discretionary time
[3] Standard error = 2.9

teach language arts is 49.1 percent. This translates to 837.8 minutes per week which exceeds the upper range of the WVBE minimum requirement of 35-50 percent (or 551.25 to 787.50). Approximately 96.6 percent of the classrooms of grades one through three, as reported by the principals, met the minimum WVBE requirement for language arts,* according to statistical calculations described below.

Current vs. past use of time. There were no significant differences in principals' reports of percentage of current vs. past instructional time for language arts and for reading.

Most influence on use of time. The principals were asked to identify the person or agency they perceive as having had the most influence on the use of instructional time in the past. Their responses, presented in Table 42, indicate that 28.0 percent perceive the state department of education had the most influence on past use of instructional time. Another quarter of principals (25.7 percent) perceive the teacher had the most influence; and 16.1 percent perceive the principal had the most influence.

The data in Table 42 were divided into state and local influence as discussed previously. Principals perceive that the local influence (67.5 percent) about use of time used to be greater than the state influence (32.5 percent) about how time was spent.

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*The mean minutes/week currently used in the past to teach language arts is 837.8 minutes/week, with a standard deviation of 132.6. Under conditions of normal distribution, 96.6 percent of the distribution is 2.12 standard deviations from the mean score; thus, 837.8 - (2.12 x 132.6) = 556.7. Since 556.7 minutes/week is greater than 551.25 minutes/week (WVBE minimum requirements), approximately 96.6 percent of the schools exceeded the minimum requirement.

Table 42

Person or Agency Having the Most Influence on Past Use of Instructional Time as Perceived by Principals

Person or Agency	Frequency	Percent of Total	Cumulative Percent
Teacher	56	25.7	
Principal	35	16.1	41.8
Central Office	40	18.4	60.2
Superintendent	7	3.2	63.4
Local Board of Education	9	4.1	67.5
State Department of Education	61	28.0	95.5
State Board of Education	10	4.6	100.1
Total	218	100.1	

A Chi-Square value of 59.25 was calculated to determine if a significant difference existed between the distribution of principal responses for past influence and current influence. The Chi-Square value was found to be significant beyond the 0.01 level of confidence. The differences in the frequencies in the cells of teacher, state department of education, and principal, in decreasing values, were the highest contributors to the calculated Chi-Square value.

Principals' perceptions of state influence c current (67.6 percent) vs. past (32.5 percent) use of instructional time are significantly different. The calculated t-value was significant beyond the 0.01 level of confidence.

There was also a significant difference between the principals' responses and the teachers' responses to this question on what person or agency had the most influence on past use of instructional time. The Chi-Square value (15.37) was significant beyond the 0.01 level of confidence. The differences in the frequencies in the cells of central office staff, state department of education, and principal, in decreasing values, were the highest contributors to the calculated Chi-Square value.

The principals' perceptions of local influence on past use of instructional time (67.5 percent) are significantly different from teachers' perceptions of local influence on past use of instructional time (49.9 percent). The t-value (-4.70) was significant beyond the 0.01 level of confidence.

Principal satisfaction. The principals were asked how satisfied they felt that students used to be able to reach their reading achievement potential under past use of instructional time. Table 43 displays their responses: 77.6 percent were satisfied or very satisfied that students were reaching their reading achievement potential under past use of instructional time.

There was no significant difference between principals' satisfaction in current vs. past use of time. There was, however, a significant difference between principals and teachers on this issue.

A t-value (3.82) was calculated to determine if the principals' degree of satisfaction (77.6 percent) that students were reaching their reading achievement potential was significantly different from the teachers' degree of satisfaction (88.5 percent). The t-value was significant beyond the 0.01 level of confidence. The principals were

significantly less satisfied than the teachers under past use of instructional time.

Table 43

Principal Responses to "Were You Satisfied that Your Students are Reaching Their Reading Achievement Potential?" Under Past Use of Instructional Time

Degree of Satisfaction	Frequency	Percent of Total	Cumulative Percent
Very Satisfied	26	12.2	
Satisfied	140	65.4	77.6
Dissatisfied	48	22.4	100.0
Very Dissatisfied	0	0.0	100.0
Total	214	100.0	

Individual learner differences. The principals were asked if teachers had been able to meet the needs of individual learner differences in reading in years past. Responses are displayed in Table 44. Three-fourths of the principals (75.1 percent) believe that teachers were able to meet the needs of individual learner differences in reading

Table 44

Principal Satisfaction that Teachers Met the Needs of Individual Learners Under Past Instructional Time Schedule

Meeting Individual Learning Differences	Frequency	Percent of Total
Yes	163	75.1
No	54	24.9
Total	217	100.0

under past use of instructional time. On the other hand, 24.9 percent of the principals believe teachers were not able to do so.

There was no significant difference between teachers' and principals' responses to this question. Neither was there any significant difference in principals' responses under past or current uses of instructional time.

Ideal Use of Instructional Time

In the last section of the ITS, principals were asked to devise their ideal use of instructional time for maximum reading achievement in grades one, two, and three. Table 45 shows the mean values for: minutes of instructional time per week, minutes per subject matter, and percent of total instructional time per subject matter in the ideal use of instructional time. The data are by grade level (first, second, and third) and then averaged across all three grade levels. The principals' responses indicate that approximately one-half (49.7 percent) of ideal instructional time (1757.9 minutes/week) in grades one through three would be used to teach language arts (873.9 minutes/week). Approximately 58.6 percent of language arts time would be used to teach reading (511.8 minutes/week) in grades one through three. Approximately 29.1 percent of the total ideal instructional time would be used to teach reading.

Teacher vs. principal use of ideal time. The percent of the principals' ideal time to teach language arts (49.7 percent) was not significantly different from the percent of the teachers' ideal time (51.9 percent). The t-value was 0.57. The percent of total ideal instructional time used to teach reading reported by the principals (29.1

Table 45

Ideal Use of Instructional Time[1] as Perceived by Principals

Subject Matter	GRADE ONE Mean	GRADE ONE St. Dev.	GRADE ONE %	GRADE TWO Mean	GRADE TWO St. Dev.	GRADE TWO %	GRADE THREE Mean	GRADE THREE St. Dev.	GRADE THREE %	TOTAL Mean	TOTAL St. Dev.	TOTAL %
Reading	542.2	175.6	30.7	513.8	161.3	29.3	479.4	158.2	27.3	511.8	163.4	29.1
Spelling	120.7	66.6	6.8	127.0	60.6	7.3	124.3	49.9	7.1	124.0	57.2	7.1
Handwriting	110.2	39.4	6.3	106.0	36.4	6.1	102.7	35.7	5.8	106.3	37.4	6.1
English	122.3	61.0	6.9	130.8	55.8	7.5	142.3	53.5	8.1	131.8	58.2	7.5
Total Language Arts	895.4	151.2	50.8[3]	877.6	141.6	50.1[3]	848.7	122.7	48.3[3]	873.9	130.9	49.7[3]
Mathematics	296.5	78.4	16.8	297.7	77.1	17.0	298.4	72.3	16.9	297.5	76.2	16.9
Social Studies	86.5	50.6	4.9	90.7	50.3	5.2	102.4	48.1	5.8	93.2	49.1	5.3
Science and Health	126.4	75.2	7.2	136.3	74.5	7.9	153.2	77.6	8.7	138.6	74.2	7.9
Art	70.9	42.6	4.0	68.5	29.8	3.9	69.7	43.7	4.0	69.7	42.1	4.0
Music	69.3	29.8	3.9	71.7	37.5	4.1	71.4	57.8	4.1	70.8	34.2	4.0
Physical Education	102.7	44.9	5.8	102.0	43.8	5.8	102.6	44.5	5.8	102.4	44.1	5.8
Discretionary Time	116.6	92.8	6.6	106.8	45.1	6.1	111.1	39.9	6.4	111.8	43.2	6.4
Total Time[2]	1,764.3	140.2	100.0	1,751.3	131.9	100.1	1,758.5	111.4	100.0	1,757.9	132.6	100.0

[1] Instructional time per week expressed in minutes

[2] Sum of time per subject matter area, plus discretionary time

[3] Standard error = 2.9

percent) was not significantly different from the percent reported by the teachers (31.5 percent). The t-value was 0.67.

When the comparison was made between the ideal use of instructional time for language arts and WVBE Policies 2510 and 2321, it was concluded that the policies would be met in grades one through three. The principals report that the mean percent of time to teach language arts would be 49.7 percent. This approaches the upper limit of the WVBE requirement of 30-50 percent. But in minutes, the principals would exceed the state minimum for teaching language arts. They would spend 874 minutes/week; state policy translates to 551.25 minutes/week to 787.50 minutes/week. Statistically, 98.4 percent of the classrooms of grades one through three, as reported by the principals, would meet the minimum WVBE requirement for language arts.*

Current vs. ideal use of time. There were no significant differences between current and ideal in principal reports of percent of time for language arts (48.4 vs. 49.7) or for reading (26.9 percent vs. 29.1 percent).

Most influence on use of time. The principals were asked to identify the person or agency who, in their opinion, should have the most influence on the use of instructional time. Their responses are presented in Table 46. A little more than one-tenth of the principals

*The mean minutes/week to be used in total instructional time to teach language arts is 873.9 minutes/week, with a standard deviation of 130.9. Under conditions of a normal distribution, 98.4 percent of the distribution is 2.41 standard deviations from the mean score. Thus, 873.9 - (2.41 x 130.9) = 558.4. Since 558.4 minutes/week is greater than 551.25 minutes/week (WVBE minimum requirement), approximately 98.4 percent of the schools would exceed the minimum requirement.

(12.1 percent) believe the state department of education should be the most influential; 40.4 percent believe the teacher should have the most influence; and 33.1 percent believe the principal should have the most influence.

Table 46

Person or Agency Having the Most Influence on Ideal Use of Instructional Time as Perceived by Responding Principals

Person or Agency	Frequency	Percent of Total	Cumulative Percent
Teacher	10	40.4	
Principal	90	33.1	73.5
Central Office	17	6.3	79.8
Superintendent	11	4.0	83.8
Local Board of Education	5	1.8	85.6
State Deptartment of Education	33	2.2	97.7
State Board of Education	6	12.1	99.9
Total	272	99.9	

The data in Table 46 were divided into state and local influence as discussed previously. Most principals (85.6 percent) believe the local influence should be greater; very few (14.4 percent) believe the state should be influential in the ideal use of instructional time.

There was a significant difference between the distribution of principal responses about influence for ideal and current use of time. The Chi-Square value (218.08) was significant beyond the 0.01 level of confidence. The differences in the frequencies in the cells of teacher, principal, state department of education, and state board of education, in decreasing values, were the highest contributors to the calculated Chi-Square value.

A Chi-Square value of 291.91 was calculated to determine if a significant difference existed between the distribution of the principals' responses and teachers' responses on what person or agency should have the most influence on ideal use of instructional time. The Chi-Square value was found to be significant beyond the 0.01 level of confidence. The differences in the frequencies in the cells of principal and teacher were the highest contributors to the calculated Chi-Square value.

A t-value (13.96) was calculated to determine if the principals' perceptions of "state" influence on current use of instructional time (67.6 percent) was significantly different from "state" influence on ideal use of instructional time (14.4 percent). The calculated t-value was significant beyond the 0.01 level of confidence.

A t-value (3.94) was calculated to determine if the principals' perceptions of "local" influence on ideal use of instructional time (85.6 percent) was significantly different from teachers' perceptions of "local" influence on ideal use of instructional time (74.7 percent). The t-value was significant beyond the 0.01 level of confidence.

Principal satisfaction. The principals were asked how satisfied they would be that students would reach their reading achievement potential under ideal use of instructional time. As displayed in Table 47, 98.9 percent of the principals would be satisfied or very satisfied.

Table 47

Principal Responses to "Would You Be Satisfied that Your Students are Reaching Their Reading Achievement Potential?" Under Ideal Use of Instructional Time

Degree of Satisfaction	Frequency	Percent of Total	Cumulative Percent
Very Satisfied	138	51.1	
Satisfied	129	47.8	98.9
Dissatisfied	2	0.7	99.6
Very Dissatisfied	1	0.4	100.0
Total	270	100.0	

There was no significant difference between principals' (98.9 percent) and teachers' (99.2 percent) degree of satisfaction under ideal use of instructional time that students would reach their reading achievement potential. There were significant differences, beyond the 0.01 level of confidence, in principals' degree of satisfaction (98.9 percent) under ideal use of time vs. current use of time (79.5 percent).

Individual learner differences. The principals were asked if teachers would be able to meet the needs of individual learner differences in reading under ideal use of instructional time. The principals' responses to this question are displayed in Table 48. Most

principals (95.2 percent) responded that teachers would be able to meet the needs of individual learner differences in reading under ideal use of instructional time, while 4.8 percent of the principals believed teachers would not.

Table 48

Principal Satisfaction that Teachers Will Meet the Needs of Individual Learners Under Ideal Instructional Time Schedule

Response	Frequency	Percent of Total
Yes	260	95.2
No	13	4.8
Total	273	100.0

There was no significant difference between principals' and teachers' responses to this question under ideal use of time. There was a significant difference, beyond the 0.01 level of confidence, between principals' responses to this question under current vs. ideal time conditions.

Summary of Principal Data on Use of Instructional Time

The data in Table 49 represent principals' reports of past, current, and ideal uses of instructional time. These are averages of the first-, second-, and third-grade reports of time use. The data in Table 49 are mean values of: minutes per week per subject matter, total minutes per week, and percent of total time per subject matter.

Table 49

Past, Current, and Ideal Use of Instructional Time
Perceived by Principals

Subject Matter	PAST		CURRENT		IDEAL	
	Min./Wk.	Percent	Min./Wk.	Percent	Min./Wk.	Percent
Reading	475.1	27.9	452.4	26.9	511.8	29.1
Spelling	124.4	7.3	126.6	7.4	124.0	7.1
Handwriting	105.8	6.2	103.7	6.2	106.3	6.1
English	132.5	7.8	134.0	8.0	131.8	7.5
Total Language Arts	837.8	49.1	813.7	48.4	873.9	49.7
Mathematics	277.9	16.3	185.5	17.0	297.5	16.9
Social Studies	101.7	6.0	106.9	6.4	93.2	5.3
Science and Health	134.8	7.9	144.7	8.6	138.6	7.9
Art	64.6	3.8	63.5	3.8	69.7	4.0
Music	65.2	3.8	66.1	3.9	70.8	4.0
Physical Education	103.1	6.1	92.2	5.5	102.4	5.8
Dicretionary Time	119.8	7.0	107.3	6.4	111.8	6.4
Total	1,704.9	100.0	1,679.9	100.0	1,757.9	100.0

The percent of total instructional time reported by principals used to teach language arts under past, current, and ideal use of instructional time w s 49.1, 48.4, and 49.7, respectively. In each of the cases, the public schools of West Virginia meet the WVBE requirements relative to the use of instructional time for teaching language arts.

No statistically significant differences were found between the principals' reported proportional use of past, current, and ideal use of instructional time for teaching language arts and reading and the teachers' reported proportional use for language arts and reading.

Most influence on use of time. The data displayed in Table 50 are a summary of the principals' perceptions of the person or agency having the most influence on past, current, and ideal use of instructional time. Figure 2 is a graphic representation of the data displayed in Table 50.

By the use of the t-test and Chi-Square techniques, the mean perceptions of principals and teachers about the most influential factors on use of instructional time were found to be significantly different. The current-past and current-ideal comparisons of the principals' perceptions were statistically significant beyond the 0.01 level of confidence.

The comparisons of the teachers' perceptions and the principals' perceptions of past vs. past and ideal vs. ideal were found to be statistically significant. The principals perceive that the "local" influence in years past was significantly greater than do the teachers. Under ideal use of instructional time, the principals believe local influence should be more important than do the teachers.

Table 50

Summary of Principal Perceptions of Person or Agency Having Most Influence on Past, Current, and Ideal Use of Instructional Time

Person or Agency	PAST N	PAST Percent	PAST Cum. Percent	CURRENT N	CURRENT Percent	CURRENT Cum. Percent	IDEAL N	IDEAL Percent	IDEAL Cum. Percent
Teacher	56	25.7		30	10.3		110	40.4	
Principal	35	16.1	41.8	24	8.3	18.6	90	33.1	73.5
Central Office	40	18.4	60.2	30	10.3	28.9	17	6.3	79.8
Superintendent	7	3.2	63.4	4	1.4	30.3	11	4.0	83.8
Local Board of Education	9	4.4	67.5	6	2.1	32.4	5	1.8	85.6
State Department of Education	61	28.0	95.5	163	56.0	88.4	33	12.1	97.7
State Board of Education	10	4.6	100.1	34	11.7	100.1	6	2.2	99.9
Total	218	100.1		291	100.1		272	99.9	

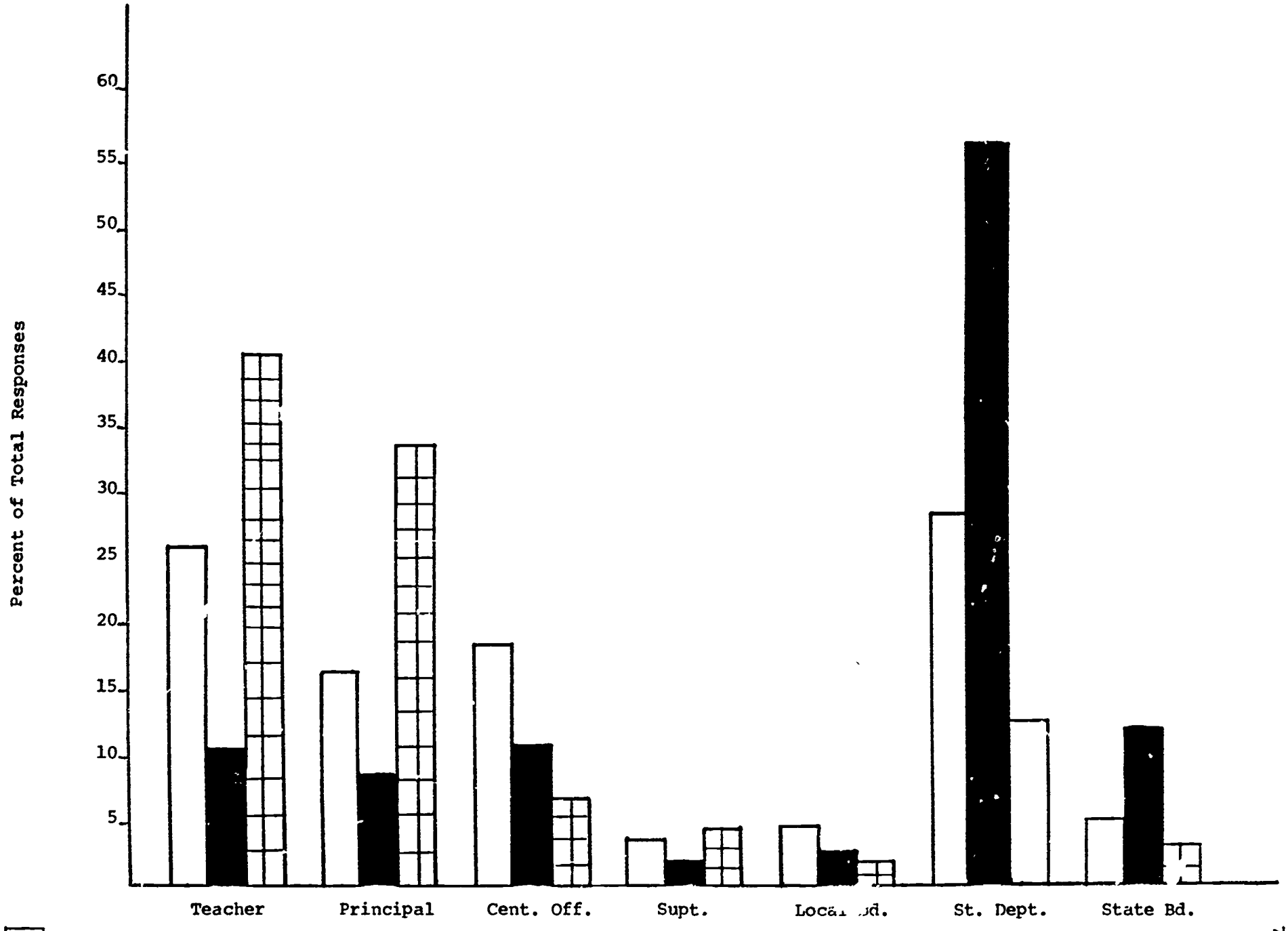

Figure 2

Agency or Individual Having Most Influence on Use of Instructional Time
(Principal Responses)

The principals' perceptions of the relative influence of the teacher and the principal were significantly greater than the teachers' perceptions in both the past and ideal use of instructional time.

Principal satisfaction. The principals hold a significantly lower degree of satisfaction than do teachers that students are currently reaching their reading achievement potential. There was also a significant difference under past use of instructional time. However, under ideal conditions, there was no significant difference between principals' and teachers' level of satisfaction.

No significant difference was found between past and current in the principals' degree of satisfaction that students are reaching their reading achievement potential. However, there was a statistically significant difference in the principals' reported level of satisfaction under current vs. ideal use of instructional time. The principals would be significantly more satisfied in the ideal case.

Individual learner differences. Under past, current, and ideal use of instructional time, no significant differences were found between the principals' and teachers' satisfaction that teachers are meeting the needs of individual learner differences in reading. No significant difference was found between current and past use of time in the principals' satisfaction that teachers meet the needs of individual learner differences in reading. However, the principals were significantly more satisfied that teachers would meet the needs of individual learner differences in reading under ideal time use than under current use of instructional time.

SUMMARY OF COMBINED TEACHER AND PRINCIPAL RESPONSES TO ITS

As appropriate, the responses of the teachers and principals were combined and summed to provide a total teacher and principal response to the ITS. The results of this summation are presented in this section of the report.

Use of Instructional Time

The teacher and principal cumulative data on the past, current, and ideal use of instructional time are presented in Table 51. These data are presented as percents of total time per subject matter.

Teachers and principals both believe that the public schools of West Virginia are meeting the WVBE policies on the use of instructional time in current classrooms, in years past, and in an ideal schedule of instructional time. No significant differences were found between/among the percent of total instructional time used to teach langauge arts and reading under past, current, and ideal use of instructional time.

Although the differences were not statistically significant, both teachers and principals--in their ideal use of time--use a higher percentage of instructional time to teach language arts than they now do or than they did in the past.

Most Influence on Use of Time

The data in Table 52 are teachers' and principals' perceptions of the person or agency having the most influence on past, current, and ideal use of instructional time. The data are presented as percent of total responses.

Table 51

Summary[1] of Combined Teacher and Principal Perceptions of Use of Instructional Time

Subject Matter	PAST			CURRENT			IDEAL		
	Prin.	Teach.	Mean	Prin.	Teach.	Mean	Prin.	Teach.	Mean
Reading	27.9	29.8	29.0	26.9	28.7	27.9	29.1	31.5	30.5
Spelling	7.3	7.1	7.2	7.4	7.2	7.3	7.1	7.2	7.2
Handwriting	6.2	5.8	6.0	6.2	5.9	6.0	6.1	5.8	5.9
English	7.8	7.3	7.5	8.0	7.4	7.7	7.5	7.4	7.4
Total Language Arts	49.1	50.0	49.6[2]	48.4	49.2	48.9[2]	49.7	51.9	51.0[2]
Mathematics	16.3	16.0	16.2	17.0	16.6	16.8	16.9	16.2	16.5
Social Studies	6.0	5.6	5.8	6.4	6.1	6.2	5.3	5.1	5.2
Science and Health	7.9	7.7	7.8	8.6	8.2	8.4	7.9	7.1	7.4
Art	3.8	3.9	3.9	3.8	3.9	3.9	4.0	3.9	3.9
Music	3.8	4.1	3.9	3.9	4.1	4.0	4.0	4.1	4.1
Physical Education	6.1	5.8	5.9	5.5	5.3	5.4	5.8	5.7	5.7
Discretionary Time	7.0	7.1	7.1	6.4	6.7	6.7	6.4	6.1	6.3
Total	100.0	100.2	100.2	100.1	100.1	100.3	100.0	100.1	100.1

[1]Data display presents percent of total responses.
[2]Standard error = 1.90

Table 52

Comparison* of Teacher and Principal Perceptions of Person or Agency Having Most Influence on Past, Current, and Ideal Use of Instructional Time

Person or Agency	PAST		CURRENT		IDEAL	
	Prin.	Teach.	Prin.	Teach.	Prin.	Teach.
Teacher	25.7	23.0	10.3	13.2	40.4	63.7
Principal	16.1	9.6	8.3	5.5	33.1	4.4
Central Office	18.4	9.9	10.3	6.2	6.3	4.7
Superintendent	3.2	4.7	1.4	3.0	4.0	1.1
Local Board of Education	4.4	3.2	2.1	1.5	1.8	1.4
State Department of Education	28.0	39.7	56.0	60.1	12.1	20.2
State Board of Education	4.6	9.9	11.7	10.7	2.2	4.7
Total	100.1	100.0	100.1	100.2	99.9	100.2

*Data displayed is percent of total responses.

Past use of instructional time. Under past use of instructional time, there were three significant differences between the perceptions of teachers and principals. The principals perceive the principal and central office had a significantly higher influence on the past use of instructional time than did the teacher; the t-values were 2.56 and 3.14, respectively. The teachers perceive the state department of education had a significantly higher influence on the use of past instructional time than did the principals; the t-value was 3.26.

Current use of instructional time. There were no significant differences between teachers' and principals' perceptions on the person or agency having the most influence on use of current instructional time.

Ideal use of instructional time. Under the ideal use of instructional time, the principals perceive, significantly more than teachers do, that the principal should have an important influence on the use of time; the t-value was 6.04. Compared to principals' perceptions, the teachers perceive the teacher and the state department of education should have a significantly higher influence; the t-values were 9.97 and 2.79, respectively.

The data displayed in Table 53 are the cumulative teacher and principal perceptions on the person or agency having the most influence on past, current, and ideal use of instructional time. The data are presented as frequency of response (n) and percent of total. Figure 3 is a graphic representation of the data displayed in Table 53; Figure 4 is a graphic display of teachers' and principals' perceptions of local vs. state influence on the past, current, and ideal use of instructional time.

Table 53

Summary of Combined Teacher and Principal Perceptions on Person or Agency Having Most Influence on Past, Current, and Ideal Use of Instructional Time

Person or Agency	PAST N	PAST Percent	PAST Cum. Percent	CURRENT N	CURRENT Percent	CURRENT Cum. Percent	IDEAL N	IDEAL Percent	IDEAL Cum. Percent
Teacher	135	24.1		83	12.0		343	53.8	
Principal	68	12.1	36.2	46	6.6	18.6	106	16.6	70.4
Central Office	74	13.2	49.4	55	7.9	26.5	34	5.3	75.7
Superintendent	23	4.1	53.5	16	2.3	28.8	15	2.4	78.1
Local Board of Education	20	3.6	57.1[1]	12	1.7	30.5[2]	10	1.6	79.7[3]
State Department of Education	197	35.1	92.2	405	58.4	88.9	107	16.8	96.5
State Board of Education	44	7.8	100.0	77	11.1	100.0	23	3.6	100.1
Total	561	100.0		694	100.0		638	100.1	

[1]Standard Error = 2.09
[2]Standard Error = 1.75
[3]Standard Error = 1.63

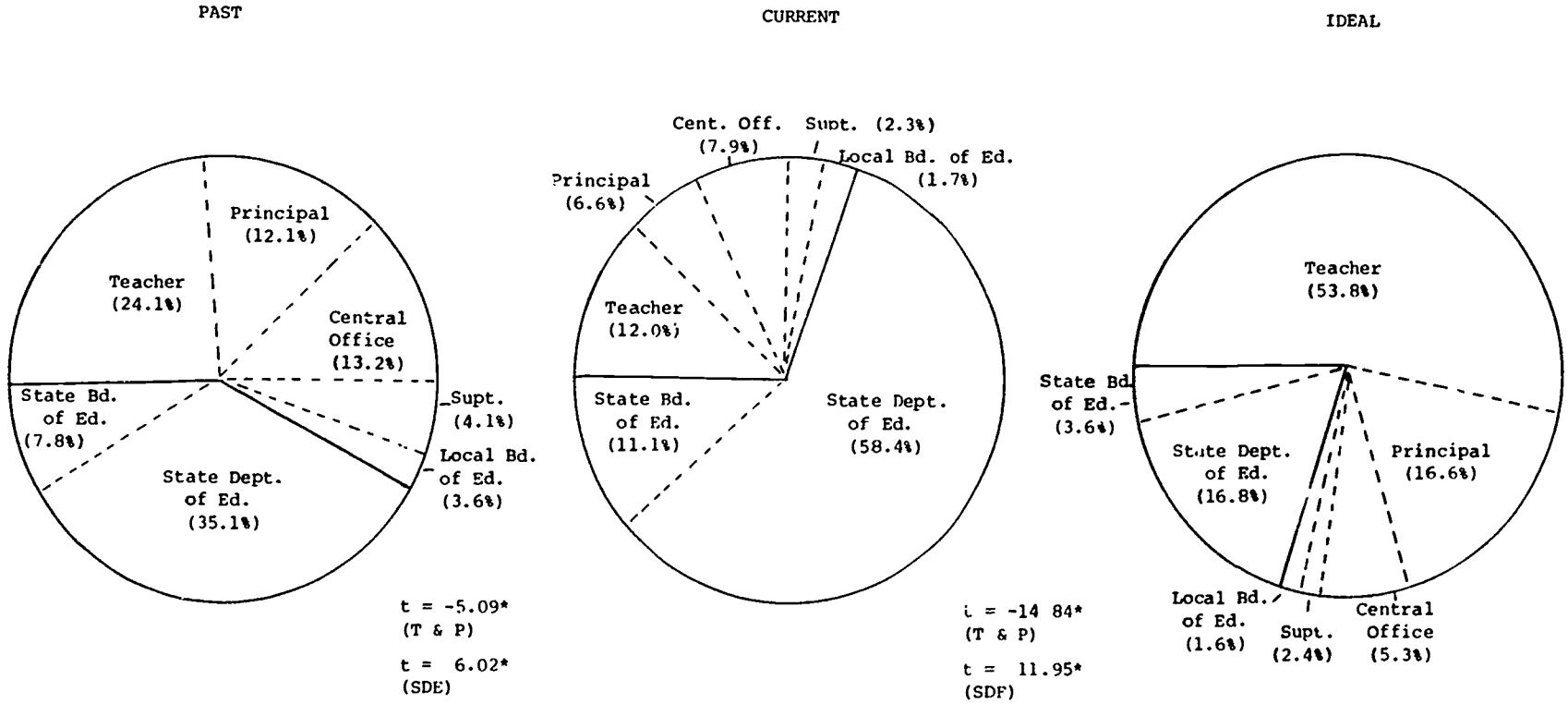

Figure 3

Summation of Teacher and Principal Perceptions of the Person or Agency Having the Most Influence on Past, Current, and Ideal Use of Instructional Time

*Significant Beyond 0.01 for Teacher Plus Principal Opinions

The data schematically presented in Figure 3 provide interesting significant findings relative to the combined teacher and principal reponses. The study subjects' perception of teacher and principal influence on current use of instructional time (14.5 percent) was significantly less than their influence on past use of instructional time (36.2 percent); the calculated t-value (-5.09) was significant beyond the 0.01 level of confidence. Also, the study subjects' perception of the state department of education's influence on current use of instructional time (58.4 percent) was significantly higher than the department's influence on past use of instructional time (35.1 percent); the calculated t-value (6.02) was significant beyond the 0.01 level of confidence.

Again referring to Figure 3, the study subjects' perception of teacher and principal influence on current use of instructional time (14.5 percent) was significantly less than their influence would be under ideal use of instructional time (70.4 percent); the calculated t-value (-14.84 percent) was significant beyond the 0.01 level of confidence. The study subjects' perception of the state department of education's influence on current use of instructional time (58.4 percent) was significantly higher than the department's influence would be under ideal use of instructional time (16.8 percent); the calculated t-value (11.95) was significant beyond the 0.01 level of confidence.

Local versus state influence. The teachers and principals perceive that local persons and agencies had a statistically significant higher influence on the past use of instructional time (57.1 percent) than on current use (30.5 percent); the t-value was -6.93. The teachers and

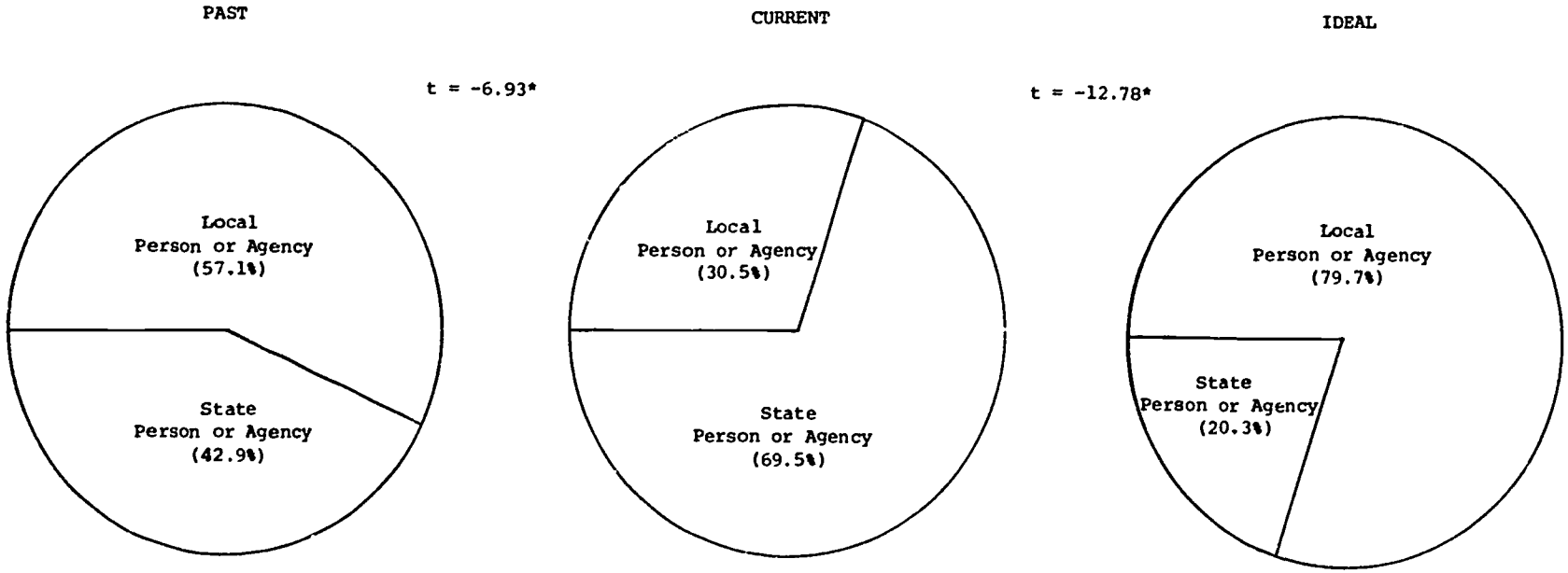

Figure 4

Summation of Teacher and Principal Perceptions of the State Vs. Local Persons or Agencies Having the Most Influence on Past, Current, and Ideal Use of Instructional Time

*Significant Beyond 0.01

principals perceive that local persons and agencies should have a higher influence on the ideal use of instructional time (79.7 percent) than they have on current use (30.5 percent); the t-value was -12.78. (See Figure 4.) Both t-values are significant beyond the 0.01 level of confidence.

Principal and Teacher Satisfaction

The data displayed in Table 54 are the combined teacher and principal responses on their level of satisfaction that students reach their reading achievement potential under past, current, and ideal use of instructional time. No significant difference was found between past and current use of instructional time. There was a significant difference ($t = -6.76$; significant beyond the 0.01 level of confidence) in their level of satisfaction between ideal (99.0 percent) use and current (84.6 percent) use of instructional time.

Table 54

Summary of Combined Teacher and Principal Responses on Satisfaction That Students Reach Their Reading Achievement Potential Under Past, Current, and Ideal Use of Instructional Time

Degree of Satisfaction	PAST		CURRENT		IDEAL	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Very Satisfied	100	17.9	137	19.7	358	55.9
Satisfied	372	66.4	452	64.9	276	43.1
Dissatisfied	83	14.8	97	13.9	3	0.5
Very Dissatisfied	5	0.9	11	1.6	3	0.5
Total	560	100.0	697	100.1	640	100.0

Figure 5 is a comparison of teacher with principal degree of satisfaction that students reach their reading achievement potential under past, current, and ideal use of instructional time. All the calculated t-values found to be significant were significant beyond the 0.01 level of confidence; these are marked with an asterisk in Figure 5.

The teachers held a higher degree of satisfaction than the principals under both the current and past use of instructional time (t-values of 3.82 and 3.07, respectively). Both the teachers and the principals held a higher degree of satisfaction under ideal use of instructional time than under current use of instructional time (t-values of -6.47 and -8.92, respectively).

Meeting Individual Learner Needs

The data in Table 55 are the combined teacher and principal responses about teachers' abilities to meet individual learner needs in reading. No significant difference was found between past and current use of instructional time. There was a significant difference ($t = 10.40$) found in the combined responses that teachers would be able to meet individual learner needs in reading under ideal (95.2 percent) vs. current (71.5 percent) use of instructional time. The t-value was significant beyond the 0.01 level of confidence.

Figure 6 compares teacher responses with principal responses on satisfaction that teachers meet individual learner needs in reading under past, current, and ideal use of instructional time. It can be observed that no significant differences were found between teacher and principal responses in their degrees of satisfaction under past, current, and ideal

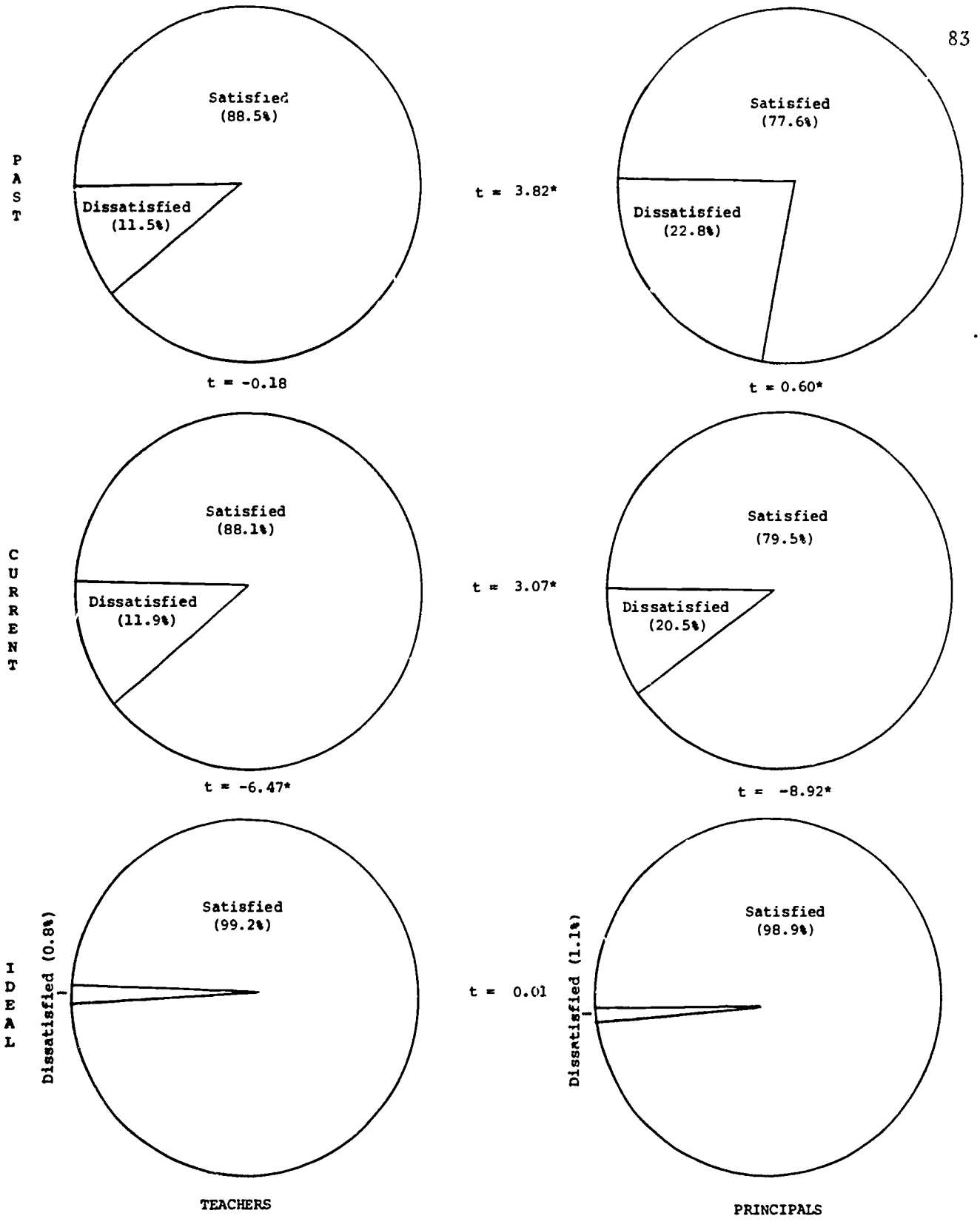

Figure 5

Comparison of Teacher With Principal Degree of Satisfaction Students Reach Their Reading Achievement Potential Under Past, Current, and Ideal Use of Instructional Time

*Significant Beyond 0.01

Table 55

Summary of Combined Teacher and Principal Responses on Satisfaction That Teachers Meeting Individual Learner Needs in Reading Under Past, Current, and Ideal Use of Instructional Time

Response	PAST Frequency	PAST Percent	CURRENT Frequency	CURRENT Percent	IDEAL Frequency	IDEAL Percent
Yes	422	75.5	496	71.5	613	95.2
No	137	24.5	198	28.5	31	4.8
Total	559	100.0	694	100.0	644	100.0

use of instructional time. The teachers' and principals' degrees of satisfaction between past and current use of instructional time were not significant. It can be observed that significant differences, beyond the 0.01 level of confidence, were found between current and ideal use of instructional time for both the teachers and principals (t-values were -9.14 and -7.97, respectively).

Ideal Reading Time: Minutes Per Week

The data presented in Table 22 reveals that the teachers' mean number of minutes for teaching reading under ideal use of instructional time was 549.3. Table 45 reveals that the principals' mean number of minutes for teaching reading under ideal use of instructional time was 511.8. A t-value (2.76) calculated to determine if the difference between these two means was significant was found to be significant beyond the 0.05 level of confidence.

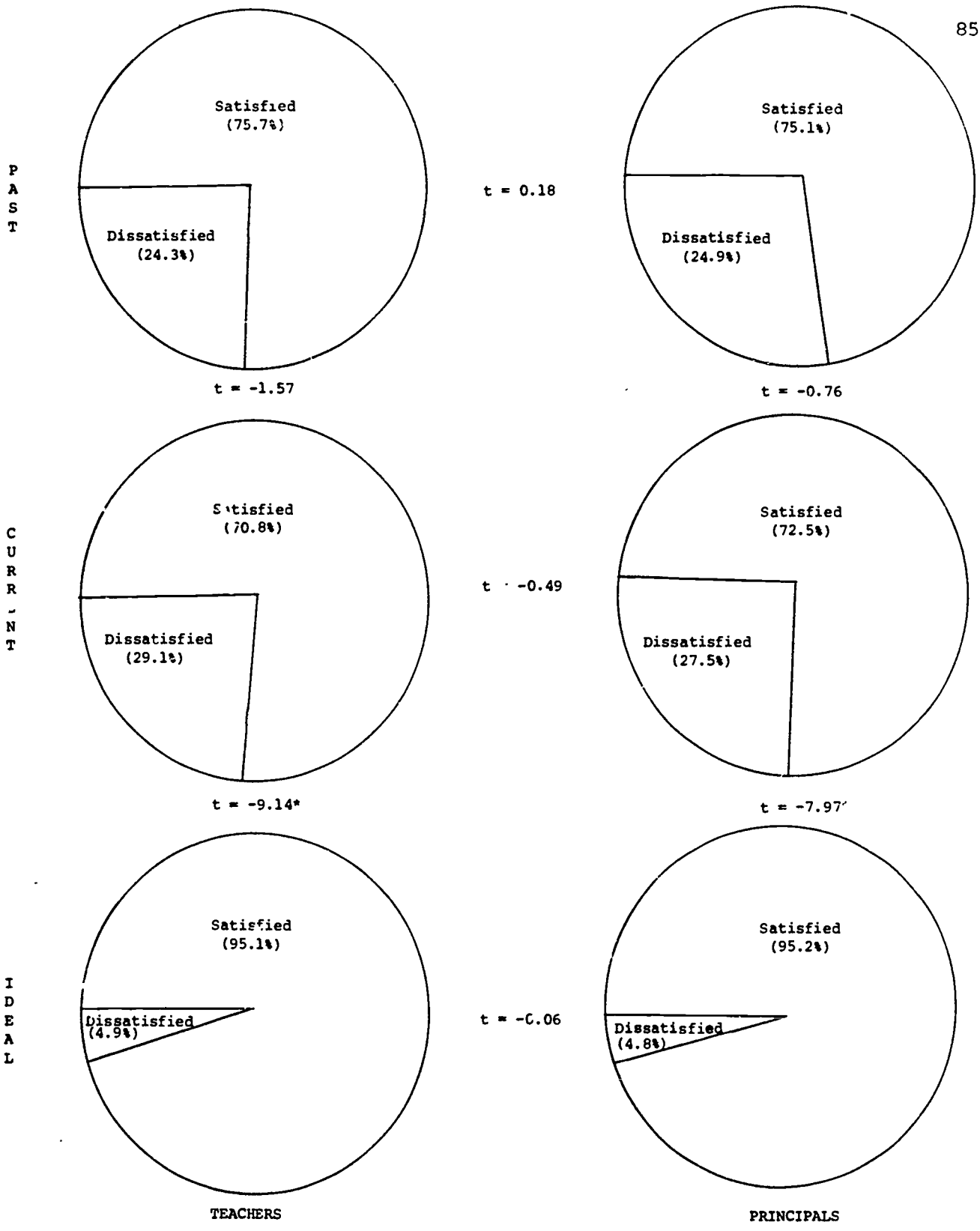

Figure 6

Comparison of Teacher With Principal Responses on Satisfaction That Teachers Meet Individual Learner Needs in Reading Under Past, Current, and Ideal Use of Instructional Time

*Significant beyond 0.01

FINDINGS AND CONCLUSIONS OF THE STUDY

The West Virginia Association of School Administrators (WVASA), with support from the Appalachia Educational Laboratory (AEL), conducted a study dealing with the use of instructional time in grades one through three of West Virginia public schools. The study surveyed the opinions and perceptions of teachers in grades one through three and of elementary school principals. Random samples of teachers and principals were selected to respond to an Instructional Time Survey instrument developed by the WVASA-AEL study group.

The data from completed Instructional Time Surveys have been presented in previous sections of this report. In this section, the conclusions, findings, and implications of the study will be presented.

Findings

The WVASA study group had identified four objectives for the study and three questions to be addressed by the study.

> Objective #1: To determine (in total minutes per week and percent of total minuts per week) how much instructional time is currently being used, how much has been used, and how much should be used in the teaching of reading.

The results of the study indicate that (a) currently, the teaching of reading is approximately 27.9 percent of the total instructional time, or approximately 475.4 minutes per week; (b) in the past, the teaching of reading was approximately 29.0 percent of the total instructional time, or approximately 495.2 minutes per week; and (c) ideally, the teaching of reading would be approximately 30.5 percent of the total instructional time, or approximately 533.5 minutes per week.

Teachers and principals believe that reading was taught more during the past and would be taught more under ideal time schedules of their own construction than is being taught currently in West Virginia classrooms. However, no statistically significant differences were found for teaching reading in the past, current, and ideal use of instructional time.

Objective #2: To determine if a statistically significant difference(s) exists between/among the past, current, and ideal use of instructional time in teaching reading.

No statistical differences in percentages of total time were found to exist between current, past, and ideal use of instructional time in teaching reading. However, as stated under Objective #1, teachers and principals believe that fewer minutes are currently spent to teach reading than in past years or than under ideal time schedules.

Objective #3: To determine if the teachers and principals are meeting the West Virginia Board of Education policies in the use of instructional time (grades one through three).

The West Virginia Board of Education Policies 2510 and 2321 state:

Instructional time allocations (315 minutes, 180 days) are provided for grades 1-4 to meet or exceed the following: ar . 3-5%; health and science, 5-7%; language arts, 35-50%; mathematics, 16-19%; music, 3-5%; physical education, 3-5%; social studies, 5-7%; and discretionary time, 2-3%.

The data presented in Table 51 indicate that the teachers and principals now meet, used to meet, and would, under their ideal time schedules, continue to meet and exceed the WVBE policies for minimum time requirements.

Objective #4: To determine the past, current, and ideal (as perceived by teachers and principals) use of instructional time in all subject matter in grades one through three.

The data presented in Tables 12, 17, 22, 37, 41, 45, and 51 present data that meet the requirements of this objective. As stated under

Objective #3, these times meet and exceed the requirements of the WVBE policies.

Question #1: What agency or person has now, used to have, and should have influence in determining how instructional time is used in grades one through three?

Table 51 and Figures 6 and 7 present a summary of the combined (teachers' and principals') perceptions relative to this question. Currently, in their perceptions, the state has the most (69.5 percent) influence. In the past (57.1 percent) and under ideal circumstances (79.9 percent), local persons and agencies had or should have the greatest influence. The differences between current-past and current-ideal were found to be statistically significant, beyond the 0.01 level of significance.

Question #2: What is the degree of satisfaction held by teachers and principals relative to reading achievement of students?

The teachers and principals expressed a statistically higher degree of satisfaction that (a) their students would reach their reading achievement potential, and (b) teachers would meet individual learner needs in reading under ideal use of instructional time than in either the past or current use of instructional time.

Question #3: Do the perceptions of teachers and principals differ significantly in the use of instructional time? In their respective degrees of satisfaction?

The teachers' and principals' perceptions did not differ significantly in the use of instructional time. The principals were significantly less satisfied than the teachers that students were reaching their reading achievement potential under both past and current use of instructional time. The principals believed more strongly that

teachers would meet the needs of individual learner differences in reading under ideal rather than current use of instructional time.

Conclusions

The study's findings indicate that under past, current, and ideal use of instructional time, the public schools of West Virginia met or exceeded the WVBE policies. Further, both teachers and principals expressed higher satisfaction under past and ideal use of instructional time than under current use.

Teachers and principals both believe local influence was significantly greater during past years and would be significantly greater under ideal use of instructional time than under current use. This may be interpreted that local public schools were and would be meeting satisfactory use of instructional time without state influence or control over use of instructional time.

It may be interpreted that the degree of satisfaction of teachers and principals with student learning in reading was significantly greater under past and ideal use of instructional time than current use because under those conditions, they perceive local control of the use of instructional time.

The data retrieved and analyzed in this study appear to have met the study's objectives and questions. However, the data identify certain additional questions which appear to beg for answers. The more obvious questions are:

1. Ideally, why do teachers indicate a significantly higher number of minutes for teaching reading per week than do the principals?

2. Why do teachers and principals perceive that they had a greater influence on instructional time during past and ideal use of instructional time than they have under current use?

3. Why do teachers and principals have a significantly higher degree of satisfaction related to student success under ideal use of instructional time than under current use?

4. Is there a relationship between the degree of teacher and principal satisfaction and influence on the use of instructional time?

APPENDIX A

Principal and Teacher Version of WVASA Survey
on Reading and Instructional Time

PRINCIPAL'S VERSION

WVASA SURVEY ON READING AND INSTRUCTIONAL TIME

You have been selected as part of a statewide random sample of teachers and principals. Your opinions and perceptions--about how time affects student learning--are important so the survey results can be generalized to all West Virginia teachers and principals.

Your answers are anonymous. No one will be able to identify your individual responses.

The survey has four major sections:

- Section I asks for background information about you and your school.
- Section II asks you to report how students spend their time, in an average week, during this school year (1986-87).
- Section III asks you to think back to 1984-85 and report how students used to spend their time in an average week.
- The last part of the survey, Section IV, asks you to reflect on what you consider to be an ideal use of student learning time for optimum reading achievement.

The survey will take approximately 40 minutes to complete. You may want to have a calculator handy so that you can accurately complete Charts A, B, and C.

Please check your answers to make sure they are legible. This is an important study and your cooperation is appreciated. The results will be available from the WVASA office later this year.

Use the attached envelope to return your completed survey to your county superintendent.

Section I
DEMOGRAPHICS/BACKGROUND

Directions: Please respond to the following questions by marking your answers in the space provided.

1. How long have you been a principal or assistant principal in West Virginia?
   ___ less than 2 years
   ___ between 2-5 years
   ___ between 6-10 years
   ___ between 11-20 years
   ___ more than 20 years

2. Write in the name of the county in which you currently work.
   _____

3. In your building is reading taught in grades 1, 2, or 3?
   ___ No (If no, please stop now and return this questionnaire. Thank you for your cooperation.)
   ___ Yes (If yes, please complete the questionnaire.)

4. Are there any split grade situations in your school?
   ___ No
   ___ Yes (If yes, please indicate grade levels _____.)

5. In what situations is reading taught in grades 1, 2, and 3 in your building (e.g., self-contained classroom, team teaching). Briefly describe.
   _____
   _____
   _____
   _____
   _____

6. What is your average class size in grades 1, 2, and 3? _____

7. What grade levels are included in your school? (Check all that apply.)

___ K	___ 4	___ 9
___ 1	___ 5	___ 10
___ 2	___ 6	___ 11
___ 3	___ 7	___ 12
	___ 8	

8. How many students are enrolled in your school? _____

Section II. CURRENT USE OF INSTRUCTIONAL TIME

Directions: In this section please think about how your students in grades 1, 2, and 3 are spending their instructional time during this current school year. Complete this chart using last year's and this year's experience as a guide.

Chart A

Subject Area	Average number of minutes in a typical WEEK*			Comments
	Grade 1	Grade 2	Grade 3	
Reading				
Language Arts Spelling				
Handwriting				
English				
Mathematics				
Social Studies				
Science				
Health				
Art				
Music				
Physical Ed.				
Other:_____				
Other:_____				
Other:_____				

* If no minutes are used for a subject matter, please insert zero.

With Chart A in mind, please respond to the following questions in the appropriate space.

1. The person or agency having the most influence on the time allocations in Chart A was: (Please check only one.)

   ___Teacher
   ___Principal
   ___Central office staff
   ___County superintendent
   ___Local school board
   ___State department of education
   ___State board of education

2. Considering the time allotted for reading in Chart A, are you satisfied that your students are reaching their reading achievement potential? (Please check only one.)

   ___very satisfied
   ___satisfied
   ___dissatisfied
   ___very dissatisfied

3. Given the time allotments in Chart A, can your teachers meet the needs of individual learner differences in reading?

   ___Yes
   ___No

   Please explain.

4. General Comments:

Section III. PAST USE OF INSTRUCTIONAL TIME

IF THIS IS YOUR FIRST, SECOND, OR THIRD YEAR AS A PRINCIPAL, PLEASE DO NOT COMPLETE SECTION III. SKIP TO SECTION IV.

Directions: In this section please think about how your students spent their instructional time prior to the 1985-86 school year. Complete this chart using your administrative experience as a guide.

Chart B

Subject Area	Average number of minutes in a typical WEEK*			Comments
	Grade 1	Grade 2	Grade 3	
Reading				
Language Arts Spelling				
Handwriting				
English				
Mathematics				
Social Studies				
Science				
Health				
Art				
Music				
Physical Ed.				
Other:_____				
Other:_____				
Other:_____				

* If no minutes are used for a subject matter, please insert zero.

With Chart B in mind, please respond to the following questions in the appropriate space.

1. The person or agency having the most influence on the time allocations in Chart B was: (Please check only one.)

   ____Teacher
   ____Principal
   ____Central office staff
   ____County superintendent
   ____Local school board
   ____State department of education
   ____State board of education

2. Considering the time allotted for reading in Chart B, are you satisfied that your students are reaching their reading achievement potential? (Please check only one.)

   ____very satisfied
   ____satisfied
   ____dissatisfied
   ____very dissatisfied

3. Given the time allotments in Chart B, were your teachers able to meet the needs of individual learner differences in reading?

   ____Yes
   ____No

   Please explain.

4. General Comments

Section IV. IDEAL USE OF INSTRUCTIONAL TIME

Directions: In this section you are given an opportunity to design an ideal instructional day for students in grades 1, 2, and 3. You may select what students will learn and how much time they will spend learning it. Complete this chart by choosing the students' subject areas, the average number of minutes you think students should spend in a typical week for each grade level, and any comments.

Chart C

Subject Area	Average number of minutes in a typical WEEK*			Comments
	Grade 1	Grade 2	Grade 3	
Reading				
Language Arts Spelling				
Handwriting				
English				
Mathematics				
Social Studies				
Science				
Health				
Art				
Music				
Physical Ed.				
Other: _____				
Other: _____				
Other: _____				

*If no minutes are used for a subject matter, please insert zero.

With Chart C in mind, please respond to the following questions in the appropriate space.

1. The person or agency having the most influence on the time allocations in Chart C should be: (Please check only one.)

   ___ Teacher
   ___ Principal
   ___ Central office staff
   ___ County superintendent
   ___ Local school board
   ___ State department of education
   ___ State board of education

2. Considering the time allocated for reading in Chart C, are you satisfied that your students could reach their reading achievement potential? (Please check only one.)

   ___ very satisfied
   ___ satisfied
   ___ dissatisfied
   ___ very dissatisfied

3. Given your instructional time allotments in Chart C, will your teachers be able to meet the needs of individual learner differences in reading?
   ___ Yes
   ___ No
   Please explain.

4. General Comments:

Thank you for your cooperation.

Please return this survey to: Your County Superintendent. Or you can mail directly to: Harry Stansbury, Director WVASA, 200 Elizabeth Street, Charleston, WV 25311

TEACHER VERSION

WVASA SURVEY ON READING AND INSTRUCTIONAL TIME

You have been selected as part of a statewide random sample of teachers and principals. Your opinions and perceptions--about how time affects student learning--are important so the survey results can be generalized to all West Virginia teachers and principals.

Your answers are anonymous. No one will be able to identify your individual responses.

The survey has four major sections:

- Section I asks for background information about you and your school.
- Section II asks you to report how students spend their time, in an average week, during this school year (1986-87).
- Section III asks you to think back to 1984-85 and report how students used to spend their time in an average week.
- The last part of the survey, Section IV, asks you to reflect on what you consider to be an ideal use of student learning time for optimum reading achievement.

The survey will take approximately 40 minutes to complete. You may want to have a calculator handy so that you can accurately complete Charts A, B, and C.

Please check your answers to make sure they are legible. This is an important study and your cooperation is appreciated. The results will be available from the WVASA office later this year.

Use the attached envelope to return your completed survey to your county superintendent.

Section I
DEMOGRAPHICS/BACKGROUND

Directions: Please respond to the following questions by marking your answers in the space provided.

1. How long have you taught in West Virginia?

   ___ less than 2 years
   ___ between 2-5 years
   ___ between 6-10 years
   ___ between 11-20 years
   ___ more than 20 years

2. Write in the name of the county in which you currently teach.

   _____

3. During your instructional day, is one of your responsibilities to teach reading in grades 1, 2, or 3?

   ___ Yes (If yes, please complete the questionnaire.)

   ___ No (If no, please stop now and return this questionnaire. Thank you for your cooperation.)

4. Check the grade(s) in which you teach reading.
   ___ grade 1
   ___ grade 2
   ___ grade 3

5. How many other teachers in your school teach reading at the same grade level?

   _____

6. Do you teach in a split grade situation?
   ___ No
   ___ Yes Please indicate level(s)_____

7. In what situation do you teach reading the majority of the time (e.g., self-contained classroom, team teaching). Briefly describe.

   _____
   _____
   _____
   _____

8. What is your average class size?_____

9. What grade levels are included in your school? (Check all that apply.)

   ___ K
   ___ 1
   ___ 2
   ___ 3
   ___ 4
   ___ 5
   ___ 6
   ___ 7
   ___ 8
   ___ 9
   ___ 10
   ___ 11
   ___ 12

10. How many students are enrolled in your school? _____

11. Do other people assist in teaching reading to your students?

    ___ No
    ___ Yes
    Describe:

    _____
    _____
    _____
    _____
    _____
    _____

Section II. CURRENT USE OF INSTRUCTIONAL TIME

Directions: In this section please think about how your students are spending their instructional time during this current school year. Complete this chart using last year's and this year's teaching experience as a guide.

Chart A

Subject Area	Average number of minutes in a typical WEEK*	Taught by: Classroom Teacher	Resource Teacher	Team Teacher	Comments
Reading					
Language Arts Spelling					
Handwriting					
English					
Mathematics					
Social Studies					
Science					
Health					
Art					
Music					
Physical Ed.					
Other:					
Other:					
Other:					

* If no minutes are used for a subject matter, please insert zero.

With Chart A in mind, please respond to the following questions in the appropriate space.

1. The person or agency having the most influence on the time allocations in Chart A was: (Please check only one.)
   ___ Teacher
   ___ Principal
   ___ Central office staff
   ___ County superintendent
   ___ Local school board
   ___ State department of education
   ___ State board of education

2. Do your students have the opportunity to learn to read at grade level?
   ___ Yes ___ No
   Comments:

3. Considering the time allotted for reading in Chart A, are you satisfied that your students are reaching their reading achievement potential? (Please check only one.)
   ___ very satisfied
   ___ satisfied
   ___ dissatisfied
   ___ very dissatisfied

4. Given the time allotments in Chart A, can you meet the needs of individual learner differences in reading?
   ___ Yes ___ No
   Please explain.

5. General Comments:

Section III. PAST USE OF INSTRUCTIONAL TIME

IF THIS IS YOUR FIRST, SECOND, OR THIRD YEAR OF TEACHING, PLEASE DO NOT COMPLETE SECTION III. SKIP TO SECTION IV.

Directions: In this section please think about how your students spent their instructional time prior to the 1985-86 school year. Complete this chart using your teaching experience as a guide.

Chart B

Subject Area	Average number of minutes in a typical WEEK*	Taught by: Classroom Teacher	Resource Teacher	Team Teacher	Comments
Reading					
Language Arts Spelling					
Handwriting					
English					
Mathematics					
Social Studies					
Science					
Health					
Art					
Music					
Physical Ed.					
Other:					
Other:					
Other:					

*If no minutes are used for a subject matter, please insert zero.

With Chart B in mind, please respond to the following questions in the appropriate space.

1. The person or agency having the most influence on the time allocations in Chart B was: (Please check only one.)

   ____ Teacher
   ____ Principal
   ____ Central office staff
   ____ County superintendent
   ____ Local school board
   ____ State department of education
   ____ State board of education

2. Did your students have the opportunity to learn to read at grade level?
   ____ Yes ____ No

3. Considering the time allotted for reading in Chart B, were you satisfied that your students could reach their reading achievement potential? (Please check only one.)
   ____ very satisfied
   ____ satisfied
   ____ dissatisfied
   ____ very dissatisfied

4. Given the time allotments in Chart B, were you able to meet the needs of individual learner differences in reading?
   ____ Yes ____ No
   Please explain.

5. General Comments:

Section IV. IDEAL USE OF INSTRUCTIONAL TIME

Directions: In this section you are given an opportunity to design your students' ideal instructional day, to choose what your students will learn, and how much time they will spend learning it. Complete this chart by choosing your students' subject areas, average number of minutes you think students should spend in a typical week, and any comments.

Chart C

Subject Area	Average number of minutes in a typical WEEK*	Taught by: Classroom Teacher	Resource Teacher	Team Teacher	Comments
Reading					
Language Arts Spelling					
Handwriting					
English					
Mathematics					
Social Studies					
Science					
Health					
Art					
Music					
Physical Ed.					
Other:					
Other:					
Other:					

* If no minutes are used for a subject matter, please insert zero.

With Chart C in mind, please respond to the following questions in the appropriate space.

1. The person or agency having the most influence on the time allocations in Chart C should be: (Please check only one.)

   ___ Teacher
   ___ Principal
   ___ Central office staff
   ___ County superintendent
   ___ Local school board
   ___ State department of education
   ___ State board of education

2. Given the time allotments in Chart C, would your students have the oppo. tunity to learn to read at grade level?

   ___Yes ___No

3. Given the time allotments in Chart C, would you be satisfied that your students could reach their reading achievement potential? (Please check only one.)

   ___ very satisfied
   ___ satisfied
   ___ dissatisfied
   ___ very dissatisfied

4. Given the time allotments in Chart C, would you be able to meet the needs of individual learner differences in reading?

   ___Yes ___No
   Please explain.

5. General Comments:

Please return this survey to:
Your County Superintendent
Or you can mail directly to:
Harry Stansbury, Director WVASA
200 Elizabeth Street
Charleston, WV 25311

Thank you for your cooperation.