

DOCUMENT RESUME

ED 252 548

TM 840 807

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 TITLE Information Collected on Nonapplied Time, Engaged Time, Nonengaged Time and Applied Time. Comparative Studies of Phase IV IGE Evaluation Project. Phase IV, Project Paper 80-5.
 INSTITUTION Wisconsin Univ., Madison. Research and Development Center for Individualized Schooling.
 SPONS AGENCY National Inst. of Education (ED), Washington, DC.
 PUB DATE Nov 80
 GRANT OB-NIE-G-80-0117
 NOTE 111p.; For related documents, see TM 840 804-812 and TM 850 019.
 PUB TYPE Statistical Data (110) -- Reports - Research/Technical (143)

EDRS PRICE MF01/PC05 Plus Postage.
 DESCRIPTORS *Curriculum Evaluation; Data Analysis; Elementary Education; Grade 2; Grade 5; *Mathematics Skills; Programed Instruction; Reading Instruction; *Reading Skills; Tables (Data); *Time Factors (Learning); *Time on Task

IDENTIFIERS Developing Mathematical Processes; *Individually Guided Education; Prereading Skills Program; Wisconsin Design for Reading Skill Development

ABSTRACT

This is one of a series of reports which provide definitions and descriptive data on the variables used in the Comparative Study of Phase IV of the Individually Guided Education (IEG) Evaluation Project. Phase IV investigated three curriculum programs specifically designed to be compatible with instructional programming for the individual student: (1) the Wisconsin Design for Reading Skills Development (WDRSD); (2) Developing Mathematical Processes (DMP); and (3) Prereading Skills (PRS). Information on instructional methods and pupil outcomes for grades 2 and 5 was collected from achievement monitoring and domain referenced tests, teacher logs, and classroom observations. This report focuses on three variables created from the observational data: nonapplied, available, and engaged time. Nonapplied time is time within the designated skills period spent in unrelated activities. Available time is the time actually available for skill instruction. Engaged time is the portion of the instructional period when students are actively involved in learning. Tables 1-8 report average number of hours and percentage of observed nonavailable, available, and engaged time, by period, for reading and math skills by grade. Tables 13-16 enumerate reading and math general objectives for each grade, and provide the total number of hours and percentages of time allocated to each objective. (BS)

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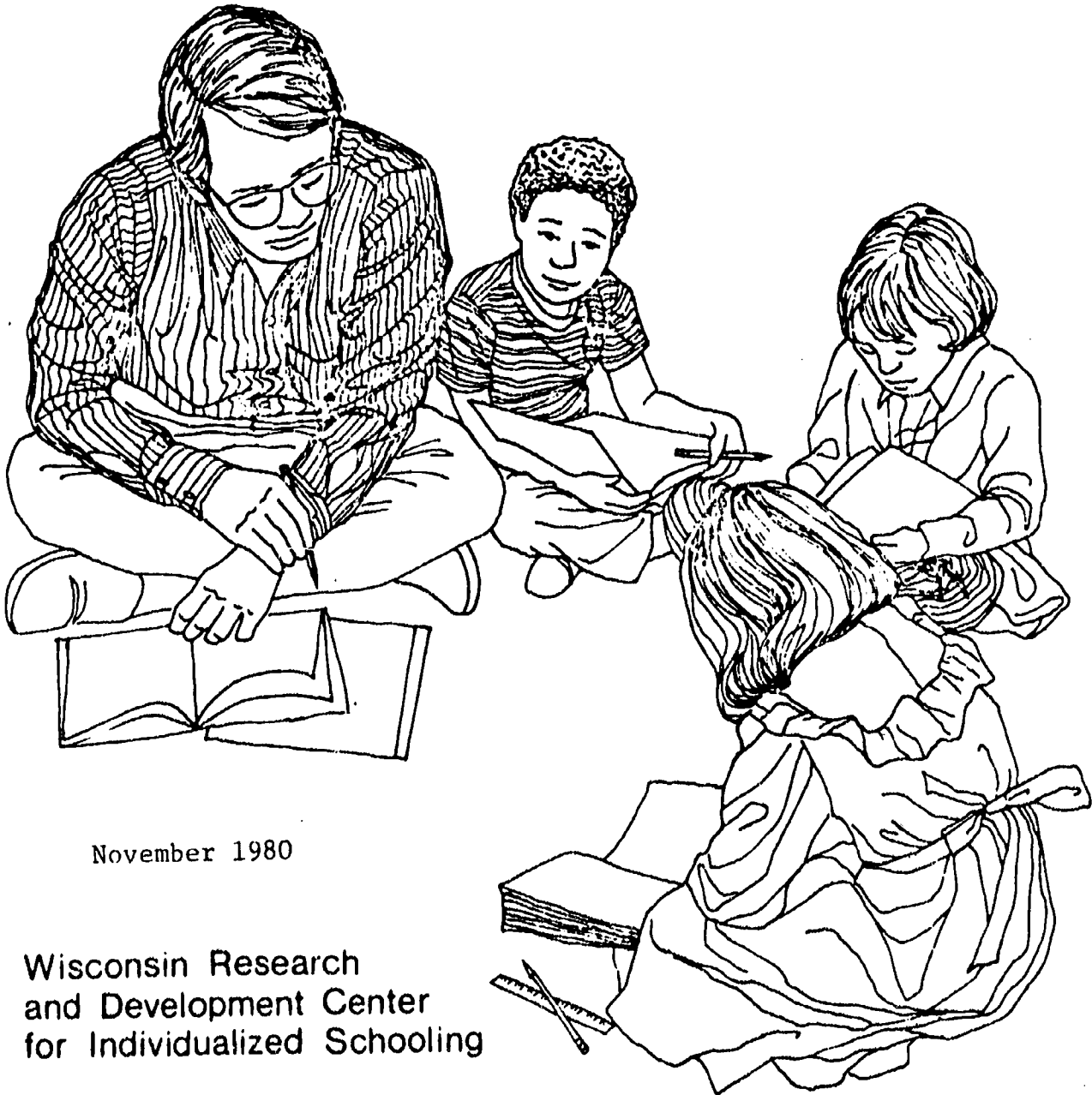
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Phase IV
Project Paper 80-5

INFORMATION COLLECTED ON NONAPPLIED TIME, ENGAGED
TIME, NONENGAGED TIME AND APPLIED TIME

COMPARATIVE STUDIES OF PHASE IV
IGE EVALUATION PROJECT

by Norman L. Webb and Anne G. Nerenz



November 1980

Wisconsin Research
and Development Center
for Individualized Schooling

TM 842 807

Project Paper 80-5

Information Collected on Nonapplied Time,
Engaged Time, Nonengaged Time and Applied Time

IGE Evaluation Phase IV
Comparative Studies

by

Norman L. Webb and Anne G. Nerenz

Report from the
IGE Evaluation Project

Thomas A. Romberg
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Wisconsin Research and Development
Center for Individualized Schooling
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Madison, Wisconsin

November 1980

Published by the Wisconsin Research and Development Center for Individualized Schooling. The project presented or reported herein was performed pursuant to a grant from the National Institute of Education, Department of Health, Education, and Welfare. However, the opinions expressed herein do not necessarily reflect the position or policy of the National Institute of Education, and no official endorsement by the National Institute of Education should be inferred.

Center Grant No. OH-NIE-C-80-0117

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- developing and demonstrating improved instructional strategies, processes, and materials for students, teachers, and school administrators
- providing assistance to educators which helps transfer the outcomes of research and development to improved practice in local schools and teacher education institutions

The Wisconsin Research and Development Center is supported with funds from the National Institute of Education and the University of Wisconsin.

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Abstract

This report is one in a series of papers which provide a definition of and descriptive information on the variables used in the Comparative studies of Phase IV of the IGE Evaluation Project. Specifically, it focuses on three variables - Nonapplied Time, Available Time, and Engaged Time.

A more detailed discussion of the design of the study and the expected relationships among the variables is available in Project Paper 80-2 (Komberg, Webb, Stewart, and Nerenz, 1980) and readers might find that report helpful in understanding the data presented here.

The IGE Evaluation Project has as a central objective the identification of features of IGE schooling which contribute to successful instruction, especially in reading skills and mathematics. Although the first four phases of this project focused on different aspects of IGE, they were designed to provide complementary data bases resulting in a comprehensive description of this form of schooling. With this goal in mind, Phase IV was designed to supplement information collected in Phases I and III by providing detailed information on a small number of curricular and instructional variables. That is, whereas these phases investigated organizational, system, general means of instruction, and general achievement variables, the main purpose of Phase IV was to investigate the three R & D Center-produced curriculum programs whose instructional procedures and materials were specifically designed to be compatible with instructional programming for the individual student. These programs are the Wisconsin Design for Reading Skills Development (WDRSD) (Otto, 1977), Developing Mathematical Processes (DMP) (Romberg, 1977), and Prereading Skills (PRS) (Venezky & Pittelman, 1977).

Phase IV was divided into two parts--the Descriptive Study and the Comparative Study--and information on the design and procedures used during each portion may be found in Project Papers 79-42 and 80-2 (Webb & Romberg, 1979; Romberg, Webb, Stewart, & Nerenz, 1980). Briefly, each part was designed to provide detailed information

on two variables - means of instruction and pupil outcomes - using achievement monitoring and domain referenced tests, teacher logs, and classroom observations. In addition, a smaller amount of information on background, organizational, and program variables was obtained using principal, unit leader, and teacher interviews.

This report focuses on three variables created from the observational data - Nonapplied, Available, and Engaged Time. Following a definition of each variable and an explanation of the aggregation procedures, the primary data are presented.

I

Definitions and Aggregations ProceduresNon-applied Time

Definition. Non-applied time is that time within the designated skills period that is spent in activities which are unrelated to reading skills or to math. This includes time spent in transition, waiting, management, break, or other academic or nonacademic content area.

Aggregation Procedures. The six types of non-applied time listed above were aggregated into three subvariables: undirected time (transition, waiting), supervised time (management, break) and other content (other academic or non-academic content).

Available Time

Definition. Available time equals the total amount of observed time less the non-applied time and thus is that portion of the instructional period which remains once undirected, supervised, and other content time have been subtracted. As indicated by the variable name, it is the time which is actually available for skills instruction. Available time was not aggregated; however, the total minutes and percentages of available time are reported in terms of the aggregated content variables discussed in Report 80-3 (Nerenz & Webb, 1980).

Engaged and Non-engaged Time

Definition. Engaged time is that portion of the instructional period during which students are actively involved in learning the particular content. When summed, Engaged Time and its complement, Non-engaged Time, equal Available Time.

Aggregations. Total minutes and percentage of engagement or non-engagement are reported as the aggregated variables Total Engagement and Total Nonengagement whenever reading skills and mathematics content are considered. In creating these variables, the three types of engaged student behavior (engaged-writing, engaged-oral, engaged-covert) were summed. Similarly, Total Nonengagement was created by summing the three categories of non-engaged behavior (non-engaged writing, non-engaged iterim, non-engaged off-task).

Tables 1 and 2 which follow report average number of hours and percentage of observed allocated time by period for reading skills, by grade; Tables 3 and 4 report similar data for math skills by grade. Tables 5-8 provide this data for engaged time, by skill and by grade. Data for nonengaged time is in Tables 9-12. Tables 13-16 enumerate reading and math general objectives for second and fifth grade and provide the total number of hours and percentage of time allocated to each.

Table 1

Average Number of Hours and Percentage of Observed Allocated Time for
Three Categories of Non-applied Time by Period for Reading Skills

Grade 2

School Type and Number	Period (Hours, %)							Total Hours
	A	B	C	D	E	F	G	
Undirected Time								
IGE/WDRSD								
466		.41, 7	2.17, 17	.78, 9	.87, 10	1.84, 10	.14, 2	6.21
451	2.03, 14	.27, 5	0, 0	.09, 9	.44, 6	.4, 6	.07, 1	3.3
476	.24, 3		.31, 33	.16, 2	-	-	.21, 3	.92
507	.5, 3	.14, 1	.13, 1	.96, 5	-	-	.07, 1	1.8
MEAN	.69, 5	.20, 3	.65, 13	.50, 6	.33, 4	.56, 4	.12, 2	3.06
IGE/Non-WDRSD								
372	1.37, 5	3.41, 8	5.3, 10	2.38, 6	1.75, 7	.55, 2	2.11, 5	16.87
410	0, 0	0, 0	.19, 1	0, 0	.35, 3	.45, 2	.83, 3	1.82
493	1.1, 19	1.23, 7	1.31, 8	.78, 7	1.89, 8	1.18, 13	.91, 5	8.4
MEAN	.82, 5	1.55, 5	2.27, 6	1.05, 4	1.33, 6	.73, 6	1.28, 4	9.03
Non-IGE/WDRSD								
900	1.46, 12	1.36, 18	-	.94, 16	.91, 12	.53, 14	.83, 14	6.03
902	.16, 4	-	.97, 12	.53, 10	1.48, 25	1.65, 21	1.44, 18	6.23
901	.34, 3	.61, 6	2.16, 8	.54, 3	.42, 3	.38, 4	.49, 3	7.94
903	.22, 3	-	.45, 4	-	.30, 4	.33, 4	.58, 6	1.88
MEAN	.54, 3	.49, 6	.90, 6	.50, 6	1.45, 11	.72, 11	.83, 10	5.52

Table 1 (continued)

School Type and Number	Period (Hours, %)							Total Hours
	A	B	C	D	E	F	G	
Supervised Time								
IGE/WDRSD								
466	-	.11, 2	.46, 4	.59, 7	.37, 4	1.63, 9	.64, 11	4.37
451	.0, 0	.07, 1	0, 0	0, 0	.10, 11	0, 0	.16, 2	.33
476	.06, 1	-	.11, 2	-	-	.11, 2	.11, 2	.39
507	-	-	.13, 1	.41, 2	.12, 1	.13, 1	.11, 1	.09
MEAN	.02, 0 ⁺	.04, 1	.18, 2	.25, 2	.15, 2	.47, 3	.26, 4	1.50
IGE/Non-WDRSD								
372	.50, 2	1.24, 3	1.74, 3	.98, 3	.47, 2	1.10, 4	1.27, 3	7.3
410	0, 0	0, 0	0, 0	0, 0	.10, 1	0, 0	0, 0	.1
493	-	.86, 5	.57, 3	.12, 1	-	-	-	1.55
MEAN	.17, 1	.70, 3	.77, 2	.37, 1	.19, 1	.37, 1	.42, 1	2.98
Non-IGE/WDRSD								
900	-	.76, 10	-	.72, 12	-	.12, 3	-	.53
902	.85, 23	.31, 10	1.93, 24	-	.06, 1	-	-	3.15
901	.55, 5	-	.48, 2	-	-	.08, 1	-	1.11
903	-	-	-	-	.92, 13	.91, 12	.62, 6	2.45
MEAN	.35, 7	.27, 5	.60, 6	.18, 3	.24, 4	.28, 4	.15, 1	1.81

Table 1 (continued)

School Type and Number	Period (Hours, %)							Total Hours
	A	B	C	D	E	F	G	
Other Content Time								
IGE/WDRSD								
466	-	.26, 5	-	.21, 2	.63, 7	.59, 3	-	1.69
451	0, 0	1.0, 19	0, 0	.67, 28	1.23, 15	.92, 13	0, 0	3.82
476	.06, 1	-	-	-	-	-	-	.06
507	.17, 1	.45, 4	.96, 6	.56, 3	.48, 2	.06, 0+	.86, 8	3.54
MEAN	.06, 0+	.43, 7	.24, 1	.36, 8	.58, 6	.39, 4	.22, 2	2.28
IGE/Non-WDRSD								
372	0, 0	3.21, 8	1.10, 2	1.56, 4	.30, 1	0, 0	.46, 1	6.63
410	0, 0	0, 0	.20, 1	.45, 2	.50, 4	.41, 2	.12, 1	1.68
493	.38, 3	.23, 1	2.47, 14	1.41, 13	.27, 1	-	.13, 1	4.89
MEAN	.10, 1	1.15, 3	1.26, 6	1.14, 6	.36, 2	.14, 1	.24, 1	4.4
Non-IGE/WDRSD								
900	-	.46, 6	-	.78, 13	-	1.07, 28	-	2.31
902	-	-	.12, 1	-	-	-	-	.12
901	.37, 3	.09, 1	-	.68, 3	.58, 4	-	.16, 1	1.88
903	-	-	1.03, 10	-	.06, 1	-	-	1.09
MEAN	.09, 1	.14, 2	.29, 3	.36, 4	.16, 1	.27, 7	.04, 0+	1.35

Table 2

Average Number of Hours and Percentage of Observed Allocated Time for
Three Categories of Non-applied Time by Period for Reading Skills

Grade 5

School Type and Number	Period (Hours, %)							Total Hours
	A	B	C	D	E	F	G	
Undirected Time								
IGE/WDRSD								
466	0, 0	.43, 8	.89, 9	.48, 8	0, 0	.69, 6	1.21, 11	3.7
451	.44, 4	1.39, 12	0, 0	0, 0	.53, 5	.35, 3	.33, 3	3.04
476	.06, 0 ⁺	0, 0	.22, 2	0, 0	0, 0	0, 0	.50, 4	.78
507	.28, 2	0, 0	0, 0	0, 0	0, 0	0, 0	.11, 3	.39
MEAN	.20, 2	.46, 5	.28, 3	.12, 2	.13, 1	.26, 2	.54, 5	1.98
IGE/Non-WDRSD								
372	1.11, 4	1.27, 4	1.76, 5	.91, 4	.72, 3	.51, 3	.12, 0 ⁺	6.4
410	0, 0	.14, 1	.20, 1	.22, 2	.05, 1	.40, 3	.06, 0 ⁺	1.07
493	.51, 6	.21, 1	.37, 3	.05, 1	.10, 1	.31, 3	.05, 0 ⁺	1.6
MEAN	.54, 3	.54, 2	.78, 3	.39, 2	.29, 2	.41, 3	.08, 0 ⁺	3.02
Non-IGE/WDRSD								
900	.89, 11	1.06, 11	0, 0	.69, 8	.49, 4	.42, 8	.66, 7	4.21
902	0, 0	0, 0	1.66, 19	1.55, 27	.67, 12	.89, 10	2.23, 25	7.0
901	1.44, 11	2.02, 19	1.15, 6	1.12, 12	.97, 5	.19, 2	1.58, 14	8.47
903	.06, 1	.04, 1	.21, 3	0, 0	.21, 2	.11, 1	.31, 3	.94
MEAN	.60, 6	.78, 8	.76, 8	.84, 12	.58, 6	.40, 5	1.20, 12	5.16

Table 2 (continued)

School Type and Number	Period (Hours, %)							Total Hours
	A	B	C	D	E	F	G	
Supervised Time								
IGE/WDRSD								
466	0, 0	.05, 1	.46, 5	.18, 3	0, 0	.77, 6	.60, 5	2.06
451	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	.06, 1	.06
476	0, 0	0, 0	.51, 4	0, 0	0, 0	0, 0	0, 0	.51
507	0, 0	0, 0	.21, 1	.04, 0 ⁺	0, 0	.13, 2	.05, 1	.43
MEAN	0, 0	.01, 0 ⁺	.30, 2	.06, 1	0, 0	.22, 2	.18, 2	.76
IGE/Non-WDRSD								
372	.11, 0 ⁺	.06, 0 ⁺	.34, 1	.10, 0 ⁺	0, 0	.06, 0 ⁺	.06, 1	1.02
410	0, 0	0, 0	0, 0	0, 0	.10, 1	.40, 3	.81, 3	1.31
493	0, 0	0, 0	0, 0	0, 0	.06, 0 ⁺	0, 0	0, 0	.06
MEAN	.04, 0 ⁺	.02, 0 ⁺	.08, 0 ⁺	.03, 0 ⁺	.02, 0 ⁺	.15, 1	.39, 1	.80
Non-IGE/WDRSD								
900	.16, 2	1.42, 14	0, 0	.32, 4	.18, 2	0, 0	0, 0	2.08
902	.59, 12	.04, 1	1.62, 19	.68, 12	1.44, 26	0, 0	0, 0	4.37
901	.09, 1	.19, 2	0, 0	.61, 7	0, 7	.40, 5	.13, 1	1.42
903	0, 10	0, 0	0, 0	0, 0	.86, 9	.93, 12	.21, 2	2.0
MEAN	.21, 3	.41, 4	.40, 5	.40, 6	.62, 9	.24, 4	.09, 1	2.47

Table 2 (continued)

School Type and Number	Period (Hours, %)							Total Hours
	A	B	C	D	E	F	G	
Other Content Time								
IGE/WDRSD								
466	0, 0	.65, 12	1.09, 11	1.12, 19	0, 0	2.52, 21	1.68, 15	7.06
451	0, 0	.20, 2	0, 0	.90, 28	0, 0	.31, 3	2.59, 24	4.0
476	0, 0	2.67, 27	3.45, 28	0, 0	0, 0	0, 0	0, 0	6.12
507	.30, 2	1.73, 27	.34, 2	2.37, 22	0, 0	.25, 4	0, 0	4.99
MEAN	.08, 0 ⁺	1.31, 17	1.22, 7	1.10, 17	0, 0	.77, 7	1.07, 10	5.54
IGE/Non-WDRSD								
372	.36, 2	.12, 1	.29, 1	.15, 1	.29, 1	.41, 2	.23, 1	1.85
410	0, 0	0, 0	.33, 2	.28, 3	0, 0	0, 0	.35, 1	.96
493	1.43, 16	2.46, 15	2.24, 17	1.35, 16	.64, 4	.38, 3	1.80, 18	10.3
MEAN	.60, 6	.86, 5	.95, 7	.59, 7	.31, 2	.26, 2	.79, 7	4.37
Non-IGE/WDRSD								
900	0, 0	.47, 5	0, 0	0, 0	2.40, 21	0, 0	0, 0	2.87
902	0, 0	.17, 4	0, 0	0, 0	0, 0	0, 0	0, 0	.17
901	0, 0	.18, 2	1.81, 9	.72, 8	.40, 2	1.67, 21	.13, 1	4.91
903	0, 0	0, 0	.06, 1	0, 0	.47, 5	.34, 4	0, 0	.87
24 MEAN	0, 0	.20, 3	.48, 2	.18, 2	.82, 7	.50, 6	.03, 0 ⁺	2.20

Table 3

Number of Hours and Percentage of Observed Allocated Time for
Three Categories of Non-applied Time by Period for Mathematics Skills

Grade 2

School Type and Number	Period (Hours, %)							Total Hours
	A	B	C	D	E	F	G	
Undirected Time								
IGE/DMP								
440	.81, 7	.87, 8	.76, 10	.31, 3	.33, 3	.11, 3	1.35, 9	4.54
593	.34, 2	.24, 1	.25, 5	.89, 4	.87, 5	.26, 2	.21, 2	3.06
MEAN	.58, 4	.56, 4	.50, 8	.60, 4	.60, 4	.18, 2	.78, 6	3.80
IGE/Non-DMP								
428	0, 0	0, 0	.07, 3	.43, 4	.48, 4	.50, 8	.37, 5	1.85
421	.81, 7	.46, 4	-	.58, 6	.71, 7	.97, 10	.56, 8	4.09
333	.11, 1	.93, 8	.14, 1	.10, 2	.43, 6	.21, 2	.13, 1	2.05
MEAN	.31, 3	.46, 4	.10, 2	.37, 4	.54, 6	.56, 7	.35, 4	2.66
Non-IGE/DMP								
904	.12, 1	0, 0	0, 0	.84, 8	.72, 6	0, 0	0, 0	1.68
906	.56, 4	.08, 1	.50, 3	0, 0	.14, 1	.06, 1	.17, 1	1.51
762	2.28, 9	2.31, 8	3.25, 10	.85, 7	.65, 2	1.51, 8	1.50, 6	12.35
MEAN	.99, 5	.80, 3	1.25, 4	.56, 5	.50, 3	.52, 3	.56, 2	5.18

Table 3 (continued)

School Type and Number	Period (Hours, %)							Total Hours
	A	B	C	D	E	F	G	
Supervised Time								
IGE/DMP								
440	.17, 2	.23, 2	.29, 4	.41, 4	0, 0	0, 0	0, 0	1.10
593	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	0
MEAN	.08, 1	.12, 1	.15, 2	.20, 2	0, 0	0, 0	0, 0	.55
IGE/Non-DMP								
428	0, 0	0, 0	0, 0	.90, 8	0, 0	.12, 2	0, 0	1.02
421	.29, 2	0, 0	-	.29, 3	0, 0	.10, 1	0, 0	.68
333	0, 0	0, 0	.44, 4	.40, 7	0, 0	.15, 1	.58, 6	1.57
MEAN	.10, 1	0, 0	.15, 1	.53, 6	0, 0	.12, 1	.19, 2	1.09
Non-IGE/DMP								
904	0, 0	.32, 0	0, 0	0, 0	0, 0	0, 0	0, 0	.32
906	0, 0	0, 0	.68, 4	.11, 1	0, 0	0, 0	.23, 2	1.02
762	5.26, 20	2.51, 8	3.97, 12	.67, 6	.77, 2	.73, 4	1.22, 5	15.13
MEAN	1.75, 7	.94, 3	1.55, 5	.26, 2	.26, 1	.24, 1	.48, 2	2.16

Table 3 (continued)

School Type and Number	Period (Hours, %)							Total Hours
	A	B	C	D	E	F	G	
Other Content Time								
IGE/DMP								
440	0, 0	0, 0	0, 0	.28, 3	.17, 2	.16, 4	.37, 2	.98
593	0, 0	0, 0	.05, 1	0, 0	0, 0	.87, 8	0, 0	.92
MEAN	0, 0	0, 0	.02, 0 ⁺	.14, 2	.08, 1	.51, 6	.18, 1	.95
IGE/Non-DMP								
428	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	0.00
421	.06, 1	1.11, 9	-	0, 0	.37, 4	1.56, 15	.11, 2	3.21
333	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	0.00
MEAN	.02, 0 ⁺	.37, 3	0, 0	0, 0	.12, 1	.52, 5	.04, 1	1.07
Non-IGE/DMP								
904	.06, 0 ⁺	.31, 2	.47, 4	.83, 8	.17, 1	0, 0	0, 0	1.84
906	.42, 3	.42, 3	0, 0	0, 0	0, 0	0, 0	0, 0	.84
762	1.91, 7	11.50, 38	7.38, 23	.27, 2	3.56, 11	1.70, 9	8.41, 34	34.73
MEAN	.80, 3	4.08, 14	2.61, 9	.37, 3	1.24, 4	.57, 3	2.80, 11	12.47

Table 4

Average Number of Hours and Percentage of Observed Allocated Time for
Three Categories of Non-applied Time by Period for Mathematics Skills

Grade 5

14

School Type and Number	Period (Hours, %)							Total Hours
	A	B	C	D	E	F	G	
Undirected Time								
IGE/DMP								
440	.83, 5	.58, 3	.53, 7	.24, 1	.66, 4	.05, 1	1.62, 6	4.51
593	1.34, 11	1.03, 8	.16, 4	1.30, 8	1.67, 10	1.19, 10	.19, 2	6.88
MEAN	1.08, 8	.80, 6	.34, 6	.77, 4	1.16, 7	.62, 6	1.81, 4	5.70
IGE/Non-DMP								
428	.14, 1	.06, 1	.12, 2	.33, 2	.52, 4	.27, 3	.76, 5	2.2
333	0, 0	.77, 4	.24, 2	.11, 1	0, 0	.20, 4	0, 0	1.32
MEAN	.07, 1	.42, 2	.18, 2	.22, 2	.26, 2	.24, 4	.38, 2	1.76
Non-IGE/DMP								
905	0, 0	0, 0	.16, 1	.05, 0 ⁺	.20, 2	.06, 1	.10, 1	.57
906	.08, 0 ⁺	.07, 0 ⁺	.54, 6	.06, 0	.18, 1	.15, 1	.25, 1	1.33
MEAN	.04, 0 ⁺	.04, 0 ⁺	.35, 4	.06, 0 ⁺	.19, 2	.10, 1	.18, 1	.95

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Table 4 (continued)

School Type and Number	Period (Hours, %)							Total Hours
	A	B	C	D	E	F	G	
Supervised Time								
IGE/DMP								
440	.18, 1	.53, 3	0, 0	.59, 3	.18, 1	0, 0	.19, 1	1.67
593	.22, 2	0, 0	0, 0	.06, 0 ⁺	.13, 1	0, 0	.12, 2	.53
MEAN	.20, 2	.26, 2	0, 0	.32, 2	.16, 1	0, 0	.16, 2	1.10
IGE/Non-DMP								
428	0, 0	0, 0	.99, 20	.47, 3	.12, 1	0, 0	0, 0	1.58
333	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	0
MEAN	0, 0	0, 0	.50, 10	.24, 2	.06, 1	0, 0	0, 0	.79
Non-IGE/DMP								
905	0, 0	0, 0	.21, 2	0, 0	.07, 1	0, 0	.06, 0 ⁺	.34
906	0, 0	0, 0	0, 0	.25, 1	0, 0	0, 0	.82, 4	1.07
MEAN	0, 0	0, 0	.10, 1	.12, 1	.02, 1	.0, 0	.44, 2	.70

Table 4 (continued)

School Type and Number	Period (Hours, %)							Total Hours
	A	B	C	D	E	F	G	
Other Content Time								
IGE/DMP								
440	1.85, 11	0, 0	0, 0	0, 0	.94, 5	0, 0	0, 0	2.79
593	.06, 0 ⁺	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	.06
MEAN	1.46, 6	0, 0	0, 0	0, 0	.47, 2	0, 0	0, 0	1.42
IGE/Non-DMP								
428	0, 0	0, 0	.06, 1	.13, 1	0, 0	0, 0	0, 0	.19
333	0, 0	.06, 0 ⁺	0, 0	.16, 2	0, 0	0, 0	0, 0	.22
MEAN	0, 0	.03, 0 ⁺	.03, 1	.15, 2	0, 0	0, 0	0, 0	.20
Non-IGE/DMP								
905	.17, 1	.31, 2	0, 0	.47, 4	0, 0	.83, 9	0, 0	1.78
906	.33, 2	1.12, 7	.44, 5	0, 0	.56, 3	0, 0	.73, 4	3.18
36 MEAN	.25, 2	.72, 4	.22, 2	.24, 2	.28, 2	.42, 4	.36, 2	2.48

Table 5

Average Number of Hours and Percentage of Observed Time for
Engaged Time by Period for Reading Skills

Grade 2

School Type and Number	Period (Hours, %)							Total Hours
	A	B	C	D	E	F	G	
IGE/WDRSD								
466	- -	3.92,70	5.74,46	4.08,47	4.65,52	9.19,52	2.99,52	30.57
451	10.40,70	3.12,59	2.01,80	1.11,46	4.71,59	3.88,54	4.69,66	29.83
476	5.04,71	4.93,70	3.82,59	4.62,69	4.16,64	3.21,75	4.84,70	30.62
507	10.03,67	9.55,76	9.53,65	11.88,67	12.69,68	12.33,77	8.13,74	74.05
MEAN	6.37,52	5.38,69	5.28,62	5.42,57	6.53,60	7.15,64	5.14,66	41.27
IGE/Non-WDRSD								
372	18.84,71	24.58,58	38.08,70	18.56,50	13.87,59	18.58,66	27.53,60	160.04
410	11.49,74	4.15,69	13.25,24	20.56,81	9.45,77	14.49,82	19.24,81	92.63
493	7.72,64	12.21,74	8.29,49	6.74,63	15.57,69	7.16,80	11.26,67	68.95
MEAN	12.68,70	13.65,67	19.87,64	15.29,65	12.96,68	13.41,76	19.34,69	107.21
Non-IGE/WDRSD								
900	10.42,85	4.40,58	-	2.65,45	4.58,60	1.12,29	4.43,74	27.60
902	2.22,59	7.30,72	3.48,42	4.60,88	3.82,65	4.38,55	4.93,62	25.73
901	7.92,67	5.63,53	11.39,45	10.61,55	6.82,52	5.39,57	7.93,52	55.69
903	3.86,51	3.02,63	3.90,39	-	3.70,51	5.11,70	5.41,56	25.00
MEAN	6.10,66	3.84,62	4.69,32	4.46,47	4.73,57	4.00,53	5.68,61	33.50

Table 6

Average Number of Hours and Percentage of Observed Time for
Engaged Time by Period for Reading Skills

Grade 5

18

School Type and Number	Period (Hours, %)							Total Hours
	A	B	C	D	E	F	G	
IGE/WDRSD								
466	-	3.71,70	4.12,43	2.53,42	-	5.47,46	5.72,52	21.55
451	6.77,70	7.23,65	-	1.94,61	7.54,69	8.09,73	5.63,52	37.20
476	8.97,79	4.86,50	3.71,31	8.38,86	6.42,77	5.75,87	8.02,68	46.11
507	9.98,67	3.51,54	10.27,69	6.21,58	5.61,80	5.11,74	2.33,60	43.02
MEAN	25.72,54	19.31,60	18.10,36	19.06,62	19.57,56	24.42,70	21.70,58	147.88
IGE/Non-WDRSD								
372	15.87,69	14.31,67	22.13,66	16.65,67	14.96,65	11.67,71	12.66,53	108.25
410	8.22,78	10.45,91	12.54,94	7.62,85	7.06,97	10.29,87	27.27,92	83.45
493	6.02,66	8.21,50	6.91,53	5.13,62	11.00,76	9.70,89	5.71,57	52.68
MEAN	30.11,71	32.97,69	41.58,71	29.40,71	33.02,79	31.66,82	45.64,67	244.38
Non-IGE/WDRSD								
900	5.78,69	5.46,55	-	6.39,71	4.76,42	2.09,39	4.82,54	29.30
902	2.62,55	2.63,67	4.06,67	3.31,57	2.46,44	6.73,78	5.91,66	27.72
901	7.59,57	7.45,71	13.13,64	4.78,52	13.50,70	4.01,50	7.09,64	57.55
40 903	3.12,62	4.09,58	4.20,58	-	6.30,66	5.03,66	7.68,78	30.42
MEAN	19.11,61	19.63,63	21.39,42	14.48,45	27.02,56	17.86,58	25.50,66	144.99

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Table 7

Average Number of Hours and Percentage of Observed Time for

Engaged Time by Period for Mathematics Skills

Grade 2

School Type and Number	Period (Hours, %)							Total Hours
	A	B	C	D	E	F	G	
IGE/DMP								
440	5.89,54	7.10,66	4.32,56	4.73,52	5.33,55	2.02,58	9.69,63	38.99
593	12.60,74	11.64,65	3.41,63	13.22,63	11.06,67	7.66,67	8.92,77	68.51
MEAN	9.24,64	9.37,66	3.86,60	8.98,58	8.20,61	4.84,62	9.26,70	53.75
IGE/Non-DMP								
428	3.88,78	4.20,84	1.79,71	8.51,72	5.60,71	2.65,41	4.42,60	31.05
421	7.85,69	7.04,60	-	2.92,28	2.76,28	3.22,32	3.01,42	26.80
333	6.93,74	5.63,49	8.16,74	4.32,72	5.50,80	6.78,66	6.46,70	43.78
MEAN	6.22,73	5.62,64	3.32,49	5.25,57	4.62,60	4.22,46	4.63,58	33.88
Non-IGE/DMP								
904	9.23,75	8.42,66	8.23,73	6.40,63	7.32,58	3.68,57	7.27,73	50.55
906	8.51,59	6.44,50	10.14,63	9.71,68	7.58,57	3.39,68	8.07,58	53.84
762	8.70,33	7.75,26	10.92,34	5.49,48	11.65,37	10.39,55	7.81,31	62.71
MEAN	8.81,56	7.54,47	9.76,57	7.20,60	8.85,51	5.82,60	7.72,54	55.70

Table 8

Average Number of Hours and Percentage of Observed Time for

Engaged Time by Period for Mathematics Skills

Grade 5

20

School Type and Number	Period (Hours, %)							Total Hours
	A	B	C	D	E	F	G	
IGE/DMP								
440	10.50,60	10.46,62	3.26,41	9.16,52	8.10,45	3.62,66	15.33,56	60.43
593	9.29,77	8.87,72	3.46,91	10.88,67	10.50,66	7.64,63	4.61,61	55.25
MEAN	9.90,69	9.66,66	3.36,66	10.02,60	9.30,56	5.63,64	9.97,58	57.84
IGE/Non-DMP								
428	12.03,83	8.44,85	3.09,63	10.45,72	9.84,71	7.02,72	10.64,71	61.51
333	3.34,74	12.08,71	7.60,64	5.59,71	6.70,72	2.66,56	9.93,73	47.90
MEAN	7.68,78	10.26,78	5.34,64	8.02,72	8.27,72	4.84,64	10.28,72	54.70
Non-IGE/DMP								
905	8.70,71	7.00,56	7.36,65	8.00,70	6.61,60	6.00,67	6.74,59	50.41
906	11.15,74	10.18,66	5.48,65	10.50,59	10.63,62	6.63,60	9.13,51	63.70
MEAN	9.92,72	8.59,60	6.42,65	9.25,64	8.62,61	6.32,64	7.94,54	57.06

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Table 9

Average Number of Hours and Percentage of Observed Time for
Non-engaged Time by Period for Reading Skills

Grade 2

School Type and Number	Period (Hours, %)							Total Hours
	A	B	C	D	E	F	G	
IGE/WDRSD								
466	- -	0.48, 8	4.13, 33	2.05, 24	2.50, 28	3.93, 22	1.93, 34	15.02
451	2.33, 16	0.82, 16	0.49, 20	0.53, 22	1.50, 19	2.01, 28	2.17, 31	9.85
476	1.28, 18	1.66, 24	2.26, 35	1.17, 17	1.98, 30	0.98, 23	1.72, 25	11.05
507	4.33, 29	2.37, 19	3.88, 26	3.86, 22	5.37, 29	3.18, 20	1.44, 13	24.43
MEAN	1.98, 16	1.33, 17	2.69, 28	1.90, 21	2.84, 26	2.52, 23	1.82, 26	15.09
IGE/Non-WDRSD								
372	5.78, 22	7.90, 18	8.39, 15	13.49, 36	7.12, 30	5.62, 20	12.08, 26	60.38
410	4.20, 27	1.85, 31	4.32, 24	4.65, 18	1.90, 15	2.61, 15	3.67, 15	23.20
493	1.49, 12	1.80, 11	1.80, 11	1.64, 15	3.02, 13	0.64, 7	1.32, 8	11.71
MEAN	3.82, 20	3.85, 20	4.84, 17	6.59, 23	4.01, 20	2.96, 14	5.69, 17	31.76
Non-IGE/WDRSD								
900	0.36, 3	0.28, 4	-	0.81, 14	1.44, 19	0.63, 16	0.72, 12	4.24
902	0.31, 8	0.57, 18	0.84, 10	0.06, 1	0.55, 9	1.50, 19	0.72, 9	4.55
901	2.06, 17	2.70, 25	10.36, 41	6.43, 33	4.52, 35	3.12, 33	3.68, 24	32.87
903	3.52, 46	1.78, 37	4.10, 41	-	1.93, 26	0.52, 7	3.08, 32	14.93
MEAN	1.56, 19	1.33, 21	3.82, 23	1.82, 12	2.11, 22	1.44, 19	2.05, 19	14.15

Table 10

Average Number of Hours and Percentage of Observed Time for
Non-engaged Time by Period for Reading Skills

Grade 5

22

School Type and Number	Period (Hours, %)							Total Hours
	A	B	C	D	E	F	G	
Non-engaged - Waiting								
IGE/WDRSD								
466	-	0.46, 9	1.52, 16	1.14, 19	-	2.55, 21	1.77, 16	7.44
451	1.96, 20	2.38, 21	-	0.37, 12	2.92, 26	2.34, 21	2.19, 20	12.16
476	1.59, 14	0.83, 8	0.93, 8	0.58, 6	1.42, 17	0.85, 13	2.55, 22	8.75
507	3.60, 24	0.85, 13	2.81, 19	1.47, 14	0.98, 14	0.25, 4	1.41, 36	11.37
MEAN	7.15, 14	4.52, 13	5.26, 10	3.56, 12	5.32, 14	5.99, 15	7.92, 24	39.72
IGE/Non-WDRSD								
372	4.11, 18	3.44, 16	6.18, 18	4.39, 18	5.81, 25	2.38, 14	3.37, 14	29.68
410	2.25, 21	0.93, 8	0.31, 2	0.89, 10	0.10, 1	0.76, 6	1.39, 5	6.63
493	1.53, 17	1.53, 8	2.51, 13	1.76, 21	2.09, 14	0.52, 5	0.20, 2	10.14
MEAN	7.89, 19	5.90, 11	9.00, 13	7.04, 16	8.00, 14	3.66, 9	4.96, 7	46.45
Non-IGE/WDRSD								
900	1.57, 19	1.50, 15	-	1.54, 17	2.56, 22	2.87, 53	2.43, 27	12.47
902	0.86, 18	0.68, 17	0.86, 10	0.25, 4	0.60, 11	0.99, 12	0.75, 8	4.99
901	4.25, 32	0.65, 6	3.45, 17	2.00, 22	4.33, 22	1.65, 21	1.60, 14	17.93
903	1.81, 36	2.96, 42	2.29, 32	-	1.28, 13	1.14, 15	1.17, 12	10.65
MEAN	8.49, 26	5.79, 20	6.60, 15	3.79, 11	8.77, 17	6.65, 25	5.95, 16	46.04

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Table 11

Average Number of Hours and Percentage of Observed Time for

Non-engaged Time by Period for Mathematics Skills

Grade 2

School Type and Number	Period (Hours, %)							Total Hours
	A	B	C	D	E	F	G	
IGE/DMP								
440	3.38,31	2.65,24	2.35,30	3.05,33	2.78,29	1.19,34	3.44,22	18.84
593	3.98,24	5.12,29	1.67,31	6.98,33	3.77,23	2.16,19	2.50,21	26.18
MEAN	3.68,28	3.88,26	2.01,30	5.02,33	3.28,26	1.68,26	2.97,22	22.51
IGE/Non-DMP								
428	1.13,23	0.82,16	0.65,26	1.08, 9	0.91,12	1.15,18	1.24,17	6.98
421	2.40,21	2.87,24	--	4.30,41	4.32,44	3.52,34	3.25,46	20.66
333	2.35,25	5.03,43	2.24,20	1.17,20	0.97,14	2.66,26	1.32,14	15.74
MEAN	1.96,23	2.91,28	0.96,15	2.18,23	2.07,23	2.44,26	1.94,26	14.46
Non-IGE/DMP								
904	2.89,24	2.92,23	1.64,14	2.03,20	2.25,18	1.74,27	2.40,24	15.87
906	5.14,35	1.40,11	4.67,29	3.50,25	4.73,36	1.55,31	4.96,35	25.95
762	5.28,20	4.42,15	6.46,20	3.08,27	9.00,28	3.65,19	2.74,11	34.63
MEAN	4.44,26	2.91,16	4.26,21	2.87,24	5.33,27	2.31,26	3.37,23	25.48

Table 12

Average Number of Hours and Percentage of Observed Time for

Non-engaged Time by Period for Mathematics Skills

Grade 5

24

School Type and Number	Period (Hours, %)							Total Hours
	A	B	C	D	E	F	G	
IGE/DMP								
440	4.03,23	5.38,32	2.86,36	7.41,42	8.02,45	1.84,33	9.92,36	39.46
593	1.10, 9	1.14, 9	0.17, 4	3.41,21	2.29,14	1.73,14	1.40,18	11.24
MEAN	2.56,16	3.26,20	1.52,20	5.41,32	5.16,30	1.78,24	5.66,28	25.35
IGE/Non-DMP								
428	2.36,16	1.41,14	0.76,16	1.40,10	3.43,25	2.45,25	2.21,15	14.02
333	1.16,26	3.45,20	2.55,21	2.45,31	1.40,15	1.13,24	3.60,27	15.83
MEAN	1.76,21	2.43,17	1.66,18	1.92,20	2.42,20	1.79,24	2.95,21	14.92
Non-IGE/DMP								
905	2.05,17	1.51,12	2.50,22	2.12,19	4.14,38	2.11,23	2.70,23	17.13
906	3.41,23	4.17,27	1.95,23	6.00,34	5.08,30	2.39,22	7.10,39	30.10
MEAN	2.73,20	2.84,20	2.22,22	4.06,26	4.61,34	2.25,22	4.90,32	23.62

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Table 13

Total Number of Hours and Percentage of Allocated Time
by Period for 12 Reading Skills General Objectives

Grade 2

Content Area
and Percentage of
Time (Hours, %)

Content Area	Analysis of Consonants	Analysis of Vowels	Phonics Analysis of Syllable Letter	Fluency Accuracy	Vocabulary Meaning	Map Skills	Comprehension Total Questions	Inference Skills	Reading Strategies	Comprehension Skills	Fluency Meaning Skills	Fluency Reading Skills	Total Allocation Time (Hours)
Period A													
Word	-	-	-	-	-	-	-	-	-	-	-	-	-
Mean %	-	4.7, 32	8.02, 54	-	-	-	-	-	-	-	-	-	12.72
Word	4.09, 58	-	-	2.23, 31	-	-	-	-	-	-	-	-	6.32
Mean %	1.78, 12	3.94, 26	-	-	-	-	0.06, 0 ⁺	-	-	4.52, 30	4.02, 27	-	14.32
Word	1.96, 23	2.88, 19	2.67, 18	0.74, 10	-	-	0.02, 0 ⁺	-	-	1.51, 10	1.34, 9	-	11.12
Mean %	1.88, 7	4.19, 16	-	3.64, 14	.16, 1	-	-	.94, 4	.92, 3	1.52, 6	2.47, 9	8.76, 33	24.48
Word	.32, 2	-	-	1.69, 11	-	-	-	.18, 1	6.96, 45	1.09, 7	-	5.34, 34	15.58
Mean %	4.26, 35	-	-	2.50, 21	-	-	-	.50, 4	-	-	.43, 4	1.53, 13	9.22
Word	2.15, 15	1.40, 5	-	2.61, 15	0.05, 0 ⁺	-	-	0.54, 3	2.63, 16	0.87, 4	0.97, 4	5.21, 27	16.43
Mean %	-	-	-	-	1.83, 15	8.94, 73	-	-	-	-	-	-	10.77
Word	.46, 12	.07, 2	-	-	.23, 6	.93, 25	-	-	-	-	-	.83, 22	2.52
Mean %	-	4.26, 36	-	-	.55, 5	3.05, 26	-	-	-	-	1.83, 15	.30, 2	9.98
Word	-	-	-	5.04, 66	-	-	-	-	-	-	2.33, 31	-	7.37
Mean %	0.12, 3	1.08, 9	-	1.26, 16	0.65, 6	3.23, 31	-	-	-	-	1.04, 12	0.28, 6	7.66

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Table 13 (continued)

Content Validity
and RCT (1974)
(Hours)

Item	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Total Mean Time (Hours)
Period C													
476	3.47, 53				2.60, 40								6.07
477	4.13, 28				2.02, 14				2.29, 16		0.07, 0 ⁺	2.43, 17	13.37
Mean	1.90, 20	3.09, 45			1.16, 14				0.57, 4		0.02, 0 ⁺	0.61, 4	7.95
Period D													
478	5.66, 10	10.02, 18		.73, 12	2.49, 4	0.28, 0 ⁺		1.63, 3	4.63, 8	0.30, 0 ⁺	2.59, 5	12.18, 22	46.51
479	0.78, 4	0.65, 4		0.12, 1	0.10, 0				2.07, 12		8.31, 46	5.47, 30	17.50
480	1.61, 9			1.35, 8	0.37, 2				1.25, 7	0.20, 1	0.64, 4	4.66, 27	10.08
Mean	2.68, 8	3.56, 7		2.73, 7	0.99, 2	0.09, 0 ⁺		0.54, 1	2.65, 9	0.17, 0 ⁺	3.85, 18	7.44, 27	24.70
Period E													
481	-	-	-	-	-	-	-	-	-	-	-	-	-
482					1.58, 19	1.53, 19	1.20, 15						4.31
483		9.26, 36						0.80, 3	3.19, 12		1.03, 4	7.37, 29	21.65
484		8.00, 81											8.00
Mean		5.75, 39			0.53, 6	0.51, 6	0.40, 5	0.27, 1	1.06, 4		0.34, 1	2.46, 10	11.32

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Table 13 (continued)

Content Area
and Performance
(Hours)

Period F													
	1.11,13	1.13,13										3.90,45	6.14
					1.64,68								1.64
476				5.80,87									5.80
		10.65,60				1.46, 8	3.63,20						15.74
	0.28, 3	2.94,18		1.45,22	0.41,17	0.36, 2	0.91, 5					0.98,11	7.33
	7.11,19	3.48, 9		2.94, 8	3.01, 8			2.02, 5	5.29,14	1.11, 3	0.82, 2	6.14,16	31.92
		1.09, 4		3.06,12	0.83, 3				2.17, 8	4.13,16	4.52,18	9.03,36	24.83
	1.84,17	0.97, 9		0.40, 4	0.18, 2				0.44, 4	0.18, 2	0.36, 3	4.00,37	8.37
	2.98,12	1.85, 8		2.13, 8	1.34, 4			0.67, 2	2.63, 9	1.81, 7	1.90, 8	6.39,30	21.71
			3.46,59										3.46
	4.67,90												4.67
		4.31,22		0.14, 1		0.14, 1		1.30, 7	1.88,10		4.43,23	4.86,25	17.06
	1.56,30	1.44, 7	1.15,20	0.05, 0 ⁺		0.05, 0 ⁺		0.43, 2	0.63, 3		1.48, 8	1.62, 8	8.40



Table 13 (continued)

Content
and Test
(Hours)

	Reading Comprehension	Reading Fluency	Writing Fluency	Writing Content	Math Skills	Math Concepts	Science Skills	Science Concepts	Art Skills	Art Concepts	Music Skills	Music Concepts	Physical Education Skills	Physical Education Concepts	Total Allocated Time (Hours)
Period 5															
466	5.81, 33	0.95, 5									0.36, 2	6.01, 34			13.13
471		2.33, 32									1.20, 17	2.35, 33			5.88
476				4.19, 97											4.19
		8.96, 56			2.49, 15	4.06, 25									15.51
Mean	1.45, 8	3.06, 23		1.05, 24	0.62, 4	1.02, 6					0.39, 5	2.09, 17			9.68
477	1.34, 5	3.88, 14		4.62, 16	1.84, 6	0.30, 1	0.14, 0 ⁺	3.33, 12	1.03, 4	2.93, 10	4.62, 16				24.03
478	0.05, 0 ⁺				1.55, 9			2.24, 13	0.66, 4	9.59, 54	3.01, 17				17.10
479	0.69, 8	1.25, 14		0.06, 1	2.14, 24				0.06, 1	0.52, 6	3.08, 34				7.80
480	0.69, 4	1.71, 9		1.56, 6	1.84, 13	0.10, 0 ⁺	0.05, 0 ⁺	1.86, 8	0.58, 3	4.35, 23	3.57, 23				16.31
481						0.36, 9	0.83, 22		0.56, 15						1.75
482		1.95, 24		3.93, 49											5.88
483				3.55, 38	1.03, 11				2.18, 23	0.69, 7	1.05, 11				8.50
484										5.64, 77					5.64
485		0.49, 6		1.87, 22	0.26, 3	0.09, 2	0.21, 6	0.14, 4	0.54, 6	1.58, 21	0.26, 3				5.44

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Table 13 (continued)

(Hours)

Period 1													
Year	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	Total (Hours)	
	3.81,42			1.25,14						0.77, 8	1.30,14	7.13	
				0.42, 5	5.81,73							6.23	
476				6.14,95								6.14	
										2.41,13	15.57,84	17.98	
Mean	0.95,10			1.95,28	1.45,18					0.80, 6	4.22,24	9.37	
1960	2.34,10	1.82, 8		3.37,14	1.46, 6			0.18, 1	4.04,17	2.04, 9	1.67, 7	3.95,17	20.87
1961	1.90,15	0.30, 2		1.20,10		0.85, 7			0.40, 3		4.55,37	2.15,17	11.35
1962	1.66, 7	1.35, 6	0.36, 2	2.19,10	1.53, 7				1.30, 6		0.87, 4	9.34,41	18.60
1963	1.97,11	1.16, 5	0.12, 1	2.25,11	1.00, 4	0.28, 2		0.06, 0 ⁺	1.91, 9	0.68, 3	2.36,16	5.15,25	16.94
1964	1.42,19		0.28, 4	1.41,19			2.89,38						6.00
1965		2.39, 4		1.98,34									4.37
1966				1.19, 9	1.17, 9					1.11, 8	4.07,31	3.78,29	11.32
1967				5.62,77									5.62
1968	0.36, 5	0.60,10	0.07, 1	2.55,34	0.79, 2		0.72,10			0.28, 2	1.02, 8	0.94, 7	6.83

Table 13 (continued)

Content Area
and Level
(Hours, %)

Content Area	Level	Hours	Percentage	Hours	Percentage	Hours	Percentage	Hours	Percentage	Hours	Percentage	Hours	Percentage		
Math	476	1.65, 29	0.83, 14									2.45, 43	4.93		
		2.43, 35										4.34, 62	6.77		
		4.13, 60	2.43, 35										6.56		
		1.13, 10		0.44, 4		5.88, 54	2.08, 19						9.53		
	Mean	2.34, 34	0.82, 12	0.11, 1		1.47, 14	0.52, 5					0.61, 11	1.09, 16	6.95	
	Science		4.48, 10	9.89, 21		5.21, 11	0.35, 1		0.53, 1	5.05, 11	0.44, 1	3.84, 8	9.13, 20	38.83	
			0.26, 1	1.17, 5	0.50, 2	0.21, 1	0.99, 4		1.10, 5	0.33, 1	4.76, 20	0.12, 0 ⁺	7.31, 31	6.11, 26	22.86
			0.64, 4	0.25, 1		0.51, 3		0.24, 1	0.13, 1		0.84, 5	1.25, 7	0.18, 1	8.59, 51	12.63
		Mean	1.79, 5	3.74, 9	0.17, 1	1.98, 5	0.45, 2	0.08, 0 ⁺	0.41, 2	0.29, 1	3.55, 12	0.60, 3	3.78, 13	7.94, 32	24.77
		Social Studies					5.16, 86								5.16
			0.28, 4			1.20, 15		4.17, 53						5.65	
			3.99, 26	0.46, 3		1.33, 9	1.32, 8						4.50, 29	11.60	
			-	-		-	-					8.49, 88		8.49	
Mean			1.07, 7	0.12, 1		1.92, 28	0.33, 2	1.04, 13				2.12, 22		1.12, 7	7.72

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Table 14

Total Number of Hours and Percentage of Allocated Time
by Period for 12 Reading Skills General Objectives
Grade 5

1967-68
1968-69
(Hours, %)

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Objective	1967-68 Hours	1967-68 %	1968-69 Hours	1968-69 %	1967-68 Hours	1967-68 %	1968-69 Hours	1968-69 %	1967-68 Hours	1967-68 %	1968-69 Hours	1968-69 %	Total Hours		
Period A															
466	-	-	-	-	-	-	-	-	-	-	-	-	-		
									1.55, 16	7.19, 75			8.74		
476													10.56, 94		
									6.17, 41	7.42, 50			13.59		
Mean									5.58, 45	2.99, 22	2.40, 25		10.96		
485															
	1.26, 5	1.86, 8	0.38, 2	2.74, 12	1.22, 5	0.05, 0 ⁺			0.72, 3	1.30, 6	0.53, 2	3.79, 16	6.16, 27	20.01	
									0.73, 7	2.36, 22	1.88, 18	2.13, 20	3.39, 32	10.49	
				0.56, 6					4.02, 44				2.95, 32	7.53	
Mean	0.42, 2	0.62, 3	0.13, 1	1.10, 6	0.41, 2	0.26, 2			2.37, 23	1.06, 8	0.89, 8	1.26, 5	4.17, 30	12.68	
494															
									3.37, 40	3.97, 47				7.34	
									3.33, 70	0.15, 3				3.48	
									9.34, 70				2.52, 19	11.86	
												4.94, 99		4.94	
									0.83, 18	0.84, 10	3.36, 30		1.24, 25	0.63, 5	6.90

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Table 14 (continued)

Content Area
and Description
(Hours)

Grade	Math	Reading	Writing	Science	Social Studies	Period D								
						Math Skills	Reading Skills	Writing Skills	Science Skills	Social Studies Skills	Art Skills	Music Skills	Physical Education	Total All Areas (Hours)
100		0.94, 16		1.81, 30								0.90, 15		3.65
151				0.70, 7				2.30, 72						2.30
476									1.40, 14			5.44, 56	1.47, 15	9.01
117							4.50, 42	3.18, 30						7.68
Mean		0.24, 4		0.63, 9			1.12, 10	1.37, 26	0.35, 4			1.58, 18	0.37, 4	5.66
100	0.28, 1	0.50, 2		2.37, 10	0.65, 3		0.06, 0 ⁺	1.20, 5	4.59, 18	0.16, 1	1.56, 6	9.64, 39		21.01
40								2.33, 26	1.39, 15		0.72, 8	4.05, 45		8.49
40									1.58, 19			5.30, 64		6.88
Mean	0.09, 0 ⁺	0.17, 1		0.79, 3	0.22, 1		.02, 0 ⁺	1.18, 10	2.52, 18	0.05, 0 ⁺	0.76, 5	6.33, 49		12.13
100						5.04, 56	2.90, 32							7.94
100											3.56, 61			3.56
100						0.75, 8		6.00, 65						6.75
100	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mean						1.93, 21	0.97, 11	2.00, 22			1.19, 20			6.08

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Table 14 (continued)

(Hours)

Period E													
	-	-	-	-	-	-	-	-	-	-	-	-	-
								7.11,65				3.35,30	10.46
476									2.27,27			5.58,67	7.85
							6.61,94						6.61
							2.20,31	2.37,22	0.76, 9			2.98,33	8.31
	0.47, 2	0.53, 2		2.83,12	0.53, 2			1.32, 6	4.19,18	0.10, 0 ⁺	2.72,12	8.04,35	20.73
								1.70,23	4.45,61		0.28, 4	0.72,10	7.15
									1.00, 7	1.11, 8	3.52,24	7.50,52	13.13
	0.16, 1	0.18, 1		0.94, 4	0.18, 1			1.01,10	3.21,29	0.40, 3	2.17,13	5.42,32	13.67
				4.33,38									7.33
							3.06,55						3.06
								3.56,18	7.05,37		0.42, 2	6.80,35	17.83
76										0.48, 5	7.11,74		7.59
				1.08,10			0.76,14	0.89, 4	2.51,16	0.12, 1	1.88,19	1.70, 9	8.95



Table 15

Total Number of Hours and Percentage of Allocated Time
by Period for Mathematics General Objectives
Grade 2

(Hours, %)

Objective Code and Number	Algebraic Numbers	Measurement	Number Operations	Addition Subtraction	Multiplication	Fractions	Measurement	Word Problems	Geometry	Statistics	Total
Period A											
102 OMP											
340	3.30, 30		0.93, 8					3.11, 29		1.92, 18	9.26
343	3.91, 23			7.63, 45		0.70, 0 ⁺		4.97, 29			16.58
Mean	3.60, 26		0.46, 4	3.82, 22		0.35, 0 ⁺		4.04, 29		0.96, 9	12.92
Non-OMP											
426			2.50, 50	2.50, 50							5.00
421										10.24, 90	10.24
333				9.28, 99							9.28
Mean			0.83, 17	3.93, 50						3.41, 30	8.17
Non-OMP											
704								5.29, 43	2.83, 23	3.99, 32	12.11
706								10.78, 74	2.41, 17	0.44, 3	13.63
705	0.23, 1			6.55, 25				4.26, 16		2.95, 11	13.99
Mean	0.08, 0 ⁺			2.18, 8				6.78, 45	1.75, 13	2.46, 16	13.24

Table 15 (continued)

(Hours, %)

Author	Year	Grade	Subject	Hours	Percentage	Author	Year	Grade	Subject	Hours	Percentage	Total
Period B												
44	1.58, 15			2.14, 20					2.95, 27			9.71
44	6.41, 36	1.08, 6		4.13, 23				5.12, 29				16.74
44	4.00, 25	0.54, 3		3.14, 22				2.56, 14	1.48, 14		1.52, 14	13.22
44												
44		2.37, 47		2.63, 53								5.00
44				8.79, 75							1.11, 9	9.90
44				7.98, 69						2.66, 23		10.64
44		0.79, 16		6.47, 66						0.89, 8	0.37, 3	8.51
44												
44	3.93, 31			3.31, 26					4.10, 32			11.34
44	4.99, 38								2.83, 22			7.82
44				10.24, 34					1.21, 4		0.71, 2	12.16
44	2.97, 23			4.52, 20					2.71, 19		0.24, 1	10.44



Table 15 (continued)

(Hours, A)

File and Number	Writing	Dictation	Copy File value or Repetition	Addition Subtraction	Multiplication	Fraction	Measurement	Money Problems	Geometry	Other	Total
Period C											
158 DM											
444	3.33, 43			2.80, 36				0.53, 7			6.66
491				4.81, 89				0.28, 5			5.09
Mean	1.66, 22			3.80, 63				0.40, 6			5.88
158 Non-											
425				0.86, 34						1.58, 63	2.44
441	-	-	-	-	-	-	-	-	-	-	-
443				10.41, 95							10.41
Mean				5.64, 64						0.79, 32	6.42
Non-158 DM											
994	2.93, 26	0.70, 6		6.13, 54							9.76
106								14.81, 93			14.81
167	3.50, 11		1.94, 6	7.65, 24				4.17, 13			17.26
Mean	2.14, 12	0.23, 2	0.65, 2	4.59, 26				6.33, 35			13.94

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Table 15 (continued)

PERIOD
 (Hours, N)

Subject Type and Number	1 Whole Numbers	2 Decimals	3 Number Place Value or Rounding	4 Addition Subtraction	5 Multiplication	6 Fractions	7 Measurement	8 Word Problems	9 Applications	10 Geometry	11 Miscellaneous	Total
Period E												
13E DMP												
440	2.98, 31			1.85, 19			1.33, 14	1.25, 13	0.70, 7			8.11
493				12.25, 74				2.56, 16				14.81
Mean	1.49, 16			7.05, 46			0.66, 7	1.90, 14	0.35, 4			11.46
13E Non-												
426		1.89, 24		4.60, 58								6.49
441			2.10, 22	3.00, 31		0.74, 8				1.25, 13		7.09
453			2.80, 41								3.66, 53	6.46
Mean		0.63, 8	1.63, 21	2.53, 30		0.25, 3				0.42, 4	1.22, 18	6.68
13E DMP												
204		1.67, 13		3.16, 25		4.71, 37						9.54
446				12.30, 92								12.30
462			3.35, 11	7.81, 25	0.41, 1					1.95, 6	6.73, 21	20.25
Mean		0.57, 4	1.12, 4	7.76, 47	0.14, 0 ⁺	1.57, 12				0.65, 2	2.24, 7	14.03

Table 15 (continued)

(Hours, %)

Period F											
Year	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
1970	1.52,43	0.33, 9	0.33, 9	1.06,30							3.24
1971				7.13,63				2.70,24			9.83
1972	0.76,22	0.16, 4	0.16, 4	4.10,46				1.35,12			6.54
1973											
1974		0.39, 6		0.07, 1						3.32,52	3.78
1975			0.84, 8	2.99,29						2.92,29	6.75
1976				2.69,26						6.73,65	9.42
1977		0.13, 2	0.28, 3	1.92,19						4.32,49	6.65
1978											
1979				5.42,83							5.42
1980	4.95,99										4.95
1981				4.69,25	0.47, 2	0.74, 4	3.03,16			4.60,24	13.53
1982											
1983	1.65,33			3.37,36	0.16, 1	0.25, 1	1.01,5			1.53, 8	7.97

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Table 15 (continued)

Number of
minutes
(Hours, $\frac{1}{4}$)

Item Type and Number	01 Arithmetic Numbers	02 Qualitative Value or Numeration	03 Addition Subtraction	04 Multi- plication	05 Fractions	06 Measurement	07 Word Problems	08 Applications	09 Geometry	10 Miscellaneous	Total
Period G											
ISE/IMP											
440	2.63, 17		7.46, 49		1.10, 7	1.84, 12					13.03
593	2.29, 20		9.06, 78						0.07, 1		11.42
Mean	2.46, 18		8.26, 64		0.55, 4	0.92, 6			0.04, 0 ⁺		12.22
ISE/Non-											
429			3.17, 43					1.93, 26	0.56, 8		5.66
421			3.84, 54		0.38, 5				2.04, 29		6.26
335			4.80, 52	2.99, 32							7.79
Mean			3.94, 50	1.00, 11	0.13, 2			0.64, 9	0.87, 12		6.57
Non-ISE/ IMP											
904		1.67, 17					4.00, 40			4.00, 40	9.67
906	5.08, 36		4.77, 34				3.16, 22				13.01
762			0.72, 3	5.69, 23	2.85, 11				1.27, 5		10.53
Mean	1.69, 12	0.56, 6	0.24, 1	3.49, 19	0.95, 4		2.39, 21		1.76, 15		11.07

Table 10.
Average Number of Hours and Percentage of Available Time
by Period for Mathematics General Objectives
Grade 5

Continued
of Table 9
(Hours, %)

Objective Number	Addition-Subtraction	Multiplication	Division	Concepts	Fractions--Computation	Decimal Fractions--Concept	Decimal Fractions--Computation	Measurement	Word Problems	Applications	Geometry	Miscellaneous	Total
Period A													
44	2.87, 16	4.55, 26	6.08, 35									1.02, 6	14.52
			10.37, 86										10.37
Mean	1.44, 8	2.28, 13	8.22, 60									0.51, 3	12.44
42			13.89, 96		0.42, 3							0.06, 0 ⁺	14.37
33		2.00, 44					0.25, 6				2.25, 50		4.50
Mean		1.00, 22	6.94, 48		0.21, 2		0.12, 3				1.12, 25	0.03, 0 ⁺	9.44
96		10.74, 87											10.74
		14.58, 97											14.58
Mean		12.66, 92											12.66



Table 16 (continued)

Content Code
and Description
(Hours, %)

Source Type and Number	01 Addition Subtraction	02 Multi- plication	03 Division	04 Fractions-- Concepts	05 Fractions-- Computation	06 Decimal Fractions-- Concept	07 Decimal Fractions-- Computation	08 Measure- ment	09 Word Problems	10 Applications	11 Geometry	12 Miscel- laneous	Total
Period B													
IQE/DMP													
440		1.96,12	9.04,53						3.87,23			0.94, 6	15.81
593			7.00,56				3.00,24						10.00
Mean		0.98, 6	8.02,55				1.50,12		1.94,12			0.47, 3	12.90
IQE-Non- IQE													
475		0.38, 4	2.45,25									7.01,71	9.84
333		5.53,32	2.73,16								5.13,30	2.17,13	15.56
Mean		2.96,18	2.59,20								2.56,15	4.59,42	12.70
Non-IQE DMP													
995		8.52,68											8.52
996		7.32,47	6.25,40	0.17, 1						0.39, 2		0.17, 1	14.30
Mean		7.92,58	3.12,20	0.08,0 ⁺						0.20, 1		0.08,0 ⁺	11.41

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Table 16 (continued)

Content Code
and Description
(Hours, %)

Subject Type and Number	01 Addition Subtraction	02 Multi- plication	03 Division	04 Fraction-- Concepts	05 Fraction-- Computation	06 Decimal Fractions-- Concept	07 Decimal Fraction-- Computation	08 Measure- ment	09 Word Problems	10 Applications	11 Geometry	12 Miscel- laneous	Total
Period C													
I.E. DMC													
410				2.20, 28	1.56, 20				0.67, 8	1.71, 21			6.14
500												3.63, 96	3.63
Mean				1.10, 14	0.78, 10				0.34, 4	0.86, 10		1.82, 48	4.88
II. Non-													
426		1.40, 28										2.33, 48	3.73
333			5.86, 49	1.17, 10	1.33, 11	1.24, 10						0.57, 5	10.17
Mean		0.70, 14	2.93, 24	0.58, 5	0.66, 6	0.62, 5						1.45, 26	6.95
Non-I.E. DMC													
905		0.44, 4	9.41, 83										9.85
906		0.33, 4	4.34, 52		0.14, 2		0.28, 3	2.34, 28					7.43
Mean		0.38, 4	6.88, 67		0.07, 1		0.14, 2	1.17, 14					8.64

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Table 16 (continued)

Content Code
and Description
(Hours, %)

School Type and Number	01 Addition Subtraction	02 Multi- plication	03 Division	04 Fractions-- Concepts	05 Fractions-- Computation	06 Decimal Fractions-- Concept	07 Decimal Fractions-- Computation	08 Measure- ment	09 Word Problems	10 Applications	11 Geometry	12 Miscel- laneous	Total
Period D													
IGE/DMP													
440	0.65, 4	1.34, 8	1.21, 7	9.05, 52	4.36, 25								16.61
503							14.05, 86					0.22, 1	14.27
Mean	0.32, 2	0.67, 4	0.60, 4	4.52, 26	2.18, 12		7.02, 43					0.11, 0 ⁺	15.44
IGE Non-													
428			1.11, 8			3.59, 25	7.13, 49						11.83
333			1.32, 17	0.33, 4	3.62, 46				2.53, 32				7.80
Mean			1.22, 12	0.16, 2	1.81, 23	1.80, 12	3.56, 24		1.26, 16				9.82
Non-IGE DMP													
005		1.16, 10	8.96, 79										10.12
996		1.42, 8	3.52, 20					7.06, 40	2.42, 14	1.96, 11	0.11, 1		16.49
Mean		1.29, 9	6.24, 49					3.53, 20	1.21, 7	0.98, 6	0.06, 0 ⁺		13.30

Table 16 (continued)

Content Area
and Descriptions
(Hours: A)

Subject Type and Number	01 Addition Subtraction	02 Multi- plication	03 Division	04 Fractions-- Concepts	05 Fractions-- Computation	06 Decimal Fractions-- Concept	07 Decimal Fractions-- Computation	08 Measure- ment	09 Word Problems	10 Applications	11 Geometry	12 Miscel- laneous	Total
Period E													
100 DMP			3.92, 22	8.23, 46	3.93, 22								16.08
440				10.40, 65			2.39, 15						12.79
500													
Math			1.96, 11	9.32, 56	1.96, 11		1.20, 8						14.44
100 Non-													
425			5.54, 40	7.72, 56									13.26
333					3.47, 37			0.77, 8			3.88, 42		8.12
Mean			2.77, 20	3.86, 28	1.74, 18			0.38, 4			1.94, 21		10.69
Non-IGLE DMP													
905				5.34, 48	5.39, 49								10.73
906	0.49, 3		1.35, 8	10.96, 64	2.44, 14						0.06, 0 ⁺	0.11, 1	15.41
Math	0.24, 2		0.68, 4	8.15, 56	3.92, 32						0.03, 0 ⁺	0.06, 0 ⁺	13.07

Table 16 (continued)

Content Code
and Description
(Hours, %)

School Type and Number	01 Addition Subtraction	02 Multi- plication	03 Division	04 Fractions-- Concepts	05 Fractions-- Computation	06 Decimal Fractions-- Concept	07 Decimal Fractions-- Computation	08 Measure- ment	09 Word Problems	10 Applications	11 Geometry	12 Miscel- laneous	Total
Period F													
IGE/DMP													
440		0.32, 6		0.72, 13	2.11, 38							2.30, 42	5.45
901				9.37, 78									9.37
Mean		0.16, 3		5.04, 45	1.06, 19							1.15, 21	7.41
IGE/Non-													
428		1.25, 14	1.63, 17	3.40, 35	0.99, 10		2.17, 22						9.44
333					0.78, 16						1.57, 33	1.45, 30	3.80
Mean		0.62, 6	0.82, 8	1.70, 18	0.88, 13		1.08, 11				0.78, 16	0.72, 15	6.62
Non-IGE/ DMP													
904					8.11, 90								8.11
906	0.28, 2			3.61, 33	4.20, 38			0.92, 8					9.01
Mean	0.14, 1			1.80, 16	6.16, 64			0.46, 4					8.56

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Table 16 (continued)

Content Code
and Description
(Hours, %)

	01 Addition Subtraction	02 Multi- plication	03 Division	04 Fractions-- Concepts	05 Fractions-- Computation	06 Decimal Fractions-- Concept	07 Decimal Fractions-- Computation	08 Measure- ment	09 Word Problems	10 Applications	11 Geometry	12 Miscel- laneous	Total
Period G													
108 EMF													
44	0.35, 1	1.41, 5	3.14, 12	8.18, 30	2.45, 9			2.81, 10			6.88, 25		25.22
				3.04, 40	2.98, 39								6.02
200	0.18, 0 ⁺	0.70, 2	1.57, 6	5.61, 35	2.72, 24			1.40, 5			3.44, 12		15.62
148 Non-													
40	1.04, 7	1.12, 8	1.34, 9	7.25, 49	1.92, 13		0.12, 1						12.79
33					2.27, 17		2.60, 19				3.03, 22	5.70, 42	13.60
200	0.52, 4	0.56, 4	0.67, 4	3.62, 24	2.10, 15		1.36, 10				1.52, 11	2.85, 21	13.20
200 EMF													
44		1.09, 9		3.45, 30			2.55, 22				2.33, 20		9.42
90		0.96, 5	0.17, 1	5.33, 30	2.94, 16	2.53, 14	3.94, 22				0.33, 2		16.20
200		1.02, 8	0.08, 0 ⁺	4.39, 30	1.47, 8	1.26, 7	3.24, 22				1.33, 11		12.81

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