Educational Development Series

INTERPRETIVE MANUAL

CONTENTS

I. INTRODUCTION

THE STS EDUCATIONAL DEVELOPMENT SERIES

The **Educational Development Series (EDSERIES)** is a standardized battery of ability and achievement tests and has the most comprehensive coverage of all the STS tests. It permits teachers, counselors, and administrators to evaluate a student from the broadest possible perspective.

Core Reports This manual is designed to be an "interpretive" manual, emphasizing the proper use and interpretation of assessment results for the EDSERIES Levels 10–18 tests. The reports that are illustrated and explained in this manual include the following:

- ✔ Alphabetical List Report and Pressure-Sensitive Label
- ✔ Group Summary Statistical Report
- ✔ Performance Profile—Individual Student Report
- ✔ Performance Profile Summary
- ✔ Narrative Report
- ✔ Individual Item Analysis Report
- ✔ Group Item Analysis Report

The information that these reports contain offer a more convenient means of evaluating student performance and of conveying information to the students and their parents. This manual also includes a section in which most frequently asked questions about the EDSERIES tests and scores are answered to further explain them. More in-depth information on featured subjects is found in the EDSERIES Technical Manual.

Alphabetical List Report

STS® EDUCATIONAL DEVELOPMENT SERIES

GROUP: SAMPLE SCHOOL   00001   DATE: 05/16/12   RUN DATE: 09/18/12   GRADE: 9.8   SEC: 1   LEVEL: 17   FORM: J   REPORT: CLASS LIST   PAGE: 1

TEACHER:

STUDENT INFORMATION (NAME / AGE / GENDER)	VERBAL	NON-VERB/QUANT	TOTAL	READING	LANGUAGE	MATH	TOTAL	READ VOC	READ COMP	WRIT LIST	LANG	MATH COMP	MATH REAS	SS / NP (AVG)	INTERESTS	PRESENT GOALS
ANDERSON NICHOLA G 15-04 M	611 98 34 10.1 11.9	617 13	986 54 76 12.1	906 60 78 10.8	846 80 56 12.1	996 70 94 11.4	946 68 79 11.6	32 8	96 85	99 93	91 81	95 71	671 92 80 11.2	6 5 9 4 6 5 9 6	COLL+ ART-MED PERS SER
BAKER TYLER 15-03 M	680 99 90 12.1	997 45	997 10 88 12.1	997 11 98 12.1	997 10 94 12.1	996 92 98 12.1	997 03 96 12.1	99 96	98 91	99 98	99 96	97 95	714 99 99 12.1	3 8 5 5 3 8 8 5	COLL+ HEALTH SCI-TECH
BARLEY ELIZA J 15-02	620 71 44 10.4	716 93	956 54 65 11.4	906 73 89 11.1	946 49 79 11.4	846 57 64 10.8	92 70	87 57	91 74	98 86	87 65	58 38	669 91 98 11.1	9 5 9 6 7 8 8 5	COLL+ HEALTH ENGINEER
BLACK JOE 15-02 M	597 47 20 9.7	476 46	746 22 35 10.0	596 38 51 10.2	665 76 33 9.2	286 53 47 10.1	616 14 34 9.9	87 57	54 26	25 12	23 12	46 41	623 58 42 10.0	1 8 7 3 6 9 5 9	COLL+ ENGINEER FINANCE
BOOKER WILLIAM J 15-00 M	648 91 75 11.1	917 27	996 83 82 12.1	996 83 93 11.4	955 55 81 11.6	966 66 89 11.2	926 70 75 11.7	87 57	96 85	99 93	87 65	71 60	680 94 91 11.4	4 7 7 7 5 8 5 6	COLLEGE SCI-TECH FINANCE
BREWER LUCAS 15-01 M	662 96 83 11.6	967 27	996 93 82 12.1	997 03 98 12.1	966 32 64 10.8	836 70 74 11.4	946 70 79 11.4	99 96	98 91	71 54	87 65	95 91	676 93 74 11.3	6 9 7 7 4 8 6 5	COLL+ FINANCE HEALTH
BROOKS MATTHEW J 15-00 M	690 99 95 12.1	997 45	997 18 88 12.1	996 21 98 12.1	966 42 74 10.8	916 17 76 11.1	566 50 81 11.0	99 96	99 95	93 79	87 65	40 24	681 95 94 11.4	6 1 8 7 5 4 8 5	COLLEGE GOVT SER COMMUNIT ***
CAPELLI CARTER B 15-02 M	636 85 63 10.8	855 81	686 13 31 9.7	416 38 51 9.6	665 82 33 9.4	336 04 25 9.5	406 08 33 9.7	87 57	57 26	34 18	23 12	34 20	615 50 60 9.8	5 2 6 8 5 7 9 8	COLLEGE ART-MED EDUCATE
CHATHAM DAVID D 15-05 M	642 88 70 11.0	886 63	866 54 48 12.1	906 56 76 10.7	826 04 34 9.8	516 26 50 10.4	646 30 56 10.4	63 34	85 61	78 54	46 29	74 48	637 71 48 10.4	4 8 7 2 3 1 9 1	TRADE REPAIR MISC
COOPER ALLEN 15-00 M	583 35 9 9.4	356 41	686 13 31 10.3	505 67 18 9.8	216 26 8 9.0	646 06 37 10.2	44 17	32 8	57 26	25 12	14 5	52 34	620 55 66 9.9	3 4 1 3 9 5 5 1	COLL+ ART-MED HEALTH
DAVIDSON JOHN F 14-11 M	721 99 98 12.1	997 13	997 18 76 11.9	997 11 98 12.1	996 93 94 12.1	996 40 68 10.6	786 70 52 11.7	99 86	99 95	99 96	99 96	97 78	695 97 98 11.7	8 5 6 8 7 4 8 8	COLL+ SCI-TECH MISC
DECKER SANDRA 15-11 M	579 31 4 9.3	315 89	205 84 13 8.9	185 97 6 9.1	255 79 13 9.3	316 04 25 9.5+	405 94 16 9.5+	8 2	37 13	13 6	78 54	22 12	581 20 5 9.0	9 7 5 7 4 7 6 5	COLLEGE CONSTRUC ENGINEER

SCORE: NP – NATIONAL PERCENTILE   NS – NATIONAL STANINE   CSQ – COGNITIVE SKILLS QUOTIENT

LEGEND: E – PERFORMANCE vs EXPECTED PERFORMANCE

LP – LOCAL PERCENTILE   LS – LOCAL STANINE   RS – RAW SCORE   GE – GRADE EQUIVALENT

SS – STANDARD SCORE   GS – GRADE SCORE   NCE – NORMAL CURVE EQUIVALENT   COL – COLLEGE BOUND NP

SIGNIFICANT PATTERN LEGEND

*STRONG SKILLS BUT NO COLLEGE PLANS   **COLLEGE PLANS BUT BASIC SKILLS WEAK

*COLLEGE PLANS   **STRONG SKILLS   ***NON-VERBAL WELL ABOVE BASIC SKILLS

00001

II. ILLUSTRATED REPORTS AND DESCRIPTIONS

Pressure-Sensitive Label

```
STUDENT NAME
                    AGE   GENDER
CODES:  A B C D   1 2 3 4 5 6

BROOKS        MATTHEWJ
00001  9.8 15-00 M
```

The score label may be split into three sections like these.

```
                        INTERESTS        SCHOOL PLANS
                                          1st CAREER
                                            CHOICE
                                          2nd CAREER
   M  A  S  S  E  F  V                       CHOICE
   U  R  O  C  N  O  O
   S  T  C  I  G  R  C
   I     I  E  L  E  A
   C     A  N  I  I  T  COLLEGE
         L  C  S  G  I  GOVT SER
            E  H  N  O
               S     N  COMMUNIT
   6  5  1  4  8  8  7  5
```

TEST DATE ___ GRADE	SCORE LEGEND *=CSQ TOT COG	BATTERY AVERAGE	COGNITIVE SKILLS			BASIC SKILLS				STS EDUCATIONAL DEVELOPMENT SERIES SCHOLASTIC TESTING SERVICE, INC.						OTHER SKILLS & ACHIEVEMENTS		
			VERBAL	QUANT	TOTAL	READING	LANG	MATH	TOTAL	READ VOC	READ COMP	WRIT LIST	LANG	MATH COMP	MATH REAS	REF SKILLS	SCIENCE	SOCIAL STUDIES
0516	SS NP	95	6 90 99	7 45 99	7 18 99	7 21 99	6 42 91	6 17 56	6 50 89	9 99	9 99	9 93	8 74	0 61			6 43 88	6 63 94
12	* LP	83	95	88	14 89 95	98	76	28	63	9 69	9 57	9 65	2 43	7			64	74
9.8	GS E	11.4	12.1	12.1	12.1	12.1 =	11.1 –	10.0 –	11.0 –	=	=	–	–	–	–		11.0 –	11.4 –

ALPHABETICAL LIST REPORT AND PRESSURE-SENSITIVE LABEL

The test scores for a given student are reported on the alphabetical listing of his or her class (group) and on an individual, pressure-sensitive label, shown above. Unless special reporting arrangements have been made, two copies of the listing are provided. The pressure-sensitive labels, also arranged in alphabetical order, are cut at various points to allow using only those sections desired and to facilitate their placement in the student files (one per student). The content of the listing and the label are virtually identical, though the order of the information may vary. Consequently, the following comments pertain to both of these reports, and differences are noted.

The Alphabetical List Report, shown on page 2, is divided into seven major columns, each of which provides a rich assortment of information about the individual student. At the far left you will find the "STUDENT INFORMATION" column which shows the student's full name, age in years and months, and gender. If your students marked the special code grids on their answer sheets, the information each student provided would appear beneath the individual's age and gender.

"COGNITIVE SKILLS," the second column of the listing and the fourth column of the label, displays the scores the student earned on the Verbal and Quantitative subtests as well as his or her total scores for these two subtests. The computed Cognitive Skills Quotient (CSQ), which replaces the traditional IQ, is also shown.

"BASIC SKILLS" is the next major column. The *General Assessment* portion shows the scores earned on Reading, Language, and Math as well as the total scores for these three subtests combined. In the *Skills Analysis* portion, each basic skills subtest is divided into two more specific subskill areas which provide additional measures of student performance. These subskill areas are: Reading—Vocabulary, Comprehension; Language—Writing and Listening, Language Skills; and Math—Computation, Reasoning.

The next major column is "OTHER SKILLS & ACHIEVEMENTS" which displays the scores earned for the Reference Skills, Science, and Social Studies subtests. (Please note, the Reference Skills subtest is not included in Forms J and K of the EDSERIES).

The "BATTERY AVERAGE" is found in the fifth column of the listing and the third column of the label. These scores are computed averages of all of the subtest scores reported for the student.

3

The sixth column of the listing, found at the far right of the label, portrays the student's *interests* and *present goals* at this stage in his or her life. The "INTERESTS" section shows the individual's likes and dislikes for eight school subjects on a 9-point scale. The "PRESENT GOALS" section reflects the current limit of the student's educational plans as well as his or her career field preferences in order of choice.

The last column of the listing, "SIGNIFICANT PATTERNS," is used to identify students who may be in need of counseling because of conflicts among their achievement, abilities, and school/career plans. The meaning of any asterisks appearing in this column is explained in the "SIGNIFICANT PATTERN LEGEND" at the bottom of the Alphabetical List Report. This column does not appear on the student label.

Scores and Norms

As indicated by the "SCORE LEGEND" at the bottom of the Alphabetical List Report, twelve different types of scores are available for reporting individual student performance. From the twelve possibilities, a total of six may be incorporated into a given set of report materials according to the preferences or special needs of the test user. Those included are identified by abbreviations which appear in the columns related to test performance on both the alphabetical list and the student label.

As shown in the sample on page 2, the scores included in this particular report are: SS–standard score, NP–national percentile, COL-college bound national percentile, GS–grade score, LP-local percentile, and E–Performance vs. Expected Performance. A CSQ-Cognitive Skills Quotient is provided for cognitive skills.

In examining the individual test results shown on your Alphabetical List Report, you may wish to use the following points as a general frame of reference:

Consistency between School Plans and Abilities

High-scoring students who are *not* planning to go to college and low-scoring students who *are* planning on college will be flagged with asterisks in the "SIGNIFICANT PATTERNS" column. Students with these patterns should be noted as needing further discussion regarding their plans.

Consistency between Career Plans and School Plans

Sensible planning is reflected in a basic accord between the student's educational expectations and his or her career choices. When this accord is not in evidence, the problem usually stems from a lack of knowledge on the part of the individual. Thus, a student who indicates science as a career choice and trade school as a school plan could benefit from a vocational counseling program.

Consistency between Career Plans and School Interests

It is not enough for plans and abilities to be consistent; the student should also complete the school courses necessary to accomplish his or her vocational goals. Therefore, a student who indicates science as a career choice but dislikes science or math courses may need assistance in developing a realistic perspective of career fields and clarifying his or her feelings.

Consistency between Quantitative Scores and Other Scores

Students whose Quantitative scores are significantly higher than their achievement scores should be noted; these will also be flagged with asterisks in the "SIGNIFICANT PATTERNS" column. Such individuals may have more basic ability than is reflected in their present achievement level and might be helped to improve their performance in the future.

4

Consistency between Achievement Scores

Although an "up and down" pattern of scores is typically found in most test results, achievement scores that are much higher than others (a difference of 2 or more stanines) should be noted. Such strong performance on one or two subtests may well indicate a student with unusual talents. If such a pattern is repeated in a series of testings with the Educational Development Series, it should certainly be brought to the attention of the student and his or her parents.

The above comments are offered primarily as suggestions and are not to be all-inclusive. Depending upon your function in the school setting, there undoubtedly will be other elements for you to consider as the test results are examined and evaluated.

General Considerations

The distinction between national norms and local norms is confusing for many students and parents. In non-technical terms each simply represents an established scale or standard of performance—a type of yardstick, so to speak—by means of which a student's performance can be measured and compared. In theory the national scale and the local scale could be very similar if not identical, but in practice rarely are. Since the two scales commonly differ (to a greater or lesser extent), it follows that they commonly give different comparative measures (also to a greater or lesser extent) of student performance. Such differences, particularly when they are large, can be confusing.

Of the two, the national norm scale is undoubtedly the more familiar. This scale is established on the basis of a nationwide testing program that is conducted at the time a test battery is standardized. Thus, the national norm scale offers the means to compare an individual's performance (raw score) against that of a representative sample of students throughout the nation. Regardless of the type of normative score—percentile ranks, grade equivalents, stanines, and so forth—all national norm scales are established in this manner.

The phrase "local norms" refers to the scale that is based solely upon the performance (raw scores) of a given group of students—most commonly, all those in the *same grade level* within the same school. (If schools within the same school system/district share a common testing program, local norms are usually established for each grade level within the *entire* system/district. Such local norms are properly termed system/district norms.) In other words, the group consists of a given individual and his or her classmates. In this context the phrase "school norms" could be interchanged with local norms. This scale is established *separately* for each grade level by ranking student raw scores on a given subtest from highest to lowest. Whether the group's collective performance is very high or very low with respect to the national scale, it should be apparent that some students must be at or near the top of this ranking (these would comprise the upper 5%) while others must be at or near the bottom (the lower 5%). Those in the upper 5% achieved the *highest performance within this group* and, regardless of their performance in terms of the national scale, will earn *local* percentile ranks of 95 or above to indicate their high position in their local group. As one might expect, those in the lower 5% will earn local percentile ranks of 5 or below to signify their bottom position within the local group.

In effect, national and local normative scales provide two different frames of reference in which to view an individual's performance. Therefore, it is possible for a student to attain high national norm scores (because his or her performance compared favorably with the national sample) and low local norm scores (because that performance fell in the lower ranges of the local group ranking). Conversely, a student could earn high local norm scores (because his or her performance fell in the upper ranges of the local group) and low national norm scores (because that performance was below par with respect to the national scale).

Group Summary Statistical Report

GROUP: SAMPLE SCHOOL   00001 DATE: 05/16/12   GRADE: 9.8   SEC: LEVEL: 17   FORM: J   REPORT: GROUP-SUMMARY   PAGE:

RUN DATE: 09/18/12   TEACHER:

STUDENT INFORMATION

NAME
AGE
CODES: ABCD 123456
GENDER

***** INTERVALS *******

NATL %-ILE	NATL STA	NATIONAL GRADE-SCR	COGNITIVE SKILLS VERBAL GROUP %FREQ	NON-VERB/ QUANT GROUP %FREQ	TOTAL GROUP %FREQ	BASIC SKILLS READING GROUP %FREQ	GENERAL ASSESSMENT LANGUAGE GROUP %FREQ	MATH GROUP %FREQ	TOTAL GROUP %FREQ

9	98-99	11.8-11.9	27 12	48 21	56 25	24 11	25 11	24 11	20 9
	96-97	11.6-11.7	17 7	8 4	16 7	5 2	11 5	15 7	18 8
8	92-95	11.3-11.5	10 4	34 15	13 6	24 11	5 2	23 10	25 11
	89-91	11.1-11.2	8 4	8 4	12 5	12 5	8 4	9 4	16 7
7	82-88	10.8-11.0	30 13	21 9	27 12	45 20	30 13	23 10	22 10
	77-81	10.6-10.7	12 5	10 4	12 5	13 6	11 5	18 8	16 7
6	66-76	10.3-10.5	39 17	19 8	22 10	36 16	17 7	27 12	30 13
	60-65	10.1-10.2	13 6	8 4	6 3	18 8	24 11	16 7	15 7
5	47-59	9.8-10.0	32 14	18 8	22 10	13 6	23 10	27 12	16 7
	41-46	9.6-9.7	6 3	5 2	6 3	19 8	19 8	6 3	10 4
4	29-40	9.3-9.5	20 9	14 6	7 3	15 7	19 8	13 6	15 7
	24-28	9.1-9.2	9 4	9 4	12 5	6 3	9 4	9 4	4 2
3	15-23	8.8-9.0	8 4	5 2	6 3	6 3	5 2	16 7	3 1
	12-14	8.6-8.7			1 1	2 1		1 1	1 1
2	7-11	8.3-8.5	2 1	4 2	4 2	2 1	5 2	3 1	3 1
	5-6	8.1-8.2				1 1	5 2	1 1	1 1
1	3-4	7.9-8.0	2 1	2 1	1 1	2 1	3 1	2 1	1 1
	1-2	7.7-7.8					1 1	1 1	1 1

***** NATIONAL PERCENTILES CORRESPONDING TO SELECTED RANKINGS WITHIN THE GROUP *****

GROUP %-ILE	SUB-GROUP IDENTIFIED	VERBAL	NON-VERB/ QUANT	TOTAL	READING	LANGUAGE	MATH	TOTAL
95	UPPER 5%	99	99	99	99	99	99	99
75	UPPER 25%	91	98	98	93	91	92	94
50	AVERAGE	75	88	85	82	69	76	79
25	LOWER 25%	52	57	59	60	42	53	59
5	LOWER 5%	24	26	21	22	7	17	21

***** OTHER SUMMARY DATA FOR THE GROUP *****

	VERBAL	NON-VERB/QUANT	TOTAL	READING	LANGUAGE	MATH	TOTAL
N - NUMBER TESTED	228	228	228	228	228	228	228
AVERAGE GRADE-SCORE	10.5	10.8	10.8	10.6	10.4	10.5	10.6
STAN.DEV.OF GR-SC	.9	1.0	1.0	.9	1.0	.9	.9
AVERAGE STAN-SCR	628	674	648	653	619	639	638
STAN.DEV.OF STAN-SCR	37	55	38	34	39	37	33
AVERAGE CSQ	119						
STAN.DEV. OF CSQ	15						

SKILLS ANALYSIS — ALL TEST SCORES

READ VOC COMP GRP %	READ COMP GRP %	WRIT LIST LANG GRP %	MATH COMP GRP %	MATH REAS GRP %
21	7 10	7 10 20	4 18	
14	5 5	5	3 9	
	8	9 7	11 3	
15	12 8 12	9	4	
10	16 9 9	9	4 13	
11	9 10 8	20	13 4	
7	10 11 15	8 12		
4	4 6	7 5		
4	4 11 11	9 5		
1	3 4	4 2		
1	2 4 10	7 5		
1	1 1	3 1		
1	1 2 4	5 2		
	1 1	1		
1	2 1	1 2		
1	1 1	1 1		

OTHER SKILLS & ACHIEVEMENTS

REF SKILLS GRP %	SCIENCE GRP %	SOCIAL STUDIES GRP %	BATTERY AVERAGE GRP %
	7 3	29 13	3
	10 4	18 8	6
	38 17	17 7	14
	14 6	14 6	8
	25 11	18 8	7
	28 12	11 5	7
	23 10	32 14	15
	13 6	15 7	6
	19 8	19 8	9
	10 4	6 3	4
	9 6	12 5	1
	3	8 4	
	5 2	7 3	2
	5 2	3 1	1
	5 2	4 2	
	2 1	5 2	
	1 1	1 1	1
	1 1	3 1	

	REF SKILLS	SCIENCE	SOCIAL STUDIES	BATTERY AVERAGE
N - NUMBER TESTED		228	228	228
AVERAGE GRADE-SCORE		10.5	10.6	10.6
STAN.DEV.OF GR-SC		.9	1.0	.8
AVERAGE STAN-SCR		630	640	646
STAN.DEV.OF STAN-SCR		30	33	35

PRESENT GOALS

SCHOOL PLANS
1ST CAREER CHOICE
2ND CAREER CHOICE

INTERESTS RATINGS

SCHOOL AVERAGE
MUSIC	5
ART	5
MATH	7
SCIENCE	6
SOC.ST.	7
ENGLISH	7
FOR LANG	6
VOCAT.	5

SCHOOL PLANS SUMMARY FREQ %
HIGH SC	
QUIT SC	2
HIGH SC	1
TRADE	4 2
JR COLL	1
COLLEGE	91 40
COLL+	132 58

CAREER PLANS SUMMARY % CHOSEN
	1ST	2ND
PERS. SER	1	2
INDUSTRY		
FARM ETC	9	7
GOVT SER	1	2
REPAIR		
TRANSPOR	1	1
CONSTRUC	1	1
OFFICE		
RETAIL	1	5
FINANCE	12	12
ART-MED	20	14
COMMUNIT	1	2
SCI-TECH	14	9
HEALTH	13	7
LEGAL	7	14
ENGINEER	15	15
EDUCATE	2	2
MISC	3	7

GROUP SUMMARY STATISTICAL REPORT

The Group Summary Statistical Report is developed for each group (class) of students and can be found immediately following the Alphabetical List Report of individual results for a particular group. Its purpose is to provide an overall picture of the collective performance of a group of students. More specifically, it presents a distribution of their performance in terms of three different national norm scales; summarizes their school interests, educational plans, and career preferences; relates selected levels within the group to the national percentile-rank scale; and provides several other common statistical indexes of group performance. A sample of the Group Summary Statistical Report is given on page 6.

Frequency Distribution—All Test Scores

As shown in the sample, the "STUDENT INFORMATION" column contains a listing of the national stanine, national percentile-rank, and national grade-score scales. To the right of this display you will find the number (frequency) of students and the percentage within the group who earned a given national norm score on each subtest (e.g., Reading), subskill test (e.g., Reading Vocabulary), and total (e.g., Total Basic Skills). Thus, it may be seen that on the Reading subtest, 24 students (11%) earned a national grade score of 11.3–11.5, which in turn is equivalent to national percentiles of 92–95 and a national stanine of 8. By combining selected data points it can be determined that the Reading performance of 65 students (29%) fell within the upper 11% of the national normative sample (89th percentile and above) which also corresponds to the 8th and 9th national stanine band. From the data points shown for Reading, it may be determined that the performance of 32 students (16%) fell within or below the 4th stanine band. These students represent the total number within the group whose Reading performance was below the national average (50th percentile).

By analyzing the distribution of scores in this manner, it is possible to gain useful insights into the performance characteristics, general or specific, of your group of students. Needless to say, the focus of this report is upon the group rather than individuals. Hence, if one wishes to identify which students earned a national stanine of 9 (above the 95th national percentile) on the Science subtest, it would be necessary to search the alphabetical list of individual students' results to discover his or her name.

Interests and Present Goals

At the right side of the Group Summary Statistical Report, the "INTERESTS" and "PRESENT GOALS" columns contain: a) the average interest ratings of the group for the eight school subjects surveyed; b) a summary of their current, long-term educational plans; and c) a summary of their career field preferences.

The "SCHOOL INTERESTS AVERAGE RATINGS" may range from a low of 1 to a high of 9, with 5 representing the midpoint of the scale. As may be seen, the ratings of the group in the illustration tend to be very favorable toward the subjects, with none earning an average rating below the midpoint and several approaching the maximum scale value. In the area of "SCHOOL PLANS GROUP SUMMARY" almost every student in the group expects to continue his or her education beyond high school, and almost all (98%) have plans for four-year college programs and beyond. The "CAREER PLANS GROUP SUMMARY" indicates that the fields of arts/media, engineering, science/technology, health, and finance are the most popular first choices while careers in engineering, law, arts/media, and finance take precedence as second choices.

In general, individual interests and goals tend to be rather fluid among younger students, often resulting in sharply different patterns from one year to the next as they advance through the lower grade levels. As individual development progresses and awareness of oneself and the world expands, a more stable pattern emerges which eventually crystallizes into a directional force within an individual's life. A thoughtful analysis of this section of the Group Summary Statistical Report can reveal much about the personal plans and hopes of your students, which may in turn have an impact upon existing or proposed classes, programs, or facilities within your school or school system.

National Percentiles Corresponding to Selected Rankings Within the Group

This section of the Group Summary Statistical Report is located in the lower portion of the report immediately below the frequency distributions. At the left are the selected rank positions within the group—"GROUP %-ILE"—and a brief description of their meaning with respect to the group—"SUB-GROUP IDENTIFIED." Thus, the 95th group (or local) percentile rank represents the upper 5% of your group, the 50th group percentile rank refers to the "typical or average" student in your group, and the 5th group percentile rank identifies the lower 5% of your group. Farther to the right, in each of the columns related to test performance, are the national percentile ranks attained by each segment or subgroup of your group.

Thus, if you wish to evaluate the typical or average performance (50th group %-ile, the median) of your students, your attention would be directed to the national percentiles that appear in each of the test-related columns on the same line as the word "AVERAGE." Any national percentile of 50 indicates that the performance of your group, on the average, is the same as the average performance within the national sample; that is, the 50th percentile for your group corresponds to the 50th percentile for the national sample. Any national percentile greater than 50 indicates that the typical performance of your group was higher than that of the national sample; any below 50 indicates lower performance. As may be seen in the sample report, the average performance of that group ranges from 67 for the Math Computation subskill of Math to 88 for the Quantitative Skills subtest.

If the upper 25% (75th group %-ile) of your group is under consideration, you would note the national percentiles that appear in each test-related column on the same line as the phrase "UPPER 25%." If the performance of your subgroup on the Math subtest, for example, were *equal to their counterparts* in the national sample, a national percentile of 75 would appear in the Math column. Any value higher than 75 indicates that the performance of your subgroup was higher than that of the upper 25% in the national sample; any below 75 indicates lower performance. To be more specific, the students in this subgroup (75th group %-ile) earned a national percentile of 92 on the Math subtest; hence, their performance exceeded 75% of those in the *local* group and 92% of those in the *national* sample. In other words, the top 25% in this *local* group are in the top 8% of the *national* sample.

The data given for the other subgroups in this section of your Group Summary Statistical Report may be analyzed in a similar manner. One must remember, of course, to adjust the level of comparison to correspond to the subgroup being evaluated. By analyzing these data it is possible not only to assess the average performance of your group as a whole, but also to evaluate the higher and lower ranked segments within the group. This approach can be very useful, for example, in identifying subgroups which could benefit from special programs designed to meet their particular needs. For example, the upper 5% may be considered for gifted, talented, or honors courses, while the lower 5% may be considered for specially designed classes of skill building.

Other Summary Data for the Group

This section of the group summary report is intended primarily for the convenience of those who wish to conduct additional analyses which incorporate these common statistical measures. Of general interest, however, are the *average grade score* and *average standard score* earned by the group on each of the subtests. While these values are equivalent to the average national percentiles shown in the previous section, these measures offer a different perspective of group performance, and thus contribute to a fuller, more comprehensive understanding of that performance.

General Considerations

While the primary purpose of the Group Summary Statistical Report is to provide an overall picture of a specific group of students, the reported data also may be used as the basis for inter-group comparisons. If your testing program included several classes (sections) within the same grade level, you have already discovered that a group summary was provided for each section and for the entire grade (i.e., all sections combined). Thus, it is possible to compare the performance of one class with that of the other classes or with that of the grade as a whole. In this application, one may use any of the national norm measures as the basis for comparison.

By extension, one may also compare the group summaries for different grade levels. This may take the form of comparing your current fourth grade students with those in the sixth grade, or of comparing the data for the *same* group of students as obtained through testings at various grade levels. In this setting, your purpose is best served by using the average standard scores as the basis for comparison.

SPECIAL PROBLEMS—QUESTIONABLE SCORES

It can be very disconcerting for all concerned when the reported test scores sharply disagree with our expectations. Fortunately, this is not a common problem, but it merits some attention.

Group Performance

If the Group Summary Statistical Report for a class indicates that the group performed unexpectedly high or low on a particular subtest, the most likely explanation is that some irregularity occurred during the administration of the subtest. For example, reducing the specified time limits tends to lower performance, extending them serves to raise performance. Since the unexpected results may have been caused by an error that went unnoticed, it is often difficult for the test administrator to recognize that an irregularity occurred at all. Nevertheless, mistakes are made—recognized or not— and the only indication may be an unexpected and unexplainable shift in the group's performance on a single subtest. Other factors which typically lower group performance include departing from the test directions as given in the Manual of Directions, any disruptive or distracting activity during the testing session, poor physical conditions in the room used for testing (temperature, light, ventilation), and so forth.

Individual Performance

Virtually all inquiries related to student performance are concerned with individuals whose test results are lower than expected. A typical example: Lisa Smith is an excellent math student, but her math scores are substantially below average. A typical reaction: the scores don't make any sense.

When the unexpected test results are confined to a single individual, it is highly unlikely that administrative irregularities are responsible. Instead, one must be alert for factors that would have an impact only upon the student involved. For those who encounter a "Lisa Smith" among their students, we offer the following suggestions:

1) Discuss the matter with Lisa, perhaps when reviewing the test scores with her. Such a discussion may be unproductive since the testing probably occurred several weeks earlier, making recall difficult. Nevertheless, she may remember that the math subtest seemed especially difficult, or she found the directions confusing, or may have skipped one or more items (which might have led her to mark subsequent responses in the wrong locations). You may discover that she did not feel well that day or was extremely anxious about taking the test. Lisa may realize that you share her concern about the math scores, have reservations about their validity, and are prepared to pursue the matter further if necessary. Most students (and parents) find such an attitude supportive and reassuring.

2) Contact the STS Scoring Center, request a verification of the math scores, and include any information that may have a bearing on the matter. In this age of optical mark readers (electronic scoring devices), high-speed computers, and sophisticated computer programming, it is extremely unlikely that Lisa's math responses were erroneously scored and reported. Nevertheless, it is a legitimate question which needs and deserves a definitive answer.

3) Inspect Lisa's answer sheet, particularly her math responses. (Answer sheets are generally returned with verification replies.) Excessive erasures frequently indicate uncertainty or confusion on the part of the student. Determine whether she responded to every item on the subtest or omitted a substantial number (25% or more). Time limits for the EDSERIES are generous. Consequently, excessive omissions usually indicate that the student found the test quite difficult or was overly cautious in responding, perhaps marking only those items about which he or she felt very confident. Finally, examine Lisa's responses to the math items, noting each item in the test booklet used for the testing. (If one is not available, request a copy from STS.) If possible, examine the responses with Lisa and discuss those that are incorrect. Such a session can be very enlightening for both you and the student.

Needless to say, these suggestions require additional time and effort, but they will yield the maximum amount of information about the subtest in question. In the vast majority of instances it is possible to arrive at a definitive conclusion regarding the validity of questionable test scores.

Performance Profile—Individual Student Report

STS® EDUCATIONAL DEVELOPMENT SERIES

PERFORMANCE PROFILE: BLACK   JOE   T   GRADE: 9.8   SECTION: 01   LEVEL: 17   FORM: J   TEST DATE: 05/16/12
TEACHER: RUN DATE: 09/18/12
SAMPLE SCHOOL   (00001)   AGE: 1502   GENDER: M   CODES:

PRESENT GOALS

SCHOOL PLANS
COLL+
1ST CAREER CHOICE
ENGINEER
2ND CAREER CHOICE
FINANCE

SCHOOL INTERESTS

MUSIC	1
ART	6
MATH	8
SCIENCE	9
SOC. STUD.	7
ENGLISH	5
FOR. LANG.	3
VOCATIONAL	9

HIGH 9   LOW 1

SCORE LEGEND: PCT- percentile rank · GS- grade score · GE- grade equivalent · ST- stanine · CSQ- cognitive skills quotient · NCE- normal curve equivalent · SS- standard score · RS- raw score

MAJOR TEST AREAS / PERFORMANCE SCORES

	SS	GS	LOCAL PCT-ST	NAT'L PCT-ST
COGNITIVE SKILLS				
QUANTITATIVE	646	10.4	35-4	74-6
VERBAL	597	9.7	20-3	47-5
TOTAL CSQ= 109	622	10.0	25-4	59-5
BASIC SKILLS				
READING	638	10.2	33-4	66-6
LANGUAGE ARTS	576	9.2	11-2	28-4
MATHEMATICS	623	10.1	34-4	61-6
TOTAL	614	9.9	23-3	54-5
REFERENCE SKILLS				
SCIENCE	635	10.7	54-5	81-7
SOCIAL STUDIES	609	9.6	19-3	42-5
BATTERY AVERAGE	623	10.0	25-4	58-5

PERFORMANCE RATINGS

	LOW	BELOW AVERAGE	AVERAGE	ABOVE AVERAGE	HIGH
QUANTITATIVE				XXXXX	
VERBAL			XXXX		
TOTAL			XXX		
READING				XXXX	
LANGUAGE ARTS		XXXX			
MATHEMATICS				XXXX	
TOTAL			XX		
SCIENCE				XXXXXX	
SOCIAL STUDIES			XXXXXX		
BATTERY AVERAGE			XX		

NATIONAL PERCENTILE RANKING: 1 5 10 20 30 40 50 60 70 80 90 95 99
NATIONAL STANINE RANKING: 1 2 3 4 5 6 7 8 9

PERFORMANCE SCORES, This student's performance is shown above by a series of numeric scores for each test area taken. These may be interpreted in the conventional manner. Thus, a national percentile rank of 65 (which would be located in the NAT'L PCT column) would indicate that the student's test score exceeded 65 percent of those in a national normative population.

PERFORMANCE RATINGS, The student's national percentile scores are also shown on the graph. A band of marks is used to allow for any inaccuracy in measurement with the score for this testing being near the center. When comparing any two tests, it is likely that there is a true difference in scores only when the ends of the bands do not overlap.
For most uses performance may be judged by noting the shaded or unshaded rating column in which a band occurs. The High, Average, and Low ratings represent the highest 10%, middle one-third, and lowest 10% respectively. The Above Average represents the upper one-third (excluding the highest 10%) while the Below Average represents the lower one-third (excluding the lowest 10%)

SPECIFIC SKILLS, Each major test area consists of various specific skills detailed below. Performance is shown on each of these by the # of items answered correctly and may be evaluated by noting the shaded or unshaded column in which a single mark occurs. These columns have the same meaning as the shaded/unshaded columns in the Performance Ratings section.

SPECIFIC SKILLS

READING

	# OF ITEMS	NO. RIGHT	LOW	-AVG	AVG	+AVG	HIGH
WORD ANALYSES							
Orthographic & Phonic Knowledge							
VOCABULARY							
Synonyms & Antonyms	6	4			X		
Definitions	15	14					X
Homonyms/Morphemes/Categories							
COMPREHENSION							
Getting Information From Text	20	14			X		
Evaluating Information/ Generating Meaning	13	7			X		
Literary Understanding/ Literary Techniques	16	11			X		

LANGUAGE ARTS

	# OF ITEMS	NO. RIGHT	LOW	-AVG	AVG	+AVG	HIGH
LISTENING							
Sentences/Sequences/Directions							
SPELLING	8	5			X		
LANGUAGE CONVENTIONS							
Capitalization & Punctuation	12	5	X				
Correct Usage	19	14			X		
WRITING PROCESS							
Prewriting and Drafting	18	12		X			
Editing and Proofreading	13	7		X			

MATHEMATICS

	# OF ITEMS	NO. RIGHT	LOW	-AVG	AVG	+AVG	HIGH
SUBJECT MATTER							
Numbers/Operations	21	13			X		
Measurement	5	2			X		
Geometry	12	7			X		
Data, Statistics, Probability	10	9					X
Algebra, Patterns, Functions	22	10		X			
PROCESS							
Procedural	35	19			X		
Conceptual	24	15			X		
Problem Solving	11	7				X	

REFERENCE SKILLS

FOLLOWING DIRECTIONS
ORGANIZATION
PICTORIAL & GRAPHIC MATERIALS
REFERENCE SOURCES

SCIENCE

	# OF ITEMS	NO. RIGHT	LOW	-AVG	AVG	+AVG	HIGH
SUBJECT MATTER							
Physical Science	16	12					X
Life Science	22	16				X	
Earth-Space Science	7	4			X		
NATURE OF SCIENCE							
History/Philosophy/Inquiry/ Problem Solving	10	8				X	
APPLICATIONS/CONTEXTS							
Science & Society in Everyday Life	5	4				X	

SOCIAL STUDIES

	# OF ITEMS	NO. RIGHT	LOW	-AVG	AVG	+AVG	HIGH
GEOGRAPHY	10	6			X		
HISTORY	17	6		X			
ECONOMICS	14	10				X	
POLITICAL SCIENCE	13	5			X		
SOCIOLOGY/ ANTHROPOLOGY	6	4			X		

SCHOLASTIC TESTING SERVICE

PERFORMANCE PROFILE—INDIVIDUAL STUDENT REPORT

Upon request, this diagnostic report is provided for each student within a class. Generally speaking, it offers a unique blend of information about student performance in that it not only provides the general scores attained by an individual, but also indications of his or her performance on the specific skills assessed by the test battery. School personnel will find the convenient size and wealth of data quite useful for a wide range of purposes. The individualized character of the report, its graphic displays, and self-contained explanations make it an ideal report for distribution to the students and parents. A sample of the Performance Profile is shown above.

The upper portion of this report focuses upon the student's *present goals*, *school interests*, and *performance scores* on the subtests administered. The sample shows the "MAJOR TEST AREAS" section, which incorporates as many as seven different scores into the Performance Profile. At the far right— the "PERFORMANCE RATINGS" section—the student's performance is presented in a graphic display of X-bands. The national percentile rank earned by an individual lies near the center of a given X-band, and its width reflects any variation in measurement that might be likely to occur. The shaded and unshaded areas of the graph depict the various levels of performance, and the national percentile-rank and stanine scales are shown at the bottom for reference.

The mid-portion of the Performance Profile offers brief explanations of the "PERFORMANCE SCORES" and "PERFORMANCE RATINGS," as well as the "SPECIFIC SKILLS" information for the graphic displays below. Additional suggestions are offered to the student on the back of the report.

The lower portion of the report presents a listing and graphic displays of the "SPECIFIC SKILLS" assessed by the five achievement subtests of the battery*. Performance is indicated by the number of items correctly answered—"NO. RIGHT" column—and the total number of items related to the skill is given as a frame of reference—"# OF ITEMS" column. As a further aid to interpretation, the student's performance is indicated by a single "X" in one of five columns which have the same meaning as the shaded and unshaded columns in the "PERFORMANCE RATINGS" section in the upper portion. A more complete description of the specific skills appears on the back of the report.

As shown in the sample on page 11, the Level 17J Reading subtest contains 21 items related to vocabulary. This category, in turn, consists of 6 items related to synonyms and antonyms and 15 items dealing with definitions of words. The student correctly answered 4 and 14 items respectively of the items related to these subcategories and earned average and high ratings for these skills.

The EDSERIES consists of thirteen separate test batteries for use at Kindergarten through Grade 12. Consequently, all of the specific skills shown on the Performance Profile will not necessarily be represented in every test battery. As may be noted, no data have been reported for the Reading skill of word analyses, indicating that Level 17J contains no test items related to this particular skill.

Occasionally a skill of relatively minor importance at a given grade level is represented in a subtest by only one or two items so that areas of greater importance may be assessed more fully or in greater depth. Whenever such a skill is measured by three or less test items, the student's performance is reported only in terms of the number of test items involved and the number correctly answered. An "X" does not appear on the graph since it is not possible statistically to provide a reliable rating based upon such a small item base.

General Considerations

The primary advantage of the Performance Profile lies in its ability to communicate both the general performance levels of the student as well as a more detailed picture of his or her specific skills. This approach can provide useful insights for both school personnel and the student.

As may be seen in the sample, the student's general scores for the five achievement subtests essentially fell in the average to above-average rating categories. Yet the student registered a *low* performance rating on capitalization and punctuation in Language Arts. Depending upon the student and/or the class curriculum, low or below-average ratings on a specific skill may be quite acceptable and even expected. If this is not the case, however, attention is focused upon achievement weaknesses that might otherwise escape unnoticed.

*Reference Skills is omitted in forms J/K or newer.

PERFORMANCE PROFILE SUMMARY

A Performance Profile Summary is developed for each group (class) of students and can be found immediately following the group's individual reports. In testings that involve two or more classes at the same grade level, a summary is provided for each section and for the entire grade (i.e., all sections combined). The purpose of this report is identical to that of the Group Summary Statistical Report provided in connection with the Alphabetical List Report—to present an overall picture of the collective performance of a group of students.

In appearance, the Performance Profile Summary is virtually identical to those provided for the individual members. It differs, of course, in that its contents reflect group rather than individual performance. This is accomplished by computing *averages* for the group with respect to their school interests, general test scores, and the number of items correctly answered for the specific skills. These *average* values are presented in the appropriate locations and are displayed graphically as well. Needless to say, the students' school plans and career choices cannot be averaged; therefore, they are omitted. Moreover, local percentile and stanine averages are not shown since such values would invariably be 50 and 5 respectively for any of the general scores.

Performance Profile Summary

STS® EDUCATIONAL DEVELOPMENT SERIES

PERFORMANCE PROFILE: GROUP SUMMARY   GRADE: 9.8   SECTION: LEVEL:17   FORM: J   TEST DATE:05/16/12
TEACHER: RUN DATE:09/18/12
SAMPLE SCHOOL   (00001)   N = 228   AGE: GENDER: CODES:

PERFORMANCE SCORES

MAJOR TEST AREAS	SS	GS	LOCAL PCT-ST	NAT'L PCT-ST
COGNITIVE SKILLS				
QUANTITATIVE	674	10.8		84-7
VERBAL	628	10.5		76-6
TOTAL CSQ= 119	648	10.8		84-7
BASIC SKILLS				
READING	653	10.6		79-7
LANGUAGE ARTS	619	10.4		73-6
MATHEMATICS	639	10.5		76-6
TOTAL	638	10.6		79-7
REFERENCE SKILLS				
SCIENCE	630	10.5		76-6
SOCIAL STUDIES	640	10.6		79-7
BATTERY AVERAGE	646	10.6		79-7

PRESENT GOALS
SCHOOL PLANS
1ST CAREER CHOICE
2ND CAREER CHOICE

SCHOOL INTERESTS
MUSIC	5
ART	5
MATH	7
SCIENCE	6
SOC. STUD.	7
ENGLISH	7
FOR. LANG.	6
VOCATIONAL	5

HIGH 9   LOW 1

PERFORMANCE RATINGS: LOW, BELOW AVERAGE, AVERAGE, ABOVE AVERAGE, HIGH

- QUANTITATIVE: XXXXX (ABOVE AVERAGE)
- VERBAL: XXXX (ABOVE AVERAGE)
- TOTAL: XXX (ABOVE AVERAGE)
- READING: XXXX
- LANGUAGE ARTS: XXXX
- MATHEMATICS: XXXX
- TOTAL: XX
- SCIENCE: XXXXXX
- SOCIAL STUDIES: XXXXXX
- BATTERY AVERAGE: XX

SCORE LEGEND
PCT- percentile rank   ST- stanine   SS- standard score
GS- grade score   CSQ- cognitive skills quotient   RS- raw score
GE- grade equivalent   NCE- normal curve equivalent

NATIONAL PERCENTILE RANKING: 1 5 10 20 30 40 50 60 70 80 90 95 99
NATIONAL STANINE RANKING: 1 2 3 4 5 6 7 8 9

PERFORMANCE SCORES. This student's performance is shown above by a series of numeric scores for each test area taken. These may be interpreted in the conventional manner. Thus, a national percentile rank of 65 (which would be located in the NAT'L PCT column) would indicate that the student's test score exceeded 65 percent of those in a national normative population.

PERFORMANCE RATINGS. The student's national percentile scores are also shown on the graph. A band of marks is used to allow for any inaccuracy in measurement with the score for this testing being near the center. When comparing any two tests, it is likely that there is a true difference in scores only when the ends of the bands do not overlap. For most uses performance may be judged by noting the shaded or unshaded rating column in which a band occurs. The High, Average, and Low ratings represent the highest 10%, middle one-third, and lowest 10% respectively. The Above Average represents the upper one-third (excluding the highest 10%) while the Below Average represents the lower one-third (excluding the lowest 10%)

SPECIFIC SKILLS. Each major test area consists of various specific skills detailed below. Performance is shown on each of these by the # of items answered correctly and may be evaluated by noting the shaded or unshaded column in which a single mark occurs. These columns have the same meaning as the shaded/unshaded columns in the Performance Ratings section.

SPECIFIC SKILLS

READING	# OF ITEMS	NO. RIGHT	LOW	-AVG	AVG	+AVG	HIGH
WORD ANALYSES							
Orthographic & Phonic Knowledge							
VOCABULARY							
Synonyms & Antonyms	6	5				X	
Definitions	15	12			X		
Homonyms/Morphemes/Categories							
COMPREHENSION							
Getting Information From Text	20	15			X		
Evaluating Information/ Generating Meaning	13	9				X	
Literary Understanding/ Literary Techniques	16	12			X		

LANGUAGE ARTS	# OF ITEMS	NO. RIGHT	LOW	-AVG	AVG	+AVG	HIGH
LISTENING							
Sentences/Sequences/Directions							
SPELLING	8	6			X		
LANGUAGE CONVENTIONS							
Capitalization & Punctuation	12	9			X		
Correct Usage	19	15			X		
WRITING PROCESS							
Prewriting and Drafting	18	15			X		
Editing and Proofreading	13	10			X		

MATHEMATICS	# OF ITEMS	NO. RIGHT	LOW	-AVG	AVG	+AVG	HIGH
SUBJECT MATTER							
Numbers/Operations	21	13		X			
Measurement	5	3			X		
Geometry	12	7		X			
Data, Statistics, Probability	10	7		X			
Algebra, Patterns, Functions	22	15		X			
PROCESS							
Procedural	35	22		X			
Conceptual	24	17		X			
Problem Solving	11	6		X			

REFERENCE SKILLS	# OF ITEMS	NO. RIGHT	LOW	-AVG	AVG	+AVG	HIGH
FOLLOWING DIRECTIONS							
ORGANIZATION							
PICTORIAL & GRAPHIC MATERIALS							
REFERENCE SOURCES							

SCIENCE	# OF ITEMS	NO. RIGHT	LOW	-AVG	AVG	+AVG	HIGH
SUBJECT MATTER							
Physical Science	16	11				X	
Life Science	22	16				X	
Earth-Space Science	7	4			X		
NATURE OF SCIENCE							
History/Philosophy/Inquiry/ Problem Solving	10	7			X		
APPLICATIONS/CONTEXTS							
Science & Society in Everyday Life	5	4				X	

SOCIAL STUDIES	# OF ITEMS	NO. RIGHT	LOW	-AVG	AVG	+AVG	HIGH
GEOGRAPHY	10	8				X	
HISTORY	17	11				X	
ECONOMICS	14	9				X	
POLITICAL SCIENCE	13	8				X	
SOCIOLOGY/ ANTHROPOLOGY	6	5				X	

SCHOLASTIC TESTING SERVICE

13

NARRATIVE REPORT

The Narrative Report is an additional service that is provided for each student within a class. Its key feature is the printed commentary which analyzes the test results on an individual basis. The report consists of two copies, so that one may be given to the student and his or her parents while the other is retained in the school for reference. A sample of the Narrative Report is given on page 15.

The upper portion of this report focuses on the student's *present goals*, *school interests*, and the *scores* attained on the subtests administered. However, unlike most of the reports described in this manual, student performance is reported in a simplified format consisting *only* of the national percentile-rank scores he or she earned. At the far right—the "PERFORMANCE RATINGS" section—the student's performance is presented in a graphic display of X-bands. The national percentile rank earned by the individual lies near the center of a given X-band, and its width reflects any variation in measurement that might be likely to occur. The shaded and unshaded areas of the graph depict the various levels of performance, and the national percentile-rank and stanine scales are shown at the bottom for reference.

The lower portion of the Narrative Report consists of a computerized analysis of the test results given in the upper portion. As may be noted in the sample, performance is discussed in a highly individualized frame of reference and in simple, easily understood terms. In effect, this portion of the report interprets the test results for the student and the parents, thus removing the need for self-interpretation and the risk of misunderstandings. Discussions with the students and parents are more likely to focus upon the implications of the test results rather than their basic meaning.

Generally speaking, the Narrative Report offers perhaps the most effective method for accurately communicating test performance to nonprofessionals. Although the report may be used at any grade level, its simplicity and clarity are particularly advantageous when working with younger students.

Narrative Report

STS® EDUCATIONAL DEVELOPMENT SERIES

REPORT FOR: BLACK   JOE   T   GRADE: 09   SECTION: 01   LEVEL: 17   DATE: 05/12

GROUP: SAMPLE SCHOOL   00001   FORM: J

NARRATIVE REPORT

GOALS

PRESENT

School Plans	COLL+
1st Career Choice	ENGINEER
2nd Career Choice	FINANCE

INTERESTS

SCHOOL

MUSIC	1
ART	6
MATH	8
SCIENCE	9
SOC. STUD.	7
ENGLISH	5
FOR. LANG	3
VOCATIONAL	9

HIGH 9   LOW 1

MAJOR TEST AREAS / SCORES / PERFORMANCE RATINGS

MAJOR TEST AREAS	SCORES NATIONAL PERCENTILE-RANK	LOW	BELOW AVERAGE	AVERAGE	ABOVE AVERAGE	HIGH
COGNITIVE SKILLS						
NON-VERBAL/QUANT	74			XXXX	XXXXX	
VERBAL	47			XXX		
TOTAL	59			XXXX		
BASIC SKILLS						
READING	66		XXXX			
LANGUAGE ARTS	28			XXXX		
MATHEMATICS	61			XX		
TOTAL	54					
REFERENCE SKILLS						
SCIENCE	81		XXXXXXX	XXXXXX		
SOCIAL STUDIES	42			XX		
BATTERY AVERAGE	58					

NATIONAL PERCENTILE RANKING: 1   5   10   20   30 40 50 60 70   80   90   95   99

NATIONAL STANINE RANKING: 1   2   3   4   5   6   7   8   9

HOW WELL IS JOE GROWING IN HIS EDUCATIONAL DEVELOPMENTS? TO ANSWER THIS QUESTION, HE RECENTLY TOOK A COMPREHENSIVE SERIES OF STANDARDIZED TESTS -- THE STS EDUCATIONAL DEVELOPMENT SERIES. THIS PROGRAM INCLUDED TESTS TO INDICATE HIS GENERAL LEARNING ABILITIES, AS WELL AS HIS DEVELOPMENT IN MANY SKILL AND ACHIEVEMENT AREAS.

IN THE BASIC SKILL AREAS OF READING, LANGUAGE ARTS, AND MATHEMATICS, JOE SCORED NEAR THE NATIONAL AVERAGE. ON THE PERCENTILE-RANK SCALE, HIS SCORE OF 54 MEANS THAT IT WAS BETTER THAN 54% OF THE SCORES MADE BY HIS PEERS IN THE NATIONAL SAMPLE. QUITE IMPORTANT IS THE FACT THAT THIS LEVEL OF DEVELOPMENT WAS CONSISTENT WITH HIS CURRENT ABILITY AS INDICATED BY HIS COGNITIVE SKILLS SCORE.

JOE'S INDIVIDUAL DEVELOPMENT SCORES RANGE OVER 53 POINTS ON THE PERCENTILE-RANK SCALE. HOWEVER, BEFORE COMPARING ANY TWO SCORES, NOTE THE GRAPH ABOVE. A BAND OF MARKS ALLOWS FOR INACCURACY OF EACH SCORE. A REAL DIFFERENCE IS LIKELY ONLY WHEN THE ENDS OF THE BANDS DO NOT OVERLAP.

HOW WELL ONE DOES IN SCHOOL IS OFTEN RELATED TO INTEREST IN THE SUBJECTS. ON THE STS INTEREST SCALE, FROM A LOW OF 1 TO A HIGH OF 9, JOE SCORED AN AVERAGE LIKING OF 6 FOR HIS SCHOOL SUBJECTS. SPECIFIC INTERESTS ARE SHOWN ABOVE.

CONCERNING FUTURE SCHOOL PLANS, JOE INDICATES THAT, AT THE PRESENT, HE INTENDS TO GO ON FOR MORE THAN 4 YEARS OF COLLEGE.

SOME STUDENTS ARE FAIRLY SURE OF FUTURE CAREER PLANS, WHILE OTHERS HAVE ONLY GENERAL IDEAS. JOE'S PRESENT CAREER INTERESTS ARE ARCH/ENGINEER AND BUSINESS.

JOE'S FUTURE SCHOOL AND CAREER PLANS SHOULD BE CONSISTENT WITH HIS INTERESTS, ABILITIES, AND SKILLS. YOU MAY WANT TO TALK TO HIS TEACHER OR COUNSELOR ABOUT THIS.

JOE'S TEACHERS CAN TELL YOU MORE ABOUT THE OTHER INTERESTING FINDINGS IN HIS TEST RESULTS.

ITEM ANALYSES—INDIVIDUAL AND GROUP

The test results provided on such reports as the Alphabetical List Report and Group Summary Statistical Report allow a test user to determine achievement levels for any given individual or the group as a whole. In certain settings it may be sufficient simply to know, for example, that the math skills of a sixth-grade student or class are average in terms of the national normative sample. In other settings, however, where the focus of attention is upon the specific skills which underlie general performance, there is a legitimate need for test data reflecting such skills.

While the Performance Profile allows a test user to gain some insight into these specific skills, the Individual Item Analysis Report and Group Item Analysis Report extend this insight to its fullest by providing performance information on an item-by-item basis and relating it to a more comprehensive set of specific skills or objectives than is possible on the Performance Profile. In short, the item analyses reports equip the test user to make as penetrating an evaluation of specific performance as his or her purpose may require.

Individual Item Analysis Report

A sample Individual Item Analysis Report is shown on page 17. As may be noted, the test results are presented in alphabetical order and restricted to a single subtest—Level 17J Reading in this instance. At the far right is the "OBJECTIVE-SKILLS OUTLINE" column which contains the specific skills or objectives measured by the items in this subtest. Major categories are listed in all caps (e.g., VOCABULARY). Each objective within a major category (e.g., 1. Synonyms\Antonyms) carries a unique objective number, and these reappear as the first line of information in the body of the report. The item numbers related to a given objective appear beneath that objective number and constitute the second and third lines of information (item numbers must be read vertically). Thus, as may be seen in the sample, items 15, 16, 17, 18, 19, and 20 deal with objective 01–Synonyms\Antonyms.

Student results are provided in two lines of information. The first line contains the individual's response to each test item—a "+" indicates a correct response, a letter indicates the incorrect response that was made, and the letter "O" signifies that the student omitted a response to the test item. The total number of correct responses (+'s) is shown at the end of the response line. The second line contains a series of two-character entries, each of which summarizes the student's performance on a given objective. The first digit signifies the number of items related to an objective which were answered correctly (i.e., the number of +'s appearing in the line above). The second character is a *rating* of that performance—a "+" indicates that the student has mastered the objective (at least 80% of the items answered correctly), a "P" represents partial mastery (50% to 80% of the items correct), and a "–" signifies a lack of mastery (less than 50% of the items correct). The total number of mastered objectives (+'s) is shown at the end of this line.

As may be seen in the sample, Nathan Johnson correctly answered seven items related to objective 06, Literary Understanding. Since there are only eight items associated with this objective, his performance was almost perfect and received a "+" rating. On objective 02, Definitions, he correctly answered eleven of the fifteen items. Consequently, the entry for this objective is "11P," eleven correct responses and a partial mastery rating. At the far right you will discover that his total number of correct responses is 52 (his raw score) and he attained mastery of three objectives. There may also be cases in which no correct responses are given (e.g., Eliza Barley, objective 05).

When using the Individual Item Analysis Report, one must not lose sight of its purpose, which is essentially diagnostic. Accordingly, it directs attention to student performance on specific objectives and the test items related to those skills, rather than focusing on a set of normative scores. In this context, evaluation of a student's performance must be based upon your knowledge of the curriculum and your insight and expectations with respect to the student. If a given objective was included in the curriculum, perhaps even emphasized, your expectations would be vastly different than if the objective had not been treated at all. Similarly, a partial mastery rating on a given objective might represent acceptable achievement for one student but a lackluster performance for another. Incorrect responses should be examined by referring to a test booklet. (If one is not available, request a copy from STS.) It is often possible to discover a pattern to the errors on an objective that could provide the basis for remedial instruction.

It should be apparent that this evaluative procedure is virtually identical to that applied to criterion-reference test results. Needless to say, it is an intensely individualized process, but for this very reason can produce the most useful and meaningful assessments of the specific strengths and weaknesses of your students.

Individual Item Analysis Report

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                          STS®  EDUCATIONAL DEVELOPMENT SERIES                                    STS.

            EDUCATIONAL DEVELOPMENT SERIES -- STUDENT PERFORMANCE ON INDIVIDUAL ITEMS (LINE 1) AND OBJECTIVES (LINE 2)
   SAMPLE SCHOOL          00001 Gr: 9   Sec: 1  Test Date:05/12    Test: READING          Level:17   Form: J   Page:1

NAME                                                                                        OBJECTIVE-SKILLS
CODES                                                                                          OUTLINE

     OBJECTIVE NO 01----02-------------03------------------04---------0506------07------  NO
     ITEM NUMBER  1111120000000001111152222333333555555556664444445666736222234442333346  OF     OBJ
     (Vertical)   5678901234567890123492467034790123456856902367873780201589814531569124  +S     NO.

ANDERSON  NICHOLA++C+++++++++CDCDD+AC++++++++++++++++++A+++AB+++B+++++++A+++++++++C+  56
                 5+     8P          19+               8P       2+7+      7+         5           VOCABULARY
                                                                                          1   Synonyms/Antonyms
BAKER     TYLER  ++++++++++++++++++++++++A++++++++++++++++AB+++B+++++++++++++++++++C+  65      2   Definitions
                 6+    15+          19+               8P       2+8+      7+         6           COMPREHENSION
                                                                                          3   Information From Text
BARLEY    ELIZA  +++O++++D+++++++B+++++++A+++A+++C++++++++++++C+++A+CB++++++++++++O+++  59      4   Generating Meaning
                 5+    13+          17+               9+       0-8+      7+         6      5   Evaluating Information
                                                                                          6   Literary Understanding
BLACK     JOE    ++DB+++++++++D+++++++++CA+++++C+D++++++BBD++AA++++ACC++C+A+++A+D+++++C  50      7   Literary Techniques
                 4P    14+          14P              6P       1P5P      6P         1

BOOKER    WILLIAM+A+++++++++++C++A+++++++++++++C+++++++++AB++B+++B+++++++++++++++++C+++  61
                 5+    13+          18+               8P       2+8+      7+         6

BREWER    LUCAS  ++++++++++++A+++++++++++A++++++++++++++++++A++A++++++++++B++++++++C  64
                 6+    14+          19+               9+       2+7+      7+         7

BROOKS    MATTHEW++++++++++++++++++++++A+++++++++++++++B+++++B++++++++++++++++++A+++  66
                 6+    15+          19+               9+       2+8+      7+         7

CAPELLI   CARTER ++++AC+++++++++++++B++++A+++++CBD+++B++++D++BB++B+A++C++++++AABA+AA+++  50
                 4P    14+          15P              6P       1P6P      4P         1

CHATHAM   DAVID  ++C+++++++++C+++D++CA+++++++++++++AAB++A+B++A+++A+AA+B+++++++++++++++  55
                 5+    11P          16+              6P       1P8+      8+         4

COOPER    ALLEN  ++D+CB+++++A+C++B+AD++C+A+++A+C++B++++D+A+++B+A+A++BC++C++++A++++AC++B  45
                 3P    10P          13P              7P       1P6P      5P         0

DAVIDSON  JOHN   ++C+++++++++++++++++++++++++++A+++B++A++++++++++++++++++++++++B  65
                 5+    15+          18+              10+       2+8+      7+         7

DECKER    SANDRA BCDA+DBD++C++++DA+BD+++BA++B++CA+++++++B+ADAB+A+BB+CBC++++++AA+A+D+B+C  36
                 1-     8P          14P              3-       0-6P      4P         0

GABRIELS  MICHAEL+++++D++++D++C++A+AD+++D++++++DB+++ADA+BA++ABA++A++++B+C++++A++++++++A  48
                 5+    10P          12P              7P       1P6P      7+         2

HALL      AARON  A+DBA+++++++B+++B+ACA+++A++B++CC++A+B++ACB++BBA+A+AA+++C++BBAB+A+D+C+B  37
                 2-    10P          12P              4-       2+3-      4P         1

HANLEY    ROBERT ++++++++++++B+++++++++++A+D+D++++++++++D+B+A+BA+++++++++++++++++++++  61
                 6+    14+          16+              7P       2+8+      8+         6

JACOBSON  BENJAMIA+++++++++++C++++++C+++BA+++A+CBD++A+++D+B+A+++++A+++++++B+++A+++A+D++  52
                 5+    13+          12P              8P       2+6P      6P         3

JOHNSON   NATHAN +C+++C+++++D++++A+AO+++++++A+++++++B++AA+++B+++BDBO++++++++++++A++B  52
                 4P    11P          16+              6P       2+7+      6P         3

            SCHOLASTIC TESTING SERVICE
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Group Item Analysis Report

The Group Item Analysis Report is provided routinely when an Individual Item Analysis Report is requested, but it may be ordered *without* the individual student data if so desired. In either case its purpose is the same—to provide an overall perspective of the collective performance of the group on a single subtest. A sample of this report is shown on page 18.

17

Group Item Analysis Report

OBJ NO.	% MASTERY GRP	ITM NO--GRP P NAT P	ITM NO--GRP P NAT P	ITM NO--GRP P NAT P	ITM NO--GRP P NAT P	ITM NO--GRP P NAT P	ITM NO--GRP P NAT P	ITM NO--GRP P NAT P
1	68	15--93 81	16--77 44	17--66 61	18--85 74	19--83 66	20--73 55	
2	68	01--91 78	02--98 86	03--93 86	04--96 86	05--94 82	06--93 81	07--79 72
		08--76 74	09--79 75	10--75 71	11--72 76	12--98 86	13--61 55	14--48 38
		59--66 53						
3	50	22--97 87	24--91 84	26--65 67	27--44 39	30--96 85	33--87 77	34--80 70
		37--72 52	39--75 69	50--49 63	51--67 78	52--75 70	53--92 79	54--82 72
		55--77 66	56--58 52	58--82 69	65--92 76	66--55 47	69--63 44	
4	31	40--49 41	42--80 72	43--63 55	46--57 61	47--67 65	48--76 70	57--77 42
		63--57 46	67--79 61	68--55 43	70--65 49			
5	59	32--83 73	60--70 48					
6	57	21--91 85	25--81 75	28--94 84	29--85 75	38--81 74	41--93 82	44--60 48
		45--65 66						
7	28	23--92 76	31--86 64	35--96 85	36--65 66	49--52 57	61--77 49	62--58 43
		64--36 29						

GROUP SIZE: 228

OBJ NO.   OBJECTIVE-SKILLS OUTLINE

VOCABULARY
1   Synonyms/Antonyms
2   Definitions
COMPREHENSION
3   Information From Text
4   Generating Meaning
5   Evaluating Information
6   Literary Understanding
7   Literary Techniques

As in the case of the individual report, the specific objectives measured by a given subtest are displayed in the "OBJECTIVE-SKILLS OUTLINE" column on the right side of the form. At the far left in any given line of information, you will find an objective number, the percentage of those in the group who mastered it, and the individual item numbers related to it. In addition, each item number is shown with the percentage of students in the group—"GRP P"—and in the national sample —"NAT P"—who correctly answered it.

When examining this report, a useful entry point is to note the group's *mastery* percentages. One must remember that these values do *not* reflect the partial mastery ratings within the group, but only the percentage which earned a mastery rating. Thus, these data afford an accurate, concise picture of the group's strengths, but indicate its possible weaknesses only indirectly.

When confronted with mastery percentages that are in the lower ranges, one must turn to the item numbers related to the objective in question and determine how the group's p-values compare with the national p-values. For example, objective 07 for the sample group shows a mastery percentage of only 28, yet the group outperformed the national sample on all except two of the eight individual items. Needless to say, a substantial portion of the group must have attained partial mastery ratings on this objective which contributed to the above-average group p-values. However, if an objective has a low mastery percentage and the group p-values are also trailing the national sample on the majority of individual items, depending upon the curriculum and your assessment of the group's potential, this may or may not be an objective that merits further time and effort in the classroom.

In general, one approaches the Group Item Analysis Report in much the same fashion as the Individual Item Analysis Report; that is, the various data must be analyzed using your knowledge of the pertinent factors as the primary frame of reference. When examining group performance on individual items, it would be very helpful to have access to the test booklet for reference.

III. EDSERIES TESTS AND SCORES—FREQUENTLY ASKED QUESTIONS

This section contains answers to some frequently asked questions regarding the EDSERIES tests and scores. As is noted throughout, more in-depth information on these subjects is found in the EDSERIES Technical Manual.

Career Interests, School Plans, and School Interests

Why are the first three sections—My Career Interests, My School Plans, My School Interests—included in your test program?

At some point in any testing program one must compare the students' test scores with their interests and plans—the things they enjoy doing, their plans for the future. STS believes that the test programmer should give the test user a start in this direction, within the realistic limits of the time and space available for such efforts.

When students respond to the same interest questions in the same standardized format each year, it becomes possible to track the students' changes in their interests and plans (and, to some degree, their self-concepts) from one year to the next. Such standard records can be of great help to administrators reviewing the impact of the school's guidance and instructional programs.

What is the validity of the first three parts of the EDSERIES?

There is a good deal of immediate validity in the Career Interests, School Plans, and the School Interests sections of the EDSERIES. Follow-up interviews with students have clearly indicated that their markings are valid: They agree with suggested interpretations, such as "You like art a great deal in school, but you don't like mathematics very much." Thus, the ratings are useful in discussions with the students and in making judgments about curriculum areas they enjoy.

On the other hand, we do not expect long-term predictive validities for the Career Interests, School Plans, or School Interests. That is, we would not expect strong predictions of high school or college activities from the motivation information gathered in Grade 7, for example. Rather, we would expect students to change their minds many times about their future plans and their likes and dislikes.

In some cases the school personnel may try to change the students' views, and changes will reduce the predictive validity of the original test information. A case in point would be that of a bright student who does not expect to go to college, but rather plans to get an office job after high school graduation. In such a case, the counseling staff might work to make these predictions *not* come true. Thus, the long-term predictions will be reduced as the students gain in experience; but the Career Interests, School Plans and School Interests section may well indicate the kinds of experiences they need. The first three sections should then be viewed as *problem identifiers*, but not necessarily as having long-term predictive validity.

The Cognitive Skills Quotient (CSQ)

What is the Cognitive Skills Quotient?

The Cognitive Skills Quotient (CSQ) expresses the relationship between cognitive skills (Quantitative and Verbal subtests) and age. It is more basic than "general educational development" scores. A combination of perceptual skills, reasoning skills, and word-recognition skills, this score is thought to be a foundation on which students build their "general educational developments."

The CSQ is also age-referenced, rather than grade-referenced. That is, the CSQ compares students with other students of their same *age*, whereas the tests of general educational development compare students with other students in their same *grade*. (This is usually a minor consideration, since most students are placed in grade according to their chronological age. However, if a student has been double-promoted or detained several times, the CSQ will appear to be out-of-line with that student's general educational development scores.)

Which scores comprise the CSQ?

The CSQ is derived from a combination of the Quantitative Skills and the Verbal Skills. It represents a combination of perceptual skills, reasoning skills, and word-recognition skills.

How does the CSQ differ from a DIQ?

The CSQ is reported on the same scale as a "Deviation IQ" or DIQ. Like the DIQ, it is age-norms referenced, and the scores are set in the bell-curve model. Hence, the difference focuses more on what the score reflects than upon the scale used for reporting. Since "skills" may be *innate* or *acquired*, the measurement process is less concerned with such a distinction than is the case when striving for "ability" assessment—typical of instruments giving the IQ.

Is the CSQ a "standard score"?

Yes, the CSQ is a "standard score" in that it is set to the bell-curve model with a fixed mean standard deviation. The fixed mean is 100; the fixed standard deviation is 16. (A more detailed description of the CSQ is given in the EDSERIES Technical Manual.)

The Performance vs. Expected Performance (E)

What do the plus, minus, and equal signs mean on the Alphabetical List Report and the pressure-sensitive label?

The Alphabetical List Report and the pressure-sensitive label show a plus sign, a minus sign, or an equal sign for each *basic skills* and *other skills & achievements* score as an expected performance indicator or "PERFORMANCE vs. EXPECTED PERFORMANCE (E)." These signs indicate whether a student's score is higher than expected (+), lower than expected (−), or about as expected (=).

In the STS computer program, the student's cognitive skills raw score is converted to its equivalent grade score, and is then compared to each grade score in the "BASIC SKILLS" and "OTHER SKILLS & ACHIEVEMENTS" sections of the test record. Grade score differences of 0.5 or less are considered to be non-significant; grade score differences greater than 0.5 are probably significant.

Thus:

Total Cognitive Skills	Reading	Language	Math
8.0	7.7	7.4	8.6
	=	−	+

This example suggests that this student's Reading score is about as expected; that his or her Language score is lower than expected; and that his or her Math score is higher than expected. (A more detailed discussion of the expected performance indicator is given in the EDSERIES Technical Manual.)

How can teachers use those expected performance indicators (E)?

For most students, grade score comparisons yield an equal sign (=). This is because the correlations between the cognitive skills scores and the educational development scores are moderately high—typically in the upper .70's. (See the EDSERIES Technical Manual.)

A series of minus signs for a student would suggest that the student has more *potential* for educational development than he or she has shown so far. Experienced teachers and counselors will know how to look for clues. Home problems? Too many family relocations? Bilingual problems? Health problems? Problems with his/her attitude toward school?

A single minus sign would suggest a specific curricular deficiency that could be readily corrected. Using the Performance Profile, teachers can focus on a single skill area and arrange for extra help for the student in that area.

A series of plus signs for a student would suggest that the student has been growing at an unusually rapid rate in general educational developments. Such students are often highly energetic, curious, and motivated.

A single plus sign would suggest a specific curricular strength to be encouraged. If the same single plus sign occurs year after year, the student should look into career possibilities associated with that test area. Such plus scores can be both interesting and encouraging, especially in career counseling at the high school level.

The Expanded Standard Score Scale

What is normal growth on the Expanded Standard Score scale?

The most important thing to note about the Expanded Standard Score scale is that it shows a decelerating growth curve, with large units of growth in the primary grades and small units of growth during the high school years. For example, normal growth on the Reading subtest is nearly 50 units between Grades K.8 and 1.8, but only 7 units between Grades 11.8 and 12.8. Normal growth is around 10 points in the middle grades.

The Performance Profile

On the Performance Profile, how can a high score be "average"?

Some skills are easy to master, while others are hard to master. Thus, in an "easier" skill area, we might find that the average American student scores 13 out of 16 items correct. The "average" then is 13, and a student who scores 11 or 12 correct out of 16 is "below average" even though he or she is doing well on the skill.

21

The EDSERIES Subtests

What is the reliability of the individual EDSERIES subtest scores?

Student scores are analyzed with the Kuder-Richardson Formula 20 (KR20). The results of these studies show median KR20 reliabilities *by level* which typically range from .80 to .95. (Detailed studies of reliability by subtest score are given in the EDSERIES Technical Manual.)

What is the validity of the subtests?

The case for the validity of these tests rests on three types of evidence. First and foremost is the matter of "content validity." If the tests are to be useful to teachers and curriculum coordinators, a majority of the actual items should be endorsed by the faculty. The rationale for the tests (presented in the EDSERIES Technical Manual) and an actual item-by-item inspection of the tests should help teachers to judge the instructional usefulness of these tests.

A second criterion is that the tests should show student growth from one year to the next. The EDSERIES Technical Manual includes detailed studies of growth for the national norms groups, but this is a matter that can also be checked locally by each school giving the tests.

A third criterion is that of concurrent and predictive validity. By and large, predictions of teacher grades have been highly encouraging; and studies of correlations with such tests as the California Achievement Tests, the Iowa Tests of Basic Skills, the Iowa Tests of Educational Development, the PSAT–NMSQT, and the ACT have shown a great deal of common variance between the EDSERIES scores and scores of these other tests of "general educational development" in the past. Of special interest is the fact that the EDSERIES Basic Skills complex (Reading, Language, and Math) typically correlates around .80 to .90 with the composite scores of these other instruments.

Which scores should be used for predicting success in specific courses?

Validity coefficients can vary a great deal from one school to another, depending on the diversity of each group, the way each course is taught, and the way each course is graded. Thus, it is not possible to guarantee that specific tests will yield useful predictions of success in specified courses in all schools.

Nonetheless, patterns of validity coefficients do become apparent after a variety of studies. From studies of the EDSERIES and other similar tests, we can suggest specific subtests as probable predictors in specified courses:

English – In almost all studies, the Language Arts subtest yields useful predictions of student success in English courses that stress functional grammar, usage, or composition. Where the stress is on literature, the Verbal and Reading subtests may be more valid as predictors.

Mathematics – In almost all studies, the Mathematics subtest yields useful predictions of student success in mathematics courses. If the course is unusually abstract, the Quantitative subtest scores may add to the predictions.

Foreign Language – The Verbal and Language Arts subtests typically yield useful predictions of student success in foreign language courses that stress grammar, composition, and conversation. If a great deal of reading is required, the Reading subtest should add to the predictions.

Social Studies – Typically, the Social Studies subtest yields useful predictions of student success in social studies courses. If a great deal of reading is required, the Reading subtest may add to the predictions. If term papers and essay examinations are required, the Language Arts subtest may add further to the predictions.

Biological Science – The Science and Verbal subtests typically yield useful predictions of student success in biology courses. If a great deal of reading is required, the Reading subtest may add to the predictions.

Physical Science – The Science and Mathematics subtests typically yield useful predictions of student success in physics and chemistry courses. If a great deal of reading is required, the Reading subtest may add to the predictions.

These suggestions are based on general experience, and they should be checked through local validity studies as actual course grades become available. It is important also to recall that previous course grades and teacher recommendations often add significantly to predictions based on standardized test results.

IV. GLOSSARY OF TERMS

College Bound National Percentile (COL)

The high school levels of the EDS J/K series List Report now also report a college bound national percentile (COL) for the achievement areas in addition to the normal national percentile (NP). The normal national percentiles are estimates of total population, which include students who will drop out of school. The college bound percentiles are comparisons with those who are expected to complete high school, and enter some form of college. Since this is a more selective group, the college bound percentiles are lower (or tougher) for most points of the scale. For those who use the STS High School Placement Test (HSPT®) in grade 8, the college bound percentiles should be more in line with the HSPT® percentiles.

Cognitive Skills Quotient (CSQ)

This measure replaces the traditional IQ score, but its purpose within the school setting remains unchanged—to function as a predictive index of a student's future academic performance in order to assess learning potential. Like the IQ, the CSQ is based upon the student's scores on both the Verbal and Quantitative subtests as well as his or her age at the time of testing. Unlike pure intelligence tests, however, these subtests do not restrict themselves to measure only innate abilities. Instead, test items were carefully designed to provide various measures of the cognitive skills (i.e., skills related to learning) whether such skills are innate or acquired.

For convenience the CSQ was designed statistically to be interpreted in the same manner as the traditional IQ. Thus, the following guide may be used in evaluating the CSQ:

above 130	represents academic potential that is found in approximately the upper 3% of the school population;
110 & above	represents academic potential that is found in the upper 25% of the school population;
100-109	represents academic potential that is found in the second quarter, the 50th to 75th percentiles, of the school population;
90-99	represents academic potential that is found in the third quarter, the 25th to 49th percentiles, of the school population;
89 & below	represents academic potential that is found in the lower 25% of the school population;
below 70	represents academic potential that is found in approximately the lower 3% of the school population.

Performance vs. Expected Performance (E)

This score provides a comparison between student performance on an achievement subtest and on cognitive skills subtests. A plus sign (+) indicates that the student's achievement is significantly higher than would be expected while a minus sign (−) signifies that the achievement is significantly lower than would be expected. An equal sign (=) indicates that performance falls within the range of normal expectations.

Grade Equivalents (GE)

Percentile ranks compare the performance of an individual student with other students at the same grade level. Grade equivalents compare the performance of an individual student with the average performance of students at *other* grade levels. Consequently, the grade equivalent scale extends across grade levels. As a normative measure, the grade equivalent scores are subject to several limitations and certain precautions must be observed:

1) Unfortunately, grade equivalents lend themselves to misinterpretation. Grade equivalents (GE) are meaningful only within the range of skills measured by the test administered. If a fifth-grade student earns a GE of 8.1 on the Math subtest focusing on fifth-grade content, this does *not* mean that he or she is capable of doing eighth-grade math. It simply means that *the student can do fifth-grade math as well as an eighth grader can do fifth-grade math* and is doing considerably better than most fifth graders. It must be remembered, however, that such a test was designed primarily to assess those math skills and concepts that should have been learned through the fifth grade. If this student were given a math test designed for use at the eighth-grade level, it is very unlikely that he or she would attain a GE of 8.1.

2) Grade equivalents have little meaning in test areas with limited content similarity from grade to grade. For example, suppose that a school system teaches American History in grade 6 and European History in grade 7. If a test designed for grade 6 were given to students in other grades, one can readily see what would happen. Students below grade 6 would do poorly because they have not yet studied the content covered in the test. Students in grade 7 would likely do more poorly than those in grade 6 since they would likely have forgotten some of the material learned the preceding year. For example, it would not be unlikely for the sixth grade to attain an average of 50 while the seventh grade attained an average of 40. This would lead to such a contradiction as a score of 50 giving a grade equivalent of 6.5, while a lower score of 40 would give a higher grade equivalent of 7.5.

3) Caution must be used when grade equivalents are used as the basis for placing students at grade levels that correspond to attained GE scores.

Grade Scores (GS)

This score may be defined as a normalized standard score which compares the performance of an individual student with other students at the same grade level. Since the grade score (GS) sets its average at grade placement, grade scores are very similar to grade equivalents of the student at the time of testing. Thus, if a midyear sixth grader (6.5) earned grade scores between 5.5 and 7.5, these grade scores may be used and interpreted in the same manner as grade equivalents.

Beyond this range, grade scores differ from conventional grade equivalents. Grade equivalents often "run wild" at the upper and lower end of the scale, and yield scores indicating that one eighth-grade student is reading at the second-grade level while another functions like a typical college sophomore. These extreme scores pose problems for most test users since they tend to be very unreliable statistically and can be confusing or even disruptive in student counseling and parent conferences.

To avoid these difficulties, STS uses a normalized SS, with the mean equal to grade placement and the standard deviation equal to 1.0, to give the compacted GS scale which allows for a maximum of +/–3.0 from grade placement. Thus, at Grade 8.5 the highest possible grade score would be 11.5 (a deviation of +3.0 from grade placement), and the lowest possible would be 5.5 (a deviation of –3.0 from grade placement). It should be noted that a grade score need not indicate grade placement. Therefore, if an eighth grader receives a GS of 5.5, it need not mean that the student reads or has math skills at the fifth-grade level. If the test focuses on eighth-grade skills, such a grade score would mean that the student scored *very low* on the national norm scale for eighth-grade skills.

It should be apparent that grade scores offer a convenient means of determining student growth from one year to another although they tend to be less precise for this purpose than standard scores. When interpreting grade scores, one must exercise the same care one applies to grade equivalents.

Normal Curve Equivalents (NCE)

Normal curve equivalents are a normative measure developed as a uniform reporting method for Title I programs focusing on student improvement and growth. Although normal curve equivalents resemble percentile ranks in various ways, there are also fundamental differences which provide NCE's with certain distinct advantages in this type of research setting. If your reports contain normal curve equivalents, STS will be pleased to provide you with special interpretation guides or other assistance that you may require to utilize the data.

Percentile Ranks

The percentile-rank scale ranges from 1 to 99 and compares the performance of an individual student with other students at the same grade level. More specifically, a percentile rank signifies the percentage of raw scores in some normative group that is lower than the raw score attained by a given student. Thus, if an individual's raw score on the Science subtest is equal to the 68th percentile, this means the raw score was *higher* than 68% of those in the normative group. If the normative group consists of a representative national sample, the percentile is termed "national." If it consists of individuals in the student's school or school system/district, the percentile is termed "local."

Raw Score (RS)

This is simply the number of test items that were correctly answered by the student.

Standard Scores (SS)

The standard score scale used with the Educational Development Series is properly termed an *expanded* standard score scale. It was developed in accord with the principles and procedures of item response theory, specifically the Rasch Model, and is a single, equal-interval scale that extends across all grade levels for use with all tests in the EDSERIES. The scale ranges from approximately 100 at Kindergarten to approximately 800 at Grade 12.

In essence, the standard score scale is a measure of performance independent of grade level, time of testing, or the test level that was administered. In practice, it becomes a basic index of growth when it is possible to compare the current standard scores with those obtained in one or more earlier testing programs. Such comparison may be made for individual students, classes within a school, or schools within a system/district.

When making comparisons, one need not be concerned about the meaning or significance of the standard scores themselves. Instead, the focus of attention should be upon the observed differences between the available standard scores. As one might expect, large differences signify greater growth, small differences indicate lesser growth. In some settings these observed differences may be sufficient for the test user's purpose. In other settings, however, it may be necessary to further compare the observed growth with the growth that might be expected. To accomplish this task one must consult the appropriate tables in the Norms Conversion Tables booklet, available separately from STS.

By way of illustration, assume that a fourth-grade class, tested in spring with the Level 14 J/K battery, attained an average SS of 548 for Reading. The following spring the class was administered the Level 15 J/K as fifth graders and earned an average SS of 578 for the same subject. A simple subtraction reveals that this group showed an average growth of 30 SS units in this subject area. To compare the observed growth with that found in the national sample, one would simply locate the average standard scores for Reading that were attained by those in the spring of Grade 4 and the spring of Grade 5. The actual values from the Norms Manual are 536 and 557 respectively which indicate that the normative sample showed an average growth of 21 SS units for Reading. Since the class in this example attained an average growth of 30 SS units, its growth exceeded that of the normative group of students.

Stanines

This score provides a comparison between the student's performance and that of other students in the same grade level. It utilizes a 9-point scale on which 9 represents the highest performance, 5 the average, and 1 the lowest. One advantage of stanine scores is their basic simplicity; the primary disadvantage is that they are a comparatively coarse measure and less precise, for example, than percentile ranks.

If one wishes to compare a student's stanine scores on two different tests, a difference of only 1 stanine should be given limited significance. A difference of 2 stanines usually indicates a significant difference in performance on the two tests, but further evidence, such as a related course, should be examined as well. Stanine differences of 3 or more may be regarded as clearly indicating a significant difference in test performance.

Like percentile ranks, stanines may be either local or national in character, depending upon the normative group on which the scale is based (see *Percentile Ranks*).

Detailed percentile-to-stanine relationships are as follows:

Percentiles	Stanines	Rating
96-99	9	
89-95	8	High
77-88	7	
60-76	6	
41-59	5	Average
24-40	4	
12-23	3	
5-11	2	Low
1-4	1	