DOCUMENT RESUME

ED 227 152 TM 830 163

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TITLE The Use, Relevance, and Appropriateness of Tests for Educational Decision Making. Final Report.
INSTITUTION Illinois State Board of Education, Springfield, Dept. of Planning, Research and Evaluation.
SPONS AGENCY National Inst. of Education (ED), Washington, DC.
PUB DATE [80]
GRANT NIE-G-80-0088
NOTE 118p.
PUB TYPE Tests/Evaluation Instruments (160) -- Reports - Research/Technical (143)

EDRS PRICE MF01/PC05 Plus Postage.
DESCRIPTORS *Accountability; Achievement Tests; *Decision Making; *Educational Testing; Elementary Secondary Education; Information Utilization; Performance Factors; Quantitative Tests; *School Districts; Student Evaluation; Student Motivation; Surveys; Teacher Attitudes; Test Interpretation; *Test Use
IDENTIFIERS *Illinois Inventory of Educational Progress; *Springfield Public Schools IL

ABSTRACT

The increasing use of educational tests to establish the accountability, credibility, and viability of educational programs is paralleled with increasing criticism of the "accountability through testing" philosophy. To analyze the relevancy and appropriateness of tests for educational decision making at the school district level, three studies examined the quality of teacher judgment in test development and implementation, the utility of test information to teachers, and what components of "achievement-on-the-test" are attributable to motivational, personality, and idiosyncratic factors. Fourth and eighth grade teachers and students in the Springfield (IL) School District were administered either teacher surveys evaluating student performance and motivation on mathematics test items, or student measures of mathematics achievement-related motives. Ninth grade teachers assessed the utility of test information varied by ability, and ninth and eleventh grade teachers were interviewed regarding test information. Indications were that the role of test information is an incremental one, enhancing teacher estimates of performance; item scaling by teachers and latent trait theory are roughly similar; and, although correlations between various achievement related motives could not be determined, a substantial portion of performance variance is attributable to motivation. Appendices contain the study instruments. (CM)

FINAL REPORT
THE USE, RELEVANCE, AND APPROPRIATENESS OF TESTS FOR EDUCATIONAL DECISION MAKING

The National Institute of Education
G-80-0088

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Introduction

Over the last several years, increasing attention has been devoted to the assessment of a student's achievement and productivity. The attention has focused primarily upon information provided by the student's performance upon educational tests. Historically, educational tests have been used to evaluate and make decisions concerning students since the beginning of the twentieth century. One of the first systematic uses of tests for evaluation was in 1905 in the Springfield, Massachusetts School District. That school district used tests in spelling, arithmetic, geography, and penmanship to determine growth in achievement since its initial educational testing in 1846. In 1911, the New York City Schools had begun district-wide educational testing. By 1923, the Stanford Achievement Test was being employed nationwide to evaluate elementary school children. In 1925, a test for secondary students, the Iowa High School Content Examination was readied for national use. Interestingly enough, the increased implementation for educational tests was occurring at the same time as increasing percentages of U.S. youth were staying in and graduating from secondary education. By the 1960's, testing had become a booming business enterprise. In 1965, Robert Guion stated that..."testing programs are being installed merely because they are stylish." Educational tests were being used to establish the accountability, credibility, and viability of educational program.

However, with the increasing use of educational tests across the decades, there was a parallel increasing criticism of this philosophy of "accountability through testing." Challenges to this philosophy have been discussed in the literature by Lippmann (1922, 1923), Bagley (1925), Davis

(1949), Eells (1951), Hoffman (1952), Shoey (1966), Brim (1965), Joslin (1966), Simon (1971), and Lawler (1978). Guion in 1965 commented that, ..."Tests are chosen because of catchy names, of clever promotion, without considering what they might be measuring, if anything."

It was clear that the use of tests had sparked a tumultuous controversy. It had also stirred the legal community. Since 1967, no less than nine separate litigations have occurred at the Federal Court and State Court level concerning the utility of tests for decision making (Hobson v. Hanks; Diane v. California; Stewart et al. v. Phillips and Massachusetts Board of Education; Larry P. v. Wilson Riles; Briggs v. Duke Power Company; Western Addition Community v. Alioto; Douglas v. Hampton; Armstead v. Starkville School District; Barker v. Columbia School District).

By now a national debate was being flamed in terms of testing. The effects of this national debate can be seen in the writing of the Wirtz Commission (1977), Quinto & McKenna (1977) and Jaegar (1980).

However, while most of this debate may now be at a national level, the actual implementation of this "accountability through testing" philosophy is at the juncture of the local school district. One of the more subliminal, yet seldom asked questions, was the relevance of tests for decision making at the local school district level. The present study was a broad based attempt at analyzing the relevancy and appropriateness of tests for educational decision making at the local level. Three issues were to be investigated this research:

1. THE QUALITY OF TEACHER JUDGMENT IN TERMS OF TEST DEVELOPMENT AND IMPLEMENTATION.

That is, (a) how well do teacher's know the characteristics of items used in testing, and (b) how well can teacher's predict the performance of their student's upon those items? More importantly, how do the results for "(a)" vary in terms of other perceptions the teachers have of the items?

2. THE UTILITY OF TEST INFORMATION TO TEACHERS.

That is, what is the relative importance of test information as compared to 30 other sources of information concerning student performance, and how does that relevancy become modified in terms of the students ability (high, medium, low) and the decision to be made (assigning grades, or placement)?

3. THE COMPONENTS OF THE "ACHIEVEMENT-ON-THE TEST" ITSELF.

That is, what relative portions of the variance of the test performance can be attributed to motivational, personality, and idiosyncratic factors such as anxiety, continuing motivation, sense of competence, expectation, attainment value, minimal standards, perceived purpose of education, and test taking. Furthermore, can we devise an instrument based upon teacher judgment to evaluate observationally the motivational strengths of the students in the classroom?

The above major thrusts guided the specific research design of this study. Within each thrust, many secondary questions were also answered.

SUBJECTS

The students, teachers, and administrators participating in this project were drawn from the Springfield, Illinois School District #186. The Springfield School District gave their overwhelming support to this endeavor. The enthusiasm of the district enabled much more data to be collected than would ever have been possible with the monies provided in the grant itself.

In particular, 24 fourth grade teachers and their students, 30 eighth grade teachers and their students, 33 ninth grade teachers, and 22 eleventh grade teachers participated in this study. In addition, for each fourth and eighth grade teacher, there was an associated 1350 fourth grade and 1350 eighth grade students. The fourth and eight grade teachers responded to survey instruments, whereas the ninth grade teachers not only responded to the written instruments but also were interviewed as to relevant attitudes and ideas by research assistants. Those interviewed were randomly selected from the total number of ninth and grade teachers.

INSTRUMENTS

Six instruments were used to assess the information for this project. These instruments were:

Fourth Grade Teacher Survey

The teachers were asked to respond to the following questions concerning each of 38 mathematics items:

(a) What percentage of students within your classroom will answer this item correctly?

(b) Indicate the difficulty of the item. (1 = very easy, to, 5 = very difficult).

(c) To what extent does the item measure mathematics? (1 = not at all, to, 5 = excellent measurement).

(d) How important is mastery of the skill required for the item? (1 = unimportant, to, 5 = very important).

(e) When were the students exposed to the item content? (1 = have not been, to, 3 = during this grade level).

(f) To what extent have students been exposed to the item content? (1 = not at all, to, 5 = very much).

At the end of the questionnaire, the teachers were also asked to write in a response to:

> "Think of a student in your classroom who is, what you would call, "motivated to achieve." What behaviors make you think he/she is motivated?"

A copy of the questionnaire is provided in the appendix. The responses to this open ended question were then used to derive a check list for observing the behavior of the children in the classroom, which will be discussed shortly.

EIGHTH GRADE TEACHER SURVEY

The same questions were asked of the eighth grade teachers, except that the eighth grade teachers were evaluating 38 eighth grade mathematics items. The eighth grade teachers were also asked to respond to the open ended motivational question.

FOURTH GRADE STUDENT BOOKLET

The students responded to 38 mathematics items as well as were measured on the motives of: sense of competence, success attribution, failure attribution, test anxiety, continuing motivation, expectation of success, minimal standard of success, attainment value of achievement, risk-taking, and perceived value of education. Additionally, the following background variables were assessed: sex, family size, age, frequency of discussion of school with parents, use of magazines and use of libraries. The continuing

motivation items were 15 additional mathematics items to which the student could respond or just rest quietly at his or her seat. The measure of continuing motivation has reported previously in the literature (Maehr, 1977). A copy is attached in the appendix.

EIGHTH GRADE STUDENT BOOKLET

The eighth grade students responded to 38 eighth grade mathematics items as well as responding to the same achievement related motives and background variables. The eighth grade students also responded to background variables of mother's education and father's education. Both of these parental education variables were scaled from "did not complete eighth grade" (1) to "complete doctoral degree" (9). A copy is attached in the appendix.

TEACHER JUDGMENTS OF RELATIVE IMPORTANCE USE, AND RELEVANCE OF TESTS

The teachers at ninth grade judged the relative importance of test information in their decisions concerning the evaluation and grading of students and the placement of students within the educational program. However, the teachers were asked to assess the relative utility of test information as it might vary for high able, moderately able, or low able students. Thus, a 2 (evaluation or placement) by 3 (high, moderate, or low ability) categorization of the relative importance of testing could be defined. For each of these 6 scenarios, the teacher were asked to "judge on a five-point scale (1 = no influence, to, 5 = strong influence) the extent that the following factors influence your decisions (for evaluation or placement) of (high able, moderately able, or low able) student": student attendance, discussions with other teachers, student effort at good work,

accuracy of student work in the classroom, performance or daily homework, student's relationships with other students, records of student's performance with previous teachers, student's performance upon standardized tests, information from counselors, student performance upon specific aptitude tests, student's performance upon classroom quizes, student's rank in his/her class, discussions with student's parents and parent information, recommendation from previous teachers, discussion and interviews with student, student performance upon classroom tests, background of student, and students attitude. In addition, background information was obtained from each teacher on the teacher's age, sex, year's experience, highest educational degree, class size, year's in particular school, and curricular area. (A copy of this instrument is included in the appendix.)

Furthermore, as an aid to the district and to this student, these ninth grade teachers as well as 22 eleventh grade teachers were interviewed concerning the utility of tests and test information and questioned also as to the following information: the educational skills they felt were the most important, how frequently the district should evaluate the student on those skills, when they would like to have the testing information, how they expect the district to assist them in evaluating students, how valuable they perceive district testing to be, what other kinds of specific information they need from the district to evaluate students, what specific information they need from counselor's files on testing if the teachers were given more access, the adequacy of information, (e.g., I.Q. tests, counselors, district tests, standardized tests) for evaluating and placing students, and what is the minimal information needed to evaluate students on these skills. (A copy of this instrument is provided in the appendix.)

RESULTS

STUDY ONE: THE RELEVANCE AND USE OF TEST INFORMATION IN LOCAL EDUCATIONAL DECISION MAKERS.

The responses of teachers to the judgment instrument were averaged within each scenario. The means for the behavior of evaluating a particular student and giving that student a particular grade are given in Table 1.

Table 1

As can be seen from Table 1, some characteristics were adjudged to be important regardless of the ability level of the student. Those factors which were considered relevant across ability levels were: student performance your classroom tests, performance on daily homework, student effort at good work, and student attitude.

For students considered "low able", the teachers also gave importance to student attendance and accuracy of student work in the classroom. For "moderate" or "high able" students, emphasis was also placed upon the student's performance on classroom quizes.

The performance of students upon standardized achievement or aptitude tests had little bearing on evaluation and grading procedure. Similar low weight was given to the student's rank within the class.

Table 2 presents the means for the teachers' estimate of the influence of various factors upon their placement decisions with students.

Table 2

As was the case of the evaluation of students, certain of these factors are perceived to be important regardless of the student ability. In particular, these are the variables of performance on daily homework, student effort at good work, accuracy of student work in the classroom.

Student attendance again gained weight as a placement component for students of "low ability". For students of "low" or "moderate ability" attention was also paid to student performance upon classroom tests.

For "moderate ability" students, the influence of that student's attitude was also noted. Three other variables were considered for students of "high ability". These were: records of the student's performance, student's performance upon standardized achievement tests, and discussions with a student's parents and parental information. Those results tend to suggest a much more personal inquiry into the track record, national comparisons, and family of a high able student for placement decision. For low able students, teachers make sure they have an attendance record, while considering a positive attitude on the part of moderate students.

A discriminant analysis was performed to determined if there were any significant multivariate profiles between the weighting of factors for low, moderate, or high able students in terms of evaluating and grading to a student. Table 3 presents the results for this discriminant analysis.

Table 3

As indicated in Table 3, it is the profile of factors for the student's considered of high ability which came out significant. For these students as compared to all other students, was their attitude (1.01), records of student's performance with previous teachers (.89), and student's effort at good work (.67), which became the critical components for the teachers judgment in term of evaluating and grading a student.

A discriminant analysis was also run to compare the influences of the factors for high versus moderate versus low able students for placement decisions. The results from that dicriminant analysis are given in Table 4.

Table 4

The results from this discriminant analysis indicate a statistically significant profile for the low able students. The results suggest, that in making placement decisions for students of low ability, as compared to all other students, that teacher place importance upon their daily attendance (.74), rank within higher class (.70), performance upon classroom tests (.70), performance upon classroom tests (.70), performance upon daily homework (.51), and recommendations from previous teachers (.48). There are the components deemed important by ninth grade teachers making their decisions concerning the placement of low able students.

Certain components of the teacher judgment instrument correlated with specific background factors of the teachers within each of the six scenarios presented. Table 5 presents the correlation for placement of a low ability students.

Table 5

The correlation presented in Table 5 indicate that the teachers with the longest experience and years rely most heavily upon information from counselors in the placement of the low ability students.

Table 6 presents the significant correlations for placement of a student with moderate ability.

Table 6

The correlation indicates that, once again, the more experienced teachers request information from counselors before suggesting placement decisions. Furthermore, they tend to use information from specific aptitude tests. The correlation also shows it is the teacher of English that also emphasizes discussions with other teachers in terms of placement decisions.

Table 7 presents the teacher background correlation with placement of a student of high ability.

Table 7

The profile of the correlations given in Table 7 indicate that once again, the teacher with experience rely upon information from counselors. They also emphasize the students performance upon specific aptitude tests and background information of the student. The correlations also indicate that teachers of English focus upon discussion with other teachers and student attendance.

The correlations of teacher background factors with the components for the judgment of evaluations and assigning a grade to a student of low ability are given in Table 8.

Table 8

The correlation in Table 8 shows that teachers who are younger, have less experience, less years in the schools, and lower degrees, focus upon student attitude to evaluation and grade low ability students. To a certain extent, the younger teacher also incorporate information on that student's rank in class.

Table 9 presents the correlation for grading a student of moderate ability.

Table 9

The correlations given in Table 9 indicte that English teachers rely upon discussion with other teachers (as was the case above for the placement of students) as well as records of the student's performance with previous teachers for the grading of students.

Table 10 presents the correlations of teacher background characteristics with the components for assigning a grade to a student of high ability.

Table 10

The correlation given in Table 10 indicate that teachers with more experience use some information from counselors to make their evaluation decisions.

The results from the preceding analyses illustrate that standardized or criterion-referenced test information is not the critical component of the teachers decision to place or evaluate a student. The data tends to indicate that test information is employed by teachers in an incremental fashion, to enhance the other components utilized in teacher judgment. Moreover, there is more orientation by the teacher's to student performance upon their own classroom tests than standardized or commerical tests. Thus, the direct impact and relevance of tests on actual decisions by teachers in evaluating and placing school children is cast in doubt.

RESULTS

STUDY TWO: TEACHERS EXPECTATION OF TESTS ITEMS: THEIR APPROPRIATENESS, UTILITY, AND CHARACTERISTICS IN LOCAL DISTRICT TESTING.

At the present time all manner of item analysis and scaling methodologies are available for consumption by psychometricians and measurement specialists. Logist gives three parameter item scaling, while the Rasch model gives one parameter of item difficulty, point biserials and delta transformations are still available although considered passe". However, one might pre-suppose that those individuals who work with their students each day and compose daily quizzes, weekly tests, and midterm and final examinations, may indeed be capable of scaling items and making judgments of their characteristics. Without attempting to embark into another "seer various sign" argument as engaged clinical psychology in the 1950's (Meehl, 1955), this study sought to determine the veridicality of teacher judgments as to (a) item characteristics, and (b) student performance. In regard to the latter, one might well questions the incrementality, or redundancy, or vacuousness of the utility of tests to increase the accuracy of the teacher's knowledge of the student. It may well be that teachers, in their daily observation of students, are as knowledgeable of the students as the test information may be.

A similar argument could be made for the case of item statistics. That is, perhaps teacher's estimates of the capabilities of items as measurement devices may be just as profound and utile as those of traditional item scaling techniques. Let us first turn to the relationship between teacher estimates and student performances.

The data for the fourth grade teacher estimates and student performance across 24 classrooms (teachers) and 1,350 fourth grade students is given in Table 11.

Table 11

The overall correlation between the teacher estimate of performance of students in their classes and actual student performance for the 39 fourth grade mathematics items was .73. Thus, over 49% of the rank older of items in student performance could be attributed to knowledge of the teachers rank order. This correlation of .73 suggests that teachers are relatively congnizant of the capabilities of their students, based upon daily observation.

The correlates of that teacher judgment are also of interest. The teacher's judgment of performance appears strongly determined by the teacher's estimated difficulty of the item. The overall correlation between the teacher's estimated difficulty and teacher's expectation of success is .92. This indicates that teachers who felt items that were very easy (code = 1) would be answered correctly by a high percentage of students.

The teacher's also were asked concerning how well the item measured the domain to be tested. The data in Table indicate an overall correlation of .43 between estimated measurability and the teacher's estimate of expectation of success. Thus, the teachers appear to base their judgement of estimate of performance upon two of the same criteria as logist: item difficulty and item discrimination.

A further characteristic of the items provided decision materials for the fourth grade teachers. In fact, this characteristic is the one hearlded as specifically important by the work by (Freeman et al., 1978) in the sense that the content of the test should extensively match the content of the curriclum. The correlation between the teacher estimate of performance with the teachers knowledge as to the extent that the student had received education in that area was .92. Interestingly enough, this knowledge of "extent of coverage" is never employed by such objective scaling methods as Logist and Rasch, but is indeed in the daily repertoire of teachers in their construction of tests. It appears then, that teachers themselves, rely on this content-match kind of information.

In the past years, one of the primary innovations within the educational community has been mastery education. One might expect that teacher's perception as to the importance or mastery of a particular skill may well relate to their estimate of student performance upon items assessing that skill. The data at the fourth grade level reveals an overall correlation of .02 between the teacher's estimate of how well the students would perform and their estimate of how important it was to master that skill tested by that item. Thus, the impact of mastery, while definitional for instructional design, did not weight heavily as a decision component in terms of estimated fourth grade performance.

The data for the 33 eighth grade teacher and 1,350 eight grade students is given in Table 12.

Table 12

The overall correlation between the teachers estimate of performance and that of the students was .57. The teachers knowledge of this student's performance would account for 27 percent of the variance in the rank-order of student performance. These teacher estimates were again based upon the teacher's daily observations of the student.

The correlates of the teachers estimate of performances for the eighth grade teachers, while lesser in magnitude, practically mirrors the same profile as that for the fourth grade teachers. That is, the correlation between teacher estimate of performance and teachers estimate of difficulty of the items is .83. The correlation between the teacher estimate of how well the item measured the mathematics domain and the teachers estimate of performance was .20. The third indicant, the extent to which the item matched the content to which the children were exposed, and the teacher's estimate of performance was .70. However, the importance of mastery of still which the item tested and the teacher's estimate of performance was only .05. The eighth grade teachers, as the fourth grade teachers appeared to rely upon their estimates of student performance upon the same criteria as traditional item scaling:

(a) item difficulty

and (b) item discrimination

However, the teacher went one step further and also relied upon criteria (c) extent of match with education, which traditional objective scaling does

not, and for which testing has received criticisim. We now turn to the results of the correlation of teachers estimtes of difficulty and measurability with those of the difficulty and discrimination parameters on the items as provided by Logist.

The data for the fourth grade teacher's estimates of difficulty and discrimination with that from Logist is given in Table 11. The correlation between the teacher's estimate of item difficulty and that of Logist is .74. This correlation reveals substantial similarity between the rank order of the difficulty of the items by teachers and by Logist. One subtle implication of these results indicate that one may just as well employ teachers to scale items in terms of difficulty rather than using Rasch or Logist.

The correlation between the fourth grade teacher's estimate of measurability and that of the logist discrimination parameter was = .31. However, it should be noted that there was substantial restriction in range of the discrimination parameter values. That is, these items were selected from the Illinois State Assessment (ef. Fyans, 1979, Kerins et al., 1979) and as such were selected for particular values. In particular, only items with discrimination parameter values equal to or higher than .90 are selected for the assessment. Thus these values were much more restricted than for a less selective test.

The data for the eighth grade teacher's estimates of difficulty and discrimination with that from Logist is given in Table 12. The correlation between teachers estimate of item difficulty with the difficulty parameter of Logist is .34. This may suggest that the eighth grade teacers were less

reliable in estimating the actual level of difficulty than the fourth grade teachers. The correlation of the teachers estimation of measurability of the item with that of the discrimination parameter value is .19. As with the fourth grade value, the real value at the eighth grade level is probably much higher with less restricted samples of items.

RESULTS

Study Three: The motivation components of achievements on-the-test itself.

In recent times, individuals have noted that performance upon test item stimuli is a function of a complex set of processes interacting in a dynamic manner. Research by Carroll (1975) has demonstrated the information processing components of the testing situation. Further research by individuals such as Hill (1980), Atkinson (1980), Crandall (1969), Weiner (1979), Maehr (1980), and Nicholls (1980) have clearly shown the relationship of certain motivational processes to achievement and productivity. While there has been some previous attempts to determine the relative strength of each of these motives (Walberg, 1980), in the main, the research has been done in isolation, with one independent predictor or one independent variable at a time. Thus, no statements could be generated as to the composite effect of all the motives, nor of the relative contribution of any particular motive vis a vis the others. The present study was an attempt to determine the impact of the following motivational predictors of mathematics test performance at the fourth and eighth grade level:

- sense of competence
- parent involvement
- success attribution
- failure attribution
- test anxiety
- continuing motivation
- perceived purpose
- expectation of success

. minimal standard

. attainment value

. risk taking tendency

The correlation amongst these motives and fourth grade mathematics test performance is given in Table 13.

Table 13.

The correlations amongst the predictors are of some interest. Sense of competence correlates (.17) with success attribution and (.17) test comfort, followed by (-.14) with risk taking tendency (preferring moderate risks), and (.11) with parent involvement.

Parent Involvement correlates (.21) with test comfort, and (.13) with success attribution, and (.10) with attainment value for achievement.

Success attribution correlates (.19) with failure attribution, (.14) with test comfort, and (.13) with attainment value for achievement. Failure attribution correlates (-.10) with risk taking tendancy.

Test comfort correlated (.17) with continuing motivation, and (.12) with perceived purpose, and (.11) with expectation of success.

Continuing motivation correlated (.13) with perceived purpose, (.12) with expectation of success, (.12) with minimal standards and (.17) with attainment value.

The results of the multiple regression analysis using each motive as a separate independent predictor of fourth grade mathematics performance is given in Table 14.

Table 14.

The results presented in Table 14 indicate that approximately 20% of the test performance can be attributed to these motives. This is approximately twice the amount previously suggested by the research (Walberg, 1980). The overall regression is highly significant. The independent variables which were significant predictors at fourth grade (in order of relative strength) are:

- risk taking tendency
- attainment value
- success attribution
- perceived purpose
- test comfort
- continuing motivation

Thus, these motives apprently account for 20% of the performance of the fourth grade students across the 23 classrooms studied.

The correlations amongst the motives and mathematics performance for the eighth grade students are given in Table 15.

Table 15.

The correlations amongst the predictors indicate that sense of competence correlates highest (.18) with expectation of success, followed by (.15) with parent involvement, and (.14) with test comfort.

Parent involvement correlates (.16) with expectation of success and (.14) with perceived purpose.

Success attribution correlates (.40) with failure attribution, (.36) with test comfort, and (-.11) with risk taking tendancy. Failure attribution correlates (.21) with test comfort.

Expectation of success correlates (.38) with minimal standard and (.18) with test comfort. Minimal standard correlates (.14) with attainment value.

The multiple regressions results using each motive as independent variables for the eight grade students is given in Table 16.

Table 16.

The results presented in Table 16 indicate that 28% of the variance in eighth grade mathematics performance is attributed to these achievement related motives. That is approximately three times the size of the effect found in the preview research (Walberg, 1980). While the overall regression is highly significant, certain of the independent motives also reach significance as predictors. These are (in order of relative strength):

. expectation of success

. success attribution

. test comfort

. continuing motivation

. risk taking tendancy

. failure attribution

. perceived purpose

. sense of competence

In comparing this "motive profile" with that obtained at grade four, some interesting divergances are noted. First, at eighth grade the cognitive moves of attribution and expectation of success become preminent. Second, risk taking tendancy loses its relative strength at eight grade. Third, test comfort increases in importance at grade eight as compared to grade four, as does continuing motivation.

Comprehensively taken, the results argue for a prevalent effect of motivation upon mathematics test performance.

An Observational Scale to Judge Motivated Behavior

There are several instruments that are used to assess achievement motivation. Mehrabian (1969), Harter (1981), and Atkinson & Raynor (1974) discuss these. However, each of these instruments require a fairlyliterate respondent and have been criticized for not being valid to the actual behavior of classroom achievements.

For those reasons, the present instruments for achievement motivation are relatively useless for early elementary education. One attempt of this research was to devise a relatively useful inventory which could be used as a structured observational checklist in measuring the motivated behavior in the classroom. As stated above, each of the teachers surveyed responded to an "open-ended" question asking them to define a child whom they considered motivated to achieve. The responses of the teachers to that question were content analyzed. That content analysis revealed approximately 35 different definitions of motivated behavior. Those 35 different definitions were then formed into a pilot observational rating scales.

The next process was to see if those 35 separate items could be reduced to a much smaller number, such that it would be manageable to work with by a classroom teacher.

To accomplish this goal, the 35 item scale was sent to all fourth and eighth grade teachers, in the Springfield School district. They were asked to rate on a 1 to 5 scale, each of the 35 behaviors as to how characteristic they were of a motivated child. A copy of this pilot rating scale is in the appendix. The results of the responses of the teachers to each of characteristics is given in Table 17.

Table 17.

The results given in Table 17 describe the distribution of responses of the teachers to each behavior. The coefficients of variation in that Table 17 show that there was a wide diversity amongst the teachers in terms of the following behaviors:

(10) Brings interesting items from home or nature

(12) Initiates new learning projects

(13) Volunteers for special academic tasks

(5) Reads in spare time

Those behaviors which were judged most consistently by the teachers were:

(2) Listens attentively

(7) Answers content questions in class

(33) Smiles

(32) Displays good posture

(18) Asks for help when help is genuinely needed

(4) Cooperates in group activities

(13) Starts lessons without undue delay

(20) Pays attention to academic stimuli

The item with the lowest overall mean was (10), "Brings interesting items from home or nature".

The responses to the 35 items were then intercorreltated and submitted to maximum likelihood factor analysis. The reference vectors were then rotated by a Promax rotation with the factor of K factor equal to 8. Table 18 illustrates the five factors which were derived from this analysis.

Table 18.

The first two factors, based on their eigenvalues were retained as the reduced set of items.

A careful review of the items on the factors reveals that, the first two factors, which account for a cumulative 49.20% of the variance deal with behaviors previously defined as continuing motivation (Maehr, 1974, Salili, Maehr, Sorenson, and Fyans, 1976). These behaviors focus upon the self motivation, self-selection (Fyans and Maehr, 1979), and self-directedness of the child. These 13 items (#4, #5, #6, #11, #21, #22, #25, #29, #10, #12, #23, #24, #28) can thus be used in a behavior checklist with which to observe and assess the motivation of a child in an elementary school classroom. This may well prove to be an additional method of non-testing assessment as well as orienting teachers toward which behaviors are critical in terms of achievement motivation.

CONCLUSIONS

Study One: The Use of Test Information for Evaluation and Placement of Students

In terms of evaluating and grading a particular student, across ability levels teachers oriented toward performance on classroom tests and daily homework, student effort at good work, and student attitude. Student attendance became a critical component for students judged to be of low ability. The performance of students upon standardized achievement of aptitude tests was of minimal utility to teachers in evaluating and grading students.

In terms of placement of students within particular programs a very similar profile of student behavior exists in comparision with the process of evaluating and grading a studet. That is, across ability levels, teachers

oriented to student performance on daily homework and student effort at good work. For placement of students with particular ability levels the following results were noted. For low able students teachers focused on the attendance record, for moderate able students teaches focussed upon student attitude and for high able students, teachers focussed upon comulative records of the student's past performance and discussions with a student's parents.

An analysis of teacher background characteristics indicated that teachers with the longest experience rely more heavily upon contact and information from counselors, whereas teachers with less experience pay more attention to student attitude. Teachers of English apparently alos incorporate discussions with other teachers into their decision for evaluation and placement of students.

The results from Study One portray the role of test information as an incremental one to the teacher. That is, test information is used to enhance a teachers estimates but does not itself receive primary importance in a teachers decision as to evaluation and grading their students.

Study Two: TEACHERS SCALING AND JUDMENTS OF TEST ITEM AND STUDENT PERFORMANCE

The results of this study suggest that the scaling of items by teachers and that of latent trait theory, are roughly similar in profile. Teachers add an additional characteristics to their estimte of a students probability of success. That additional characteristic is the relevence of the item to the curriculum and textbooks. Given their own scaling of difficulty,

discrimination, and relevence, the correlation between fourth grade teacherts estimated studnt performance and actual performance was very high. While latent trait theory helps to resolve a number of issues in scaling, teachers appear as systematic and predictable in their estimate of item characteristics.

Study Three: The Effect of Motivation Upon Achievement Test Performance

The role of motivation on achievement and productivity has been highlighted in the educational and psychological literature. Most of the previous research has dealth with one specific motivational construct, in the absence of all the others. This situation created three maladies:

1. The correlation between the various achievement related motives could not be determined. Obviously some of the motives are related, perhaps even in a cluster framework, but the nature of this remained unknown.

2. The relative strenghts and effects of each particular motive vis a vis each other motive in predicting performance was not assessed. For example, while we know that attributions are important motivational constructs, empirically, how important are they as compared to expectations or test anxiety?

3. The overall, comprehensive amount of variance accounted for by all the motivational variables in predicting achievement could not be evaluated.

The present research resolved these maladies indicating that a substantial portion of the variance in performance is attributable to motivation. Furthermore, the achievement related motives with the highest relative strength at grades four and eight have been highlighted.

IMPLICATIONS

The results reported in there three studies have considerable potential for practical application. From the strenghts of these results it appears that, although the traditional assertion for a need for further research could be appended here, a developmental model of teacher judgment could have some utility. Such a model would guide the development of both pre-service and in-service programs to enhance teacher judgment. Two aspects of the models can be invisioned:

1) A model of informed judgment, perhaps analogous to medical diagnostics strategies, to be used in student assessment and placement processes. This model would incorporate the study results reported here relative to judment to student effort, additudes, homework, intergrated with guidance information.

2) A model of school district test development for districts without highly sophisticated computer technology which would intergrate carefully structured teacher judgments about item difficulty and item discrimintation in addition to curricular validity of materials.

DLN/2845f

TABLE 1

ESTIMATED INFLUENCE OF VARIABLE FOR EVALUATING AND GRADING THE ACADEMIC PERFORMANCE OF A STUDENT

VARIABLE	LOW ABILITY	MODERATE ABILITY	HIGH ABILITY
1. Student attendance	4.13*	3.82	3.83
2. Discussions with other teachers	2.69	2.54	2.54
3. Student effort at good work	4.42	4.57	4.57
4. Accuracy of student work in classroom	4.02	4.11	4.11
5. Performance on daily homework	4.22	4.17	4.17
6. Students relationship with other students	2.67	2.57	2.80
7. Records of students performance	2.49	2.11	4.25
8. Students performance upon standardized achievement tests	2.93	2.71	4.00
9. Information from counselors	3.20	3.16	3.74
10. Students performance upon specific aptitude tets	3.11	2.79	3.52
11. Student's performance on classroom quizes	3.87	3.80	1.24
12. Students rank in his/her class	1.88	1.95	2.67
13. Discussion with students parents and parental information	3.00	2.88	4.36
14. Recommendations from previous teachers	2.82	2.49	1.67
15. Discussion and interviews with student	3.02	3.00	2.48
16. Student performance upon classroom tests	4.00	4.09	3.67
17. Background of student	2.78	2.53	1.54
18. Student attitude	3.98	4.14	3.39

*Means above 4.00 are significantly different (pl. 05) than other means within the same vector.

TABLE 2

ESTIMATED INFLUENCE OF VARIABLE FOR ASSIGNING PLACEMENT
A PARTICULAR STUDENT

VARIABLE	LOW ABILITY	MODERATE ABILITY	HIGH ABILITY
1. Student attendance	4.06*	3.77	3.86
2. Discussions with other teachers	2.50	2.31	2.51
3. Student effort at good work	4.59	4.37	4.46
4. Accuracy of student work in classroom	4.00	3.69	3.94
5. Performance on daily homework	4.18	4.23	4.37
6. Students relationship with other students	2.41	2.34	2.38
7. Records of students performance with previous teachers	2.15	2.00	2.23
8. Students performance upon standardized achievement tests	2.38	2.34	2.69
9. Information from counselors	2.36	2.35	2.42
10. Students performance upon specific aptitude tests	2.30	2.20	2.51
11. Student's performance on classroom quizes	3.97	4.14	4.54
12. Students rank in his/her class	1.65	1.55	2.05
13. Discussions with students partents and parental information	2.94	2.71	2.83
14. Recommendations from previous teachers	2.53	2.37	2.43
15. Discussion and interviews with student	3.00	2.71	2.97
16. Student performance upon classroom tests	4.12	4.37	4.68
17. Background of student	2.76	2.54	2.63
18. Student attitude	4.23	4.46	4.62

*Means above 4.00 are significantly different (p1. 05) than other means within the same vector.

TABLE 3

DISCRIMINANT ANALYSIS OF EVALUATION
AND GRADING STUDENTS

ROTATED STANDARDIZED DISCRIMINANT FUNCTION COEFFICIENTS

Variable	Weight
1	-.28
2	-.11
3	.67
4	.27
5	.02
6	.01
7	.89
8	.07
9	-.10
10	-.10
11	.304
12	-.07
13	-.30
14	-.09
15	.11
16	-.19
17	-.12
18	1.02

Group Means On The Discriminant Function

Low able students	-.32
Moderate able students	-.03
High able students	.35

X^2=92.18 df=36 pt. 05

TABLE 4

DISCRIMINANT ANALYSIS OF PLACEMENT OF STUDENTS

ROTATED STANDARDIZED DISCRIMINANT FUNCTION COEFFICIENTS

Variable	Weight
1	.74
2	.23
3	-.14
4	-.34
5	.51
6	.14
7	-.12
8	-.04
9	.29
10	-.03
11	.28
12	.70
13	-.04
14	.48
15	.04
16	.70
17	-.01
18	.40

Group Means On The Discriminant Function

Low able students	.42
Moderate able students	.01
High able students	-.41

X^2=54.85, df=36, pl. 05

TABLE 5

ESTIMATED INFLUENCE OF FACTORS FOR EVALUATING ACADEMIC PERFORMANCES OF A STUDENT WITH LOW ABILITY.

Age

.31 Information from Counselors (PL.01)

Experience

.39 Information from Counselors (PL.001)
.35 Background of Student (PL.002)

Years in School

.30 Information from Counselors (PL.02)

TABLE 6

ESTIMATED INFLUENCE OF FACTORS FOR EVALUATING ACADEMIC PERFORMANCE OF A STUDENT WITH MODERATE ABILITY.

Age

.35 Information from Counselors

Experience

.41 Information from Counselors

Years

.34 Information from Counselors
.30 Student's performance upon specific aptitude tests

Subject Matter

.32 Discussion with other teachers

TABLE 7

ESTIMATED INFLUENCE OF FACTORS FOR EVALUATING ACADEMIC PERFORMANCE OF A STUDENT WITH HIGH ABILITY.

Age

.37 Information from Counselors (PL.003)

Experience

.40 Information from Counselors (PL.001)
.31 Background of Student (PL.005)
.30 Student's performance upon Specific Aptitude Tests (.007)

Years Experience

.37 Information from Counselors (PL.002)

Subject Matter

.37 Discussion with other teachers (PL.01)
.31 Student Attendance (PL.04)

TABLE 8

ESTIMATED INFLUENCE OF FACTOR FOR ASSIGNING A PARTICULAR GRADE TO A STUDENT OF LOW ABILITY.

Age

-.31 Student's Rank in His or Her class

Experience

-.36 Student attitude

Degree

-.37 Student attitude

Years Experience

-.37 Student attitude

TABLE 9

ESTIMATED INFLUENCE OF FACTOR FOR ASSIGNMENT A PARTICULAR GRADE TO A STUDENT WITH MODERATE ABILITY.

Subject Matter

.36 Discussion with other teachers
.35 Records of student's performance with previous teachers

TABLE 10

ESTIMATED INFLUENCE OF FACTOR FOR ASSIGNING A PARTICULAR GRADE TO A STUDENT WITH HIGH ABILITY.

Experience

.32 Information from Counselors (PL.01)

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TABLE 11

Fourth Grade (24 Classrooms)

Item	Percent Correct	Teacher Estimate	Estimated Difficulty	Measurability	Mastery
17	34.9%	57.6%	3.14	3.91	4.45
18	92.0%	95.0%	1.17	1.91	4.78
19	63.4%	66.7%	2.96	2.70	3.57
20	60.6%	73.2%	3.04	3.57	4.13
21	51.6%	49.3%	3.13	3.39	3.70
22	51.4%	22.4%	4.17	3.22	3.52
23	55.2%	49.6%	3.39	3.30	3.61
24	64.1%	67.0%	2.70	2.65	4.00
25	80.2%	64.3%	3.52	4.26	4.57
26	95.3%	92.9%	1.78	2.96	4.35
27	65.7%	71.9%	2.83	3.74	4.43
28	89.0%	82.9%	1.96	3.87	3.83
29	68.2%	64.4%	3.22	2.22	4.74
30	57.7%	68.4%	2.78	3.61	4.00
31	42.6%	43.3%	3.87	2.04	4.74
32	44.4%	59.1%	3.60	4.00	4.22
33	50.1%	25.4%	4.45	3.45	4.14
34	25.8%	25.2%	4.36	3.59	4.05
35	46.4%	22.3%	4.45	3.59	4.18
36	50.9%	27.1%	4.09	3.64	4.27
37	51.7%	61.1%	3.61	4.74	4.61
38	29.6%	22.9%	4.41	3.95	3.86
39	51.9%	69.8%	2.96	4.52	4.52
40	53.2%	52.2%	3.82	4.64	4.45
41	58.9%	76.1%	2.58	3.50	4.33
42	73.4%	69.5%	2.96	4.13	3.83
43	80.4%	92.3%	1.50	2.13	4.71
44	79.5%	86.1%	2.17	2.13	4.67
45	54.9%	73.1%	3.22	3.30	4.35

Item	Extent	Logist Discrimination	Logist Difficulty
17	3.50	.29	3.14
18	4.65	.47	-3.32
19	2.78	.78	-0.16
20	3.87	1.03	-0.01
21	2.26	.51	.64
22	1.30	1.84	2.87
23	2.22	.56	.38
24	2.87	1.40	1.32
25	3.57	.89	-1.18
26	4.00	1.15	-2.83
27	2.96	.56	- .41
28	3.17	.88	-1.93
29	3.00	.62	- .56
30	2.96	1.18	.11

TABLE 11 (Con't.)

Item	Extent	Logist Discrimination	Logist Difficulty
31	2.52	1.00	.97
32	3.00	1.25	.69
33	1.39	.97	1.36
34	1.45	1.99	2.72
35	1.36	1.00	.72
36	1.48	.91	.41
37	3.70	.70	.38
38	1.45	1.25	2.43
39	3.87	.59	1.63
40	2.70	1.19	.22
41	3.83	.95	- .05
42	2.63	.76	- .86
43	4.67	1.20	-1.07
44	4.04	.98	-1.18
45	3.33	1.04	.04

Item	Student Percent Correct	Teacher Estimate	Estimated Difficulty	Measurability	Mastery
46	68.6%	74.3%	2.96	3.54	4.08
47	41.8%	66.1%	2.87	3.17	4.09
48	42.4%	68.9%	3.70	4.48	4.52
49	31.9%	35.2%	4.39	4.61	4.35
50	70.2%	43.0%	3.50	3.30	3.43
51	37.3%	65.1%	3.50	4.38	4.46
52	42.4%	72.0%	2.96	2.35	4.00
53	38.1%	36.4%	3.78	4.22	3.74
54	22.6%	20.7%	4.40	4.13	3.61
55	29.3%	26.6%	4.34	4.43	4.39
Mean	55.1% Rxy=.73	57.4%	Rxy=-.92	Rxy=-.43	Rxy=.02

Item	Extent	Logist Discrimination	Logist Difficulty
46	3.58	1.24	- .56
47	3.00	.59	1.06
48	3.17	1.11	.80
49	2.00	1.17	1.17
50	1.86	.80	- .75
51	3.58	.34	2.86
52	3.78	1.17	.60
53	2.00	1.67	2.26
54	1.79	1.58	1.48
55	2.04	.66	1.94

TABLE 12

Eighth Grade (33 Classrooms)

Item	Percent Correct	Teacher Estimate	Estimated Difficulty	Measurability	Mastery	Extent
17	44.5%	64.4%	2.47	2.19	3.66	3.03
18	37.8%	43.0%	3.66	2.31	3.78	2.91
19	64.1%	70.7%	2.81	2.16	4.16	3.66
20	30.0%	55.0%	3.81	1.97	4.34	3.50
21	78.4%	51.2%	2.66	1.94	3.75	2.22
22	49.6%	52.8%	2.78	2.31	3.00	2.22
23	73.6%	70.8%	2.78	3.56	3.41	3.00
24	70.8%	68.7%	2.84	3.53	3.38	3.00
25	30.3%	50.0%	3.56	3.91	3.50	2.41
26	55.8%	44.8%	4.09	4.41	3.28	1.94
27	46.1%	53.2%	3.53	2.91	3.31	2.03
28	19.7%	36.4%	3.69	3.59	3.50	1.84
29	44.9%	50.0%	3.19	2.44	3.50	2.41
30	52.9%	56.3%	2.94	1.88	3.41	3.03
31	68.5%	71.0%	2.34	1.66	3.91	3.63
32	80.5%	78.8%	2.41	1.47	3.63	3.81
33	77.2%	47.7%	2.88	1.88	3.38	2.28
34	69.2%	64.0%	2.63	2.75	2.97	2.38
35	79.5%	57.1%	3.19	3.09	2.97	2.19
36	36.5%	47.2%	3.66	2.41	3.78	2.56
37	61.1%	47.3%	3.75	3.44	3.78	2.28
38	45.0%	40.7%	3.72	2.25	3.59	1.91
39	51.5%	31.9%	4.22	3.59	3.44	1.72
40	60.3%	47.1%	3.06	2.88	3.22	2.41
41	53.0%	57.5%	3.48	4.29	3.90	2.97
42	44.0%	60.5%	3.19	3.10	3.35	2.81
43	42.1%	48.2%	3.42	3.16	2.68	1.65
44	47.9%	56.8%	3.00	2.06	3.94	2.64
45	68.0%	58.7%	3.55	3.35	3.68	2.97

Item	Logist Discrimination	Logist Difficulty
17	1.01	.43
18	1.18	.56
19	.65	- .36
20	1.25	1.17
21	.39	-1.77
22	.82	.53
23	.94	- .73
24	.93	- .61
25	1.25	1.28
26	.54	.20
27	1.63	.27
28	1.31	1.79
29	1.13	.41
30	1.00	.15

TABLE 12 (Con't.)

Item	Logist Discrimination	Logist Difficulty
31	.34	- .95
32	.82	-1.20
33	.90	- .93
34	1.16	- .47
35	.80	-1.15
36	.78	.79
37	.75	- .16
38	1.45	.47
39	.96	.39
40	.55	- .15
41	.99	.19
42	1.55	1.32
43	1.00	.72
44	1.48	.21
45	.93	- .48

Item	Percent Correct	Teacher Estimate	Estimated Difficulty	Measurability	Mastery	Extent
46	62.6%	68.7%	2.94	2.39	4.13	3.81
47	71.8%	55.03%	3.39	1.74	4.52	3.52
48	23.6%	48.3%	3.68	2.39	4.00	3.03
49	51.1%	74.8%	2.16	2.32	3.00	3.39
50	36.9%	39.0%	3.90	2.84	3.61	2.65
51	18.2%	37.3%	4.00	2.77	3.87	2.19
52	51.3%	41.6%	3.81	2.68	3.06	1.52
53	50.0%	62.4%	3.10	3.90	3.03	2.42
54	21.6%	46.7%	3.71	3.03	3.77	2.29
55	78.2%	72.5%	2.94	3.90	3.52	3.19

Item	Logist Discrimination	Logist Difficulty
46	1.63	- .08
47	.81	- .65
48	.88	1.49
49	.89	.30
50	.02	36.06
51	1.97	2.47
52	1.02	.32
53	.60	.50
54	1.35	2.24
55	.80	-1.07

TABLE 13

CORRELATIONS OF MOTIVES IN FOURTH GRADE

	VAR005	VAR006	VAR007	VAR008	TOTCONF	CMMATH	VAR079	VAR056	VAR057	VAR058	VAR080	TOTMATH
VAR005	1.00000	0.11425	0.17431	0.03807	0.16748	0.07047	0.05667	0.09884	-0.00095	0.08470	-0.13258	0.14259
VAR006	0.11425	1.00000	0.13369	0.06849	0.20773	0.07055	0.08224	0.09060	0.00097	0.10199	0.02558	0.10437
VAR007	0.17431	0.13369	1.00000	0.18693	0.14165	0.03790	-0.03459	0.03860	-0.02217	0.13108	-0.07076	0.23851
VAR008	0.03807	0.06949	0.18693	1.00000	0.09330	-0.02291	0.03113	0.02000	0.05402	0.08607	-0.10276	0.13422
TOTCONF	0.16748	0.20773	0.14165	0.09330	1.00000	0.17215	0.11908	0.11410	-0.01150	0.07094	-0.01626	0.18461
CMMATH	0.07047	0.07055	0.03790	-0.02291	0.17215	1.00000	0.12836	0.11742	0.11542	0.11017	0.06797	0.12399
VAR079	0.05667	0.08224	-0.03459	0.03113	0.11908	0.12836	1.00000	0.09922	0.08600	0.05004	0.15989	0.12489
VAR056	0.09884	0.09060	0.03860	0.00200	0.11410	0.11742	0.09922	1.00000	0.40848	0.16252	-0.02548	0.14447
VAR057	-0.00095	0.00097	-0.02217	0.05402	-0.01150	0.11542	0.08600	0.40848	1.00000	0.07699	0.02014	0.09179
VAR058	0.08470	0.10199	0.13108	0.08607	0.07094	0.11017	0.05004	0.16252	0.07699	1.00000	-0.03957	0.26291
VAR080	-0.13258	0.02558	-0.07076	-0.10276	-0.01626	0.06797	0.15989	-0.02548	0.02014	-0.03957	1.00000	-0.21323
TOTMATH	0.14259	0.10437	0.23851	0.13422	0.18461	0.12399	0.12489	0.14447	0.09179	0.26291	-0.21323	1.00000

TABLE 14

GRADE FOUR REGRESSION OF MOTIVES UPON STUDENT ACHIEVEMENT

Predictor	BETA	Standard Error	F For Predictor
Sense of Competence	.03	.46	.73
Parent Involvement	.02	.23	.31
Success Attribution	.17	.32	18.82*
Failure Attribution	.05	.22	1.60
Test Anxiety	.10	.14	6.43*
Continuing Motivation	.06	.04	2.84*
Perceived Purpose	.12	.24	9.94*
Expectation of Success	.05	.02	1.25
Minimal Standard	.05	.02	1.31
Attainment Value	.19	.12	25.59*
Risk Taking	-.21	.16	29.48*

Multiple R=.45 R Squared .20 Standard Error=5.84

Analysis of Variance	Df	Sum of Squares	Mean Square	F
Regression	11	5927.75	457.07	13.42
Residual	589	20061.47	34.06	

Dependent Variable=Total Score on 39 Item Mathematics Fourth Grade Test

TABLE 15

CORRELATIONS OF MOTIVES AT EIGHTH GRADE

	TOTMATH	VAR005	VAR006	VAR007	VAR008	VAR056	VAR057	VAR058	TOTCOMP	CMMATH	VAR081
TOTMATH	1.00000	0.13658	0.08297	0.39114	0.20275	0.35239	0.14372	0.05929	0.28357	-0.08917	0.09
VAR005	0.13658	1.00000	0.15843	0.05054	0.02949	0.18338	0.06712	0.02590	0.14244	0.03512	0.09
VAR006	0.08297	0.15843	1.00000	0.02782	-0.02714	0.16148	0.03475	0.09737	0.08956	0.09000	0.13
VAR007	0.39114	0.05054	0.02782	1.00000	0.39940	0.10398	0.03940	0.12186	0.35545	-0.09440	0.02
VAR008	0.20275	0.02949	-0.02714	0.39940	1.00000	-0.03462	0.00027	0.12916	0.21022	-0.07718	0.04
VAR056	0.35239	0.18338	0.16148	0.10398	-0.03462	1.00000	0.38290	0.04063	0.17836	0.07988	0.07
VAR057	0.14372	0.06712	0.03475	0.03940	0.00027	0.38290	1.00000	0.13695	0.00034	-0.05520	0.02
VAR058	0.05929	0.02590	0.09737	0.12186	0.12916	0.04063	0.13695	1.00000	0.08757	-0.03026	0.05
TOTCOMP	0.28357	0.14244	0.08956	0.35545	0.21022	0.17836	0.00034	0.08757	1.00000	0.01632	0.08
CMMATH	-0.08917	0.03512	0.09000	-0.09440	-0.07718	0.07988	-0.05520	-0.03026	0.01632	1.00000	0.00
VAR081	0.09485	0.09959	0.13654	0.02364	0.04495	0.07938	0.02786	0.05521	0.08628	0.00644	1.00
VAR082	-0.09656	-0.00548	0.00124	-0.11828	-0.07341	0.01813	0.01311	-0.02996	-0.09011	-0.00999	0.10

	VAR082
TOTMATH	-0.09656
VAR005	-0.00548
VAR006	0.00124
VAR007	-0.11828
VAR008	-0.07341
VAR056	0.01813
VAR057	0.01311
VAR058	-0.02996
TOTCOMP	-0.09011
CMMATH	-0.00999
VAR080	0.21064
VAR081	0.10874
VAR082	1.00000

TABLE 16

GRADE EIGHT REGRESSION OF MOTIVES UPON STUDENT ACHIEVEMENT

Predictor	BETA	Standard Error	F For Predictor
Sense of Competence	.05	.33	2.44*
Parent Involvement	.02	.22	0.25
Success Attribution	.28	.34	65.00*
Failure Attribution	.07	.27	4.28*
Expectation of Success	.29	.02	74.38*
Minimal Standard	.02	.02	0.21
Attainment Value	-.02	.12	0.25
Test Anxiety	.10	.13	9.40*
Continuing Motivation	-.09	.04	7.79*
Perceived Purpose	.05	.25	2.48*
Risk Taking Tendency	-.07	.25	4.63*

Multiple R=.53 R Squared=.28 Standard Error=6.80

Analysis of Variance	Df	Sum of Squares	Mean Square	F
Regression	11	14726.49	1227.21	26.50
Residual	802	37139.44	46.31	

Dependent Variable=Total Score on 39 item Mathematics Eighth Grade Test

TABLE 17
Descriptive Statistics on Items
of Observational Measure of Student
motivation and Achievement

Item	Mean	Standard Deviation	Coefficient of Variation	Kurtosis	Skewness
1	3.98	1.06	.2663	.40	-.90
2	4.40	.65	.1478	1.85	-1.04
3	3.52	1.35	.3833	-1.22	-.39
4	4.40	.82	.1857	.11	-1.08
5	3.69	1.26	.3409	-.25	-.79
6	3.96	1.19	.2998	.26	-1.02
7	4.37	.75	.1710	.50	-.99
8	4.14	.86	.2080	.09	-.81
9	4.05	.97	.2393	.76	-1.00
10	2.75	1.41	.5136	-1.13	.29
11	4.28	.90	.2106	2.02	-1.35
12	3.15	1.39	.4424	-1.28	-.23
13	4.45	.83	.1874	5.17	-2.03
14	3.76	.95	.2522	-1.00	-.09
15	3.71	1.12	.3025	.08	-.84
16	4.00	1.01	.2523	1.21	-1.10
17	4.11	1.06	.2591	1.90	-1.42
18	4.54	.80	.1768	5.85	-2.18
19	4.12	.98	.2385	1.92	-1.31
20	4.30	.78	.1823	-.08	-.84
21	4.05	.98	.2418	.86	-1.07
22	3.93	.73	.1854	-.34	-.18
23	3.19	1.00	.3139	-.42	-.04
24	3.39	1.04	.3056	-.44	-.33
25	4.12	.87	.2104	-.43	-1.10
26	3.70	1.11	.3004	-.43	-.52
27	4.18	.80	.1903	-.49	-.57
28	4.00	.77	.1925	-.58	-.25
29	4.15	1.02	.2452	2.00	-1.43
30	3.67	.93	.2542	.10	-.51
31	3.66	1.00	.2747	-.38	-.39
32	4.18	.73	.1760	-1.07	-.29
33	4.30	.76	.1757	.15	-.82
34	4.26	.84	.1959	.14	-.92

DLN/2682f

Table 18.

Reference Factors of Observational Measure of Student Motivation and Achievement

Factor I/Eignevalue = 15.82, Explained Variance = 46.50%

- Cooperate in group activities
- Reads in spare time
- Uses library books
- Performs academic tasks which are not graded
- Detects and corrects own error
- Tries to figure things out for her/himself
- Shifts easily from one academic task to another
- Works independently

Factor II/Eigenvalue = 4.31, Explained Variance = 12.70%

- Brings interesting items from home or nature
- Initiates new learning activities
- Choose outgoing investigative activities
- Takes moderate risks
- Shows interest in the "unusual"

Factor III/Eigenvalue = 2.70, Explained Variance = 7.90%

- Asks content oriented questions
- Plans school work
- Talks to teachers about academic material

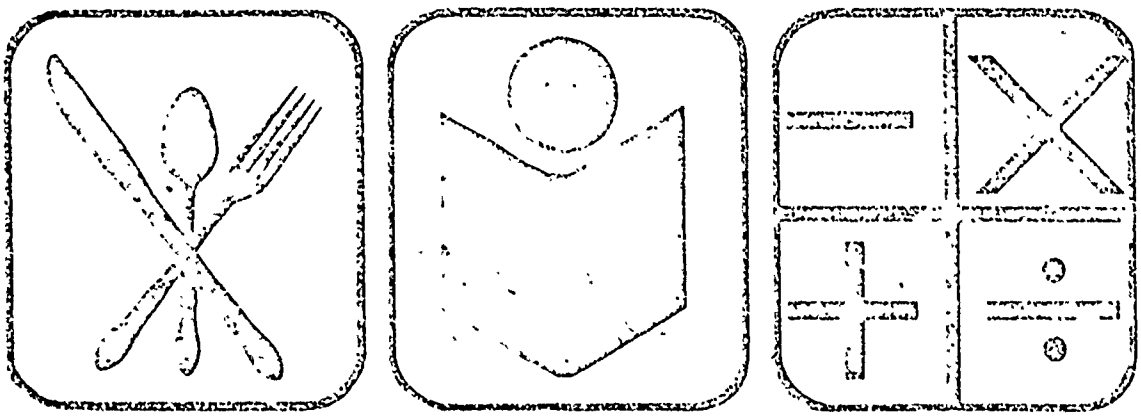
Factor IV/Eigenvalue = 1.98, Explained Variance = 5.8%

- Listens attentively
- Volunteers for special academic tasks
- Continues to work when frustrated
- Pays attention to academic materials
- Smiles

APPENDIX

THE ILLINOIS INVENTORY OF EDUCATIONAL PROGRESS

1980 GRADE 4



INTRODUCTION

The test you are about to take contains questions about you and sections on mathematics, reading, and nutrition.

The first section asks some questions about you. The second section is a mathematics test. There will be a three-minute "break" after the mathematics section. During the "break" you may take a rest in silence or you may do the additional items provided for those interested.

Following the "break" there will be a reading section, some more questions about you, and the nutrition section.

PLEASE DO THE BEST YOU CAN. We are trying to get true information about what students your age know and can do.

DIRECTIONS FOR COMPLETING ITEMS

This test booklet will be used again by other students. PLEASE DO NOT WRITE ANYWHERE ON THE BOOKLET. Use a pencil and mark your answers in your answer booklet.

Look at your answer booklet. The items in this test booklet are followed by suggested answers. Select only one answer for each item. Mark an X for the answer you choose in the correct box in your answer booklet. Item numbers are given to the left of the boxes of your answer booklet. Look at the sample item below.

SAMPLE ITEM

Which of these words means the same as begin?

a. End
b. Read
c. Start
d. Work

Look at your student answer booklet. Where it says SAMPLE ITEM an X has been placed in box "c," since the word "start" means the same as "begin." Turn now to page 2 in your student test booklet. Continue on page 1 in your student answer booklet.

STUDENT QUESTIONNAIRE

1. Please indicate whether you are a boy or girl.

   a. Boy
   b. Girl

2. In addition to books you use for school work, how often do you read books?

   a. Never or hardly at all
   b. Once or twice a month
   c. Once or twice a week
   d. Just about every day

3. How often do you read magazines?

   a. Never or hardly at all
   b. Once or twice a month
   c. Once or twice a week
   d. Just about every day

4. How often do you use the public library or bookmobile?

   a. Never or hardly at all
   b. Once or twice a month
   c. Once or twice a week
   d. Just about every day
   e. There is no public library or bookmobile close enough for me to use.

STOP

Your test administrator will now stop the tape to be sure you have marked your answers correctly and will answer any questions you may have.

Turn to page 3 in your test booklet. Continue on page 1 in your answer booklet. As you are working along with the tape, your test administrator will be checking to be sure you have the correct place in your answer booklet.

5. How well do you think you read?

   a. I read worse than most students my age that I know.
   b. I read as well as most students my age that I know.
   c. I read better than most students my age that I know.

6. How often do you talk to your parents about your school work?

   a. Never or hardly at all
   b. Once or twice a month
   c. Once or twice a week
   d. Just about every day

7. When you do well on a test at school it is because

   a. you are smart.
   b. you studied very hard.
   c. you were lucky.
   d. the test was easy.

8. When you do poorly on a test at school it is because

   a. you are not very smart.
   b. you did not study enough.
   c. you were unlucky.
   d. the test was hard.

9. Do you feel relaxed when the teacher says he/she is going to ask you questions to find out how much you know?

   a. Yes
   b. No

STOP
DO NOT CONTINUE UNTIL TOLD TO DO SO

10. Do you like tests in school?

a. Yes
b. No

11. Do you feel relaxed before you take a test?

a. Yes
b. No

12. Do you feel relaxed while you are taking a test?

a. Yes
b. No

13. When the teacher says that he/she is going to give the class a test, do you usually feel that you will do good work?

a. Yes
b. No

14. When the teacher says that he/she is going to give the class a test, do you feel relaxed and comfortable?

a. Yes
b. No

15. While you are taking a test, do you usually think you are doing good work?

a. Yes
b. No

16. Do you ever worry about knowing your lesson?

a. Yes
b. No

STOP
DO NOT CONTINUE UNTIL TOLD TO DO SO

Turn to page 5 in your student test booklet. Turn to page 2 in your student answer booklet.

MATHEMATICS

This section contains mathematics items. The tape will announce the question part of the items, but will not announce the answer choices. After you listen to the tape while reading the question along with the tape, read the answer choices to yourself silently and mark an X for your choice in the proper box of your answer booklet. PLEASE USE THE SCRATCH PAPER PROVIDED TO WORK OUT YOUR ANSWERS. DO NOT WRITE ON THE TEST BOOKLET.

17. 1029 is written as

a. ten hundred twenty-nine.
b. ten thousand twenty-nine.
c. one thousand two hundred nine.

18. Do the following problem: 12 - 7 =

a. 4
b. 5
c. 6
d. 7

19. What is the missing number in this pattern?

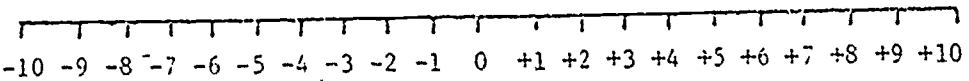
322, 324, 326, 328, ☐

a. 329
b. 330
c. 331
d. 332

STOP
DO NOT CONTINUE UNTIL TOLD TO DO SO

20. The number that is 200 less than 800 is

a. 1000
b. 400
c. 600



Using the number line above, solve the following problems:

21. What is the difference between +2 and +5?

a. 2
b. 3
c. 7
d. 10

22. What is the difference between -5 and +2?

a. 2
b. 3
c. 5
d. 7

23. What is the difference between +2 and +4?

a. 1
b. 2
c. 3
d. 4

STOP
DO NOT CONTINUE UNTIL TOLD TO DO SO

24. Is the following statement true or false?

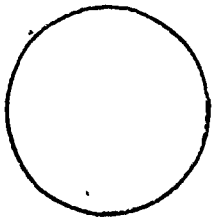
15 + 3 = 10 + 8

a. True
b. False

25. If you spent 72 cents, how much change should you get back from one dollar?

a. 8 cents
b. 14 cents
c. 16 cents
d. 28 cents

26. The figure below is a



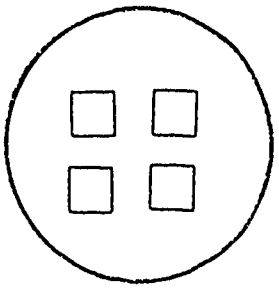
a. triangle.
b. cube.
c. circle.
d. rectangle.

27. How many inches are there in a foot?

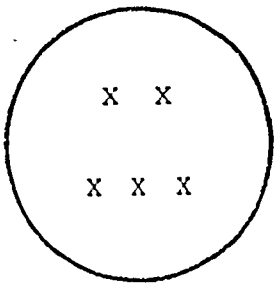
a. 12 inches
b. 24 inches
c. 36 inches
d. 48 inches

STOP
DO NOT CONTINUE UNTIL TOLD TO DO SO

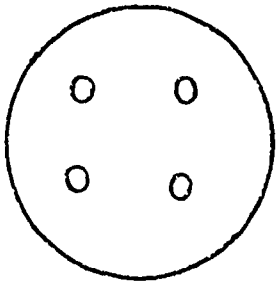
28. Which one of the following sets has the same number of elements (members) as the picture shown below?



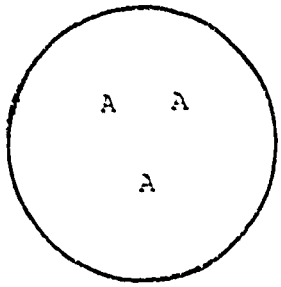
a.



b.



c.



STOP
DO NOT CONTINUE UNTIL TOLD TO-DO SO

29. Do the following problem: 48 : 6 =

a. 8
b. 12
c. 40
d. 42

30. What is the next larger odd number after 5?

a. 6
b. 7
c. 8
d. 9

31. Multiply:
$$\begin{array}{r} 38 \\ \times\ 7 \\ \hline \end{array}$$

a. 256
b. 266
c. 271
d. 276

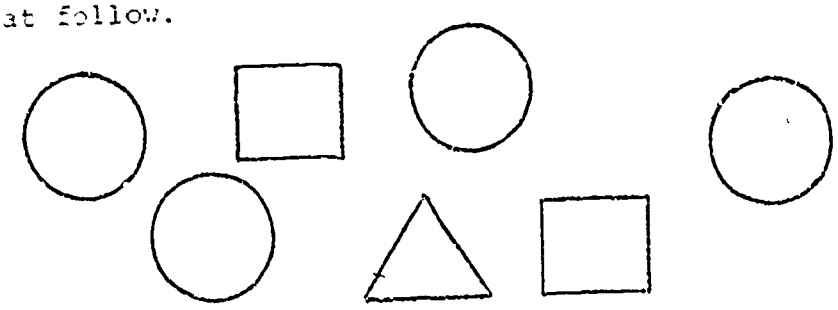
32. Since 43 = 4 tens + 3 ones and 52 = 5 tens + 2 ones,

then 43 + 52 = _____ tens + _____ ones.

a. 4 tens + 5 ones
b. 5 tens + 5 ones
c. 9 tens + 5 ones
d. 9 tens + 8 ones

STOP
DO NOT CONTINUE UNTIL TOLD TO DO SO

Look at the drawings below and answer the questions that follow.



33. What fraction of the figures are circles?

a. $\frac{4}{4}$

b. $\frac{3}{7}$

c. $\frac{2}{7}$

d. $\frac{4}{7}$

34. What fraction of the figures are geometric shapes?

a. $\frac{3}{7}$

b. $\frac{7}{7}$

c. $\frac{4}{7}$

d. $\frac{2}{7}$

STOP
DO NOT CONTINUE UNTIL TOLD TO DO SO

35. Four and two-fifths is written as

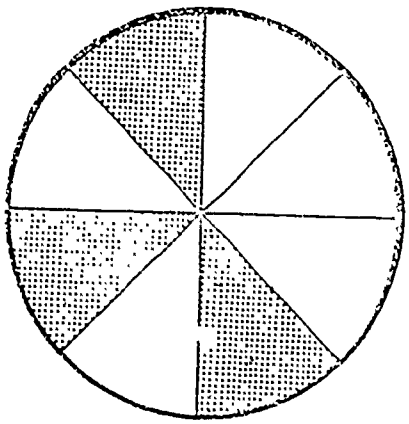
a. $\frac{42}{5}$

b. $\frac{4}{25}$

c. $4\frac{2}{5}$

d. None of these

36. The figure below is divided into equal parts. What fractional part is shaded?



a. $\frac{1}{2}$

b. $\frac{3}{6}$

c. $\frac{3}{8}$

d. $\frac{3}{10}$

STOP
DO NOT CONTINUE UNTIL TOLD TO DO SO

37. John has 385 stamps in his stamp collection. Greg has 230, Pete has 310 and Bob has 175. The number of stamps the boys have all together is

a. 900 stamps.
b. 1,000 stamps.
c. 1,100 stamps.
d. 1,200 stamps.

38. An angle may be measured in units called

a. centimeters.
b. degrees.
c. grams.
d. inches.

39. Jane and Sue each had 10 cents, Mary had 9 cents. How much money did the girls have all together?

a. 10 + 9 + 10 = 29
b. 20 - 9 = 11
c. 9 + 10 = 19

40. An astronaut is to orbit the earth in a space capsule for seven days. If he drinks three pints of water each day, how many pints of drinking water will be needed for the trip?

a. 4 pints
b. 7 pints
c. 10 pints
d. 21 pints

STOP
DO NOT CONTINUE UNTIL TOLD TO DO SO

41. What digit is in the tens place in 4,263?

a. 2
b. 3
c. 4
d. 6

42. In the picture below, if the square on the left is the first square, the square with the X in it is in what position?

a. Fifth
b. Sixth
c. Seventh
d. Eighth

43. Do the following problem:

$$\begin{array}{r} 6 \\ +\ 7 \\ \hline \end{array}$$

a. 11
b. 12
c. 13
d. 14
e. 15

44. Do the following problem: $9 \times 3 =$

a. 3
b. 6
c. 12
d. 27

STOP
DO NOT CONTINUE UNTIL TOLD TO DO SO

45. What number is 3 more than 999?

a. 2,997
b. 996
c. 333
d. 1,002

46. What number can replace the ☐ to make the following a true sentence?

☐ + 11 = 17

a. 6
b. 7
c. 8
d. 9

4 What value of x makes the following TRUE?

x - 3 = 7

a. 12
b. 10
c. 8
d. 4
e. 1

48. How many apples did you have at the start if you gave away 9 apples and have 6 apples left?

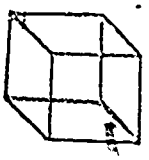
a. 9 - 6 = 3
b. 9 + 6 = 15
c. 6 + 3 = 9

STOP
DO NOT CONTINUE UNTIL TOLD TO DO SO

49. A sports car owner says that the car gets 22 miles per gallon of gasoline. How many miles could the car go on seven gallons of gasoline?

a. 144 miles
b. 154 miles
c. 164 miles
d. 174 miles

50. The figure below is a



a. triangle.
b. cube.
c. circle.
d. rectangle.

51. John has 13 cents. He wants to buy a 25 cent toy. How much more money does he need?

a. 12 + 13 = 25
b. 25 - 12 = 13
c. 25 - 13 = 12

52. 762 -

a. 7 + 6 + 2
b. 7 + 60 + 200
c. 700 + 60 + 2
d. 70 + 60 + 20

STOP
DO NOT CONTINUE UNTIL TOLD TO DO SO

53. In the United States, we usually buy gasoline by the gallon. In France, where the metric system is used, people buy gasoline by the

a. meter.
b. liter.
c. quart.
d. gram.

54. Which is the CLOSEST to the size of one square centimeter?

a. A tennis court
b. Your thumbnail
c. A slice of bread
d. The cover of a record album

55. Mary earned $1.00 raking leaves. Candy bars cost 15 cents. How many candy bars can she buy with her money?

a. 3
b. 4
c. 6
d. 7

STOP
DO NOT CONTINUE UNTIL TOLD TO DO SO

56. Out of the 39 items in the math test, how many do you think you answered correctly? ____

57. Out of the 39 items in the math test, how many should a student answer correctly to be promoted to the next grade level? ____

58. Circle the number which shows how important it is for you to do well on this mathematics test you just completed.

1 Not important at all

2

3

4 Important

5

6

7 Very important

STOP
DO NOT CONTINUE UNTIL TOLD TO DO SO

You have completed the section on mathematics. We will now take a three-minute break period in silence. During this time you can simply remain quiet or, if you wish, you can do the following additional math items provided. These additional items will not be counted in your total score of the last section.

59. Multiply: $\begin{array}{r} 7 \\ \times 3 \\ \hline \end{array}$

a. 10
b. 30
c. 31
d. 21

60. Divide: $2\overline{)16}$

a. 3
b. 4
c. 8
d. 12

61. Add: $5 + 0 =$

a. 0
b. 4
c. 5
d. 6

62. Six thousand, four hundred, sixty-five is written as

a. 60,465
b. 6,465
c. 6,000,400,065
d. None of these

63. Which number below is the LARGEST?

a. 3,000,000
b. 800,000
c. 8,000,000
d. 300,000

64. Counting by 8's, what number comes next?

8, 16, 24, _____

a. 28
b. 32
c. 36
d. 34

65. Counting by 10's, what number comes next?

10, 20, 30, _____.

a. 31
b. 35
c. 40
d. 45

66. Add the following numbers:

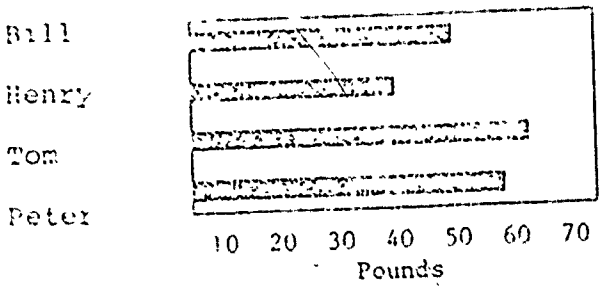
$ 3.06
10.00
9.14
5.10

a. $27.30
b. $28.40
c. $26.20
d. $27.20

67. Betty's dog eats two biscuits every day. How many days will it take the dog to eat a package of 24 biscuits?

a. 12 days
b. 6 days
c. 8 days
d. 48 days

68. The graph below shows the weight in pounds of four boys. Which boy weighs the most?



a. Bill
b. Henry
c. Tom
d. Peter

69. A candy bar is broken into three pieces of the same size. One piece is what part of the candy bar?

a. $\frac{1}{2}$

b. $\frac{1}{3}$

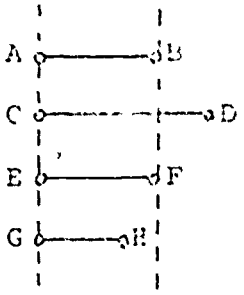
c. $\frac{1}{4}$

d. $\frac{2}{4}$

70. Add:
$$\begin{array}{r} {}^{1}384 \\ +193 \\ \hline 77 \end{array}$$

a. 577
b. 477
c. 587
d. 487

71. Which of the line segments shown below have the same size?



a. AB and GH
b. AB and CD
c. CD and EF
d. AB and EF

72. What value of x makes the following TRUE?

$x - 3 = 7$

a. 8
b. 9
c. 10
d. 11

73. If a team made seven hits per game, how many hits would it make in nine games?

a. 16 hits
b. 57 hits
c. 61 hits
d. 63 hits

STOP
DO NOT CONTINUE UNTIL TOLD TO DO SO

Turn to page 22 in your student test booklet. Turn to page 3 in your student answer booklet.

74. How many children are there in your family?

a. I am an only child.
b. Two
c. Three
d. Four
e. Five or more

75. Which group below do you belong to?

a. Oriental American
b. American Indian
c. Black American
d. American of Cuban, Mexican, or Puerto Rican descent
e. White American
f. Other

76. Does your family get a newspaper regularly?

a. Yes
b. No

77. Does your family get any magazines regularly?

a. Yes
b. No

78. How old were you on your last birthday?

a. 7 or younger
b. 8
c. 9
d. 10
e. 11
f. 12 or older

79. Which of the following is the <u>most</u> important result of doing well in school?

a. Getting the teacher to approve of my work
b. Show the other students how smart I am
c. Get an understanding of an interesting subject

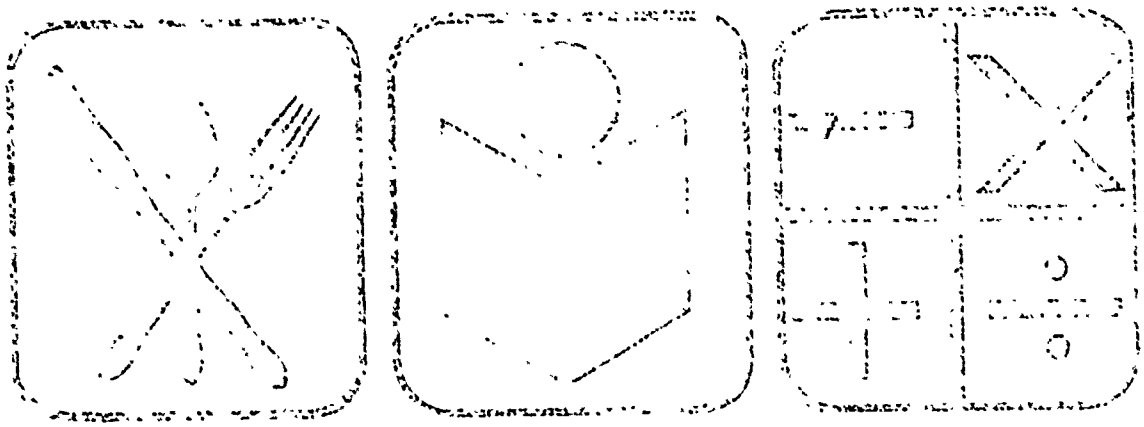
20. I prefer school assignments of which I have

a. 9[illegible] chance of success on the assignment.
b. 7[illegible] chance of success on the assignment.
c. 5[illegible] chance of success on the assignment.
d. 3[illegible] chance of success on the assignment.
e. 10% chance of success on the assignment.

THE ILLINOIS INVENTORY OF EDUCATIONAL PROGRESS

1969

GRADE 3



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Following the "break" there will be a reading section, some more questions about you, and the nutrition section.

PLEASE DO THE BEST YOU CAN. We are trying to get true information about what students your age know and can do.

DIRECTIONS FOR COMPLETING ITEMS

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SAMPLE ITEM

Which of these words means the same as begin?

a. End
b. Read
c. Start
d. Work

Look at your student answer booklet. Where it says SAMPLE ITEM an X has been placed in box "c," since the word "start" means the same as "begin." Turn now to page 2 in your student test booklet. Continue on page 1 in your student answer booklet.

STUDENT QUESTIONNAIRE

1. Please indicate whether you are a male or female.

   a. Male
   b. Female

2. In addition to books you use for school work, how often do you read books?

   a. Never or hardly at all
   b. Once or twice a month
   c. Once or twice a week
   d. Just about every day

3. How often do you read magazines?

   a. Never or hardly at all
   b. Once or twice a month
   c. Once or twice a week
   d. Just about every day

4. How often do you use the public library or bookmobile?

   a. Never or hardly at all
   b. Once or twice a month
   c. Once or twice a week
   d. Just about every day
   e. There is no public library or bookmobile close enough for me to use.

STOP

Your test administrator will now stop the tape to be sure you have marked your answers correctly and will answer any questions you may have.

Turn to page 3 in your test booklet. Continue on page 1 in your student answer booklet. As you are working along with the tape your test administrator will be checking to be sure you have the correct place in your answer booklet.

How well do you think you read?

a. I read worse than most students my age that I know.
b. I read as well as most students my age that I know.
c. I read better than most students my age that I know.

How often do you talk to your parents about your school work?

a. Never or hardly at all
b. Once or twice a month
c. Once or twice a week
d. Just about every day

7. When you do well on a test at school it is because

a. you are smart.
b. you studied very hard.
c. you were lucky.
d. the test was easy.

8. When you do poorly on a test at school it is because

a. you are not very smart.
b. you did not study enough.
c. you were unlucky.
d. the test was hard.

9. Do you feel relaxed when the teacher says that he/she is going to ask you questions to find out how much you know?

a. Yes
b. No

10. Do you like tests in school?

a. Yes
b. No

STOP
DO NOT CONTINUE UNTIL TOLD TO DO SO

11. Do you feel relaxed before you take a test?

a. Yes
b. No

12. Do you feel relaxed while you are taking a test?

a. Yes
b. No

13. When the teacher says that he/she is going to give the class a test, do you usually feel that you will do good work?

a. Yes
b. No

14. When the teacher says that he/she is going to give the class a test, do you feel relaxed and comfortable?

a. Yes
b. No

15. While you are taking a test, do you usually think you are doing good work?

a. Yes
b. No

16. Do you ever worry about knowing your lessons?

a. Yes
b. No

STOP
DO NOT CONTINUE UNTIL TOLD TO DO SO

Turn to page 5 in your student test booklet. Turn to page 2 in your student answer booklet.

MATHEMATICS

This section contains mathematics items. The tape will announce the question part of the items, but will not announce the answer choices. After you listen to the tape while reading the question along with the tape, read the answer choices to yourself silently and mark an X for your choice in the proper box of your answer booklet. PLEASE USE THE SCRATCH PAPER PROVIDED TO WORK OUT YOUR ANSWERS. DO NOT WRITE ON THE TEST BOOKLET.

17. Which number is the SMALLEST?

a. ~~2~~.002
b. 0.202
c. 0.22
d. 0.022

18. $\frac{1}{5}$ is equivalent to what percent?

a. 15%
b. 5%
c. 20%
d. 25%

19. Subtract 4.78 from 17.5

a. 12.63
b. 12.72
c. 11.92
d. 11.72
e. 12.91

STOP
DO NOT CONTINUE UNTIL TOLD TO DO SO

20. $1\frac{2}{5} - \frac{1}{2} =$

a. $\frac{2}{3}$

b. $\frac{9}{10}$

c. $1\frac{1}{10}$

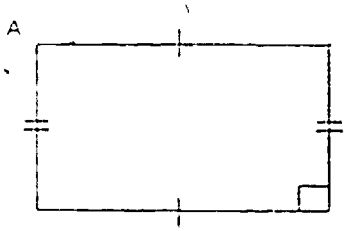
d. $1\frac{1}{7}$

e. $1\frac{1}{3}$

21. $-2 \times 12 =$

a. 24
b. -24
c. 14
d. 6

22. Angle A is what kind of an angle?



a. Acute
b. Right
c. Oblique

STOP
DO NOT CONTINUE UNTIL TOLD TO DO SO

23. In the United States, we usually buy gasoline by the gallon. In France, where the metric system is used, people buy gasoline by the

a. meter.
b. liter.
c. quart.
d. gram.

24. In the United States, we usually buy potatoes by the pound. In Germany, where the metric system is used, people buy potatoes by the

a. meter.
b. liter.
c. pound.
d. kilogram.

25. A car takes 15 minutes to travel ten kilometers. What is the speed of the car?

a. 30 kilometers per hour
b. 40 kilometers per hour
c. 60 kilometers per hour
d. 90 kilometers per hour
e. 150 kilometers per hour

26. Choose the verbal statement that represents the meaning of this formula:

$$4x - 12 = 200$$

a. If a certain number is subtracted from 12 then multiplied by 4, the result is 200.
b. If a certain number is multiplied by 4 and then decreased by 12, the result is 200.
c. If a certain number is multiplied by 4 and then subtracted from 12, the result is 200.

STOP
DO NOT CONTINUE UNTIL TOLD TO DO SO

27. If x is replaced by 3, then the value of $x^2 - 1$ is

a. 8
b. 11
c. 5
d. 2

28. In a given triangle, the measures of two of the angles are 35 degrees and 75 degrees. The measure of the third angle is

a. 40 degrees.
b. 55 degrees.
c. 70 degrees.
d. 95 degrees.
e. 110 degrees.

29. Which of the following is true?

a. $8 < 7$
b. $1 < 0$
c. $-1 < 0$
d. $-5 > -4$
e. $-7 > 6$

30. $4^3 =$

a. 12
b. 24
c. 48
d. 64

STOP
DO NOT CONTINUE UNTIL TOLD TO DO SO

31. $\frac{1}{2} \times \frac{1}{4} =$

a. $\frac{1}{6}$

b. $\frac{1}{8}$

c. $\frac{2}{6}$

d. $\frac{2}{8}$

32. 11.09 - 8.53 =

a. 2.06
b. 2.56
c. 3.06
d. 3.53
e. 3.56

33. $-27 \div 3 =$

a. -9
b. 3
c. +9
d. -3

34. An angle may be measured in units called

a. centimeters.
b. degrees.
c. grams.
d. inches.

STOP
DO NOT CONTINUE UNTIL TOLD TO DO SO

35. Which illustration below shows that the ratio of the number of squares to the number of circles is 1:2?

a. 

b. 

c. 

d. 

36. 2 meters + 3 millimeters =

a. 2.0003 meters
b. 2.003 meters
c. 2.03 meters
d. 2.3 meters
e. 5 meters

37. A 15 centimeter piece is cut from a stick one meter long. What is the length of the remaining piece?

a. 85 cm
b. 115 cm
c. 985 cm
d. 1015 cm
e. 9985 cm

38. Solve the following equation:

$$3x - 3 = 12$$
$$x =$$

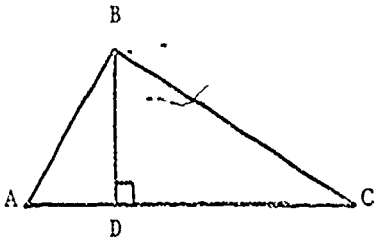
a. 15
b. 5
c. 3
d. 9

STOP
DO NOT CONTINUE UNTIL TOLD TO DO SO

39. Which of the following represents the expression, "the sum of a number and 3 times that number is less than 30"?

a. $x + x < 30$
b. $3x - x = 30$
c. $x + 3x < 30$
d. $x + 3x > 30$

40. What is the altitude of the triangle below?



a. $\overline{AB}$

b. $\overline{BC}$

c. $\overline{AC}$

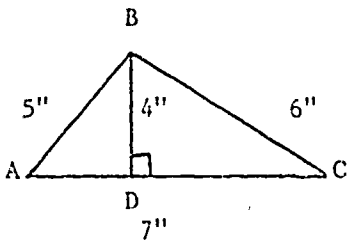
d. $\overline{BD}$

41. John's parents bought a refrigerator for $375. If they pay $20 per month for two years, how much more than $375 will the refrigerator cost them?

a. $ 95
b. $105
c. $200
d. $375

STOP
DO NOT CONTINUE UNTIL TOLD TO DO SO

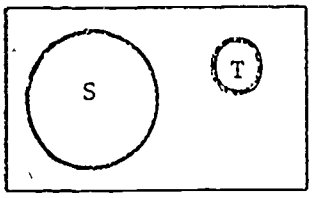
42. What is the perimeter of the triangle ABC below?



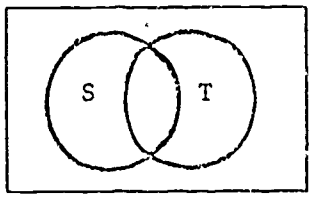
a. 22 inches
b. 18 inches
c. 14 inches
d. 28 inches

43. Which set of the following diagrams illustrates the statement, "Set S is a subset of Set T"?

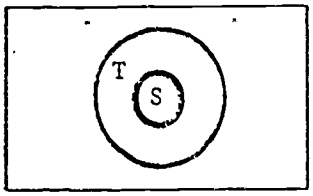
a.



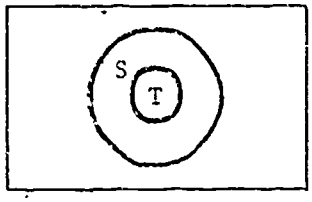
b.



c.



d.



STOP
DO NOT CONTINUE UNTIL TOLD TO DO SO

44. $3(2 + 7) =$

a. 6
b. 12
c. 13
d. 23
e. 27

45. What is the SMALLEST positive number that can be divided by 6, 9, and 12 without a remainder?

a. 18
b. 24
c. 36
d. 72

46. Which one of the following equals $\frac{47}{5}$?

a. $4\frac{7}{5}$

b. $9\frac{2}{5}$

c. $47\frac{1}{5}$

d. $47 - \frac{1}{5}$

47. Divide: $16.4 \div .04 =$

a. 165
b. 371.42
c. 410
d. 450

STOP
DO NOT CONTINUE UNTIL TOLD TO DO SO

48. Which of the following is NOT true?

a. $.65 = \frac{65}{100}$

b. $\frac{2}{4} = .5$

c. $\frac{1}{10} = .1$

d. $\frac{70}{100} = .07$

49. The number of centimeters in one meter is

a. $\frac{1}{100}$

b. 10

c. 100

d. 1000

50. Which one of the metric units below is equivalent to .07 kilograms?

a. 7 hectograms
b. 7 grams
c. 70 grams
d. 7000 milligrams

STOP
DO NOT CONTINUE UNTIL TOLD TO DO SO

51. Solve the missing value in this proportion and choose the correct response.

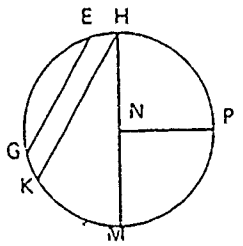
Solve for n: $\frac{12}{26} = \frac{18}{n}$

a. 39
b. 32
c. 13
d. 38

52. Let a * b = a(a + b), then 2 * 3 =

a. 2(2 + 3)
b. 3(2 + 3)
c. (2 + 3) (2 + 3)
d. 3(2 + 2)

53. Which line segment is a diameter of the circle with the center N?

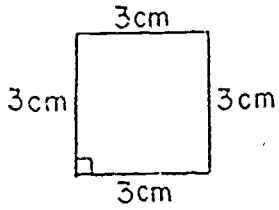


a. NP
b. HM
c. EG
d. HK

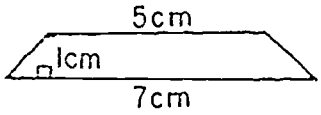
STOP
DO NOT CONTINUE UNTIL TOLD TO DO SO

54. Which polygon has an area of 12 square centimeters?

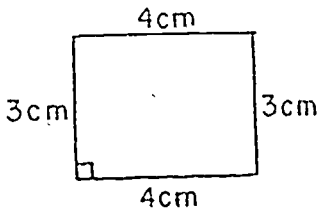
a.



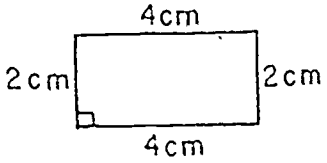
b.



c.



d.



55. A sports car owner says that the car gets 22 miles per gallon of gasoline. How many miles could the car go on seven gallons of gasoline?

a. 154 miles
b. 144 miles
c. 134 miles
d. 124 miles

STOP
DO NOT CONTINUE UNTIL TOLD TO DO SO

56. Out of the 39 items in the math test, how many do you think you answered correctly? _____

57. Out of the 39 items in the math test, how many should a student answer correctly to be promoted to the next grade level? _____

58. Circle the number which shows how important it is for you to do well on this mathematics test you just completed.

1 Not important at all

2

3

4 Important

5

6

7 Very important

STOP
DO NOT CONTINUE UNTIL TOLD TO DO SO

You have completed the section on mathematics. We will now take a three-minute break period in silence. During this time you can simply remain quiet or, if you wish, you can do the following additional math items provided. These additional items will not be counted in your total score of the last section.

59. Multiply:
$$\begin{array}{r} 38 \\ \times\ 92 \\ \hline \end{array}$$

a. 3,796
b. 3,676
c. 3,496
d. 3,386

60. If 23.85 is subtracted from 62.14, the result is

a. 36.29.
b. 38.29.
c. 36.39.
d. 35.29.

61.
$$\begin{array}{r} \frac{3}{7} \\ + \\ \frac{2}{7} \\ \hline \end{array}$$

a. $\frac{5}{7}$

b. $\frac{5}{14}$

c. $\frac{6}{7}$

d. $\frac{6}{49}$

62. $\frac{5}{8}$

$-$

$\frac{3}{8}$

a. 2

b. $-\frac{1}{4}$

c. -2

d. $\frac{1}{4}$

63. 752% expressed as a decimal is

a. 752.
b. 7.52.
c. 0.752.
d. 0.0752.

64. Without performing any computations, indicate what sign belongs in the oval of the item below:

47892 + 12345 ◯ 12345 + 47892

a. =
b. <
c. >

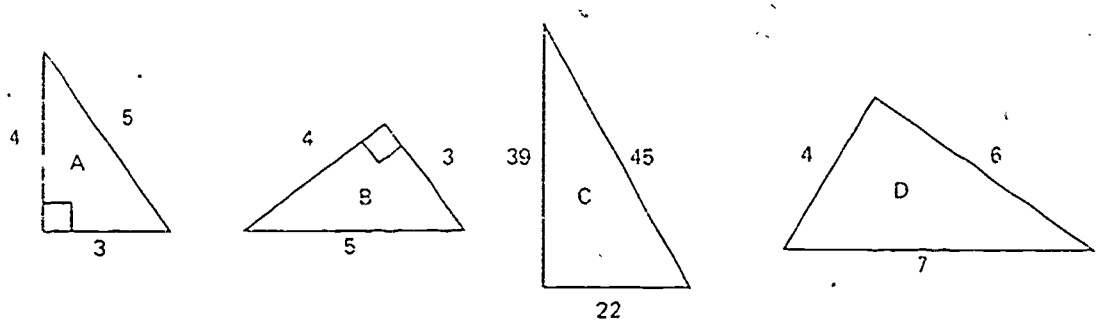
65. Mr. Johnson wants to buy carpeting for his living room. The room is square and has a perimeter of 56 feet. What is the area of the room in square feet?

a. 144 square feet
b. 169 square feet
c. 182 square feet
d. 196 square feet

66. A worker went to her job at 7:45 a.m. She returned home exactly ten hours later. At what time did she reach home?

a. 5:45 p.m.
b. 6:45 p.m.
c. 7:45 p.m.
d. 8:45 p.m.

67. Which of the triangles below is congruent to triangle A?



a. Only B
b. Only B and C
c. Only C
d. Only D
e. Only C and D

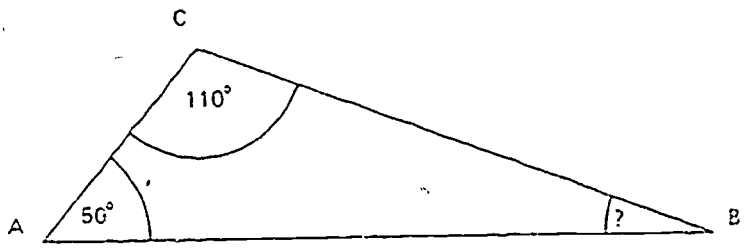
68. Box W holds twice as much as box B. Box B holds about one liter. Box W holds about

a. 2 mℓ
b. 200 mℓ
c. 2000 mℓ
d. 1000 mℓ

69. If x is less than 4, then x + 7 must be

a. less than 7.
b. less than 11.
c. greater than 7.
d. greater than 11.

70. The measure of angle B is

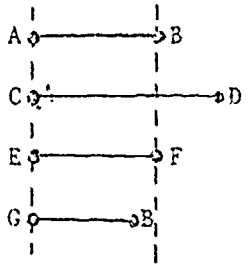


a. 20 degrees.
b. 30 degrees.
c. 40 degrees.
d. 90 degrees.

71.
$$\begin{array}{r} 2037 \\ \times\ 82 \\ \hline \end{array}$$

a. 16,770
b. 19,434
c. 23,034
d. 167,034

72. Which of the line segments shown below have the same size?



a. AB and GH
b. AB and CD
c. CD and EF
d. AB and EF

73. What value of x makes the following TRUE?

$x - 3 = 7$

a. 8
b. 9
c. 10
d. 11

STOP
DO NOT CONTINUE UNTIL TOLD TO DO SO

Turn to page 23 in your student test booklet. Turn to page 3 in your student answer booklet.

74. How many children are there in your family?

a. I am an only child.
b. Two
c. Three
d. Four
e. Five or more

75. Which group below do you belong to?

a. Oriental American
b. American Indian
c. Black American
d. American of Cuban, Mexican, or Puerto Rican descent
e. White American
f. Other

76. Does your family get a newspaper regularly?

a. Yes
b. No

77. Does your family get any magazines regularly?

a. Yes
b. No

78. How much schooling did your father complete?

a. Did not complete the eighth grade
b. Completed the eighth grade but did not go to high school
c. Went to high school but did not graduate from high school
d. Graduated from high school
e. Had some non-college training after graduating from high school
f. Went to college but did not graduate from college
g. Graduated from a two-year college
h. Graduated from a four-year college
i. Has a master's or doctoral degree

79. How much schooling did your mother complete?

a. Did not complete the eighth grade
b. Completed the eighth grade but did not go to high school
c. Went to high school but did not graduate from high school
d. Graduated from high school
e. Had some non-college training after graduating from high school
f. Went to college but did not graduate from college
g. Graduated from a two-year college
h. Graduated from a four-year college
i. Has a master's or doctoral degree

80. What was your age on your last birthday?

a. 11 or younger
b. 12
c. 13
d. 14
e. 15
f. 16 or older

81. Which of the following is the <u>most</u> important result of doing well in school?

a. Getting the teacher to approve of my work
b. Show the other students how smart I am
c. Get an understanding of an interesting subject

82. I prefer school assignments at which I have

a. 90% chance of success on the assignment.
b. 70% chance of success on the assignment.
c. 50% chance of success on the assignment.
d. 30% chance of success on the assignment.
e. 10% chance of success on the assignment.

Teacher Name:
School:
Class:

ILLINOIS STATE BOARD OF EDUCATION
Department of Planning, Research and Evaluation
Program Evaluation and Assessment Section
100 North First Street
Springfield, Illinois 62777

(1) (2) (3)

4th GRADE 1980 MATH ATTENDANCE CENTER TEACHER SURVEY

INSTRUCTIONS: Start with Column 7, indicate your response by placing a number corresponding to your opinion in the appropriate box. Return the form to your building principal when completed.

ITEM NUMBER (1/6)	WHEN WERE STUDENTS EXPOSED TO THE ITEM CONTENT? 1 Have not been 2 Prior to this grade level 3 During this grade level (7)	TO WHAT EXTENT HAVE STUDENTS BEEN EXPOSED TO THE ITEM CONTENT? 1 Not at all 2. Hardly 3. Somewhat 4. Quite 5. Very much (8)	HOW IMPORTANT IS MASTERY OF THE SKILL REQUIRED FOR THE ITEM? 1. Not at all 2 Hardly 3. Somewhat 4. Quite 5. Very much (9)	TO WHAT EXTENT DOES THE ITEM MEASURE READING? 1. Not at all 2 Hardly 3. Somewhat 4. Quite 5. Very much (10)	INDICATE THE DIFFICULTY OF THE ITEM: 1. Very easy 2. Somewhat easy 3 Neither easy nor difficult 4. Somewhat difficult 5. Very difficult (11)	WHAT PERCENTAGE OF STUDENTS WILL ANSWER THIS ITEM CORRECTLY? ___ ___ % (12-13)
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						
40						

(CONTINUED ON REVERSE SIDE)

ITEM NUMBER (1)	WHEN WERE STUDENTS EXPOSED TO THE ITEM CONTENT? 1 Have not been 2 Close to this grade level 3 Right at this grade level (7)	TO WHAT EXTENT HAVE STUDENTS BEEN EXPOSED TO THE ITEM CONTENT? 1 Not at all 2 Hardly 3 Somewhat 4 Quite 5 Very much (8)	HOW IMPORTANT IS MASTERY OF THE SKILL REQUIRED FOR THE ITEM? 1 Not at all 2. Hardly 3 Somewhat 4. Quite 5 Very much (9)	TO WHAT EXTENT DOES THE ITEM MEASURE READING? 1. Not at all 2. Hardly 3. Somewhat 4. Quite 5. Very much (10)	INDICATE THE DIFFICULTY OF THE ITEM 1 Very easy 2. Somewhat easy 3 Neither easy nor difficult 4. Somewhat difficult 5 Very difficult (11)	WHAT PERCENTAGE OF STUDENTS WILL ANSWER THIS ITEM CORRECTLY? _____ % (12 13)
41						
42						
43						
44						
45						
46						
47						
48						
49						
50						
51						
52						
53						
54						
55						

Think of a student in your classroom who is what you would call "motivated to achieve." What behaviors make you think he/she is motivated?

Teacher Name:
School:
Class:

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Department of Planning, Research and Evaluation
Program Evaluation and Assessment Section
100 North First Street
Springfield, Illinois 62777

(1) (2) (3)

8th GRADE 1980 MATH ATTENDANCE CENTER TEACHER SURVEY

INSTRUCTIONS. Starting with Column 7, indicate your response by placing a number corresponding to your opinion in the appropriate box. Return the form to your building principal when completed.

ITEM NUMBER (4-6)	WHEN WERE STUDENTS EXPOSED TO THE ITEM CONTENT? 1. Have not been 2. Prior to this grade level 3. During this grade level (7)	TO WHAT EXTENT HAVE STUDENTS BEEN EXPOSED TO THE ITEM CONTENT? 1. Not at all 2. Hardly 3. Somewhat 4. Quite 5. Very much (8)	HOW IMPORTANT IS MASTERY OF THE SKILL REQUIRED FOR THE ITEM? 1. Not at all 2. Hardly 3. Somewhat 4. Quite 5. Very much (9)	TO WHAT EXTENT DOES THE ITEM MEASURE READING? 1. Not at all 2. Hardly 3. Somewhat 4. Quite 5. Very much (10)	INDICATE THE DIFFICULTY OF THE ITEM. 1. Very easy 2. Somewhat easy 3. Neither easy nor difficult 4. Somewhat difficult 5. Very difficult (11)	WHAT PERCENTAGE OF STUDENTS WILL ANSWER THIS ITEM CORRECTLY? ____ % (12)
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						
33						
34						
35						
36						
37			103			
38						
39						
40						

ITEM NUMBER	WHEN WERE STUDENTS EXPOSED TO THE ITEM CONTENT? 1. Last year 2. Prior to this grade level 3. During this grade level (2)	TO WHAT EXTENT HAVE STUDENTS BEEN EXPOSED TO THE ITEM CONTENT? 1. Not at all 2. Hardly 3. Somewhat 4. Quite 5. Very much (3)	HOW IMPORTANT IS MASTERY OF THE SKILL REQUIRED FOR THE ITEM? 1. Not at all 2. Hardly 3. Somewhat 4. Quite 5. Very much (9)	TO WHAT EXTENT DOES THE ITEM MEASURE READING? 1. Not at all 2. Hardly 3. Somewhat 4. Quite 5. Very much (10)	INDICATE THE DIFFICULTY OF THE ITEM 1. Very easy 2. Somewhat easy 3. Neither easy nor difficult 4. Somewhat difficult 5. Very difficult (11)	WHAT PERCENTAGE OF STUDENTS WILL ANSWER THIS ITEM CORRECTLY? _____% (12-14)
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						

Think of a student in your classroom who is what you would call "motivated to achieve." What behaviors make you think he/she is motivated?

_____

_____

_____

_____

_____

(1) (2) (3)

4th GRADE 1982 - TEACHER OBSERVATION RATING SURVEY

INSTRUCTIONS: We are developing a behavior rating scale for boys and girls. Please think of a boy or girl in your classroom who usually performs up to potential, that is, is motivated to do his/her best (the child need not be among the smartest in the class) and please rate that child on the following items.

	Rarely				Most of the Time
1. Asks content-oriented questions	1	2	3	4	5
2. Listens attentively	1	2	3	4	5
3. Volunteers for special academic tasks	1	2	3	4	5
4. Cooperates in group activities	1	2	3	4	5
5. Reads in spare time	1	2	3	4	5
6. Uses library books	1	2	3	4	5
7. Answers content questions in class	1	2	3	4	5
8. Uses free time constructively	1	2	3	4	5
9. Plans school work	1	2	3	4	5
10. Brings interesting items from home or nature	1	2	3	4	5
11. Works independently	1	2	3	4	5
12. Initiates new learning projects	1	2	3	4	5
13. Starts lessons without undue delay	1	2	3	4	5
14. Delays gratification	1	2	3	4	5
15. Chooses tasks of moderate difficulty for him/herself	1	2	3	4	5
16. Continues to work when frustrated	1	2	3	4	5
17. Volunteers information concerning content of lesson	1	2	3	4	5
18. Asks for help when help is genuinely needed	1	2	3	4	5
19. Talks to teacher about academic material	1	2	3	4	5
20. Pays attention to academic stimuli	1	2	3	4	5
21. Performs academic tasks which are not graded	1	2	3	4	5
22. Detects and corrects own errors	1	2	3	4	5
23. Chooses out-going investigative activities	1	2	3	4	5
24. Takes moderate risks	1	2	3	4	5
25. Tries to figure things out for her/himself	1	2	3	4	5
26. Seeks peer approval	1	2	3	4	5
27. Displays curiosity	1	2	3	4	5
28. Shows interest in "the unusual"	1	2	3	4	5
29. Shifts easily from one academic task to another	1	2	3	4	5
30. Talks to peers about academic material	1	2	3	4	5
31. Looks for better ways	1	2	3	4	5
32. Displays good posture	1	2	3	4	5
33. Smiles	1	2	3	4	5
34. Shows excitement when he/she discovers something new	1	2	3	4	5

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THIS SURVEY IS DESIGNED TO ASSESS THE USE OF INFORMATION IN THE ACADEMIC EVALUATION AND PLACEMENT OF STUDENTS IN SPRINGFIELD SCHOOLS. SEVERAL DIFFERENT COMPONENTS OF INFORMATION ARE INCLUDED IN THIS SURVEY. YOUR RESPONSES WILL HELP DETERMINE THE FUTURE AVAILABILITY AND USEFULNESS OF THIS STUDENT INFORMATION.

PLEASE TELL US SOME INFORMATION ABOUT YOURSELF THAT WILL HELP US ANALYZE THIS DATA:

YOUR AGE 48

YOUR SEX male

YEAR'S EXPERIENCE 20

HIGHEST EDUCATIONAL DEGREE M.A.

CLASS SIZE 25

YEARS IN PARTICULAR SCHOOL 10

CURRICULAR AREA

ENGLISH_____

MATHEMATICS_____

SCIENCE_____

SOCIAL STUDIES_____

THANK YOU!

Consider a student whom you would consider a LOW ABILITY student. How would each of the following factors aid you for the purposes of placing this student within a particular instructional program?

	No Influence 1	2	Moderate Influence 3	4	Strong Influence 5
1. Student's attendance	1	2	3	4	(5)
2. Discussions with other teachers	1	2	3	4	(5)
3. Student's effort at good work	1	2	3	4	(5)
4. Student attitudes	1	2	3	4	(5)
5. Performance on daily homework	1	2	3	4	(5)
6. Student's relationships with other students	1	2	3	(4)	5
7. Student's performance with previous teachers	1	2	(3)	(4)	5
8. Student's performance on standardized achievement tests	1	2	(3)	4	5
9. Information from counselors (If counselors at your level)	1	2	3	4	5
10. Student's performance on specific aptitude tests	1	2	(3)	(4)	5
11. Student's performance on classroom quizes	1	2	3	4	(5)
12. Student rank in class (High School only)	1	2	3	4	5
13. Discussions with student's parents and parental information	1	2	3	(4)	5
14. Recommendations from previous teachers	1	2	(3)	4	5
15. Discussion and interviews with students	1	2	3	(4)	5
16. Student's performance upon classroom tests	1	2	3	4	(5)
17. Background of students	1	2	3	(4)	5
18. Accuracy of student work in classroom	1	2	3	4	(5)

Consider a student whom you would consider a MODERATE ABILITY student. How would each of the following factors aid you for the purposes of placing this student within a particular instructional program?

	No Influence 1	2	Moderate Influence 3	4	Strong Influence 5
1. Student's attendance	1	2	3	4	(5)
2. Discussions with other teachers	1	2	(3)	4	5
3. Student's effort at good work	1	2	3	4	(5)
4. Student attitudes	1	2	3	4	(5)
5. Performance on daily homework	1	2	3	4	(5)
6. Student's relationships with other students	1	2	3	(4)	5
7. Student's performance with previous teachers	1	2	(3)	4	5
8. Student's performance on standardized achievement tests	1	2	(3)	4	5
9. Information from counselors (If counselors at your level)	1	2	3	4	5
10. Student's performance on specific aptitude tests	1	2	(3)	4	5
11. Student's performance on classroom quizes	1	2	3	(4)	5
12. Student rank in class (High School only)	1	2	3	4	5
13. Discussions with student's parents and parental information	1	2	3	4	(5)
14. Recommendations from previous teachers	1	2	3	(4)	5
15. Discussion and interviews with students	1	2	3	4	(5)
16. Student's performance upon classroom tests	1	2	3	4	(5)
17. Background of students	1	2	3	(4)	5
18. Accuracy of student work in classroom	1	2	3	4	(5)

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Consider a student whom you would consider a HIGH ABILITY student. How would each of the follwoing factors aid you for the purposes of placing this student within a particular instructional program?

	No Influence 1	2	Moderate Influence 3	4	Strong Influence 5
1. Student's attendance	1	2	3	(4)	5
2. Discussions with other teachers	1	2	3	4	(5)
3. Student's effort at good work	1	2	3	(4)	5
4. Student attitudes	1	2	3	(4)	5
5. Performance on daily homework	1	2	3	(4)	5
6. Student's relationships with other students	1	2	3	(4)	5
7. Student's performance with previous teachers	1	2	(3)	4	5
8. Student's performance on standardized achievement tests	1	2	(3)	4	5
9. Information from counselors (If counselors at your level)	1	2	3	(4)	5
10. Student's performance on specific aptitude tests.	1	2	(3)	4	5
11. Student's performance on classroom quizes	1	2	(3)	4	5
12. Student rank in class (High School only)	1	2	3	4	5
13. Discussions with student's parents and parental information	1	2	3	(4)	5
14. Recommendations from previous teachers	1	2	3	(4)	5
15. Discussion and interviews with students	1	2	3	(4)	5
16. Student's performance upon classroom tests	1	2	3	(4)	5
17. Background of students	(1)	2	3	4	5
18. Accuracy of student work in classroom	1	2	3	(4)	5

Consider a student whom you would consider a LOW ABILITY student. How would each of the following factors aid you in assigning a particular grade to that student.

	No Influence 1	2	Moderate Influence 3	4	Strong Influence 5
1. Student's attendance	1	2	(3)	4	5
2. Discussions with other teachers	1	2	(3)	4	5
3. Student's effort at good work	1	2	3	4	(5)
4. Student attitudes	1	2	3	(4)	5
5. Performance on daily homework	1	2	3	(4)	5
6. Student's relationships with other students	1	2	3	(4)	5
7. Student's performance with previous teachers	1	2	(3)	4	5
8. Student's performance on standardized achievement tests	1	2	(3)	4	5
9. Information from counselors (If counselors at your level)	1	2	(3)	4	5
10. Student's performance on specific aptitude tests	1	2	(3)	4	5
11. Student's performance on classroom quizes	1	2	3	4	5
12. Student rank in class (High School only)	1	2	3	4	5
13. Discussions with student's parents and parental information	1	2	3	(4)	5
14. Recommendations from previous teachers	1	2	3	(4)	5
15. Discussion and interviews with students	1	2	3	4	5
16. Student's performance upon classroom tests	1	2	(3)	4	5
17. Background of students	(1)	2	3	4	5
18. Accuracy of student work in classroom	1	2	3	(4)	5

Consider a student whom you would consider a MODERATE ABILITY student. How would each of the following factors aid you in assigning a particular grade to that student?

	No Influence 1	2	Moderate Influence 3	4	Strong Influence 5
1. Student's attendance	1	2	3	(4)	5
2. Discussions with other teachers	1	2	(3)	4	5
3. Student's effort at good work	1	2	3	(4)	5
4. Student attitudes	1	2	3	(4)	5
5. Performance on daily homework	1	2	(3)	4	5
6. Student's relationships with other students	1	2	(3)	4	5
7. Student's performance with previous teachers	1	2	(3)	4	5
8. Student's performance on standardized achievement tests	1	2	(3)	4	5
9. Information from counselors (If counselors at your level)	1	2	(3)	4	5
10. Student's performance on specific aptitude tests	1	2	(3)	4	5
11. Student's performance on classroom quizes	1	2	3	(4)	5
12. Student rank in class (High School only)	1	2	3	4	5
13. Discussions with student's parents and parental information	1	2	(3)	4	5
14. Recommendations from previous teachers	1	2	(3)	4	5
15. Discussion and interviews with students	1	2	(3)	4	5
16. Student's performance upon classroom tests	1	2	(3)	4	5
17. Background of students	(1)	2	3	4	5
18. Accuracy of student work in classroom	1	2	3	(4)	5

Consider a student whom you teach who is a HIGH ABILITY student. How do you use each of the following factors in ... that student?

	No Influence 1	2	Moderate Influence 3	4	Strong Influence 5
1. Student's attendance	1	2	(3)	4	5
2. Discussions with other teachers	(1)	2	3	4	5
3. Student's effort at good work	1	2	3	(4)	5
4. Student attitudes	1	2	3	(4)	5
5. Performance on daily homework	1	2	3	4	(5)
6. Student's relationships with other students	(1)	2	3	4	5
7. Student's performance with previous teachers	(1)	2	3	4	5
8. Student's performance on standardized achievement tests	(1)	2	3	4	5
9. Information from counselors (If counselors at your level)	(1)	2	3	4	5
10. Student's performance on specific aptitude tests	(1)	2	3	4	5
11. Student's performance on classroom quizes	1	2	3	4	(5)
12. Student rank in class (High School only)	1	2	3	4	5
13. Discussions with student's parents and parental information	(1)	2	3	4	5
14. Recommendations from previous teachers	(1)	2	3	4	5
15. Discussion and interviews with students	1	(2)	3	4	5
16. Student's performance upon classroom tests	1	2	3	4	(5)
17. Background of students	(1)	2	3	4	5
18. Accuracy of student work in classroom	1	2	3	4	(5)