| AUTIOR | Barries, Jarvis |
| :---: | :---: |
| TITLE | Profiles of Effectiveness and Acceptability of |
|  | Reading and Arithmetic Programs, 1971-72. Research |
|  | and Development Report, Vclume 6, Number 18, March 1973. |
| INSTITUTICN | Atlanta Public Schools, Ga. |
| PUB DATE | Mar 73 |
| NOTE | 173p. |
| EDRS PRICE | MF-\$0.65 HC-\$6.58 |
| DESCRIPTORS | Academic Achievement; Academic Performance; Cost |
|  | Erfectiveness; Educational Accountability; |
|  | Educational Diagnosis; *Elementary School Students: |
|  | *Junior High School Students: *Mathematics |
|  | Instruction; Performance Factors; *Program |
|  | Evaluation; *Reading Programs; Teacher Attitudes: |
|  | Urban Education |
| IDENTIFIERS | Georjia; Metropolitan Achievement Tests |

## ABSTRACT

Because of the effects of the various factors which influence pupil growth and development, and because of the innumerable input measures of a program (measures such as people, places, things, and strategies), the need exists to formulate a model for determining effectiveness and acceptability of a program: and, at the same time, to take into consideration the relative extent to which the factors and measures influence pupil growth and development. This report of pupil performance during the 1971-72 school year represents an application, for the second year, of a model designed to meet this need. The model can be used to identify the relztive effectiveness and acceptability of pupil ferformance in grades two through seven in the Atlanta Public School System. effectiveness is defined as the degree that a program accomplishes its objectives or its predictions. Acceptability is defined as the level of performance obtained by the cupils in terms of norms or standards. Reading and arithmetic are the two programs incorcorated in the profiles. This analysis of achievement in reading comprehension and in arithmetic computation, as measured by the Metropolitan Achievement Tests, focuses attention on pucil accountability, rather than on teacher accountability. (Author/JM)

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# PROFILES OF EPFECTIVENESS AND ACCEPTABILITY OF READING AND ARITHMETIC PROGRAMS 

1971-72

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March, 1973

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PREFACE
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## POSSIBLE VALUES TO BE DERIVED FROM READING THIS REPORT

Hopefully, the reader will find this report to be valuable in gaining information about the effectiveness and acceptability of the reading and arithmetic programs and about the use of funds in the Atlarita Public Schools as follows:

1. It will focus the spotlight on individual grades (two through seven) and on individual schools (elementary) that have been unusually successful or unusually unsuccessful in the areas of reading and arithmetic, so that the failures may be studied and avoided, while the successes may be replicated, in the future.
2. It will provide information which will enable principals and teachers to conduct self-studies aimed at spreading successes and/or at remediating deficiencies in certain grades and schools whose programs are exceptional.
3. It will inform everyone of the status of the Atlanta elementary schools in two important areas, reading and arithmetic.
4. It will make available a means for sharing and exchanging -with other schools, teachers, and administrators -- ideas and suggestions for remediating deficiencies and for replicating successes.
5. It will report cost-effectiveness information, indicating separate local-fund and supplementary-fund costs for each unit of effectiveness in each school.
6. It will supply needed information for school administrators and policy makers to use in making decisions.
7. It will provide interesting and useful research findings for other researchers who are seeking answers to similar research questions.

Accordingly, perhaps it might be helpful if one would keep these potential values in mind while reading this report.

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## I. INTRODUCTION

During the last several years American education has received an increasing amount of attention. The focus of the earlier efforts was mainly on improving the instructional opportunities of the pupils. Gradually, other dimensions of education came into the arena of public concern. Among some of the more recent issues is that of acco ntability -- in other words, exactly what has been the effects of the innovations and new instructional strategies on pupil growth and development, or what benefits have been derived from spending additional funds and from using additional manpower and improved methods? The prccess of determining the effects of programs on pupil progress has taken many forms in the pursuit of accountability. Educational leaders, along with certain elements from business, are coping with accountability (1) by trying to predetermine and express the objectives of a program in terms of measurable or observable changes to be exhibited by pupils or by the participants of the program, (2) by enunciating the extent of anticipated changes, and (3) by gathering data to determine whether or not the ob;-ctives have been accomplished. The activities of accountability are a part cf the educational system's answer to the public's demands for visibility and justification of the production obtained by the use of increased lesources. Hence, product, as well as process, is clearly recognized as a vital concern in improving the educational opportunities for the youth of a community.

While exploring new approaches to prevent educational deprivation or to remediate manifested deficiencies in performance, recognition is imperative that all learners are not alike -- in rate of learning, in desire to learr, or in readiness brought to the learning process. Hence, emphasis is given to two dimensions of the educational program: its effectiveness and its acceptability. This is to say that these two dimensions can be used to describe a program in four ways:

1. A program can be both effective and acceptable.
2. A program can be effective but not acceptable.
3. A program can be not effective but acceptable.
4. A program can be neither effective nor acceptable.

In other words, a progran can be cescribed in terms of (1) the degree that it accomplishes its objectives or its predictions and (2) the level of performance obtained by the pupils 1.: $\because: \mathrm{m}_{\mathrm{s}}$ of norms or standards. For this report and analysis, the first deccint: $\therefore \quad 1 \cdot+\cdots$ as effectiveress, and the second one, as acceptability. These two doerrptors give recognition that many programs can be very effective; but, hecause of many atverse factors the participants still may not perform at the leval, or norm, esiablished for them to reach.

## II. MODEL O: EFFECTIVENESS AND ACCEPTABILITY

Because of the effects of the various factors which influence pupil growth and development, and because of the innumerable input measures of a program (measures such as people, places, things, and strategies), the need exists to formulate a model for determining effectiveness and acceptability of a program and, at the same time, to take into considerstion the relative extent to which the factors and measures influence pupil growth and development. This report of pupil performance during the 1971-72 school year represents an application, for the second year, of a model designed to meet this need. The model can be used to identify the relative effectiveness and acceptability of pupil performance in grades two through seven in the Atlanta Public School System. Reading and arithmetic are the two programs incorporated in the profiles.

This analysis of achievement in reading comprehension and in arithmetic computation, as measured by the Metropolitan Achievement Tests (MAT), focuses ttention on pupill accountability, rather than on teacher accountability. The emphasis on pupil accountability is a realistic approach in that learning and teaching are iwo dietinct processes. Definitely, they are related, but not in a one-to-one manner. Teaching is one of the inputs to learning. Learning, or achievement in this case, is a manifestation of what the pupil has done on one type of act or performance which is symbolic of what he knows at one specific time and duratg wetain prescribed minutes -- regardless of how
he acquired the information. He might have acquired the knowledge and skills through self study, through home teaching and environmental circumstances, in the classroom, from his peers while exploring liesure activities, or from a thousand and one other scurces. The home and community experiences are tremendous reinforcers in learning. According to ancreasing evidence, the home is a greater reinforcer in pupil pertor : that the school. Nevertheless, it is the pupil's
 instrument which is dEci to inatate the leve of performance or achievement in a particular subject.

In order to develop a compardile inciex of performance with that displayed by the scores of a standardized test, the model of effectiveness and acceptability, which is used in this report, takes into consideracic. certain factors which have been identified by administrators, by teachers, and by a review of the related literature as being factors which significantly influence pupil performance. The factors used in this model should not be thought of as being all inclusive or as being the best mix of factors which should result from analysis of achievement data over a period of years. Refinement of the model is desirable and develofmental. But for the secon, vear, lis lift has veen consisient in order to observe further the results of its application and to have an opportunity to analyze opinions of the local school staffs.

## Factors

Six factors art ised in the model to predict pupil performance. The weights of these factors are statistically determined by the linear multiple step-wise regression technique. The equation resulting from this technique is applied to each school and each grade in order to determine the prodicted performance level of that particular grade and particular school.

1. Information gained prior to the pupi]'s coning to a selected learning situation is represented by the pretest score taken approximately six months before the predicted performance score (che postost score in Anril), An exception to this is that the pretest score usec $i$, the fourth grade is the posttest score made in April (or in He spri:og) of the third grade. The fourth grade pupils did not have a pretest score during the fall of their fourth grade. Instead, they participated in the State-Wide Teisting Program which uses $1 \cdot \operatorname{sits}$ other than the Metropolitan Achievement Tests.
2. The economic enviroument from which the pupil cor..es is represented by the per cent of paid lunches. This index has been found to correlate highly with other economic data such as consumer-buying power. The use of this irdex ar :rmmolates recency of data, comm:rity changes, and pupil tranfers ... aimatages which census data cannot provide.
3. Stability of the commun: $v$ is expressed in terms of the extent that pupils remail. enroiles 1 i a macti ular shool and do not move in and out.
4. Regular:ty in attendance is represented by the per cent of attendance.
5. The nimici u: icawime mployed io ivurk with the pupils of the particular schesl is represented by the pupil-teacher ratio.
$\dot{0}$. The philosophy of the local school soncerning guidelines for passing or failing vupils is represented by the per cent of pupils passing. In a manner. this index might be thought of as representing whether a faculty is pupil centered or subject centered: a high percentage of passing, representing a pupil-centered approach to instruction; and a high per cent of failures, representing a subject-centered approach. This dicnotonv ne,, further study in order to determine its validity, even though it is interesting on the surface.

In general, tio use of these six factors in predicting postrest performan, eliminates these facture is dauscs for significant deviations of actual scores from predicted scores, miess there is a most unusual situation. Thus, in determining significant deviations, local school personnel should examine other influences on achievement.

## Effectiveness an' Acceptability

The indices of effectiveness and acceptability as defined in this model represent, respectively, the relationship of posttest scores of a grade to the predicted scores and the relationship of tre posttest scores of a grade to the national norm. For example, an index of effectiveness of 100 means that the dctual gain during the six months between the pretest and posttest scores was the same as the predicted gain. An index of 150 means that the actual gain was 1.5 times the predicted gain; whereas, an effectiveness index of 50 represents again of only one-half of the predicted gain.

The index of acceptability is similarly represented. Accordingly, an index of 100 means that the actual posttest score was the same as the national norm for t'lat grade. An index of 150 means that the actual post test score was 1.5 the national ncrm, and 50 means that the actual posttest score was only one-half of the national norm.

Thus, it can be seen that the indices of effectiveness and acceptability more or less equate the influences on achievement of the six factors included in the model. A school which has factors that are relatively favorable would be predicted to perform higher than a school which has factors that are relatively unfavorable. It might be said, therefore, that the index of effectiveness can be used to compare relative performance of two schools. Further, the index can be used to compare performance among grades within the same school. On the other hand, the index of acceptability can be used to compare the level of performance with the national norm, but not with the performance of another school. Thus, pupil performance can be viewed from two dimensions: relative standing among Atlanta schools and relative standing in relationship to the national norm.

## Cost Effectiveness

A third index has been incorporated in this study because of the comparability of the data. This index focuses on cost effectiveness. For years, educational business administrators have been rather skilled in financial accounting. At the same time, instructional personnel have been rather skilled in measuring pupil progress. Only within recent years, however, have there been steps taken to relate these two efforts. Cost effectiveness is defined in terms of the relationship between the expenditures (or cost) of an instructional program and pupil progress. In other words, is there a unit of pupil progress for a unit of financial outlay?

The analysis of cost effectiveness in this report is concerned with two types of financial outlays: expenditure of funds derived from revenue sources which make up the general operating budget and expenditures of funds derived from supplementary sources, such as from the federal and state governments or from private foundations. The programs financed by the use of supplementary funds are referred to as compensatory programs, and they are in addition to the programs provided from the general budget. The indices of cost effectiveness are, therefore, the amount of funds used to gain one unit of effectiveness (as previously definci) for each pupil in average daily attendance (ADA).

Expenditures included in this analysis are those which are charged directly to the local schools. Thus, expenditures which are svstem- or area-wide are excluded. Further, general fund expenditures are non-salary instructional costs such as cost of textbooks, supplies, materials, and library supplies. Compensatory fund expenditures are both salary and non-salary costs charged directly to the local school.

The use of cost effectiveness as a signal to study decision making and what is happening in a school can be illustrated by the data of School $A$ and School B. For example, suppose School A spent $\$ 10.39$ per ADA from the general budget and that its index of effectiveness was 123. Its cost of effectivepess of general funds would be the ratio of these two figures or $\$ 0.08$. Suppos School B spent $\$ 27.65$ per ADA from the general budget and that its index of effectiveness was 81. Its cost of effectiveness of general funds would be the ratio of $\$ 27.65$ to 81 or $\$ 0.34$. Hence, School $B$ spent more than four times as much general funds as School A spent in order to obtain one degree cf effectiveness.

Cost effectiveness of compensatory programs is similarly defined: the ratio of supplementary funds (compensatory funds) to the index of effectiveness. An examination of compensatory expenditures of the same two schools will 1llustrate the point in question. Suppose School A spent $\$ 16.07$ per ADA from supplementary sources. With an index of effectiveness of 123 , School A spent $\$ 0.13$ for one unit gain of effectiveness. Suppose School B spent $\$ 657.75$ per ADA from compensatory sources. With an index of effectiveness of 81 , it spent $\$ 8.12$ for a unit gain of effectiveness -- or approximately more than 60 times as much supplementary funds as School A spent in order to obtain the same degree of effectiveness.

In terms of total cost of efferiveness of these two schools, School A spent a total of $\$ 0.21$ for a unit of effectiveness; whereas, School B spent a total of $\$ 8.46$ or approximately 40 times as much as School A spent.

| School | Index of Effectiveness | Expenditures Per Unit of Effectiveness |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | General Funds Per ADA | Compensatory Funds Per ADA | $\begin{aligned} & \text { Total } \\ & \text { Per ADA } \end{aligned}$ |
|  |  |  |  |  |
| A | 123 | \$0.08 | \$0.13 | \$0.21 |
| B | 81 | \$0.34 | \$8.12 | \$8.46 |

Differences in coet effectiveness such as those which exist between Schools A and $B$ are signals for administrators, instructional personnel, anil iocal staff members to study the local situation in order to determine the reasons for the differences. The index of effectiveness equates or adjusts for differences in levels of performance, mobility, attendance, aconomic environment, pupil-teacher racio, and philosophy for pupil failures. In other words, the causes for the differences exist outside or beyond these six factors unless the local sicuation is most unusual.

## Self-Evaluation by Local Staffs

Opiniors of local school staffs were sought concerning differences between pupil performance during 1970-71 (FY 71) and during 1971-72 (FY 72). Their attention was directed to the three dinensions of the model which are being developed in this analysis: namely, index of effectiveness, index of acceptability, and cost effictiveness. The local staffs were requested to analyze their respecti e school data according to: differences between years for each grade, differences among grades for FY 72, and changes in overall effectiveness and acceptability. Thuy also we e requested to make suggestions of how to ojtain more direct influences of expenditures on pupil progress. This self evaluation, along with assistance from area and central office personnel, resulted in local schools' developing and implementing plans during FY 73 to overcone significant differences. The approach was positive, and the opinions of how to overcome the difference have been summarized in a later secison of this report.

The FY 72 data which are anaiyzed in this report differ in several respects from the FY 71 data which were analyzed a year ago. This current report includes pupil performance as represented by median scores in reading comprehension and in arithmetic computation. The ?chievement in arithmetic was not a part of the FY 71 analysis. In addition to analyzing the achi vement of reading and arithmetic separately, a composite index was obtainc: co represent the total performance in reading and arithnetir. Hence, the index of effectiveness used in this report, unless otherwise stated, represents the composite degree to which the pupils performei in both reading and in arithmetic. This index is denoted by the symbn' ERA. The level or acceptability of the composite performance in reading and arithmetic is denoted by ARA. Further, the cost effectivent is
data of general funds and of compensatory funds are also based on the composite performance in reading and in arithmetic or, in other words, the cost of these programs per ERA. It also should be noted that the effectiveness and acceptability data of the reading and arithmetic programs, when viewed separately, already have been made avdilable to instructional, administrative, and local personnel.


An examination of the intercorreiations of the s: factors included in the model revealed several noleworthy relationships witich were rather consistent in that they were present in each of the grades from two through seven. Further, the pattern found for piedicting reading scores was similar to the one found for predicting arithmetic scores.

The patterns of the intercorrelations of the factors are displayed on the nest page in Tabla 1 . The rows and columns of this table represent the factors: attendance, stability, paid lunches, pupil-teacher ratio, per cent passing, and pretest score. The data recorded in each cell of the table are the qrade levels in which the relationshins of the particular pair of factors were found to be correlated significantly at least at the . 05 level of significance. Each number in a cell represents the grade level at which the significant correlation occurred. The negative numbers mean that the relationship for that particular grade was not positive, but negative. In other words, as the value of one factor increased, the value of the other factor tended to derrease. Attention is called to the fact that there are seven cells (two in the reading matrix and five in the arithmetic matrix) in which the correlation was significant only at a single grade level. Four of these exceptions occurred at the third grade level, two at the seventh grade level, and one at the four th grade level. A further deviation from the general pattern existed between atiendance of pupils and pretest scores. Positive relationships existed between these two factors in all of the grades from two through seven with the exception of fifth grade arithmetic. The relationship at the fifth grade level was not significant.

TABLE 1
SIGNIFICANT INTERCORRELATIONAL RELATIONSHIPS AMONG THE SIX FACTORS USED IN THE EFFECTIVE-ACCEPTABLE MODEL, BY GRADE LEVELS 1971-72

| READING | Attendance | Stability | Paid <br> Lunches | Pupil- <br> Teacher <br> Ratio | Per Cent Passing | Pretest |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |
| Stability |  |  |  |  |  |  |
| Paid <br> Lunches | $\begin{array}{ll} 2 & 3 \\ 4 & 5 \\ 6 & 7 \\ \hline \end{array}$ |  |  |  |  |  |
| Pupil- <br> Teacher <br> Ratio | -3 |  | -7 |  |  |  |
| Per Cent <br> Passing |  |  |  |  |  |  |
| Pretest | $\begin{array}{ll}2 & 3 \\ 4 & 5 \\ 6 & 7\end{array}$ |  | $\begin{array}{ll}2 & 3 \\ 4 & 5 \\ 6 & 7\end{array}$ | $\begin{array}{ll}-2 & -3 \\ -4 & -5 \\ -6 & -7\end{array}$ |  |  |
| Posttest | 2 3 <br> 4 5 <br> 6 7 |  | 2 3 <br> 4 5 <br> 6 7 | $\begin{array}{ll}-2 & -3 \\ -4 & -5 \\ -6 & -7\end{array}$ |  | $\begin{array}{ll}2 & 3 \\ 4 & 5 \\ 6 & 7\end{array}$ |
| ARITHMETIC |  |  |  |  |  |  |
| Stability |  |  |  |  |  |  |
| Paid <br> Lunches | $\begin{array}{ll} 2 & 3 \\ 4 & 5 \\ 6 & 7 \end{array}$ |  |  |  |  |  |
| Pupil- <br> Teacher <br> Ratio | -3 |  | -7 |  |  |  |
| Per Cent Passing |  | 4 |  |  |  |  |
| Pretest | 2 3 <br> 4  <br> 6 7 |  | $\begin{array}{ll}2 & 3 \\ 4 & 5 \\ 6 & 7\end{array}$ | $\begin{array}{ll} \hline-2 & -3 \\ -4 & -5 \\ -6 & -7 \\ \hline \end{array}$ | -3 |  |
| Posttest | 2 3 <br> 4 5 <br> 6 7 |  |  | $\begin{array}{ll} \hline-2 & -3 \\ -4 & -5 \\ -6 & -7 \\ \hline \end{array}$ | -3 | $\begin{array}{ll}2 & 3 \\ 4 & 5 \\ 6 & 7\end{array}$ |

Because of the consistency of the intercorrelations among the factors, the following generalizations can be made:

1. There was a positive and significant correlation in grade two through seven between:
a. Attendance of pupils and stability of pupils.
b. Attendance of pupils and paid lunches.
c. Attendance of pupils and pretest scores.
d. Attendance of pupils and posttest scores.
e. Paid lunches and pretest scores.
f. Paid lunches and posttest scores.
g. Pretest and posttest scores.
2. There was a negative and significant cor-elation in grades two through seven between:
a. Pupil-teacher ratios and pretest scores.
b. Pupil-teacher ratios and posttest scores.
3. There was a negative and significant correlation in the third grade between attendance of pupils and pupil-teacher ratios.
4. There was a positive and significant correlation in fourth grade arithmetic between stability of pupils and per cent of pupils passing.
5. There was a negative and significant correlation in the seventh grade between paid lunches and pupil-teacher ratios.
6. There was a negative and significant correlation in the third grade between:
a. Per cent passing and pretest arithmetic scores.
b. Per cent passing and posttest arithmetic scores.

From these relationships it can be said that four factors were definitely related: attendance, paid lunches, pretest scores, and posttest scores. A fifth factor, stability, was related significantly to (and only to) attendance, which, in turn, was related to the other factors. Further, a sixth factor was related significantly only to the pretest and posttest scores. This factor was pupil-teacher ratio, and it had a negative relationship. Per cent of pupils
passing was, therefore, the only factor which existed more or less in isolation.
At this point, attention should be called to research findings of other studies conducted by the Division of Research and Development which have related to the correlation between pupil attendance and pupil achievement. These studies have rather consistently revealed that there has not been a significant correlation between attendance and achievement of pupils who have been enrolled continuously in the same school throughout the school $y \in ? r$. Accordingly, it seems that attendance becomes a significant factor only in the case of those individuals who are mobile. However, another possibility for attendance to be significantly related to pupils who move in and out might be an artifact of the mechanics of attendance counting, that is, the extent there is delay in getting pupils removed from the rolls when they withdraw from the schools. Another possibility is that poor attendance might be a characteristic of the highly mobile pupils. In any instance, it does not seem that stability can be used to predict pupil performance, while it can be used to predict pupil attendance. Neither can attendance be used to predict achievement of those pupils who are not mobile.

Another unusual and positive relationship is revealed among the intercorrelations of the factors used in the effective-acceptable model. This relationship is betreen the pupil-teacher ratio and the pretest and posttest scores. In this study, the relationship is significant and negative; whereas, in many other situations there has not been a significant relationship. In other words, based on the data in the elementary schools in grades two through seven in FY 72, the pupil-teacher ratio can be used to predict the pretest and posttest scores for both reading and arithmetic. In this case, as the pupil-teacher ratio goes up, the scores go down and vice versa.

Profiles of the Indices of Effectiveness and Accepiability
The profiles of the effectiveness and acceptability of the 129 elementary schools in che composite of reading and arithmetic are different. The profile (see Chart 1) of effectiveness (ERA) is rather symmetrical and normal with a mean of 100 and a median of 97 . This means that for the 129 elementary schools in the city the predicted was the average index and that one-half of the schools made more than 100 while the other one-half made less than 100. In fact, the range of the effectiveness index was from a low of 33
to a high of 245. Beginning at the bottom, the lowest one-fourth of the schools fell within the range of 33 to 79 , whereas, the second lowest fourth was within 20 points of the average score, with a range of 80 to 96 . This second group of schools was either effective or on the border line of effectiveness. The third fourth of schools fell within the range of 97 through 116 and the top fourth of the schools ranged from 117 through 245 . The last two groups of schools were effective. In general, the variance among the 129 schools was rather large. The standard deviation was 35 . In other words, approximately two-thirds of the schools were expected to fall within the range of 100 plus or minus 35 , or from 65 through 135. Actually 78 per cent (101 schools) came within this range.

The profile (see Chart 2) of the index of acceptability (ARA) differed rather sharply from that of effectiveness (ERA). The mean or average index was 79. In other words, the average school performed at 79 per cent of the national norm. The median was approximately the same (74): one-half of the schools had an index of effectiveness of 74 or below; and one-half, above. The 129 elementary schools ranged from 62 to 123 in acceptability. The lowest fourth ranged from 62 to 69 , the highest fourth from 86 to 123 , and the middle half of the schools ranged from 70 to 85 -- being divided into two groups, from 70 to 74 and from 75 to 85 . The distribution of the indices of acceptability was not normal. There was a tendency toward the lower scores. The variance among the acceptable indices was not as great as that among the effectiveness indices. The standard deviation of acceptability was 15 , almost one-half of the standard deviation for effectiveness (35). Approximately 81 per cent ( 104 schools) came within the range of the mean plus and minus one standard deviation (64 to 94).

## Performance by Classification of Effectiveness and Acceptability

The two dimensions of pupil performance, effectiveness and acceptability, permit dividing the schools into four groups as previously defined.

CHART II
acceptability of reading and arithmetic programs, ZL xA ' STOOHOS $x$ a Q: Quartile.

TABLE II A
PERFORMANCE OF SCHOOLS BY CLASSIFICATION OF EFFECTIVENESS AND ACCEPTABILITY

| Group | Classification | Number | Per Cent |
| :---: | :--- | :---: | :---: |
| I | Effective and Acceptable | 18 | 14 |
| II | Effective but not Acceptable | 56 | 43 |
| III | Neither Effective nor Acceptable | 47 | 37 |
| IV | Acceptable but not Effective | -8 | -2 |
|  |  | Total | 129 |

From Tables IIA and IIb, it can be seen that approximately one-seventh of the schools were both effective and acceptable. Their pupil performance was above 90 in terms of the index of effectiveness and their level of performance was above 90 per cent of the national rorm. The second group included approximately one-half of the schools; these schools were effective but not acceptable. In other words, they performed as predicted or better than predicted, but the performance was not up to the national norm. The third group included about one-third of the schools, and these schools were neither effective nor acceptable. The pupils did not perform as predicted, and neither were they up to the national norm. The last and fourth group was not effective but acceptable. For some reason, they did not perform as predicted, but their level of performance did equal or exceed the national norm. It might be said that the schools in Group I performed quite well. Those in Group II were on the move upward, and if they continue this pattern of performance, their level of performance should reach that of the national norm. For some reason, the schools in Group IV did not perform as predicted. They are expected to change this pattern. Most probably, this performance is only temporary and is not an enduring situation. Schools for which there should be concern are those in Group III. These are the schools which were neither effective nor acceptable. Careful attention should be given to these schools in order to determine what can be done to improve their level of performance. Chart 3 depicts the four classifications by the respective quadrants formed by the vertical (effectiveness) and horizontal axes (acceptability).

TABLE II B
CLASSIFICATION OF SCHOOLS BY EFFECTIVENESS/ACCEPTABILITY GROUPS, READING AND ARITHMETIC, FY 72

EFFECTIVE AND ACCEPTABLE ( GROUP I )

| SCHOOL | SCHOOL | ERA | ARA | CF/ADA | GF/ADA |
| :--- | :--- | :--- | :--- | ---: | :--- |
| NAME | NUMBER |  |  | PER ERA | PER ERA |



EFFECTIVE BUT NOT ACCEPTABLE ( GROUP II )

| SCHOOL | SCHOOL | ERA | ARA | CF/ADA | GF/ADA |
| :---: | :---: | :---: | :---: | :---: | :---: |
| NAME | NUMBER |  |  | PER ERA | PER ERA |
| PITTS | 97 | 245 | 71 | 0.44 | 0.08 |
| STANTON, DANIEL | 110 | 225 | 82 | 1.47 | 0.07 |
| JOHNSON | 74 | 201 | 75 | 2.61 | 0.13 |
| OGLETHORPE | 91 | 197 | 89 | 0.04 | 0.05 |
| COOPER | 33 | 163 | 67 | 2.33 | 0.10 |
| --- | - -- | -- | - - - | - - - | - . - |
| WFSLEY | 122 | 161 | 74 | 1.60 | 0.09 |
| BLAIR VILLAGE | 10 | 157 | 69 | 0.02 | 0.12 |
| GILBERT | 49 | 153 | 71 | 0.61 | 0.11 |
| Grant Park | 52 | 140 | 79 | 1.38 | 0.16 |
| :1ORELAND | 88 | 137 | 71 | 0.36 | 0.11 |
|  |  |  |  |  |  |

EFFECTIVE BUT NOT ACCEPTABLE ( GROUP II CONT'D)

| SCHOOL | SCHOOL | ERA | ARA | CF/ADA | GF/ADA <br> PER ERA |
| :---: | :---: | :---: | :---: | :---: | :---: |
| NAME | NUMBER |  |  | PER ERA |  |
| ADAIR | 1 | 128 | 76 | 0.08 | 0.11 |
| FORREST | 44 | 127 | 80 | 0.25 | 0.11 |
| BLALOCK | 11 | 124 | 66 | 1.02 | 0.21 |
| ROBINSON | 102 | 124 | 66 | 1.06 | 0.13 |
| JONES, JESSIE | 76 | 123 | 71 | 1.36 | 0.16 |
|  |  |  |  |  |  |
| GOLDSMITH | 50 | 122 | 78 | 1.19 | 0.13 |
| DREW | 37 | 122 | 64 | 0.39 | 0.18 |
| WILLIAMS | 128 | 120 | 67 | 0.50 | 0.16 |
| WARE | 120 | 119 | 80 | 4.99 | 0.20 |
| CAREY | 21 | 118 | 74 | 0.45 | 0.16 |
|  |  |  |  |  |  |
| JONES, JEROME | 75 | 118 | 73 | 0.88 | 0.10 |
| BURCESS | 16 | 116 | 74 | 0.06 | 0.12 |
| HOPE, JOHN | 65 | 116 | 68 | 2.62 | 0.13 |
| PEEPLES | 93 | 116 | 74 | 0.40 | 0.13 |
| RUSK | 104 | 116 | 72 | 2.15 | 0.13 |
|  |  |  |  |  |  |
| GRANT PARK PRIMARY | 53 | 115 | 74 | 6.06 | 0.39 |
| JONES, M. AGNES | 77 | 114 | 74 | 0.44 | 0.12 |
| LIN | 82 | 113 | 79 | 0.09 | 0.14 |
| CAPITOL AVE. | 19 | 111 | 68 | 1.78 | 0.14 |
| CAMPBELL | 18 | 110 | 67 | 0.47 | 0.16 |
|  |  |  |  |  |  |
| HOWELL, E. P. | 67 | 109 | 83 | 0.00 | 0.13 |
| COOK | 32 | 108 | 69 | 2.68 | 0.15 |
| GUICE | 55 | 107 | 85 | 0.42 | 0.28 |
| CARTER | 22 | 106 | 75 | 3.68 | 0.20 |
| DOBBS | 36 | 106 | 72 | 0.20 | 0.23 |
| - - - - - - - - - - - - - - - - - - - - - |  |  |  |  |  |
| HIGHLAND | 62 | 105 | 87 | 0.03 | 0.17 |
| CLEMENT | 26 | 103 | 75 | 0.00 | 0.16 |
| REYNOLDS | 100 | 102 | 70 | 0.69 | 0.32 |
| WHIT'E | 126 | 102 | 74 | 0.08 | 0.16 |
| LJCKIE | 83 | 100 | 75 | 2.80 | 0.16 |
| - - - . . - - - - - - - - - - - . - - - - |  |  |  |  |  |
| CONNALLY | 30 | 99 | 72 | 0.15 | 0.25 |
| WHITEFOORD | 127 | 99 | 73 | 0.38 | 0.18 |
| HARPER | 57 | 98 | 70 | 0.30 | 0.19 |
| WATERS | 121 | 98 | 77 | 0.00 | 0.12 |
| BETHUNE | 8 | 97 | 68 | 7.88 | 0.26 |
|  |  |  |  |  |  |
| CAPITOL VIEW | 20 | 97 | 88 | 0.03 | 0.23 |
| COLLIER HEIGHTS | 29 | 97 | 86 | 0.00 | 0.14 |
| PETERSON | 95 | 97 | 81 | 0.18 | 0.13 |
| CRADDOCK | 34 | 96 | 66 | 4.83 | 0.27 |
| ADAMSVILLE | 2 | 94 | 77 | 0.05 | 0.46 |

EFFECTIVE BUT NOT ACCEPTABLE ( GROUP II IONT'D)


NEITHER EFFECTIVE NOR ACCEPTABLE ( GROUP III )

| SCHOOL | SCHOOL | ERA | ARA | CF/ADA | GF/ADA |
| :---: | :---: | :---: | :---: | :---: | :---: |
| NAME | NUMBER |  |  | PER ERA | PER ERA |
| ANDERSON | 3 | 89 | 75 | 0.05 | 0.16 |
| CFNTER HILL | 24 | 89 | 73 | 0.49 | 0.20 |
| FINCH | 43 | 89 | 75 | 0.14 | 0.14 |
| SLATER | 106 | 88 | 71 | 0.19 | 0.23 |
| BREWER | 14 | 87 | 82 | 0.03 | 0.20 |
| - - - - - - | - - | -- | - | - - | - |
| ENGLISH PRIMARY | 41 | 86 | 67 | 6.22 | 0.17 |
| GROVE PARK | 54 | 85 | 72 | 0.01 | 0.18 |
| MILES | 86 | 84 | 82 | 0.20 | 0.26 |
| PEYTON FOREST | 96 | 84 | 87 | 0.08 | 0.15 |
| PARKS ELEM. | 92 | 84 | 62 | 4.52 | 0.84 |
| - - - - - - - | - - - | - - | - - | - - | - - - - |
| THOMASVILLE | 113 | 83 | 67 | 0.91 | 0.38 |
| CHATTAMOOCHEE | 25 | 82 | 72 | 0.19 | 0.17 |
| GORDON | 51 | 82 | 73 | 0.12 | 0.13 |
| BRYANT | 15 | 82 | 67 | 2.53 | 0.35 |
| ENGLISH | 40 | 81 | 68 | 4.79 | 0.23 |
| - - - - - - | - | - - | - - | - - - | - - - |
| HARWELL | 59 | 81 | 75 | 0.08 | 0.17 |
| PRYOR | 98 | 81 | 66 | 8.17 | 0.34 |
| HARDNETT | 56 | 80 | 72 | 1.07 | 0.25 |
| STANTON, FRANK L. | 111 | 80 | 80 | 0.20 | 0.21 |
| FOUNTAIN | 45 | 80 | 69 | 0.16 | 0.22 |
| - - - - - | - - | - | - - | - - - | - - - |
| BEECHER HILLS | 5 | 79 | 79 | 0.23 | 0.16 |
| WRIGHT | 129 | 76 | 79 | 0.00 | 0.23 |
| LAKEWOOD | 81 | 75 | 82 | 0.01 | 0.19 |
| HILL | 63 | 74 | 64 | 2.83 | 0.26 |
| HUBERT | 69 | 73 | 68 | 0.45 | 0.28 |

NEITHER EFFECTIVE NOR ACCEPTABLE ( GROUP III CONT'D )

| SCHOOL NAME | SCHOOL | ERA | ARA | CF/ADA | GF/ADA |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | NUMBER |  |  | PER ERA | PER ERA |
| CROGMAN | 35 | 73 | 67 | 6.70 | 0.22 |
| SLATON | 107 | 72 | 67 | 3.72 | 0.27 |
| ARKWRIGHT | 4 | 71 | 71 | 0.07 | 0.25 |
| BENTEEN | 7 | 71 | 86 | 0.06 | 0.30 |
| EAST LAKE | 39 | 71 | 70 | 0.04 | 0.26 |
| - - - - |  |  |  |  |  |
| HARRIS | 58 | 71 | 70 | 0.25 | 0.27 |
| BUTLER | 17 | 67 | 66 | 1.60 | 0.36 |
| BEN HILL | 6 | 66 | 86 | 0.10 | 0.23 |
| GIDEONS | 48 | 65 | 68 | 3.04 | 0.26 |
| MAYSON | 84 | 65 | 70 | 0.49 | 0.45 |
| - - - - - - - - - - - - - - - - - . - - - |  |  |  |  |  |
| HERNDON | 61 | 64 | 70 | 0.12 | 0.29 |
| WEST | 123 | 64 | 82 | 0.03 | 0.20 |
| TOWNS | 115 | 64 | 72 | 0.59 | 0.27 |
| WALKER | 119 | 64 | 68 | 2.27 | 0.31 |
| DUNBAR | 38 | 61 | 63 | 4.77 | 0.27 |
| - - - - . - - . . . - . . . . . . . . . . - |  |  |  |  |  |
| VENETIAN HILLS | 117 | 54 | 80 | 0.23 | 0.33 |
| HAYGOOD | 60 | 50 | 74 | 1.10 | 0.41 |
| COAN ELEM. | 28 | 50 | 64 | 2.89 | 0.72 |
| SCOTT | 105 | 45 | 62 | 1.63 | 0.39 |
| WALDEN ELEM. | 118 | 38 | 63 | 4.38 | 1.28 |
|  |  |  |  |  |  |
| FOWLER | 46 | 33 | 74 | 0.69 | 0.40 |
| KENNEDY ELEM. | 78 | 33 | 65 | 3.11 | 1.29 |
| AVERAGE |  | 71 | 72 | 1.27 | 0.28 |

NOT EFFECTIVE BUT ACCEPTABLE ( GROUP IV )

| SCHOOL | SCHOOL | ERA | ARA | CF/ADA | GF/ADA |
| :--- | :---: | :---: | :---: | :---: | :---: |
| NAME | NUMBER |  |  | PER ERA | PER ERA |


| CASCADE | 23 | 87 | 93 | 0.11 | 0.15 |
| :--- | ---: | ---: | ---: | ---: | ---: |
| KIMBERLY | 79 | 83 | 92 | 0.12 | 0.18 |
| HOPE, R. L. | 66 | 80 | 102 | 0.01 | 0.25 |
| PERRERSON | 94 | 78 | 94 | 0.00 | 0.17 |
| CONTINENTAL COLONY | 31 | 78 | 95 | 0.20 | 0.16 |
| $-\cdots-$ | - | - | - | - | - |
| WEST MANOR | 125 | 76 | 92 | 0.15 | 0.27 |
| BIRNEY | 9 | 65 | 114 | 0.21 | 0.25 |
| HUTCHINSON | 71 | 62 | 90 | 0.20 | 0.22 |
| AVERAGE |  | 76 | 96 | 0.13 | 0.20 |

CHART III
PERFORMANCE OF SCHOOLS IN READING AND ARITHMETIC BY CLASSIFICATION OF EFFECTIVENESS AND ACCEPTABILITY

FY 72


The analysis of the average effectivene:s of the four groups revealed that a distinct pattern existed between Groups I and II as compared to the performan $n$ in Groups III and IV (see Table III). The average index of effectiveness of Group I was 125 , only 5 points higher than the average index of effectiveness of Group II. The average index of effectiveness for Group III and Croup IV were similar; 71 and 76, respectively. These two groups differed only b:- 5 points, the same as the iifference between the index of effectiveness of Group $\bar{i}$ and Group II. However, attention is called to the fact that Groups III and IV had an average level of performance of approximately 50 points lower than the average index of effectiveness of Groups I and II. The variance or standard deviation of the indices of effectiveness in Groups I and II differea by 9 points, 24 and 33, respectively. The variance of these two groups was quite a bit more than the variance of Groups I • .d IV (15 and 9, respectively).

The index of acce. tability of the four groups did not pair tog?iher as in the case of index of effectiveness. The index of acceptability of Group I was only 11 points higher than the index of acceptability of Group IV (107 and 96 , respectively). The index of acceptability of Groups $1 I$ and III were similar. In fact, they were 2 poirts different ( 74 and 72 , respectively). These data mean that the pupils in Groups $I$ and IV performed at the national norm or above; whereas, those in Groups II and III performed at approximately three-fourths of the national norm. The overall index of acceptability for the 129 schools was 79 (or 79 per cent of the national norm). The variance or standard deviation of the four groups did not differ significantly. The standard deviation of Group I was 10, while that of Group II ws 6. The standard deviation of Groups III and IV were 7 and 8 , respectively. Thus, the average performance as represented by the index of acceptability varied only from 6 per cent to 10 per cent in each group.

Furthermore, specific attention is called to the fact that even though pupils in Groups II and III had similar achievement levels (as shown on the Index of Acceptability), still those in Group II performed much higher in relaticnship to what had been predicted for them than those in Group III (as shown on the Index of Effectiveness). This contrast in performance should be a cause for further analysis.

## Expenditures by Classification of Effectiveness and Acceptability

A significant difference existed among the four groups in the cas of the average expenditure of compensatory funds. Groups I and IV were similar. Group I spent an average of $\$ 11.67$ per ADA for compensatory programs; whereas, Group IV
TABZ̈E III
INDICES OF EFFECTIVENESS AND ACCEPTABILITY,

| Index of Effectiveness (ERA) |  |  |  |  | Index of Acceptability (ARA) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Group |  |  |  |  | Group |  |  |  |  |
| I | II | III | IV | Total | I | II | III | IV | Total |
| 18 | 56 | 47 | 8 | 129 | 18 | 56 | 47 | 8 | 129 |
| 174 | 245 | 89 | 87 | 245 | 123 | 89 | 87 | 114 | 123 |
| 91 | 90 | 33 | 62 | 33 | 90 | 64 | 62 | 90 | 62 |
| 84 | 155 | 56 | 26 | 212 | 33 | 25 | 26 | 25. | 61 |
| 125 | 120 | 71 | 76 | 100 | 107 | 74 | 72 | 96 | 79 |
| 119 | 112 | 74 | 78 | 97 | 108 | 74 | 71 | 93 | 74 |
| 24 | 33 | 15 | 9 | 35 | 10 | 6 | 7 | 8 | 15 |

No. of Schools Maximum
Minimum
Range
Mean
Median
Standard Deviation
spent $\$ 9.95$. The big difference occurred between these two groups and between Groups II and III. The expenditures of the schools in Group II averaged $\$ 118.50$ per pupi- in ADA, the highest of the four groups. Group III was next highest with an average expenditure of $\$ 97.42$ per pupil. The overall average of all four groups (or for the 129 elementary schools) was $\$ 90.64$ per pupil.

The expenditures of the compensatory funds to gain one unit of effectiveness differed among the four groups, particularly between Groups I and IV and between Groups II and III (see Table IV). Groups I and II were similar in that Group I spent $\$ 0.09$ for one unit of effectiveness; whereas, Group IV spent \$0.13. Group II spent $\$ 0.99$ to gain one unit of effectiveness, and Group III, the schools which had the lowest pupil performance spent $\$ 1.37$. The overall average for the 129 schools was an average compensatory expenditure of $\$ 0.90$ to gain one unit of effectiveness.

An interesting situation exists in that there was no significant correlation between the amount of money spent and the effectiveness of the programs. This is true in each of the four groups (see Table V). In other words, effectiveness cannot be nredicted by the amount of compensatory expenditures. (Note: In the schools of Group IV there was a tendency toward a negative relationship between effectiveness and comp $\epsilon$ nsatory expenditures.)

TABLE IV
EXPENDITURES PER UNIT OF EFFECTIVENESS (BASED ON ADA) FOR READING AND ARITHMETIC, FY 72

| Group | Funds |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Compensatory |  | General |  | Total |  |
|  | Per ADA | Per E | Per ADA | Per E | Per ADA | Per E |
| I | \$11.67 | \$0.09 | \$16.39 | \$0.13 | \$28.06 | \$0.22 |
| II | 118.50 | 0.99 | 18.94 | 0.16 | 137.44 | 1.15 |
| III | 97.42 | 1.37 | 20.17 | 0.28 | 117.59 | 1.65 |
| IV | 9.95 | 0.13 | 15.19 | 0.20 | 25.14 | 0.33 |
| All School.s | \$90.64 | \$0.90 | \$18.34 | \$0.19 | \$109.58 | \$1.09 |

TABLE V
INTERCORRELATION OF EFFECTIVENESS ATD EXPENDITURES PER UNIT OF EFFECTIVENESS (BASED ON ADA) FOR READING AND ARITHMETIC, FY 72

|  | Funds |  |
| :---: | :---: | :---: |
| Group | Compensatory | Genera1 |
| I | .274 | -.244 |
| II | .186 | -.121 |
| III | .056 | -.242 |
| IV | -.346 | -.020 |
| All Schools | .117 | -.172 |

No significant correlation coefficients were found.

The situation concerning the expenditures of general funds is not quite the same as that of spending compensatory funds. For example, a higher rate of general funds was spent in Group III schools ( $\$ 20.17$ per pupil in average daily attendance) and in Group II schools (\$18.94) than in Group I and Group IV schools. These are the two groups in which also there was a higher rate of compensatory funds spent. The expenditure of general funds in Groups I and IV did not differ significantly; $\$ 16.39$ and $\$ 15.19$, respectively. The overall average of the general funds per pupil in average daily attendance for the 129 schools was $\$ 18.94$. One might think that the expenditures would be similar in all schools as far as the general funds are concerned. Hcwever, this analysis reveals that not only do the schools with the lowest level of effectiveness receive the highest rate of compensatory funds, but they also receive the highest rate of general funds.

Further analysis of the amount of general funds spent is revealed by a study of how much general funds was spent to gain one unit of effectiveness (see Table IV). Again, the greatest amount was spent in Group III (\$0.28) ; the least amount, in Group I ( $\$ 0.13$ ). The expenditures in Groups II and IV were similar, $\$ 0.16$ and $\$ 0.20$, respectively. In all 129 schools, there was an average of $\$ 0.19$ spent in order to gain one unit of effectiveness. These comparisons are based on the amount spent per pupil in average daily attendance.

As was the case for compensatory funds, effectiveness cannot be predicted by the amount of general funcis spent. For some reason, there is not statistically significant correlation between general expenditures and performance. In fact, there was a tendency toward a negative relationship (see Table V).

The opinions of each local school staff concerning effectiveness and acceptability of pupil progress in reading during FY 72 were sought by the means of a questionnaire. An attempt was not made to identify concerns of effectiveness and acceptability in arithmetic. The decision was made that for the initial analysis by local personnel emphasis would be placed on differences in the reading profile. Responses to the questionnaire were based on the opinions and documentations developed by principals and faculty members. An effort was made to develop a positive attitude toward the improvement of instruction. Consequently, reasons for lower performance were not requested, but reasons for improved performance in FY 72 over FY 71 were sought. In addition, if performance in FY 72 was lower than that in FY 71, the local staff was requested to submit a plan for raising the performance level back to at least the level of FY 71.

There were several sections of the questionnaire. The main ones were:

Section
I

II III

IV

V

VI

VII

## Areas of Interest

Comparison of the index of effectiveness for FY 72 with FY 71 by grade levels.

Comparison of the index of effectiveness for FY 72 among grades within the school.

The trend of pupil progress from grades two through seven as represented by the index of effectiveness.

Comparison of the overall index of effectiveness of grades two through seven for FY 72 with that of FY 71.

Comparison of compensatory and general funds spent on the basis of the number of pupils in average daily attendance.

Variables which were included in the formula that possibly should be eliminated from it.

Other variables which might be included in the formula.

The first part of the analysis of the opinions of the local school staffs concerns the comparison of the index of effectiveness for FY 72 with FY 71 at the same grade level. A difference in progress was defined as a difference of more than 50 points between the indices of effectiveness for the two years. The first portion of this comparison relates to grades in which the index of FY 72 was at least 50 points higher than the corresponding index for FY 71. The second portion relates to the situations in which the performance of pupils was at least 50 points lower in FY 72 than in FY 71. In this latter case, the local schools were asked to develop plans for raising the index during FY 73 to at least the level of FY 71.

The responses of the local schools were divided into three categories: reasons and plans relating to teacher performance or responsibilities, reasons and plans relating to pupil characteristics or responsibilities, and reasons and plans relating to the instructional program or instructional strategies. In fact, responses to all sections of the questionnaire were divided into these three categories.

A total of 26 different reasons was given for the performance in FY 72 to be at leest 50 points higher than the performance in FY 71 for the corresponding grade (see Table VI). These 26 reasons were given a total of 194 times with reasons relating to teacher variables constituting approximately one-half ( 49.6 per cent) of all of the reasons. The second most frequently given reason related to the instructional program, and these constituted 40.4 per cent of all of the reasons given. Thus, the reasons relating to pupil characteristics constituted only 10 per cent of all of the reasons.

It is realized that the coding of the responses according to teacher, pupil; and instructional reasons depended a great deal on the interpretation of a particular response. Consequently, it is conceivable that some of the responses might have been coded under more than one reason. However, a consistent effort was made to code the response according to the emphasis given in the particular comment.

With this possible variance of interpretation in mind, attention is next directed to some of the most frequently given reasons. In the category relating to teacher variables, two reasons were cited most frequently: (a) flexibility of the teacher in her use of difierent and innovative instructional methods in the classroom and (b) the teacher's ability to relate to individual pupils.

The second most frequently cited group of reasons for improved performance in FY 72 when compared with FY 71 related to instructional program variables. One reason constituted about one-haif of all the reasons relating to this variable. The local schools gave emphasis to the availability of reading materials and audio-visual equipment, as well as to the fact that these media were used effectively.

Factors relating to pupil variables were not cited frequently. The two leading ones which were cited constituted only approximately three per cent of all the comments. They related to drill and practice procedures which prepared pupils for taking tests and to the involvement of parents in the school program.

TABLE VI

REASONS FOR HIGHER PERFORMANCE AND PLANS FOR IMPROVING PERFORMANCE
IN CORRESPONDING GRADES, FY 71 AND FY 72

| Reason Higher Pe $\qquad$ | for <br> formance 72 | Plans for lmproving Performance |  | Differences Between Indices of Effectiveness of Same Grade, FY 71 and FY 72 |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Frequency Per Cent |  | Frequency | Per Cent |  | Variables |
| I. Teacher Variables |  |  |  |  |  |
| 27 | 13.9 | 28 | 12.3 | (1) | Innovative classroom methods. |
| 5 | 2.6 | 0 | 0.0 | (2) | Same teacher with same children over a period of years. |
| 2 | 1.0 | 5 | 2.2 | (3) | Effective use of teacher aides. |
| 12 | 6.2 | 5 | 2.2 | (4) | Low pupil-teacher ratio. |
| 17 | 8.8 | 20 | 8.8 | (5) | Excellent preparation and training. |
| 3 | 1.6 | 1 | 0.4 | (6) | Utilization of the library. |
| 4 | 2.1 | 1 | 0.4 | (7) | Excellent classroom discipline. |
| 2 | 1.0 | 2 | 0.9 | (8) | Low teacher turnover. |
| 20 | 10.3 | 27 | 11.8 |  | Instructional program which emphasizes the individual. |
| 4 | 2.1 | 7 | 3.1 | (10) | Team teaching. |
| 96 | 49.6 | 96 | 42.1 |  | Total |


| Reasons for <br> Higher Performance <br> in FY 72 | Plans for <br> Improving <br> Performance | Differences Between Indices of <br> Effectiveness of Same Grade, |
| :---: | :---: | :---: |
| Frequency Per Cent Frequency Per Cent | FY 71 and FY 72 |  |

II. Pupil Variables

| 2 | 1.0 | 7 | 3.1 | (11) | Wholesome pupil attitudes. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 0 | 0.0 | 1 | 0.4 | (12) | Very bright and well prepared pupils. |
| 3 | 1.6 | 1 | 0.4 | (13) | Pupils in the same instructional program for a period of years. |
| 1 | 0.5 | 0 | 0.0 | (14) | Fewer emotionallv disturbed children. |
| 5 | 2.6 | 1 | 0.4 | (15) | Drill and practice procedures to condition pupils to testing. |
| 5 | 2.6 | 8 | 3.5 | (16) | Parental involvement. |
| 4 | 2.1 | 0 | 0.0 | (17) | Good pupil attendance. |
| 20 | $\overline{10.4}$ | 18 | 7.8 |  | Total |
|  |  | III. | ructio | ram | Variables |
| 3 | 1.6 | 3 | 1.3 | (18) | Assistance from area resource personnel. |
| 32 | 16.5 | 30 | 13.2 | (19) | Effective use of additional reading materials and audiovisual equipment. |
| 11 | 5.7 | 17 | 7.5 | (20) | Effective use of tests as instructional tools to motivate pupils. |
| 4 | 2.1 | 7 | 3.1 | (21) | Administration of tests. |
| 6 | 3.1 | 23 | 10.1 | (22) | Effective compensatory programs. |
| 12 | 6.2 | 8 | 3.5 | (23) | Effective use of CIP resources. |
| 6 | 3.1 | 1 | 0.4 | (24) | More departmentalization. |
| 3 | 1.6 | 18 | 7.9 | (25) | Effective grouping of pupils. |
| 1 | 0.5 | 7 | 3.1 | (26) | Established behavioral objectives were commensurate with pupil needs. |
| 78 | 40.4 | 114 | 50.1 |  | Total |
| 194 | 100.0 | 228 | 100.0 |  | GRAND TOTAL |

The second portion of the analysis of the comparison of FY 72 with FY 71 dealt with the plans for restoring performance in FY 73 to at least the level of performance in FY 71 (see Table VI). For the schools responding, the value of the index of effectiveness was at least. 50 points lower in $F Y 72$ than it had been in FY 71.

A total of 228 plans were suggested for grades two thiough seven. About one-half the plans related to instructional program variables, and about 40 per cent of them related to teacher variables. Again, pupil variables were cited with the least frequency ( 8 per cent). The most cited instructional plan related to the use and availability of reading materials and audio-visual equipment and to the manner in which they were to be used, so that their effectiveness would be increased. The next most frequently cited plans related to teacher variables and, more specificaliy, to the use of innovative methods and the manner in which the teacher deals with the individual pupils. This latter group of plans seemed to focus on developing pupil-centered versus subject-centered activities. Even though pupil characteristics were not frequently cited as the chief elements of plans to improve pupil performance, the two pupil characteristics which were most frequently cited related to improving the pupils' attitudes toward school and to the greater involvement of parents in the instructional program.

The next portion of the analysis of the opinions of the local staff is a comparison within a school of the index of effectiveness among the different grades. The first portion deals with the reason the index of effectiveness in certain grades was at least 50 points higher than the overall average for the school during FY 72.

There was a total of 26 different reasons given (see Table VII). These 26 reasons were used a total of 90 times. Approximately one-half of the reasons related to teacher variables and one-fourth to each of the other two, respectively (pupil variables and instructional program). By far the most frequently cited reason among all of the variables related to the teacher's manner in the class room and her use of innova:ive methods. This one reason constituted about one-fourth of all of the reasons given. The next most frequently cited reason dealt with pupil characteristics: preparation of the pupils and the fact that the pupils who remained within the particular instructional situation improved more rapidly than those who had moved rather frequencly. Stability, therefore, seems to have been the key in this particular reason. The local staffs were concerned with the pupils' remaining in a school setting and receiving consistent instruction over several years. The third most frequently cited reason dealt with the instructional program and, more specifically, stressed the cffective grouping of pupils.

## TABLE VII

REASONS FOR HIGHER PERFORMANCE AND PLANS FOR IMPROVING PERFORMANCE
AMONG GRADES WITHIN A SCHOOL, FY 72

Reasons for Higher Performance in FY 72

Plans for
Improving Performance

Differences of Indices of Effectiveness Among Grades of Same School, FY 72

Frequency Per Cent
Frequency Per Cent
Variables
I. Teacher Variables

| 21 | 23.3 | 16 |
| ---: | ---: | ---: |
| 4 | 4.4 | 3 |
| 2 | 2.2 | 6 |
| 7 | 7.8 | 8 |
| 0 | 0.0 | 1 |
| 4 | 4.4 | 2 |
| 5 | 5.6 | 13 |
| 0 | 0.0 | 1 |
| 0 | 0.0 | 1 |
| 1 | 1.1 | 1 |
| 0 | 0.0 | -1 |
| 44 | 48.8 | 53 |


| $1 . .3$ | (1) Innovative classroom methods. |
| ---: | :--- |
| 2.3 | (2) Effective use of teacher aides. |
| 4.6 | (3) Low pupil-teacher ratio. |
| 6.2 | (4) Excellent preparation and training |
| 0.7 | (5) Effective utilization of the library. |
| 1.5 | (6) Tmproved classroom discipline. |
| 10.0 | (7) Instructional program which. |
| 0.7 | (8) emphasizes tine individual. |
| 0.7 | (9) Team teacher diction. |
| 0.7 | (10) Consistent follow up in the |
| 0.7 | (11) Reduced teacher turnover. |
| instructional program. |  |

II. Pupil Variables


| 3 | 3.3 | 7 | 5.4 |  |
| :---: | :---: | :---: | :---: | :---: |
| 3 | 3.3 | 0 | 0.0 | (24) Effective use of CIP resources. |
| 8 | 8.9 | 10 | 7.7 | (26) Effective grouping of pupils. |
| 22 | 24.3 | 65 | 50.1 | Total |
| 90 | 99.7 | 130 | 99.5 | GRAND TOTAL |

The second portion of the analysis of the differences among the grades in their index of effectiveness examines plans for improving thnge grades in which the index of effectiveness was at least 50 points lower than the overall index of effectiveness for the particular school. Among the plans cited, approximately one-half stressed changes in the instructional program, and about 40 per cent stressed changes in teacher-related variables. The most cited reason in the former group identified again the effective use of additional reading materials and audio-visual equipment. In the teacher-variable group, two ,reasons led the list: the teacher's use of innovative materials and methods and her desire to relate to pupils on an individual basis. Even though pupil relatad variables constituted only 9 per cent of all the reasons given, the most frequently cited reason in this category concerned parental involvement. Examination of Table VII reveals the various reasons given and the frequencies cited.

The third portion of the analysis of the opinions of local staffs deals with a comparison of sitiations in which the lower and upper grades consistentiy differed (see Table ViII).

The lower grades, in general, were consistently higher than the upper grades. Reasons relating to improved pupil performance stressed two instructional variables: effective use of additional and improved reading materials and audio-visual equipment and the use of improved grou;ing practices -- grouping of pupils according to their performance levels. Closely following the instructional related variables, which were cited as approximately half of the reasons for improved performance, are the reasons related to teachers. The most frequently cited reasons of the teacher variables stressed the teacher's ability to relate to the pupil individually, to use innovative methods, and to conduct an individualized instructional program. Also, her preparation and training were recognized as being important. The third group of reasons, the pupil related variables, constituted about 10 per cent of all the reasons given. Among these, by far the most frequently cited, was involvement of parents in the instructional program. Additional reasons for improved performance can be gleaned from Table VIII.

PLANS FOR IMPROVING PERFORMANEE IN EITHER THE LOWER OR UPPER GRADES IN WHICH THE INDEX OF EFFECTIVENESS WAS CONSISTENTLY LOWER

| Plans for Improving Performance |  | Variables |  |
| :---: | :---: | :---: | :---: |
|  | Per |  |  |
| Frequency | Cent |  |  |
| I. Teacher Varjables |  |  |  |
| 8 | 7.8 | (1) | Innovative classroom methods. |
| 8 | 7.8 | (2) | Effective use of teacher aides. |
| 4 | 3.9 | (3) | Low pupil-teacher ratio. |
| 8 | 7.8 | (4) | Improve preparation and training of teachers. |
| 1 | 1.0 | (5) | Utilization of the library. |
| 1 | 1.0 | (6) | Improve classroom discipline. |
| 12 | 11.7 | (7) | Institute an instructional program which emphasizes the pupil. |
| 1 | 1.0 | (8) | Develop a consistent follow up program. |
| 43 | 42.0 |  | Total |
| II. Pupil Variables |  |  |  |
| 2 | 1.9 | (9) | Develop wholesome pupil attitudes. |
| 1 | 1.0 | (10) | Persuade parents of high achievers not to put their children into private schools. |
| 1 | 1.9 | (11) | Keep pupils in the same instructional program for a period of years. |
| 1 | 1.0 | (12) | Develop drill and practice procedures to condition pupils to taking tests. |
| 7 | 6.8 | (13) | Increased parental involvement. |
| 12 | 11.7 |  | Total |
| III. Instructional Program Variables |  |  |  |
| 3 | 2.9 | (14) | Increased assistance from school area personnel. |
| 14 | 13.6 | (15) | Obtain more effective tse of additional reading materials and audio-visual equipment. |
| 6 | 5.8 | (16) | Effective use of tests as instructional tools to motivate pupils. |
| 6 | 5.8 | (17) | Effective compensatory programs. |
| 6 | 5.8 | (18) | Effective use of CIP resources. |
| 13 | 12.6 | (19) | Improve practice of grouping pupils. |
| 48 | 46.5 |  | Total |
| 103 | 100.2 |  | GRAND TOTAL |

The local staffs were of the opinion that overall effectiveness can be gained by stressing mainly two variables which relate to the instructional program and three variables which relate to teachers (see Table IX). Instructional and teacher related variables were cited approximately equally ( 46 per cent and 44 per cent, respectively). The reasons given in the order of their frequency were: effective use of additional and improved reading materials and audiovisual equipment ( 16 per cent); the use of innovative teaching methuds, such as having pupils to write poetry or stories about themselves or to participate in contests (13 per cent); the teacher's ability to relate on an individual basis to the various pupils ( 13 per cent); preparation and training of teachers (12 per cent); and improved grouping practices, or grouping based on pupil performance (10 per cent).

Opinions of the local staffs concerning ways to gain a significant correlation between the use of funds and improved pupil progress revealed two main ways. Over half of their opinions concerned teacher variables, and about one-third concerned instructional variables (see Table X). The most frequently cited suggestions are given below in a descending order of the frequencies cited: decrease the pupil-teacher ratio ( 14 per cent); increase individualization of instruction ( 14 per cent); make greater use of paraprofessiunals, such as teacher aides ( 12 per cent); and obtain more and improved reading materials and make more effective use of these materials and of audio-visual equipment ( 10 per cent).

The last two sections of the analysis of opinjons of the local school personnel concerning pupil performance deal with the variables which might be eliminated from the model and other variables which might be considered for inclusion. Regarding suggestions of variables which might be eliminated, only $3<$ responses were made, and 23 of the 32 were concerned with the inclusion of the per cent of pupils' passing. The desire to eliminate this variable seemed to be based on the fact that the guidelines for determining pupil failures are not clearly defined and that teachers in a local school, much less in different schools, vary in determining whether or not a pupil should be passed or failed.

TABLE IX
PIANS FOR IMPROVING THE OVERAI.L EFFECTIVENESS IN SCHOOLS IN WHICH THE INDEX OF EFFECTIVENESS WAS AT LEAST 50 POINTS LOWER IN FY 72 THAN IN FY 71


TABLE X

## SUGGESTED WAYS FOR INCREASING THE CORRELATION betneen THE AMOUNT OF FUNDS SPENT AND PUPIL PROGRESS

| Frequency | Per <br> Cent |
| :---: | :---: |
| 6 | 5.0 |
| 2 | 1.7 |
| 15 | 12.4 |
| 17 | 14.1 |
| 9 | 7.4 |
|  |  |
| 1 | 0.8 |
| 1 | 0.8 |
| $\frac{17}{68}$ | 14.1 |
|  | 56.3 |

I. Teacher Varish :
(1) Imnlement imovative methods of i...........
 of chilaren for several years.
(3) Make more extensive use of f..a: rnesesjonals.
(4) Decrease the pupil-teaciser ratio.
(5) Improve the preparation and traibilia of teachers and encourage :hem to irprove their daily lesson plans.
(6) Maincain c!dssroom discipline.
(7) Cease using negative reinforcement.
(8) Have more individualized instruction.「•••1
II. Pupil Variabies
(9) Try to improve the pupils' attitudes.
(10) De no: $\therefore$ nsisier emotionally disturbed c: : 3 ? $\cdot$ a in cratution activities.
(11) Try to obtait: $\therefore$ hich level of parental involvenirit.
(12) Improve pupii attendance.

Total
III.

Instructional Progran Uariables
(13) More erfectively use the assistance of area resource personnel.
(14) Effectively use additional resource materials and audio-visual equipment.
(15) Use tests more effectively to motiväd $\because$ ?pils and to assess their learning needs.
(16) More effectively use the compensatory prograns.
(17) More effectively use CIP resources.
(18) Improve practices of grouping pupils.
(19) Set behavioral objectives in accordance with pupil needs.

| Frequency | Per <br> Cent |
| :---: | :---: |
| 1 | 0.8 |
| 1 | 0.8 |
| 6 | 5.0 |
| 3 | 2.5 |
| 41 | 33.8 |
| 121 | 100.1 |

## Suggestions

(20) Stop spending so much money on testing.
(21) Increase teacher participation in determining how money will be used within the local schools.
(22) Take care of the nutritional needs of the children.
(23) Improve the evaluation of pupil progress.

Total
GRAND TOTAL

Greater attention was given to variables which might be included in the model. In fact, there were 17 different variables suggested for a total of 90 times (see Table XI). More than one-half of the suggestions concerned the following four variables: attendance of teachers (17 per cent), turnover of teachers ( 14 per cent), ability level of pupils (14 per cent), and educational background of parents ( 12 per cent). A scanning of Tables $X$ and XI will reveal the extent that the variables were suggested for either elimination or inclusion, respectively.

TABLE XI
OTHER VARIABLES WHICH MIGHT BE CONSIDERED FOR I ${ }^{\text {CE }}$ IN THE FORMULA FOR PREDICTING PUPIL PROGRESS

| Frequency | Per <br> Cent | Variables |
| :---: | :---: | :---: |
| 13 | 14.4 | (1) Ability of pupils. |
| 11 | 12.2 | (2) Educational background of parents. |
| 6 | 6.7 | (3) Techniques used in managing the classroom situation. |
| 13 | 14.4 | (4) Turnover of teachers. |
| 2 | 2.2 | (5) Health of pupils. |
| 3 | 3.3 | (6) Involvement of parents. |
| 2 | 2.2 | (7) Management of the school by the principal. |
| 1 | 1.1 | (8) Socio-economic level of the pupil by an index other than receiving free lunches. |
| 5 | 5.6 | (9) Attitudes of the pupils. |
| 15 | 16.7 | (10) Attendance of teachers. |
| 2 | 2.2 | (11) Attendance of pupils. |
| 8 | 8.9 | (12) Experience and qualifications of teachers. |
| 1 | 1.1 | (13) Attitudes of teachers. |
| 1 | 1.1 | (14) Racial make-up of classroom. |
| 2 | 2.2 | (15) Mobility of pupils. |
| 3 | 3.3 | (16) Sex ratio. |
| 2 | 2.2 | (17) Amount of money spent to employ people who work directly with the pupils rather than including auxiliary personnel such as lead teachers, social workers, and librarians. |
| 90 | 99.8 | Total |

## Profiles of Local Schools

An analysis of the effectiveness of the instructional program and of the acceptability of the level of achievement can best be shown by examining the data of each individual school. In making the analysis, attention should be given to the grossness of the cata, the the approximation of achievement which the data represent, and to the establishment of an index of 90 or above as representing performance as predicted or petormance as being equal to or higiner than the national norm.

The profiles of effectiveness and acceptability $r £$ the reading and arithmetic programs are subsequentlv giwn (iee ame (inix) in chart form eur grales two
 numerical data from which more specific information can be gleaned concerning deviations and trends within an individual school, porformance in reading during FY 71 and FY 72, and performance in arithmetic during FY 72. In addition to the data concerning effectiveness and acceptability, informdtion is given concerning expenditure per unit of effectiveness for each pupil in average daily attendance for FY 72. A comparis on of local school expenditures can be made with the system-wide averages.

In making the analysis of elfectiveness anc wocptabilitv oi the reading and arithmetic programs, attention should be directed to the trends and to the deviations of the data. For analysis and comparison, the data concerning reading are given for FY 71 and for FY 72 by grades. The graph is designed so that the diff, nes between years and among graues can be determined by visual inspecioion. For cxample, in the case of Adair School, the gain rate of effectiveness of reading in the second grade decreased from an index of 200 in FY 71 to -50 in FY 72; whereas, the same index for the fifth grade increased from 20 in FY 71 to 200 in FY 72. The overall effectiveness for grades two through seven decreased from 107 in FY 71 to $\partial \ddot{\ell}$ in FY 72. In general, effectiveness in FY 71 was rather uniform with the exception of two grades, the fifth and the seventh ( 20 and -33 , respectively). The effectiveness in FY 72 was more sporadic with performance in three grades being as predicted or better than predicted and in three other grades being less than predicted. The performance in the fourth, fitth, and sixth grades was as predicted; whereas, the performance ir. the corond, ihird, and seventh rrades was less than predicted. In other words, it might be said that the performance in the fourth grade and in the sixth grade was similar for the two years and was equal to or higher than predicted.

The index of the gain rate of effectiveness in arithmetic is given only for FY 72. In general, the index of effectiveness at Adair was higher in arithmetic than in reading. The performance among the grades was more consistent than in reading. The index in the third grade was low for both reading and arithmetic during FY 72 ( 75 and 40, respectively). A great difference existed between reading and arichmetic in the second grade and in the seventh grade. The gain rate of effectiveness during $F Y 72$ in the second grade reading was -50 as compared to 150 for arithmetic. In the seventh grade, the gain rate of effectiveness in reading during FY 72 was 40 ; whereas, the similar index n arithmetic was 150. The overall index of effectiveness during FY 72 for grades two through seven was higher, almost twice as high, in arithmetic than in reading ( 168 as compared to 88 ).

The index of acceptability (or the relationship of performance to the national norm) decreased in reading during FY 72 at Adair as compared to the index in FY 71. This decrease was from 73 to 67 . As far as pupil performance in arithmetic is concerned. it was almost at the level of the national norm. In fact, it was 85 per cent of the national norm.

As far as the overall effectiveness and acceptability indices for the combination of reading and arithmetic are concerned, Adair School was classified as a Group II school: effective but not acceptable (128 and 76, respectively).

The expenditure per unit of effectiveness during FY 72 from general funds and from compensatory funds was not as high as the respective expenditures for the city. Adair School spent a total of $\$ 0.19$ from these two sources in order to gain one unit of effectiveness; whereas, the average of all of the elementary schools was $\$ 1.09$. On an average, the elementary schools throughout the school system spent from general funds $\$ 0.19$ to gain one unit of effectiveness, while Adair School spent only \$0.11. Similarly, throughout the school system the elementary schools spent from compensatory funds $\$ 0.90$ for one unit of effectiveness as compared to Adair's spending $\$ 0.08$.

In general, the profile of effectiveness of the reading program at Adair School during FY 72 represented rather consistent and high performance in certain grades and inconsistent and relatively low performance in other grades. The effectiveness of the arithmetic program represented greater consistency and higher performance than the efrectiveness of the reading program. There was, however, one low performing grade in both reading and arithmetic. Further, Adair's expenditures for one unit of effectiveness was about one-sixth of the average of all of the elementary schools.

The analysis of pupil performance during FY 72 resulted in the formulation of the following conclusions concerning the effectiveness and acceptability of the reading and arithmetic programs and the expenditures from general and compensatory funds:

1. Because of the consistency of the intercorrelations among the factors used in the model to predict pupil performance, the following generalizations can be made:
a. There was a positive and significant correlation in grades two through seven between:
(1) attendance of pupils and stability of pupils
(2) attendance of pupils and paid lunches
(3) attendance of pupils and pretest scores
(4) attendance of pupils and posttest scores
(5) paid lunches and pretest scores
(6) paid lunches and posttest scores
(7) pretest and posttest scores.
b. There was a negative and significant correlation in grades two through seven between:
(1) pupil-teacher ratios and pretest scores
(2) pupil-teacher ratios and posttest scores.
c. There was a negative and significant correlation in the third grade between attendance of pupils and pupil-teacher ratios.
d. There was a positive and significant correlation in fourth grade arithmetic between stability of pupils and per cent of pupils passing.
e. There was a negative and significant correlation in the seventh grade between paid lunches and pupil-teacher ratios.
f. There was a negative and significant correlation in the third grade between:
(1) per cent passing and pretest arithmetic scores
(2) per cent passing and posttest arithmetic scores.
2. Mure than half of the schools performed as predicted and, consequently, were classified as being effective.
3. Only about one-sixth of the schools performed equal to or better than the national norm and could be classified as being acceptable.
4. Effectiveness cannot be predicted by the amount of funds spent, neither compensatory nor general funds.
5. There was a tendency toward a negative relationship between the amount of general funds spent and pupil performance. In other words, there was a tendency to spend a greater proportion of general funds in the lower performing schools than in the higher performing schools.
6. Schools classified as being effective and not acceptable (classification II) and those classified as being neither effective nor acceptable (classification III) performed decidedly differently. Even though the levels of acceptability of these two groups were approximately the same, schools in Group II were about 70 per cent more effective than the schools in Group III.
7. Essentially, three reasons wer a given for improved pupil performance: innovative classroom methods, teachers who related to pupils and who individualized instruction, anl effective use of additional reading materials and audio-visual aıds. These three variables were the main ones stressed in plans to inprove instruction. Two other variables seemed to emerge, which should receive additional attention: (a) drill and practice procedures which condition pupils to taking tests and (b) parental involvement. Also, in general, these five variables were suggested as the main ones for increasing the correlation between the amount of funds spent and pupil progress.
8. The one variable now included in the formula which was strongly suggested for elimination was the per cent of pupils passing.
9. Two teacher variables and two pupil variables were suggested by more than ten schools for consideration to be included in the formula: (a) the ability of the pupils and the educational background of their parents and (b) teacher attendance and teacher turnover.

## V. RECOMMENDATIONS

The following recommendations are made based on the findings of this siudy :

1. Careful analysis should be made of the manner in which schools use additional materials and funds. This study shows that it is not the quantity of these two resources which makes the difference but the quality of their use.
2. Increased attention should be given to the use of innovative classroom procedures; but, above all, it seems that these should be accompanied by the personalized manner in which tnese methods are used. Also, it seems that this is another way of saying that there is a need to develop further the understanding of people's reactions (both teacher's and pupil's), to help each group to understand the cause and effect relationships, to use problem-solving techniques, and to promote positive reinforcement of behavior. The use of innovative instructional methods would most likely be a natural outgrowth of these actions.
3. Extensive study should be made of the differences between pairs of schools in which their acceptability levels are, for all practical purposes, equal but their respective effectiveness differs extensively. Pupils with similar characteristics are not performing similarly from school to school, as evidenced by the differences between Group II and roup III schools.
4. Additional assistance should be given to helping local staffs to diagnose the lack of pupil performance, particularly in those schools in which effectiveness is rather low. Particular attention might well focus on the decision-making process of the school and on the emphasis given to process and product. What value is the process if it does not yield the specified product? Hence, predetermination of the desired product is most important. In general, do not people tend to perform as they are expected to perform?
5. Encouragement should be given to all schools to begin considering the development of plans for implementing an instructional management system (a) in which the objectives of the curriculum are clearly and specifically stated in behavioral terms, (b) in which available resources and strategies for accomplishing these objectives are efficiently utilized, and (c) in which appropriate data on pupil progress serve to promote fully each pupil's efforts in accomplishing the stated objectives. In fact, this recommendation might well be a system-wide effort.
6. Accountability involves at least two processes: teaching and learning. These are different but related processes. The former has traditiorally been delegated to the role of the teacher; the latter, to the pupil. Profitable results might well be obtained if more emphasis were given to learning, particularly if pupil performance continues as one of the primary goals of the school system.
PROFILE of effectiveness and acceptability
OF READING AND ARITHMETIC PROGRAMS,1971-72



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OF READIMG AND ARITHETIC PROGRATS,1971-72
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PROFILE OF EFFECTIVENESS AMD ACCEPTABILITY
OF READING AHD ARITH:IETIC PROGRAIS,1971-72
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GAIN-RATE QE EEFECTIVENESS (E)





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PROFILE OF EFFECTIVENESS AND ACCEPTABILITY
OF READING Alld ARITV＇ETIC PROGRA＇IS，1971－72
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PROFILE OF EFFECTIVEN:SS AMD ACCEPTABILITY
OF READING AIID APITHEETIC PROGRA'S,1971-72



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EXPENDITURE PER UNIT OF EFFECTIVENESS (PER ADA) FOR FY 72:



PROFILE OF ETFECMIVEMESS AND ACCFPTABILITY
OF READIMG AIID ARIT!!?MIC PRJGRAM,1971-72





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PROFILE OF EFFECTIVENESS AND ACCEPTABILITY
OF READING AND ARITHMTIC ERGGRAM.1971-72
CARTER ELEMENTARY SCROOL GROUP II: EFFECTIVE BUT NOT ACCEPTABLE


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PROFILE OF RFFECTIVENESS AND ACCPDTABILITY
OF PEADING AND ARITHMETIC PROCRA'S,1971-72
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OF READING AND ARITIUTTIC PROCRAMS.1971-72


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OF READING AMD ARITH＇ETIC PROGRA＇S，1971－72
COLLIER HEIGHTS ELEMENTARY GCHOOL GROJP II：ERFECTIE BUM HOT ACCEPTABLE


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PROFILE OF EFFECTIVEMFSS ARD ACCEPTABILITY
OF READING AND ARITY:ETIC PROGRAN,1971-72
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GFADE LEVEL (APRIL 1972)


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OF READING AYD AFITU!ETIC PROG:MA:S,1971-72







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PROFILE OF FFFECTIVENESS AND ACCEPTABILITY
OF READING AND ARIM？RTIC P？OCRA：C，1971－72
FINCH ELEITENTAPY SCHOOL GROUP III：NETTHER ERFECTIYE NOR ACCEPTABLE



：EFFECTI $\uparrow$ A AND ACCEPTABLE LEVEL OF PERFORMANCE

INDEX OF ACCEPTABILTTY（A）

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 GAIN－RATE OE EFEECTIVENESS（E） |  | $R E A D I N G$ |  | $A R I T H$ | ARITH |
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| 2 | 120 | 75 | 67 | 71 |
| 3 | 133 | 56 | 55 | 56 |
| 4 | 17 | 100 | 100 | 100 |
| 5 | 67 | 100 | 75 | 88 |
| 6 | 0 | 0 | 60 | 30 |
| 7 | 69 | 79 | 98 | 89 |

EXPENDITURE PER UNIT OF EFFECTIVENESS（PER ADA）FOR FY 72：
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OF READING AND ARITMMETIC PROGPA.'S,1971-72
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 GAIN-RATE OF EFEECTIVENESS (E)

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PROFILE OF SERECTYGMFSS AVD ACCEPTABILITY
OF READIMG AVD APTMMETIC PROGRA'S,1971-72





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OF PEADING AND APITHITTIC PROGRANS,1971-72



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| 5 | 178 | 50 | 140 | 95 |
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GAIN-RATE OF EEFECTIVENESS (E)





EYPENDITURE PER UNIY OF EFFECTIVENESS (PER ADA) FOR FY 72:
PROFILE OF EFFECTIVEHESS AND ACCEPTABILITY
OF READING ANL ARITHMETIC PROGRAMS.1971-72



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PROFILE OF EFFECTIVENESS AND ACCEPTABILITY
OF READING AND ARITHMETIC PROGRAMS，1971－72


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PROFILE OF EEFECTIVENESS AND ACCEPTABILITYY
OF READING All ATITHMETIC PROCRA：IS，1971－72
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PROFILE OF EFPECTIVEMESS AND ACCEPTABILITY
OF READING AND ARITHIETIC PROGRA1S,1971-72
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OF READING AIID ARITHINTIC PROGRA：S， $1971-72$
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PROFILE of EFEECTIVENESS AND ACCEPTABILITY
OF READING AND ARITHMETIC PROGRAMS,1971-72
herndon elementary school group ili: neither effective nor acceptable

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EXPENDITURE PER UNIT OF EFFECTIVENESS (PER ADA) FOR FY 72: GENERAL
PROFILE OF EFGECTIVEHESS AND ACCEPTABILITY
OF READING AND ARITHMETIC EROGRAMS,1971-72
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PROFILE OF EFEECTVENESS AND ACCEPTABILITY
OF READING AND ARITHMETIC PROCRAMS $1971-72$
hill elementary school group ini : neither effective nor acceptable





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OF READING AND ARITHIETIC PROGRAMS,1971-72
HOME PARK ELEMENTARY SCHOOL GROUP I: EFFECTIVE AND ACCEPTABLE PROFILE OF EFFECTIVENESS AND ACCEPTABILITY
OF READING AND ARITHIETIC PROGRAMS,1971-72
HOME PARK ELEMENTARY SCHOOL GROUP I: EFFECTIVE AND ACCEPTABLE



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EXPENDITURE PER UNIT OF EFFECTIVENESS
PROFILE OF EFFECTIVENESS AND ACCEPTABILITY
OF READING AND ARITHMETIC PROGRAMS,1971-72
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OF READING AND ARITH'ETIC DPOCRA:': $1971-72$ HoNELL, E. P. ELE!ENTATY sCHOOL GPOUP II: EFFECTIVE BUT NOT ACCEPTABLE

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GAIN-RATE OE EEFECTIVEMESS (E)
GRADE LEVEL (ARPIL 1972)

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PROFILE OF EFFECTIVENESS AIID ACCEPTABILITY
OF READTMG AND ARITMIETIC PROGRA'S,1971-72
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OF READING AND ARITHIETIC PROGRAMS,1971-72
hutchinson ele?entary school group iv: not effective but acceptable

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ACTUAL SYSTEL-WIDE ACCEPTABLE



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PROFILE OF EFFECTIVENESS AND ACCEPTABILITY
OF READING AMD ARITHMETIC PROGRA! $!$, 1971-72 OF READING AMD arIthaetic prograis,1971-72
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PROFILE OF EFFECTIVENESS AND ACCEPTABILITY
OF READING AND ARITHIETIC PROGRAMS,1971-72 OF READING AND ARITHIETIC PROGRAMS,1971-72
JACKSON ELEMENTARY SCHOOL GROUP I: EFFECTIVE AND RDG + ARITH

PRCFILE OF EFFECTIVENESS AND ACCEPTABILITY
OF READING AND ARITHIUTIC PROGRAMS,1971-72

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EXPENDITURE PER UNIT OF EFFECTIVENESS (PER ADA, FOR FY 72:

PROFILE OF EFFECTIVENESS AND ACCEPTABILITY
OF READING AND ARITHMETIC PROGRAMS,1971-72
jones, jerome elefientary school group in: effective but not acceptable




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EXPENDITURE PER UNIT OF EFFECTIVENESS (PER ADA) FOR FY 72:
GAIN-RATE OF EFEECTIVENESS (E)


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PROFILE OF EFFEGTIVENESS AND ACCEPTABILITY
OF READING AND ARITHMETIC PROGRAMS,1971-72
jones, jessie mae elementary school group it: effective but not acceptable



2-7
E:EFFECTIVENESS $A$ :ACCEPTABILITY $\quad \mathrm{U}: E$ and a are equal

PROFILE OF EFFECTIVENESS AND ACCEPTABILITY
OF READING All ARITHMETIC PROGRAMS,1971-72
JONES, $\mu$. AGNES ELEMENTARY SCHOOL GROUP II: EFFECTIVE BUT NOT ACCEPTABLE



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OF READING AND ARITHUETIC PROGRAMS，1971－72



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PROEILE OF ECEECTIVENESS AYD ACCEMTARILITY
OF READING AYO ARTT!I'ETIC PROGRA:'S,1971-72


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PROFILE OF EFFECTIVEHESS AZD ACCPPTABILITY
OF pEADIMG All ARITHTETIC PROGRAMS,1971-72
LUCHIF ELE! Tittary sChool group it : erfective but not acceptable





PROFILE OF EFFECTIVENESS AND ACCEPTABILITY
OF READING AHD ARITHMETIC PROGRAMS，1971－72
mCCLATCHEY elementaky school group I：effective and acceftable


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ACCEPTABLE
$(M A T: L H O R M)$



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PROFILE OF EFFECTIVENESS AND ACCEPTABILITY
OF READING AMD ARITHMETIC PROGRAMS，1971－72

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GAIN－RATE OF EFFECTIVENESS（E）
PROFILE OF EFFECTIVENESS AND ACCEPTABILITY
OF FEADING AND ARITMMETIC PROGRASS，1971－72
mitchell eleuentary school group i：effective akd acceptable





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GAIN－RATE QE EEEEGTIVETESS（E）
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SROFILE OF EFFECTIVENESS AND ACCEPTABILITY
OF READIIU AND ARITHMETIC PROGRAMS,1971-72







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EXPENDITURE PER UNIT OF EFFECTIVENESS (PER ADA) FOR FY 72 :
PROFILE OF EFFECTIVENESS AND ACCEPTAHILITY
OF READING AND ARITHMETIC PROGRAMS,1971-72

PROEILE OF EFFECTIVEMDSS AND ACCEPTABILITY
OE READIMG A：DD ANITYTTYC PROGRA＇S，1971－72


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GRARE LEYEL (APRIL 1972)


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PROFILE OF EFFECTIVENESS AND ACCEPTABILITY
PEEPLES ELEMENTARY SCHOOL GROUP II: EFFECTIVE BUT NOT ACCEPTABLE


: EFFECTIVE AND ACCEPTABLE LEVEL OF PERFORMANCE


GAIN-RATE QF EEFECTIVENESS (E)


IUDEX OF ACCEPTABILITY (A)
$\begin{array}{r}\text { ARITH } \\ \text { FY72 } \\ \hline 85\end{array}$
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PROFILE OF EFFECTIVENESS AND ACCEPTABILITY
OF READING AND ARITHMETIC PROGRAH,1971-72
perkerson elementary school group iv: not effective but acceptable

INDEX QE ACCEPTABILITY (4)
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CPADE LETFL (APPIL 1972)


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| GRADE | 71 | 72 | 71 | 72 | 71 | 72 | 71 | 72 | 71 | 72 | GAIN-RATE OE EFEECTIVENESS (E)


$E: E F F E C T I V E N E S S \quad A: A C C E P T A B I L I T Y \quad \square: E$ AND A ARE EQUAL


PROFILE OF EFFECTIVENESS AND ACCEPTABILITY
OF READING AND ARITAMETIC PROGRAMS，1971－72



> INPEX OF ACCEPTABTLITY (A)
GRADE LEVET＇ARPIL 1972＇

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PROFILE OF EFFECTIVENESS AND ACCEPTABILITY
OF READING AND ARITHMETIC PROCRA'SS.1971-72
peyton forest eleuentary school group int : neither effective nor acceptable
READING








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$\begin{array}{lllllll}72 & 72 & 72 & 72 & 72 & 72 & 72\end{array}$

PROFILF OF EFFECTIVENESS AND ACCEPTABILITY
OF READING AND ARITHMETIC PROGRAMS，1971－72



72


GRADE LEYEL（APRIL 1972）
$\begin{array}{lll}\text { ACTUAL } \\ \text { RDG } & \text { ARITH } \\ \text { SYSTEM－WIDE } & \text { ACCEPTABLE } \\ \text { RDG } & \text { ARITH } & \text {（NATIL＿NORM）}\end{array}$


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$\frac{\text { SYSTEM－WIDE }}{\$ 0.19}$

INDEX OF ACCEPTABILITY（A）
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PROFILE OF EFFECTIVENESS AND ACCEPTABILITY
OF READING AND ARITHMETIC PROGRAMS,1971-72

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PROFILE OF EFFECTIVENESS AND ACCEPTABILITY
OF READING AND ARITHMETIC PROGRAMS,1971-72
ragsdale elementary school group it: effective but not acceptable



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& \begin{array}{cccccccccccc}
71 & 72 & 71 & 72 & 71 & 72 & 71 & 72 & \underline{71} & 72 & 71 & 72 \\
\text { GRADE } & 2 & 3 & 4 & 5 & 6 & 7 & 2-7
\end{array} \\
& \text { E':EFFECTIVENESS A:ACCEPTABILITY D:E AND A ARE EQUAL }
\end{aligned}
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:EFFECTIVE AND ACCEPTASLE LEVEL OF PERFORMANCE
GRADE LEVEL (APRIL 1972)
SYSTEM-WIDE ACCEPTABLE SYSTFM - $A$ RTTH (NAT'L NORM)


$\frac{\text { SYSTEM-WIDE }}{}$
$\$ 0.19$
$\$ 0.90$

PROFILE OF EFFECTIVENESS AND ACCEPTABILITY
OF READING AND ARITHMETIC PROGRAMS，1971－72
reynolds elementary school group it effective but not acceptable

 ：EFFECTIVE AND ACCEP＇ABLE LEVEL OF PERFORMANCE
GRADE LEVEL（APRIL 1972）
ACTUAL SYSTEN－WIDE $\begin{aligned} & \text { ACCEPTABLE } \\ & \text {（NATL NORM）}\end{aligned}$
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INDEX OF ACCEPTABIVITY（A） $\qquad$



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$\frac{\text { SYSTEM－WIDE }}{\$ 0.19}$




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| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | 71 | 72 | 71 | 72 |  |  |  |  |  |  |
| GRADE | 2 | 3 | 4 | 5 | 6 | 7 | $2-7$ |  |  |  |
| $E: E F F E C T I V E N E S S$ | $A: A C C E P T A B I L I T Y$ | D：E AND A ARE EQUAL |  |  |  |  |  |  |  |  |

GAIN－RATE OF EFEECTTVENESS（E） | READING | ARITH | ARITH |  |
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| FY71 | FY72 | FY72 | FY72 |
| 50 | 0 | 83 | 4 |

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PROFILE OF EFFECTIVENESS iND ACCEPTABILITY
OF READING AMD ARITHMETIC PROGRAMS.1971-72


ROFILE OF EFFECTIVENESS AND ACCEPTABILITY
ह READING AMD AIITHMETIC PROGRAMS，1971－72
ROB1．．oN ELEMENTARY SCHOOL GROUP II：EFFECTIVE BUT ：OTT ACCEPTABLE

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：EFFECTIVE AND ACCERTABLE LEVEL OF PERFORMANCE

## CRADE LEVEL（APRIL 1972）

$\begin{array}{lll}\text { ACTUAL } \\ \text { RDG ARITH } \\ \text { SYCTEM－WIDE } \\ \text { RDG } & \text { ACCEPTARLE } \\ \text {（NITH }\end{array}$
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INDEX OF ACCEPTABILITY（A）
READING $\leqslant{ }^{-\top T H}$ ARITH

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のデゥ
LOCS $-\frac{\text { SCHOOL }}{0.13}$
$\begin{array}{lllllllllllllll} & 71 & 72 & 71 & 72 & 71 & 72 & 71 & 72 & 71 & 72 & 71 & 72 & 71 & 72 \\ \text { GRADE } & 2 & 3 & 4 & 5 & 6 & 7 & 2-7 \\ E: E F E E C T I V E N B S S ~ & \text { A：ACCEPTABILITY } & \text { U：E AND A ARE EQUAL }\end{array}$
GAIN－RATE OE EEFECTIVENESS（E）

$\begin{array}{crrrrrr}7 & 100 & & & 53 & \\ 2-7 & 14 & 139 & 109 & 124 & 54 & 62\end{array}$
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COYPENSATORY
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GAIN-RATE OE EPEECTIVENESS (E)

| GRADE | READIWG |  | $\begin{array}{r} A R I T H \\ E Y 72 \end{array}$ | ARITH FY72 |
| :---: | :---: | :---: | :---: | :---: |
|  | FY71 | FY72 |  |  |
| 2 | 140 | 139 | 130 | 134 |
| 3 |  | 20 | 88 | 54 |
| 4 | 89 |  | 131 |  |
| 5 | 100 | 133 | 40 | 87 |
| 6 | 178 | 150 | 100 | 125 |
| 7 | 167 | 286 | 117 | 202 |
| 2-7 | 135 | 145 | 101 | 123 |

$$
\text { INDEX OF } \frac{A C C E P T A B I L L T Y}{R D G}(\underset{+}{(A)} \quad \text { GRADE LEVEL (APRIL } 1972)
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:EFCECTIVE AND ACCEPTABLE LEVEL
$E: E F E E C T I \forall E N E S S$ A:ACCEPTABILITY IIE AND A ARE EQUAL :EFEECTIVE AND ACCEPTABLE LEVEL OF PERFORUANCE
PROFILE OF EFFECTIVENESS AND ACCEPTABILITY
OF READING AND ARITHTETIC PROGRAMS,1971-72
rusk elemeniapy school group it: fffective but not acceptable:

PROFILE OF FFFECTIVENESS AND ACCEPTABILITY
OF READING AND ARITH:TETIC PROGRAMS,1971-72 SCOTt elementary school, group iti: neither effective nor acceptable

PROFILE OF EFFECTIVENESS AND ACCEPTABILITY
OF READING AND ARITHMETIC PROCRA！IS，1971－72
SLater elementary school group int：neither fafective nor acceptable
RDG + ARITH
 N $\begin{array}{rrrrrrrr}72 & 72 & 72 & 72 & 72 & 72 & 72 & 72 \\ 2 & 3 & 4 & 5 & 6 & 7 & 2-7 & 2-7\end{array}$ ：EfFECTIVE AND aCCEPTABLE LEVEL OF performance
GRADE LEVEL（APRIL 1972）
ACTUAL SYSTEM－WIDE ACCEPTABLE RDG ARITH RDG ARITH

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| COMPENSATORY | $\$ 0.23$ |
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PROFILE OF EFFECTIVEIUESS AND ACCEPTABILITY
OF READING AND ARITHMFTIC PROGRAAS,1971-72





GAIN-RATE OF EFFECTIVENESS (E)


GRADE

PROFILE OF EFFECTIVENESS AND ACCEPTABILITY
OF READING AND ARITHMETIC PROGRAMS,1971-72



E:EFFECTIVENESS A:ACCEPTABILTTY $\square: E$ AND A ARE EQUAL :EFFECTIVE AND ACCEPTABLE LEVEL, OF PERFORMANCE
$\begin{array}{lll}\text { ACTUAL } & \text { SYSTEM-WIDE } & \begin{array}{c}\text { ACCEPTABLE }\end{array} \\ \text { RDG ARITH } & \text { RDG ARITH } & \text { (NAT'L NORM) }\end{array}$
$\dot{\sim} \dot{\sim} \dot{\sim} \dot{\sim}$
GRADE LEVEL (APRIL 1972)


SYSTEM-WIDE
$\$ 0.19$
$\$ 0.90$

INDEX OF ACCEPTABILITY (A)
READING ARITH ARITH N

115
115
121
126
132
107
119
$\begin{array}{rl}\text { LOCAL } & \frac{\text { SCHOOL }}{0.12} \\ \$ & 0.00\end{array}$


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\underline{71} \quad 72 \quad 71 \quad 72 \quad 71 \quad 72 \quad 71 \quad 72 \quad 71 \quad 72 \quad 71
$$

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GAIN-RATE QF EFFECTIVENESS (E)




READING
FY71 FY72




GRADE
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PROFILE OF EFFECTIVENESS AND ACCEPTABILITY
OF READING AND ARITHMETIC PROGRA'S,1971-72

PROFILE OF EFFECTIVENESS AND ACCEPTABILITY
OF READING AND ARITHMFTIC PROGRAMS,1971-72


PROFILE OF EFFECTIVEIUESS AND ACCEPTABILITY
OF READING AND ARITHMETIC PROGRAMS,1971-72
stanton, f. L. eleuentary school group iti: neither effective nor acceptable


| GAIN-RATE OF EFFECTIVENESS (E) |  |  |  |  | INDEX OE ACCEPTABILITY (A) |  |  |  |  | GRADE LEVEL (APRIL 1972) |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | READING |  | ARITH | $\begin{gathered} A R I T H \\ E Y Y Z \end{gathered}$ | READING | DING | ARITH | ${ }_{\text {RDIG }}+$ |  | TURL | SYSTEM-WIDE |  | ACCEPTABLE (NAT'L NORM) |
| GRADE | FY71 | FY $\underline{Y}^{2}$ | FY72 |  | FY71 | FY72 | FYY72 | FY 72 | RDS | ARITH | RDG | ARITH |  |
| 2 | 100 | 114 | 113 | 114 | 85 | 100 | 93 | 97 | 2.7 | 2.5 | 2.2 | 2.3 | 2.7 |
| 3 | 100 | 120 | 129 | 125 | 76 | 84 | 89 | 87 | 3.1 | 3.3 | 2.8 | 2.9 | 3.7 |
| 4 | 33 | $5{ }^{5}$ | 129 | 92 | 72 | 72 | 96 | 84 | 3.4 | 4.5 | 3.3 | 4.0 | 4.7 |
| 5 | 20 | 40 | 200 | $\underline{120}$ | 65 | 68 | 93 | 81 | 3.9 | 5.3 | 3.9 | 4.9 | 5.7 |
| 6 | 100 | -167 | 50 | 59 | 64 | 51 | 78 | 65 | 3.4 | 5.2 | 4.4 | 5.3 | 6.7 |
| 7 | 140 | 57 | 117 | 87 | 65 | 56 | 75 | 66 | 4.3 | 5.8 | 4.8 | 6.0 | 7.7 |
| 2-7 | 82 | 37 | 123 | 80 | 75 | 72 | 87 | 80 | 4.3 |  | 4.8 | 6. | 7. |
| EXPENDITUR | PER UNIT OF |  | FFECTIVENESS ( |  | FOR FY 72: |  | FUNDS | LOCAL SCHOOL |  |  |  |  |  |
|  |  |  | ENERAL |  |  |  |  |  |  |  |  |  |
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GAIN-RATE OF EFFECTIVENESS (E)

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PROFILE OF EFFEC：IVEUESS AMD ACCEPTABILITY
OF READ ING AND ARITHMETIC PROGRAMS，1971－72
SYLVAN HILLS ELEMENTARY SCHOOL GROUP I：EFFECTIVE AND ACCEPTABLE



INDEX OF ACCEPTABILTTY $\frac{\text {（A）}}{R D G}{ }_{+}$


CRADE LEVEL（APRIL 1972）

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EXPENDITURE PER UNIT OF EEFECTIVENESS（PER ADA）KOR EY COMPENSATORY
thomasville elementary school group iit : neither effective nor acceptable


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PROFILE OF EFFECTIVEHESS AKD ACCEPTABILITY
OF READING AMD ARITH:TETIC PROGRAMS,1971-72




SYSTEM-HIDE
$\$ 0.19$
$\$ 0.90$

LOCAL SCHOOL


E:EFFECTIVENESS A:ACCEPTABILITY []:E AND A ARE EqUAL
GAIN-RATE OF EFFECTIVENESS (E)
FOR FY 72 : GUNDS
COMPENSATORY

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\end{array}
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\begin{array}{ccccccc}
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\end{array}
$$ $\$ 0.86$

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& A C T U A L \\
& R D G \quad A R I T H
\end{aligned}
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GRADE LEVEL (AFRTL 1972)

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SYSTEM-HIDE

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\begin{aligned}
& A C C E P T A B L E \\
& \left(N A T T^{\prime} L N O R M\right)
\end{aligned}
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PROFILE OF EFFECTIVENESS AMD ACCEPTABILITY
OF READING AND ARITHMETIC PROGRAS,1971-72

PROFILE OF EFFECTIVENESS AND ACCEPTABILITY
OF READING AND ARITHMETIC PROGRAMS,1971-72
venetian hills elementary school group int: neither efective nor acceptable

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:EFFECTIVE 1 ND ACCEPTABLE LEVEL OF PERFORMANCE

SYSTEM-WTDE
$\$ 0.19$
$\$ 0.90$




：HFFECTTVE AMD ACCEPTABLE LEVEL，OF PERFORMANC：
（GRADE LEVEL（APRIL 1972 ）
ACCEPTABLE
（NAT＇L NORM）
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GAIN－RATE QE EEFECTIVENESS（E）
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PROFILE OF EFFECTIVENESS AND ACCEPTABILITY
OF READING AND ARITHMETIC PROGRAMS,1971-72

waters elementary school group II: effective but not acceptable

 |  | 71 | 72 | 71 | 72 | 71 | 72 | 71 | 72 | 71 | 72 | 71 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 3 | 72 | 71 | 72 |  |  |  |  |  |  |  |  |
| GRADE | 2 | 3 | 4 | 5 | 6 | 7 | $2-7$ |  |  |  |  |
| $E: E F F E C T I V E N E S S$ | $A: A C C E P T A B I L I T Y$ | []:E AND A ARE EQUAL |  |  |  |  |  |  |  |  |  |

GAIN-RATE QE EFFECTIVENESS (E) 운 N N N



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DPOFILE OF ETFECTIVENESS ANE ACCEPTABILITY
OF READING AND ARIMH:ETIC PROCRAMS,1971-72



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GRADE LEVEI. (APRIL 1972)


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$\$ 0.90$



GAIN-RATE OF EEEECTIVENESS (E)

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EXPENDITURE PER UNIT OF EFFECTIVENESS (PER ADA) FOR 7y 72:
PROFILE OF EFFECTIVENESS AND ACCEPTABILITY
OF READING AMD ARITHMETIC PROGRAMS,1971-72
WEST ELEMENCARY SGHOOL GROUP IIT: GEITHER EFFECTIVE NOR ACCEftable
GRADE LEVEL (APRIL 1972)

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 $\frac{\text { SYSTEM-WIDE }}{\$ 0.19}$

 | GUNDS | LOCAL |
| :--- | :---: |
| GENERAL | SCHOOL |
| COMPENSATORY | $\$ 0.20$ |


 GAIN-RATE OF EEFECTIVENESS (E)
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$A R I T H$

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\text { INDEX } \frac{O E}{} \frac{A C C E P T A B I L I T Y}{}(A)
$$

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| GRADE |
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| 3 |
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| 6 |
| 7 |
| $2-7$ |


west haven elemeatary sciool group it effective buí not acceptable


INDEX OF $\frac{\text { ACCEPTABILITY (A) }}{\text { ( }) ~ G R A D E ~ L E V E L ~(A P R I L ~ 1972) ~}$ ACTUAL SYSTEM-WIDE ACCEPTABLE







E:effectiveness a:Acceptability $0: E$ and a are equal
GAIN-RATE OF EEFECTIVENESS (E)
$\begin{array}{rrr}\text { READING } & \text { ARITH } & \text { ARITH } \\ \text { FY71 } & \text { FY72 } & \text { FY\%2 } \\ \text { FY72 }\end{array}$

EXPENDITURE PER UNIT OF EFFECTIVENESS (PER ADA) FOR FY 72:
PROFILE OF EFFECTIVEIESS AND ACCEPTABILITY
OF READIMG AND ARITHMETIC PROGRAMS，1971－72


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ACTUAL SYSTEM－WIDE ACCEPTABLE S
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$\frac{\text { SYSTEM－WIDE }}{\$ 0.19}$



GAIN－RATE OF EFEECTIVEMESS（E）

GRADE
2
3
4
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7
$2-7$
$\frac{\text { LOCAL }}{} \frac{\text { SCHOOL }}{0.27}$ COMPENSATORY $\$ 0.15$ －
EXPENDITURE PER UNIT OF EFFECTIVENESS（PER ADA）GOR FY 72：
PROFILE OF EFFECTIVENESS AND ACCEPTABILITY
OF READING AND ARITHIETIC PROGRAMS,1971 7?

PROFILE OF EFFECTITEXESS AND ACGEPTABILITY
OF READING AND APITHMETC PROGPAN， $1971-72$
WHITEFOORD ELEMENTARY TCHOM ZROUP IT EFFECMI：aUM VCM ACCEPTABLE

GRADE LEVEL（APRIL 1972） $\begin{array}{cc}A C T U A L \\ R D G \text { ARITH } & \text { SYSTEM－WIDE } \\ \text { RDG } & \text { ACCEPTABLE } \\ \text { ARTTH }\end{array}$




| SYSTEM－WIDE |
| :---: |
| $\$ 0.19$ |
| $\$ 0.90$ |




GAIN－RATE OE EFEECTIVENESS $(E)$





GAIM-RASE QE EFFECTIVENESS (E) |  | READING |  | ARITH | ARITH |
| :---: | ---: | ---: | ---: | ---: |
| GRADE | FY71 | FY72 | FY72 | FY72 |
| -2 | 150 | 100 | 140 | 120 |
| 3 | 120 | 0 | 125 | 63 |
| 4 | 25 | 50 | 100 | 75 |
| 5 | 80 | 50 | 00 | 225 |
| 6 |  |  |  |  |
| 7 | 200 | 167 | 67 | 117 |
| $2-7$ | 115 | 73 | 165 | 120 |


MOEX OF

EXPENDITURE PER UNIT OF EFFECTIVENESS (PER ADA) FOR FY 72:



GRADE LEVEL (APRIL 1972)





 $\stackrel{9}{i}$

74
70
79


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$\begin{array}{cccc}11 & 72 & 71 & 72 \\ 6 & 7 & 2-7\end{array}$
$3-4$
 $71 \quad 72 \quad 71 \quad 72 \quad 71 \quad 72 \quad 71 \quad 72$

GRADE 2
E:EFFECTIVENESS A:ACCEPTABILITY
IODEY OE



| SYSTEM-NIDE |
| ---: | :--- |
| $\$ 0.19$ |
| $\$ 0.90$ |


| I8 |
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| 93 |
| 68 |
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| GRADE |
| :---: |
| 2 |
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| $2-7$ |


[^0]:    GPADE LEVEL (ARRIL 1972)
    ACTUAL SYSTEM-WIDE ACCEPTABLE (พษOM T.
    
    
    
    
    
    
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    GAIN-RATE OE EEFECTIVENESS (E)
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    EXPENDITUKE PER UNTT OF EFFECTIVENESS (P

[^1]:    GRADE LEVEL (APDIL 1972)
     ( $\overline{\text { wion }} \overline{\text { Tin }}$
    
    
    
    
     $\stackrel{+}{2}$
     $\begin{array}{rl}\text { SYSTEY-WIDE } \\ \$ 0.19 \\ \$ & 0.90\end{array}$

    INDEX QE ACCEPTABILITY (A)

    | $R D G+$ |
    | ---: |
    | $A R I T H$ |
    | $F Y 72$ |
    | 59 |
    | 71 |
    | 78 |
    | 78 |
    | 75 |
    | 72 |
    | 69 |
    | 71 |

     EUMDS
    CONEPAL
    COPENAT

    caIn-reTE QE EEFECTIVENESS (E) \begin{tabular}{crrrr}
    \& READING \& ARITH \& $\begin{array}{r}\text { RDG } \\
    \text { ARITH }\end{array}$ <br>
    GRADE \& FY71 \& FY72 \& FY72 \& $\underline{F Y 72}$ <br>
    \hline 2 \& 100 \& 20 \& 33 \& 27 <br>
    3 \& \& 100 \& 100 \& 100 <br>
    4 \& 133 \& \& \& <br>
    5 \& 60 \& 20 \& 100 \& 60 <br>
    6 \& 100 \& 0 \& 133 \& 67 <br>
    7 \& 100 \& 140 \& 60 \& 100 <br>
    $2-7$ \& 99 \& 56 \& 85 \& 71

 

    \multicolumn{2}{c}{ PEADIMG } \& ARITH <br>
    FY71 \& FY72 \& FY72 <br>
    \hline-1 \& 59 \& 59 <br>
    81 \& 59 \& 68 <br>
    72 \& 70 \& 85 <br>
    68 \& 65 \& 84 <br>
    04 \& 64 \& 79 <br>
    60 \& 62 \& 75 <br>
    69 \& 66 \& 75
    \end{tabular} COIPEMSATORY

    EXPENDITURE PER UNIT OF EFFECTIVENESS (PER ADA) FOR FY 72:

[^2]:    GRADE LEVEL（AP？TL 1972）
    
    

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    $\dot{\sim} \dot{\sim} \dot{j} \dot{=} \dot{\sim} \dot{\circ}$
    
    
    
    $\begin{array}{rl}\text { ZOCAL } \\ 5 & \frac{\text { SCHOOL }}{0.16} \\ 5 & 0.23\end{array}$
    
    $\$ 0.23$

[^3]:    GRADE LEVEI（APRIL 1972）
    $\begin{array}{ccc}A C T U A L \\ \text { RDG ARITH } \\ \text { SYSTEM－NIDE } & \text { ACCEPTABLE } \\ \text { RDG ARITH } & \text {（NATLLNORM）}\end{array}$
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    $m$
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    $\cdots \dot{j} \dot{j} \dot{j} \dot{0}$
    
    

    RDG
    ARITH ARITH
    으움욱ํㅜㅇ
    $\begin{array}{rl}\text { LOCAL } & \frac{\text { SCHOOL }}{} \\ \$ & 0.12 \\ \$ & 0.02\end{array}$
    
    

    GAIN－RATE QE EEFECTIVENESS（E）
    
    

[^4]:    GRADE LEVEL (APRIL 1972)
    
    
    
    
    

    SYSTEN-WIDE
    $\$ 0.19$
    $\$ 0.90$

    INDEX $O F$ ACCEPTABILITY (A)
    종
     $\begin{array}{lr}\text { EUMDS } & \text { LOCAL } \\ \text { GENERAL } & \frac{\text { SCHOOL }}{} \\ \text { COMPEHSATORY } & \$ 1.21 \\ & \$ 1.02\end{array}$

     | EUMDS | LOCAL |
    | :--- | :---: |
    | GENERAL | SCHOOL |
    | COMPEHSATORY | $\$$ |
    | 0.21 |  |
    |  | $\$ 1.02$ | GAIN-RATE OF EFFECTIVENESS (E) RDG +

    ARITH
    IY7 en? $\xrightarrow{275}$ ${ }^{100}$ 2ñ READING
    FY71 FY72
    
    然管 READING
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[^5]:    
    
    
    
    
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    $\frac{\text { READIMG }}{27 \%}$
    
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[^6]:    GRADE LEVEL (APEIL 1972) | ACCEPTABLE |
    | :---: |
    | $($ (VAT'L_NORM) |
    | 2.7 |
    | 3.7 |

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    GRADE INDEX QF ACCEPTABILITY (A)
     $\frac{\text { SYSEEM-IIDE }}{\$ 0.19}$
    $\$ 0.90$ $\begin{aligned} & \text { LOCAL } \\ & \$ \frac{\text { SCHOOL }}{0.27} \\ & \$ 0.01\end{aligned}$
    $\frac{\text { GAIV-RATE }}{\text { OF EPEECTIVENESS }}{ }_{\text {RDG }}{ }^{(E)}+$
    
    
     GENERAS READING
    
    
    
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    EXPENDITURE PER UNIT OF EFFECTIVENESS (PER ADA) FOR FY 72: COMPRALSATORY

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    \begin{aligned}
    & \begin{array}{c}
    2 \\
    3 \\
    4 \\
    5 \\
    6 \\
    7 \\
    2-7
    \end{array}
    \end{aligned}
    $$

[^7]:    INDEX OE ACCEPTABILITY（A）
    ACTUAL SYSTEM－WIDE ACCEPYTABLE （NATLL NORM）
    

    GAIN－RATE OE EFFECTIVENESS（E）
    ARITH
    FY72
    -83
    100
    107
    0
    50
    100
    73
    
    
    
    9
    $\vdots$
    0
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    0
    

    ヘベゥま゙こ
    
    
    
    COMPENSATORY $\$ 0.01$
    
    EXPENDITURE PER UNIT OF EFFECTIVENESS（PER ADA）FOR FY 72：

[^8]:    GRADE LEVEL（APRII 1972）
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    \begin{aligned}
    & 0 \quad \pm \\
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    \end{aligned}
    $$

    

    $$
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    $$

    SEADING ARIT？ARI ATH
    
    

    ##  COMPENSATORY

    GAIU－RATE QE EPBECTIVEUESS（E）
    QDG
    AMITH
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[^9]:    GRADE LEVEL (APRUL: 1972)
    
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    $\sim$
    
    
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    RDGYUAL
    
    Ning.
    
    

[^10]:    PROFILE OF EFFECTIVENESS AND ACCEPTABILITY
    OF READING AND ARITHYETIC PROGRAMS，1971－72
    

[^11]:    GRADE LEVEL（APPIL 1972）
    
    
    
    
    
    
    
     RDG ACTUAL

    SYSTEM－HIDE
    $\$ 0.19$
    $\$ 0.90$ IUDEX OF $\frac{A C C E P T A B I L I T Y ~(A)}{R D G}+$

    HLIAY

    + OGY
    ZLAG
    HLIGY
    
    $\frac{\text { LOCAL }}{\$} \frac{\text { SCHOOL }}{1.29}$

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    EUNDS
    GOMERAL
    COMPENSAT

    GAIV－RATE OF EFFECTIVENESS（E）
    
    気资
    解品
    EXPENDITURE PER UNIT OF EFFECTIVENESS（PER ADA）FOR FY 72：

[^12]:    ACTUAL $\frac{\text { SYGTEM－OIDE }}{\text { RDC }}$ AC：EPTABLE （AT：
    

    IUDEX OF ACCEPTABILITY（A）
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