The two objectives of this accountability project carried out in St. Elizabeth School District, Mo., were: (a) to increase the average student achievement by at least 5 percent at each level K-12 in the four basic areas of language arts, mathematics, social studies, and science during the 1972-73 school term as measured by scores on the Stanford Achievement Tests, and (b) to increase the "achievement to ability index" at each grade level by at least 5 percentile points in the four basic areas, as measured by Stanford Achievement Tests and Otis-Lennon Mental Ability Tests.

Methods used to achieve these gains were voluntary performance contracting by teachers and administrators, the use of special teachers to work with low achievers, incentives for students, and the use of teacher assistants. It is reported that each of these methods seems to be sound and to help produce achievement gains even though some of them need to be further tested and improved. Fifty classes were measured in this project. Seventeen of the classes met the first objective satisfactorily, and 24 showed some increase in student achievement. Seven classes met objective 2 satisfactorily with 21 of the classes showing some gain in "achievement to ability index." (HMD)
Interim Evaluation Report
For
ACCOUNTABILITY FOR EDUCATORS TO STUDENTS
35-72-10-0
July 1, 1972 to June 30, 1973
ST. ELIZABETH SCHOOL DISTRICT R-4
ST. ELIZABETH, MISSOURI
July 27, 1973
EVALUATION OF AN ACCOUNTABILITY PROJECT IN THE ST. ELIZABETH R-IV
SCHOOLS DURING THE 1972-73 SCHOOL TERM FUNDED BY ESEA TITLE III

There were two specific objectives of this project:

Objective 1. To increase the average student achievement by at least 5% at each grade level K-12 in the four basic areas of Language Arts, mathematics, social studies, and science during the 1972-73 school term as measured by scores on Stanford Achievement Tests.

Objective 2. To increase the "achievement to ability index" at each grade level K-12 by at least 5 percentile points in the four basic areas during the 1972-73 school term as measured by Stanford Achievement Tests and Otis-Lennon Mental Ability Tests.

The following chart shows the extent to which the first objective was achieved.

<table>
<thead>
<tr>
<th></th>
<th>Language Arts</th>
<th>Math</th>
<th>Science</th>
<th>Social Studies</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grades with</td>
<td>K-1-8-11-12</td>
<td>8-9-11-12</td>
<td>K-9-11-12</td>
<td>K-8-11-12</td>
<td>17</td>
</tr>
<tr>
<td>a 5% or more increase</td>
<td>11-12</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>in achievement</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grades with an increase of less than 5% in achievement</td>
<td>4-7-9</td>
<td>1</td>
<td>4-8</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>Grades with a decrease in achievement</td>
<td>2-3-5-6-10</td>
<td>K-2-3-4-5-6-7-10</td>
<td>2-3-5-6-7-10</td>
<td>2-3-5-6-7-10</td>
<td>25</td>
</tr>
<tr>
<td>Grades with no change</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>
The following chart shows the extent to which the second objective was achieved.

<table>
<thead>
<tr>
<th>Language Arts</th>
<th>Math</th>
<th>Science</th>
<th>Social Studies</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grades with a 5 percentile point or more increase in achievement to ability index</td>
<td>K</td>
<td>10</td>
<td>K-9-10</td>
<td>K-8</td>
</tr>
<tr>
<td>Grades with an increase of less than 5 percentile points in achievement to ability index</td>
<td>1-2-5-7-8-10-9</td>
<td>K-5-8-11</td>
<td>5-11</td>
<td>10</td>
</tr>
<tr>
<td>Grades with a decrease in achievement to ability index</td>
<td>3-4-6-9-12</td>
<td>1-2-3-4-6-7-11-12</td>
<td>2-3-6-7-8-12</td>
<td>2-3-4-5-6-7-9-11-12</td>
</tr>
<tr>
<td>Grades with no change</td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
</tbody>
</table>

Note: The Stanford Achievement Tests contain over 100 sub-tests in the four basic areas for Grades K-12. When we compare the average scores for all areas at all grade levels of these sub-tests, we find the following averages.

- 1970 average .... 60.21 percentile
- 1971 average .... 60.36 percentile
- 1972 average .... 60.64 percentile
- 1973 average .... 60.97 percentile

Three-year average: 60.40

According to the above figures, there has been a consistent gain each year for the past 3 years and the largest annual gain was during the last school year.

Several activities were undertaken that were designed to help achieve two major objectives. These activities are each explained and evaluated individually on the following pages.
Performance contracting was voluntary for any teacher or administrator in the field of Language Arts, social studies, science, and mathematics. If a person chose to sign such a contract, they were required to sign separate contracts for each class they were responsible for in the eligible fields. Performance for all contracts was determined by comparing scores on Stanford Achievement Tests in May of 1973 to the average scores on these same tests for the previous three years.

Due to ease of explanation and greater validity, all standardized test scores are reported as percentile rank scores and performance was determined by comparing these percentile rank scores. Achievement prediction tables based on group I.Q. were taken into consideration, but the general rule was that, if a group gained in achievement, the contractor gained financially and, if the group scored lower in achievement, then the contractor also had a financial loss.

The amount of gain or loss for each percentile point was optional for the contractor to choose. The contracts varied from $10.00 per percentile point to $250.00 per percentile point. Contractors could also set a limit on the amount of gain or loss on each contract. These limits varied from $75.00 to no limit.

Since current teaching contracts cannot be altered after the year's achievement test results are known, the gain or loss under any performance contract is added to, or subtracted from, the following year's contract.

The basic performance contracting program seems to be sound and acceptable. There seems to be a need for minor revisions in some parts of the program and these will be considered before the next performance contracts are issued.

One of the major problems for the coming year will be an attempt to find ways to objectively evaluate performance in vocational courses so that performance contracting may be extended to teachers in these areas also.

The attached chart is a tabulation of the actual gains and losses for all the contracts for the 1972-73 school term, which will affect the 1973-74 salaries.

Attachments (1)
# PERFORMANCE CONTRACTING REPORT

**TEACHER A**

- Reading 4: + $100
- English 4: - $200
- English 5: + $100
- English 6: - $200
- Math 4: 0

Net: - $200

**TEACHER B**

- Reading 5: + $10
- Science 4: + $70
- Science 5: + $10
- Science 6: - $90
- Math 5: + $20

Net: + $20

**TEACHER C**

- Math 7: + $100
- Science 9: + $100
- Science 11: 0
- Science 12: + $50

Net: + $250

**TEACHER D**

- Science 7: + $75
- Math 8: - $.75
- Math 9: + $75
- Math 10: + $75
- Math 11: - $75
- Math 12: + $75

Net: + $150

**TEACHER E**

- Science 8: 0
- Science 10: + $350
- Science 11: 0
- Science 12: + $300

Net: + $650

**ADMINISTRATOR F**

- Reading 8: - $400
- Social Studies 8: 0
- All K-6: - $750

Net: - $1,150

**ADMINISTRATOR G**

- All K-12: + $1,000

Net all contracts: + $720

Teachers B and F not returning - Net remainder of contracts: + $1,850
SPECIAL TEACHER REPORT

The duties of the special teacher were to work with small groups of especially difficult cases of achievement deficiency that require more expert skills than the teacher assistants will have, and to work with small accelerated groups at all grade levels to bring their achievement in line with their ability.

Most of the students, or groups of students, who were referred for special help were given diagnostic tests by the special teacher who is certified as a psychological examiner. A few students were referred to the Rolla Diagnostic Clinic for further diagnosis. The special teacher then planned her program for the students based on all the past test scores, current diagnostic tests, and current reports from the referring teacher.

In evaluating the results of this special help program comparisons were made between the achievement test gains for the current year and the previous year in the areas that the students received special help. The special teacher worked with fifty-four (54) students on which scores were available for both years. The following are the test results:

- 40 students gained more during the 1972-73 school year
- 13 students gained less during the 1972-73 school year
- 1 student had the same gain both years

The average gain of these students in these areas during the 1971-72 school year was -4.5 percentile points.

The average gain of these students in these areas during the 1972-73 school year was +1.7 percentile points.

As can be seen from the above information, these students in general were decreasing in achievement in comparison to national norms (percentile ranking on Stanford Achievement Tests). With this
special help these students, in general, increased in achievement in comparison to national norms an average change of over six percentile points from -4.5 to +1.7.

We feel that this type of help for students has been more beneficial than relegating these students to special rooms for longer periods of time. With this special help system, the student spends the entire day with his normal classroom group except for the brief period scheduled for special help.
STUDENT INCENTIVE REPORT

Class incentives were available to all classes in the four basic areas of Language Arts, science, social studies, and math. Incentives were chosen by the classes with teacher consent and advice. When an incentive was agreed upon by a majority of the class and the teacher, an incentive proposal was submitted in writing to the project director who either accepted, rejected, or returned it to the class with recommended changes. Most proposals were accepted immediately, or with minor revisions. After the incentive was undertaken, an evaluation sheet was completed by the class and filed with the project director.

A partial list of incentives would include:

**Local activities (at or near school)**

- Bowling
- Camp Out
- Hayride
- Bar-B-Q
- Party
- Movie at school
- Playtime in gym after school
- Paperbacks for students' class use
- Tape recorder for class use
- SRA reading and math labs for class use
- Art prints for class use
- Newspapers for class use

**Trips to Jefferson City**

- Roller skating and ice skating
- Plays or movies
- Tours of Capitol building - Executive Mansion - Highway Patrol - State Library - Fire Station - Conservation Commission - T.V. and Radio Station - Algoa Prison Farm - Court Session - Missouri Legislature in session

**Distant Trips**

- Three-day visit to Hickman High in Columbia
- Tour of chemistry and physics lab at Missouri University
- M.U. basketball game
- Tour of State Geological Survey at Rolla
- St. Louis trips to zoo - Cardinal baseball game - Six Flags - Grants Farm
- Springfield area tours to Exotic Animal Paradise and Silver Dollar City
The amount of classwork, length of time required, and achievement percentage were all dependent on the incentive desired. The more extravagant incentives required more work and a higher percentage of achievement to gain the incentive.

A total of $5,300 was spent on this incentive program, the major portion of which was spent for transportation.

The success of this phase can only be estimated by student, faculty, and administration response to questionnaires and discussions. According to student questionnaires filled out near the end of the year, about 95% of the students felt enthusiastic about the program. About 75% of the students felt the incentives caused them to work harder, and about 70% of the students felt it helped them learn more. Almost all students wanted continuance of the incentive program for another year at least.

The faculty and administration tended to be more conservative in their evaluation of the program but they agreed they tended to dwell on those extreme cases evident in every school, such as the students and even classes who refuse to get excited for anyone or anything. The faculty was generally happy with the incentive phase of the project and its results. Some felt that incentives were just bribes and should not be offered. A majority felt that the fun incentives should be reduced or eliminated but that, as a whole, the incentives were a motivating factor.
TEACHER ASSISTANT REPORT

Five teacher assistants were employed to "help locate appropriate materials for teachers to use in the classroom, develop these materials into the most useable form, and help the teachers with putting them into use." These assistants were distributed as follows:

1 - All basic subjects in Kindergarten and Grade 1
1 - All basic subjects in Grades 2 and 3
1 - All basic subjects in Grades 4, 5, and 6
1 - Language Arts and social studies - Grades 7-12
1 - Science and mathematics - Grades 7-12

The effect of assistants on student achievement is another subjective evaluation. Faculty responses and attitudes are the only way to decide on the effectiveness of their assistance to the faculty.

The teachers appeared to be quite happy with their respective assistant and had no difficulty in keeping them occupied at all times. Duplicator paper consumption increased by 50% over previous years. Teachers appreciated the fact they were relieved of the mundane routine of typing, scoring, duplicating materials, and had more time to actually prepare for class. They felt they could allow more time to in-class activities and try to establish a closer rapport with students. Many teachers felt freer to research and prepare the materials that assistants weren't capable of doing.