# A Study of Fifty Effective Teachers Whose Class Average Gain Scores Ranked in the Top 15% of Each of Four School Types in Project STAR[1]

Helen Pate Bain, Nan Lintz, Elizabeth Word

## Executive Summary

The teaching practices, the materials used, and professional and personal characteristics of forty-nine[2] effective teachers were studied to determine hat effective teachers do to promote learning in reading and mathematics.

Teachers were selected for interview/observation whose students ranked in the top fifteen percent of scaled score average gains in reading and mathematics. Inter-rater reliability (90%) was achieved by a procedure in which interviewer/observers were paired, worked in teams, and checked each other's independent judgements.

A variety of instructional planning activities, teaching strategies, and materials were found to be common in the repertoires of effective teachers:

- They had high expectations for student learning.
- They provided clear and focused instruction.
- They closely monitored student learning progress.
- They retaught using alternative strategies when children didn't learn.
- They used incentives and rewards to promote learning.
- They were highly efficient tin their classroom routines.
- They set and enforced high standards for classroom behavior.
- They maintained excellent personal interactions with their students.

Effective teachers were for the most part those whose classes had been substantially reduced in size or had the effect of being reduced by the use of aides. Forty-three of the effective teachers had either small classes or an aide. Only seven of the effective teachers had large classes. These effective teachers who demonstrated excellent organizational skills had almost an hour more of teaching time per week for each math and reading.

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[1] This paper was presented at the 1989 annual meeting of the American Educational Research Association, San Francisco, CA.

[2] Only 49 were interviewed because one teacher had retired and could not be reached. However, her gain scores, teaching time, and demographic characteristics were available and are included.

## I. Student Gain Scores in Reading and Mathematics of Effective Teachers

The performance of students of forty-nine effective teachers was documented from standardized tests applied to students in reading and mathematics from kindergarten to final first grade testing.

Average student gains were computed by class type and in terms of both scaled scores and grade equivalants. The results are shown in Tables 1 and 2.

The outcome measures were the Stanford Achievement Tests, administered at the end of kindergarten (SESAT II) and first grade (Stanford Primary I). Composite scores for calculating scaled score gains for the 338 classes were derived as follows:

1. The SESAT II Total Reading scores were averaged to obtain a class reading mean score. The SESAT II Total Math scores were averaged to obtain a class math mean score.
2. The same procedures were used to calculate a class reading mean score and a class math mean score for the Stanford Primary I test administered at the end of first grade.
3. The SESAT II class reading mean score was subtracted from the Primary I class reading mean score to provide a scaled score average gain in reading for each class. The same procedure was repeated for math.
4. In order to obtain a scaled score average gain for each class, the reading mean gain and the math mean gain were averaged.
5. The scaled score average gains were ranked within each school type category.
6. The top 15% of each category was selected for this study.
7. Teachers were chosen for observation/interview whose classes ranked in the top 15% of scaled score average gains for each of four school types: rural, urban, suburban, inner city.
8. The class sizes for the in-school design are small (13-17); regular (22-25); and regular plus a full time instructional aide (22-25). Seven teachers' classes did not meet the specified requirements and are identified as Not in Design (18-21). (Table 3).

## Table 1

## Average Student Gains in Scaled Scores by Class Type

READING

| | Top 15% | | | Other 85% | | |
|---|---|---|---|---|---|---|
| Class Type | K | Grade 1 | Gain | K | Grade 1 | Gain |
| Small (13-17) | 444 | 564 | 120 | 443 | 527 | 84 |
| Regular (22-25) | 443 | 554 | 111 | 439 | 515 | 76 |
| Regular+Aide (22-25) | 438 | 556 | 118 | 438 | 522 | 84 |
| Not in Design (18-21) | 432 | 554 | 122 | NA[✠] | NA | NA |

MATH

| | Top 15% | | | Other 85% | | |
|---|---|---|---|---|---|---|
| Class Type | K | Grade 1 | Gain | K | Grade 1 | Gain |
| Small (13-17) | 492 | 570 | 78 | 497 | 536 | 39 |
| Regular (22-25) | 492 | 572 | 80 | 489 | 525 | 36 |
| Regular+Aide (22-25) | 487 | 558 | 71 | 489 | 528 | 39 |
| Not in Design (18-21) | 480 | 563 | 83 | NA[✠] | NA | NA |

[✠] If the Not in Design (18-21) numbers had been available for the other 85%, the differences in the regular and regular+aide classes would probably be greater.

## Table 2

## Average Student Gains in Grade Equivalents by Class Type

READING

| | Top 15% | | | Other 85% | | |
|---|---|---|---|---|---|---|
| Class Type | K | Grade 1 | Gain | K | Grade 1 | Gain |
| Small (13-17) | 1.1 | 2.6 | 1.5 | 1.1 | 2.0 | K.9 |
| Regular (22-25) | 1.1 | 2.4 | 1.3 | 1.0 | 1.8 | K.8 |
| Regular+Aide (22-25) | 1.0 | 2.4 | 1.4 | 1.0 | 1.9 | K.9 |
| Not in Design (18-21) | K.9 | 2.4 | 1.5 | NA[✠] | NA | NA |

MATH

| | Top 15% | | | Other 85% | | |
|---|---|---|---|---|---|---|
| Class Type | K | Grade 1 | Gain | K | Grade 1 | Gain |
| Small (13-17) | 1.1 | 3.2 | 2.1 | 1.2 | 2.1 | K.9 |
| Regular (22-25) | 1.1 | 3.2 | 2.1 | 1.0 | 1.8 | K.8 |
| Regular+Aide (22-25) | 1.0 | 2.8 | 1.8 | 1.2 | 1.9 | K.7 |
| Not in Design (18-21) | K.9 | 2.9 | 2.0 | NA[✠] | NA | NA |

[✠] If the Not in Design (18-21) numbers had been available for the other 85%, the differences in the regular and regular+aide classes would probably be greater.

## Table 3

## Distribution of Class Type by School Type

| Class Type | School Type: Inner City | Urban | Suburban | Rural |
|---|---|---|---|---|
| Small (13-17) | 3 | 3 | 6 | 11 |
| Regular (22-25) | 3 | 0 | 1 | 4 |
| Regular+Aide (22-25) | 3 | 2 | 2 | 5 |
| Not in Design (18-21) | 1 | 0 | 0 | 6 |
| | 10 | 5 | 9 | 26 |

# I. CHARACTERISTICS OF EFFECTIVE TEACHERS

For the teacher characteristics, the interview guide drew on personal characteristics summarized by the Educational Research Service. The characteristics included: preparation, certification, experience, in-service education, and family background.

The sample consisted of 50 females, of which 41 were white and 9 were black. The teachers' ages were in the following ranges: 25 to 34 (n=11), 35 to 44 (n=24), 45 to 54 (n=8), 55 to 64 (n=3), unknown (n=4) resulting in a median age of 38.5. Data collected on teacher preparation included BA/BS degree (n=32), MA/MS (n=18), full primary certification (n=50), teaching experience at the first grade level: less than 1 year (n=8), 1 to 5 years (n=12), 6 to 10 years (n=12), 11 to 15 years (n=9), 16 to 20 years (n=5), 21+ years (n=4); total years of teaching experience: less than 1 year (n=2), 1 to 5 years (n=10), 6 to 10 years (n=13), 11 to 15 years (n=13), 16 to 20 years (n=5), 21+ years (n=7). In addition, in-service training completed within the past two years was reported as follows: Tennessee Instructional Model (n=36), Reading Workshop (n=23), Orientation to Career Ladder (n=16), College Courses (n=26) (Table 4).

Thirty percent (n=19) chose teaching as a career when they were in elementary school, 27% (n=13) made this choice in high school. While 18% (n=9) chose teaching during their college training, only 16% (n=8) made career changes in order to become teachers.

Fifty-seven percent (n=28) have other teachers in their families. Twenty-nine percent (n=14) are children of a teacher. Thirty-three percent (n=16) have one or more siblings who are in the teaching profession. Eight percent (n=4) are married to educators.

Eighty-six percent (n=42) of the effective teachers belong to a professional association, and 45 percent (n=22) work actively in the association.

## Table 4

## Professional and Personal Characteristics of Teachers

| Characteristics | Top 15% (n=50) | Other 85% (n=288) |
|---|---|---|
| Race: White | 41 (82%) | 238 (83%) |
| Black | 9 (18%) | 50 (17%) |
| Age: 25-34 | 11 (22%) | NA[¤] |
| 35-44 | 24 (48%) | NA[¤] |
| 45-54 | 8 (16%) | NA[¤] |
| 55-64 | 3 (6%) | NA[¤] |
| Missing | 4 (8%) | NA[¤] |
| Preparation: | | |
| BA/BS | 32 (64%) | 187 (65%) |
| MA/MS | 18 (36%) | 101 (35%) |
| Certification: | | |
| Full Primary | 50 (100%) | 288 (100%) |
| Years Teaching at 1st Grade: | | |
| Less than 1 | 8 (16%) | 48 (17%) |
| 1-5 | 12 (24%) | 99 (34%) |
| 6-10 | 12 (24%) | 58 (20%) |
| 11-15 | 9 (18%) | 36 (13%) |
| 16-20 | 5 (10%) | 24 (8%) |
| 21+ | 4 (8%) | 23 (8%) |
| Total Years Teaching | | |
| Less than 1 | 2 (4%) | 11 (4%) |
| 1-5 | 10 (20%) | 74 (26%) |
| 6-10 | 13 (26%) | 58 (20%) |
| 11-15 | 13 (26%) | 58 (20%) |
| 16-20 | 5 (10%) | 44 (15%) |
| 21+ | 7 (14%) | 43 (15%) |
| In-service Training Completed Within the Last Two Years: | | |
| TN Instructional Model (TIM) | 36 (72%) | 173 (60%) |
| Reading Workshop | 23 (46%) | 145 (50%) |
| Mathematics Workshop | 18 (36%) | 105 (36%) |
| Classroom Management | 23 (46%) | 142 (49%) |
| Orientation to Career Ladder | 16 (32%) | 124 (43%) |
| College Courses | 26 (52%) | 116 (40%) |

[¤] NA: Project STAR did not collect data on age.

## II. TEACHING PRACTICES AND MATERIALS USED BY EFFECTIVE TEACHERS

With forty-nine effective teachers having been identified, based on the criteria described in section one, a procedure was established for documenting teaching practices and use of materials. The procedure included both observation and interview. An interview guide was designed (Appendix A) based on the adaptation of Concepts of Effective Teaching delineated in "A Synthesis of Effective Schools Research" compiled by the Northwest Regional Educational Laboratory (Appendix B). Observer reliability was achieved by using paired observers who checked each other's independent judgement. Teachers were rated poor, fair, good, or excellent on each of the 12 criterion included in "A Synthesis of Effective Schools Research" (Table 5).

Six categories were developed to describe the practices used by effective teachers:

A. Preplanned Instruction
B. Expectations
C. Strategies for Accomplishing Expectations
D. Organization and Classroom Management
E. Personal Interaction
F. Family Involvement

### A. PREPLANNED INSTRUCTION

Instruction is guided by a preplanned curriculum which is adapted to the needs of students. The teachers use a broad range of resources and activities. An example of this is well reflected in the use of supplemental readers:

| | | |
|---|---|---|
| taken home to be read to family | 31% | (n=15) |
| used as a supplemental text for additional instruction | 28% | (n=10) |
| students read them aloud to each other | 16% | (n=8) |
| used at enrichment centers | 16% | (n=8) |
| used for reinforcement for students having difficulty | 10% | (n=5) |

### B. EXPECTATIONS

The observer/interviewers (O/Is) determined that effective teachers had high expectations for student learning. O/Is ranked eighty percent of the 49 teachers excellent at setting expectations and twenty percent above average on a scale of 1-4 with 4 being the highest. On a scale of below average, average and above average, the majority of teachers stated that their class was either average (n=27) or above average (n=18).

## Table 5

## Ratings of Effective Teachers

| | Poor | Fair | Good | Excellent | No Eval. |
|---|---|---|---|---|---|
| Criterion | | | | | |
| Instruction is guided by a preplanned curriculum | | | 9 (18%) | 40 (82%) | |
| There are high expectations for student learning | | | 10 (20%) | 39 (80%) | |
| Students are carefully oriented to lessons | | | 7 (14%) | 42 (86%) | |
| Instruction is clear and focused | | | 6 (12%) | 41 (84%) | 2 (4%) |
| Learning Progress is monitored closely | | | 3 (6%) | 46 (94%) | 1 (2%) |
| When students don't understand, they are retaught | | | 4 (8%) | 43 (88%) | 2 (4%) |
| Class time is used for learning | | | 3 (6%) | 46 (94%) | |
| There are smooth, efficient classroom routines | | 1 (2%) | 1 (2%) | 46 (94%) | 1 (2%) |
| Instructional groups formed in the classroom fit instructional needs | | | 3 (6%) | 46 (94%) | |
| Standards for classroom behavior are explicit | | 1 (2%) | 6 (12%) | 41 (84%) | 1 (2%) |
| Personal interactions between teacher and students are positive | | 2 (4%) | 5 (10%) | 41 (84%) | 1 (2%) |
| Incentives and rewards for students are used to promote excellence | | | 1 2 | 46 94 | 2 4 |

Effective teachers set and maintain quality standards consistently. These teachers use a variety of strategies to assure that all students will be at the level of learning necessary to be successful in the next grade. The strategies mentioned most often were: parent involvement (n=18), individualization (n=18), use of teacher assistant where available (n=15), peer tutoring (n=12), and praise and encouragement (n=10).

## C. STRATEGIES FOR ACCOMPLISHING EXPECTATIONS

This section includes representative survey questions, responses and discussion specific to teaching strategies for accomplishing expectations. Effective teachers use a variety of teaching strategies which fall within the following general areas:

1. Orientation
2. Clear and focused instruction
3. Monitoring
4. Grouping
5. Reteaching
6. Incentives and rewards
7. Learning centers
8. Manipulatives

### 1. Orientation

O/Is rated effective teachers excellent (86%) and good (14%) on how carefully they orient students to lessons. Teachers use a variety of strategies to orient students to lessons. They help students get ready to learn by explaining lesson objectives in simple, everyday language and refer to them throughout lessons to maintain focus. They post or hand out objectives to help students keep a sense of direction and check to see if objectives are understood.

Effective teachers describe the relationship of current lesson to previous study and remind students of key concepts in material previously covered. These teachers also challenge students to learn, particularly at the beginning of difficult lessons. They let the students know what's expected.

### 2. Clear and Focused Instruction

O/Is rated teachers on clear and focused instruction excellent (84%) and good (12%). Over half of the teachers (59%) were observed using the Tennessee Instructional Model (TIM). This is an adaptation of Madeline Hunter's instructional model.

Effective teachers review lesson plans, give clear written and verbal directions, repeat key points and instructions, and check student understanding. Students are given plenty of opportunity for guided and independent practice with new concepts and skills. To check understanding, effective teachers ask clear questions and make sure all students have a chance to respond.

### 3. Monitoring

O/Is rated all effective teachers either excellent (94%) or good (6%) on monitoring student learning progress closely. Teachers keep up with student progress through students' written work (n=70); observing students in class (n=47); and discussion (n-=24). Effective teachers discern which students are not performing at their maximum level by observations of behavior patterns deterrent to learning (n=26); student performance/testing (n=10); and intuition (n=3).

Effective teachers require that students be accountable for their academic work by setting standards that students understand and can accomplish (n=39); praise and rewards

given for completed work (n=15); and homework completed and returned (n=7). Teachers set high grading scales and mastery standards to promote excellence. Teachers encourage parents to keep track of student progress by using homework and/or folders (n=32); oral communication (n=20); written correspondence (n=18); and report cards (n=5).

4. Grouping

All Project STAR first grade teachers (n=338) completed a grouping questionnaire (Appendix C).

Fifty (100%) of the effective teachers form smaller groups for the teaching of reading; 20 (40%) of them group for math. Students are moved from group to group when their achievement levels change. The teachers rely heavily upon their personal assessment and testing of the students as criteria for placement. Secondary sources are standardized test scores and other teachers' opinions.

For reading the teachers of small classes (n=23) had 2 (n=8), 3 (n=9), and 4 (n=6) groups. The teachers of regular with a full time aide (n=12) had 1 (n=1), 3 (n=6), 4 (n=2), and 5 (n=2) reading groups. The teachers of regular classes (n=8) had 3 (n=5) and 4 (n=2) groups, and 1 teacher did not group. The out-of-design teachers (n=7) had 3 (n=5) and 5 (n=2) groups.

The teachers of small classes (n=23) had 2 (n=9), and 3 (n=1) math groups, and 13 did not group for math. The teachers with a full time aide (n=12) had 2 (n=6) groups, and 6 teachers did not group. The out-of-design teachers (n=7) had 2 (n=1) groups, and 6 did not group for math. Teachers of regular classes (n=8) had 2 (n=2) and 3 (n=1) groups, and 5 did not group for math.

5. Reteaching

The O/Is ranked effective teachers excellent (88%) and good (8%) on reteaching when students don't understand. These teachers introduce new material as quickly as possible at the beginning of the year or course, with a minimum review or reteaching of previous content. Effective teachers reteach priority lesson content until students show they've mastered it. They conduct regular, focused reviews of key concepts throughout the year to check on and strengthen student retention.

Effective teachers find time to reteach a skill that has not been mastered by working with individuals or small groups (n=34); reteaching skill to whole class using alternate approaches (n=19); involving aide in reteaching small groups and one-on-one (n=4); work sessions before and after school (n=11); and peer tutoring (n=6).

6. Incentives and Rewards

Ninety-five percent (n=46) of the effective teachers make excellent use of incentives and rewards to promote excellence. Systems are established in their classrooms for frequent and consistent rewards to students for academic achievement and excellent behavior. They use rewards appropriate to the developmental level of students. The students are all knowledgeable about the appealing rewards and what they have to do to get them. The most popular reward for these first graders is stickers (98%/n=47); second was verbal praise (88%/n=43); third was display of work (73%/n=36); fourth was prizes (65%/n=32); special privilege or job was fifth (53%/n=26). Under the heading of

"other" the following were mentioned: certificates, applause from class, thumbs up from group, positive comments on papers, good grades.

7. Learning Centers

Learning Centers appear to be an important tool for effective teachers. Eighty-eight percent (n=43) of effective teachers use learning centers for either reinforcement or enrichment of skills previously taught. On the average these centers are changed every two weeks. Some of the centers regularly used and the number of teachers that use them are as follows:

| | | | | | |
|---|---|---|---|---|---|
| Creative Skills | (n=29) | Math Skills | (n=40) | Reading Skills | (n=40) |
| Science Skills | (n=32) | Enrichment | (n=37) | Language Arts Skills | (n=41) |
| Listening Skills | (n=40) | | | | |

8. Manipulatives

All effective teachers said they use manipulatives in teaching math. Teachers said they use a variety of manipulatives such as clocks (98%); concrete objects (98%); money (96%); and others, dice, thermometer, scales, etc. (45%).

D. ORGANIZATION AND CLASSROOM MANAGEMENT

All of the teachers have a scheduled time for each subject and concentrate on using class time for learning. Ninety-four percent (n=46) of the teachers were evaluated as excellent on this point. Students who are not able to complete their work during class are required to finish it at the following times:

| | | | |
|---|---|---|---|
| before school | (n=3) | after school | (n=2) |
| during recess | (n=13) | at other times | (n=21) |

Ninety-four percent (n=46) of the teachers were rated excellent on the efficiency of their classroom routines. Each teacher has assignments, activities, and needed materials ready to start class when the students arrive. Students bring required materials, e.g. folders with papers signed by parents. Students are familiar with the established routine and move efficiently from one activity to another.

Eighty-four percent (n=41) of the effective teachers have excellent standards for classroom behavior. They let the students know at the beginning of the school year what the rules, discipline procedures, and consequences are. The rules are usually prominently displayed in their rooms. The teachers are usually prominently displayed in their rooms. The teachers are consistent and equitable in enforcing the standards. Forty-three percent (n=20) use Lee Cantor's Assertive Discipline Technique.

Other behavior techniques described by teachers:

positive e.g. verbal praise, individual and group rewards, pats and hugs, notes of praise sent home, a different student eats with that teacher each Friday – 57% (n=28)

negative e.g. "I paddle in the principal's office (magic room)." "I take away privileges, e.g. library, P.E., working at enrichment center, fun time on Friday—35% (n=17).

## E. PERSONAL INTERACTION

Eighty-four percent (n=41) maintained excellent personal interactions with the students. Ten percent had good interactions with students. When asked how they let the students know that they really cared, the teachers gave the following answers:

| | |
|---|---|
| pats and hugs | 55% (n=27) |
| group sharing time | 31% (n=15) |
| one-on-one sharing time | 29% (n=14) |
| Praise students and make them feel important; call them endearing names, and tell them how special they are. | 59% (n=29) |

## F. FAMILY INVOLVEMENT

Effective teachers believe that the families of their students should be involved in the students' continuous learning process. These teachers believe in open communication between home and school by either telephone, notes, conferences, or quick chats when someone in the family comes to pick up the student after school.

These teachers' belies are evidenced by the fact that 95% of them said that they encourage the families of their students to keep up with their progress in school.

Listed below are some of the ways these teachers involve the families of their students in their educational process and keep them aware of student progress.

| | |
|---|---|
| Send home instructions for helping with homework | 98% (n=48) |
| Send home individualized notes | 92% (n=45) |
| Telephone parents as needed | 92% (n=45) |
| Hold special parent conferences as needed | 90% (n=44) |
| Send home student folders | 82% (n=40) |
| Send home class newsletters | 29% (n=14) |

Effective teachers involve the families of their students in other important ways. They invite the families to serve as volunteers at school. These teachers are able to explain to the families of their students the necessity of becoming involved in their learning in a variety of ways:

listening to the students read at home
helping them with math by using flashcards or other manipulatives
checking their homework
eating lunch with them at school
various activities to keep them involved

When these teachers were asked, "What kinds of things do you do in order to prevent a student in your classroom from experiencing failure?", 37% said they involve the families of their students in the learning process in order to try to prevent failure.

It is often said that child's parents are the first and foremost teachers. It appears that effective teachers believe this premise to be true.

## III. EFFECTIVE TEACHERS' PERCEPTIONS OF INDIVIDUAL EFFECTIVENESS FACTORS

Forty-nine teachers were asked to identify two factors they believed made them effective teachers. Those factors reported by twenty percent or more of the respondents were as follows:

| | | |
|---|---|---|
| love for children and teaching | 76% | (n=37) |
| high expectations for their students | 37% | (n=18) |
| patience and understanding | 24% | (n=12) |
| being organized | 20% | (n=10) |

Being organized presents an interesting finding. Even though only 20% chose this characteristic as one of their top two, observers of the same group of teachers reported 90% of them appear to be highly organized. An explanation for this may be that being highly organized is common to and taken for granted by effective teachers. Because of their good organization the effective teachers had on the average over an hour and a half more per week for the teaching of math and reading (Table 6).

**Table 6**

**Number of Instructional Minutes Spent Teaching Reading and Math**

| | Reading | | Gain | |
|---|---|---|---|---|
| | Top 15% | Other 85% | Per Day | Per Week |
| Whole Group | 27.81 | 34.97 | -7.16 | -35.80 |
| Small Group | 106.87✠ | 92.19 | 14.68 | 73.40 |
| Individualized | 16.25 | 15.42 | .83 | 4.15 |
| Total | 150.93 | 142.58 | 8.35 | 41.75 |

| | Math | | Gain | |
|---|---|---|---|---|
| | Top 15% | Other 85% | Per Day | Per Week |
| Whole Group | 66.56 | 59.74 | 6.82 | 34.10 |
| Small Group | 8.75 | 7.16 | 1.59 | 7.95 |
| Individualized | 8.44 | 8.78 | -.34 | -1.70 |
| Total | 83.75 | 75.68 | 8.07 | 40.35 |

✠ Significant at $p \leq .01$

The following factors mentioned by less than 20% of the respondents received high consensus on the part of the observers as being characteristic of performance and perceived attitudes of a majority of the forty-nine teachers.

consistent
professional
motivating
thorough
enthusiastic
intelligent
positive
go-getting
empathetic
fair
persistent
dedicated
compassionate
mature
outgoing
having a sense of humor
relating well to children
having children of their own
remembering what being a child is like

## IV. TEACHER PERCEPTIONS OF INSTRUCTIONAL STRATEGIES AND OTHER ACTIVITIES IMPORTANT FOR BEGINNING TEACHERS

The forty-nine project teachers were asked to identify their most effective instructional strategies and other instruction-related activities they believed were important for beginning teachers to learn.

Representative descriptions of these strategies and activities are recorded in the following paragraphs under four major categories. They are reported in the teachers' own words.

### A. ATTITUDES, TECHNIQUES, MATERIALS

"Always be enthusiastic. They will mirror your attitude."
"Be consistent."
"Provide positive reinforcement. Use praise."
"Adjust your teaching style to the needs of the class."
"Adjust your pace for your class. Don't try to keep up with other classes."
"Use pairs in peer tutoring."
"Repeat and reinforce skills. Never close the door on a skill."
"Repetition and drill are very important."
"Ask probing questions to teach thinking."
"Include creative writing in the curriculum. It is better than any test."

### B. ORGANIZATION

"Set up a file system for materials."
"Be organized but flexible."
"Have a structure."
"Get organized and stay organized."
"Planning pays off."
"Set up a structure that allows time to be with individuals."

### C. INDIVIDUALIZATION

"Modify work so students can succeed."
"Provide instruction on their level."
"Group by student needs."
"Involve children in what they are doing."
"Give immediate feedback."
"Try to deal with each child at his/her level."
"Find out all that you can about each student, e.g. likes, dislikes."
"Never assume that they know something."
"Get to know each student - - listen to them, be careful not to ignore anyone, get the quiet ones to talk."

Look at each child as if he/she were your own child. Ask yourself how you would want your child to be treated."

D. DISCIPLINE

"Be firm but fair."

"Be consistent. Do what you say you will."

"Let them know that you mean business."

"Keep everyone's attention with constant eye contact as you move around the room."

"Explain rules in the beginning."

"Have a daily routine so students know what to expect."

"Let children know in the morning exactly what is expected that day."

"Have an overall plan and make it work. They will learn more, and you will have less stress."

"Use a quiet voice."

"Involve all of the children. Try to make it fun."

"Take the time top set the atmosphere you want."

## V. CONCLUSIONS

A profile of the effective teacher in this study reveals the following:

median age – 38.5 years
education – BA/BS
median years of teaching experience – 10.5
median years of teaching experience at first grade – 8.0
K-3 Certification
TIM trained
taking college courses
Level I of Tennessee Career Ladder
other educators in the family

These teachers consistently displayed similar affective qualities. Enthusiasm in the form of "acting", demonstrating, and role-playing activities on the part of the teacher was prominent. Having positive attitudes toward children, emphasizing positive behavior and praising success were observed as common. Having and using a sense of humor to promote learning and motivate students were often observed. Finally, "a love for children" seemed to permeate the entire professional repertoire in nearly all of the observations.

In addition to these common characteristics, class size appears to have been a contributing factor to the success of these fifty effective teachers. Only 8 (16%) had a regular class of 22-25. Twenty-three (46%) had small classes (13-17); 12 (24%) had a full-time instructional aide and 7 (14%) had a class out of design (18-21).

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## REFERENCES

Effective Schooling Practices: A Research Synthesis. Northwest Regional Laboratory, Portland, Oregon. April 1984.

Effective Schools: A Summary of Research. Educational Research Service, Inc., Arlington, Virginia. 1983.

## Appendix A

### Project STAR
### Effective Teacher Practices Survey: Interview Questionnaire & Observation Checklist

System: _____

School ID: _____

School Name: _____

School Type: _____

University Responsible: _____

Teacher ID: _____

Teacher Name: _____

Grade Taught During STAR: _____ (0=K, 1=1st, 2=2nd, 3=3rd)

Class Type During STAR: _____ (1=Small, 2=Regular, 3=Regular + Aide)

Interviewer Instructions:

Each question has a title with a performance category and a specific practices checklist. The performance category is from one to four; 1 equals poor and 4 equals excellent. The practices checklist is (Y)es or (N)o if the characteristic is observed or reported.

1. INSTRUCTION IS GUIDED BY A PREPLANNED CURRICULUM. 1 2 3 4

Learning goals and objectives are developed by the teacher. Y or N

The BASIC SKILLS FIRST or local equivalent is used. Y or N

Alternative resources and activities are identified. Y or N

Resources and teaching activities (e.g., Additional Reading Series) are modified to help students learn. Y or N

How do you use additional Reading Series? _____

_____

_____

_____

2. THERE ARE HIGH EXPECTATIONS FOR STUDENT LEARNING. 1 2 3 4

What kind of class do you have this year? 1- Below Average 2- Average 3- Above Average

What are the students' chances of being successful? 1- Poor 2- Good 3- Excellent

Quality standards for academic work are set and maintained consistently. Y or N

Will any students fall below the level of learning needed to be successful at the next level of education? Y or N

How do you prevent it? _____

_____

_____

_____

3. STUDENTS ARE CAREFULLY ORIENTED TO LESSONS 1 2 3 4

Teacher helps students get ready to learn. She explains lesson objectives in simple, everyday language and refers to them throughout lesson to maintain focus. Y or N

Objectives may be posted or handed out to help students keep a sense of direction.

Teacher checks to see that objectives are understood. Y or N

The relationship of a current lesson to previous study is described. Students are reminded of key concepts of skills previously covered. Y or N

Students are challenged to learn, particularly at the start of difficult lessons. Students know in advance what's expected and are ready to learn. Y or N

4. INSTRUCTION IS CLEAR AND FOCUSED. 1 2 3 4

Do you use the Tennessee Instructional Model (TIMS)? Y or N

Lesson activities are previewed; clear written and verbal directions are given; key points and instructions are repeated; student understanding is checked. Y or N

Presentations, such as lectures or demonstrations, are designed to communicate clearly to students; digressions are avoided. Y or N

Students have plenty of opportunity for guided and independent practice with new concepts and skills. Y or N

To check understanding, teacher asks clear questions and makes sure all students have a chance to respond. Y or N

Teacher selects problems and other academic tasks that are well matched to lesson content so student success rate is high. Seatwork assignments provide variety and challenge. Y or N

Homework is assigned that students can complete successfully. It is typically in small increments and provides additional proctive with contend covered in class; work is checked and students are given quick feedback. Y or N

Parents help keep students involved in learning. Teacher lets parents know that homework is important and gives them tips on how to help students keep working. Y or N

5. LEARNING PROGRESS IS MONITORED CLOSELY. 1 2 3 4

Teacher frequently monitors student learning, both formally and informally. Y or N

How? _____

_____

_____

Teacher requires that students be accountable for their academic work. Y or N

How? _____

_____

_____

Grading scales and mastery standards are set high to promote excellence. Y or N

Teacher encourages parents to keep track of student progress too. Y or N

How? _____

_____

_____

How do you keep up with students' progress? _____

_____

_____

How do you know which ones are not performing at their maximum ability? _____

_____

_____

6. WHEN STUDENTS DON'T UNDERSTAND, THEY ARE RETAUGHT. 1 2 3 4

New material is introduced as quickly as possible at the beginning of the year or course, with a minimum review or reteaching of previous content. Key prerequisite concepts and skills are reviewed thoroughly but quickly. Y or N

How? _____

_____

_____

Teacher reteaches priority lesson content until students show they've learned it. Y or N

Regular, focused reviews of key concepts and skills are used throughout the year to check on and strengthen student retention. Y or N

How do you find the time to reteach a skill that has not been mastered?_____

_____

_____

_____

_____

7. CLASS TIME IS USED FOR LEARNING. 1 2 3 4

Teacher follows a system of priorities for using class time and allocates time for each subject or lesson. She concentrated on using class time for learning and spends very little time on non-learning activities. Y or N

Students are encouraged to pace themselves. If they don't finish during class, they work on lessons: 1- before school 2- during recess 3- after school 4- other

8. THERE ARE SMOOTH, EFFICIENT CLASSROOM ROUTINES. 1 2 3 4

Class starts quickly and purposefully; teacher has assignments or activities ready for students when they arrive. Materials and supplies are ready, too. Y or N

Students are required to bring the materials they need to class each day; they use assigned storage space. Y or N

Administrative matters are handled with quick, efficient routines that keep classroom disruptions to a minimum. Y or N

There are smooth, rapid transitions between activities throughout the day or class. Y or N

9. INSTRUCTIONAL GROUPS FORMED FIT INSTRUCTIONAL NEEDS 1 2 3 4

When introducing new concepts and skills, whole-group instruction (actively led by the teacher) is used. Y or N

Smaller groups are formed within the classroom as needed to make sure all students learn thoroughly. Students are placed according to individual achievement levels. Y or N

Teacher reviews and adjusts groups often, moving students when achievement levels change. Y or N

What criteria do you use to place students in groups?

student achievement test scores: _____ Y or N

teacher devised test: _____ Y or N

teacher's opinion: _____ Y or N

other teacher's opinion: _____ Y or N

reading checklist: _____ Y or N

other: _____ Y or N

Which criteria do you consider most important? _____

10. STANDARDS FOR CLASSROOM BEHAVIOR ARE EXPLICIT 1 2 3 4

Teacher lets students know that there are high standards for behavior in the classroom. Y or N

Classroom behavior standards are written, taught, and reviewed from the beginning of the year or the start of new courses. Y or N

Rules, discipline procedures and consequences are planned in advance. Standards are consistent with or identical to the building code of conduct. Y or N

Consistent, equitable discipline is applied for all students. Procedures are carried out quickly and clearly linked to student's inappropriate behavior. Y or N

Teacher stops disruptions quickly, taking care to avoid disrupting the whole class. Y or N

In disciplinary action, the teacher focuses on the inappropriate behavior not on the student's personality. Y or N

Teacher uses the Lee Canto Assertive Discipline Technique. Y or N

What other behavior techniques do you use? _____

_____

_____

11. PERSONAL INTERACTIONS BETWEEN TEACHER & STUDENTS ARE POSITIVE 1 2 3 4

Teacher pays attention to student interests, problems and accomplishments in social interactions both in and out of the classroom. Y or N

Teacher makes sure she lets students know she really cares. Y or N

How? _____

_____

_____

Students are allowed and encouraged to develop a sense of responsibility and self-reliance. Y or N

Students are assigned responsibility for class duties. Y or N

12. INCENTIVES/REWARDS FOR STUDENTS ARE USED TO PROMOTE EXCELLENCE 1 2 3 4

Excellence is defined by objective standards, not by peer comparison. Systems are set up in the classroom for frequent and consistent rewards to students for academic achievement and excellent behavior. Rewards are appropriate to the developmental level of students. Y or N

All students know about the rewards and what they need to do to get them. Rewards are chosen because they appeal to the students. Y or N

Rewards are given for specific student achievements. Some rewards may be presented publicly; some should be immediately presented, others delayed in order to teach persistence. Y or N

Parents are told about student successes and requested to help students keep working toward excellence. Y or N

What types of incentives and rewards are used most often?

Display student's work: _____ Y or N

Prizes: _____ Y or N

Special privilege or job: _____ Y or N

Stickers: _____ Y or N

Verbal praise: _____ Y or N

Others: _____ Y or N

_____

_____

13. HOW DO YOU INVOLVE THE FAMILY IN THE CHILD'S LEARNING?

Distribute class newsletter: _____ Y or N

Hold special parent conferences when needed: _____ Y or N

Provide instructions for helping with homework: _____ Y or N

Send home individualized notes: _____ Y or N

Send home student's folder: _____ Y or N

Telephone parents as needed: _____ Y or N

Other: _____ Y or N

Which do you consider most productive? _____

14. DO YOU MAKE HOME VISITS? Y or N

If so, when and why? _____

_____

_____

15. DO YOU USE LEARNING CENTERS? Y or N

What kind of learning centers do you use regularly?

Creative Skills: _____ Y or N

Enrichment Centers: _____ Y or N

Language Arts Skills: _____ Y or N

Listening Skills: _____ Y or N

Math Skills: _____ Y or N

Reading Skills: _____ Y or N

Science Skills: _____ Y or N

Thinking Skills: _____ Y or N

Others: _____

_____

_____

How many centers do you have available at one time? _____

How long do centers usually stay up?

_____ 1 week _____ 2 weeks

_____ 3 week _____ 4 weeks

_____ 5 to 6 weeks

Other: _____

16. DO YOU USE MANIPULATIVES IN TEACHING MATH? Y or N

_____ Clocks _____ Concrete objects (e.g., sticks, blocks)

_____ Money

Others: _____

_____

_____

17. WHAT ARE THE TWO CHARACTERISTICS THAT MAKE YOU A GOOD TEACHER?

_____ I care about children. _____ I am flexible.

_____ I am very organized. _____ I am patient and understanding.

_____ I have high expectations for my students.

Others: _____

_____

_____

18. WHAT TWO TEACHING TECHNIQUES DO YOU CONSIDER TO BE THE MOST EFFECTIVE?

_____

_____

_____

_____

_____

_____

19. WHEN DID YOU DECIDE TO BECOME A TEACHER?

_____ In elementary school _____ In high school

_____ In college _____ After college

Why? _____

_____

_____

_____

_____

20. BACKGROUND INFORMATION

Spouse's Occupation

_____ Business _____ Education

Others: _____

Number of children: _____ boys _____ girls

Their ages: _____ 0 to 4 _____ 5 to 13 _____14 to 18 _____19 to 25

_____ 26 to 45

Father's Occupation

_____ Business _____ Education

Others: _____

Mother's Occupation

_____ Business _____ Education

Others: _____

Brother's and Sister's Occupations

_____ Business _____ Education

Others: _____

Do you belong to a professional association? Y or N

Do you work actively in the association? Y or N

Teacher's Age: _____

Birth order: _____ oldest _____ youngest

_____ only _____ other

## Appendix B

EFFECTIVE SCHOOLING PRACTICES: A RESEARCH SYNTHESIS

Onward to Excellence: Making Schools More Effective

Classroom Characteristics and Practices

Northwest Regional Educational Laboratory
101 S.W. Main, Suite 500
Portland, Oregon 97204
(503) 275-9507

Appendix B is a document that was produced for the Goal Based Education Program and is the property of Northwest Regional Educational Laboratory.

It is available on-line at:
**http://www.nwrel.org/scpd/esp/esp95toc.html**

# Appendix C

## Project STAR Grouping Questionnaire

The STAR Project is interested in the extent to which teachers in the Project regularly divide children into groups for instruction. Please describe the groups you have within your class. Any groups that involve your children with children from other classes should be recorded on the Special Programs questionnaire. Please complete this form and return to the principal. Thank you for your assistance.

System: _____

Teacher ID: _____ Date: _____

Teacher Name: _____ University Responsible: _____

School ID: _____ School Name: _____

School Type: _____

Class Type: _____ 1. Small (1-15) 2. Regular (1-25) 3. Regular w/Aide

Class Type: _____ 1. Female 2. Male

Teacher's Race: _____ 1. White 2. Black 3. Asian 4. Hispanic 5. American Indian 6. Other

---

1. Do you divide your students into small groups for reading instruction on a regular basis? If so, please indicate the number of groups, and the average number of minutes spent in small grouped instruction each week.

   1. Yes
   2. No _____ Number of Groups: _____ Average Number of Minutes Per Week _____

2. Do you divide your students into small groups for math instruction on a regular basis? If so, please indicate the number of groups, and the average number of minutes spent in small grouped instruction each week.

   1. Yes
   2. No _____ Number of Groups: _____ Average Number of Minutes Per Week _____

3. Do you divide your students into small groups for science instruction on a regular basis? If so, please indicate the number of groups, and the average number of minutes spent in small grouped instruction each week.

   1. Yes
   2. No _____ Number of Groups: _____ Average Number of Minutes Per Week _____

4. Do you divide your students into small groups for social science instruction on a regular basis? If so, please indicate the number of groups, and the average number of minutes spent in small grouped instruction each week.

   1. Yes
   2. No _____ Number of Groups: _____ Average Number of Minutes Per Week _____

5. How do you assign the children to reading or math instructional groups?
   Please write a “1” in the box for yes, and a “2” in the box for no.

| | **Reading** | **Math** |
|---|---|---|
| A) By the child’s skill level | _____ | _____ |
| B) By the child’s interest | _____ | _____ |
| C) Other procedure(s) | _____ | _____ |

If other, please specify: _____

_____

_____

6. For Reading and Math, do you move children from one group to another during the school year?
   Please indicate by using:

**1 = Yes: Frequently** [every six (6) weeks or more often]

**2 = Yes: Occasionally** [less than every six (6) weeks, but at least once during the year]

**3 = No**

A) Reading _____

B) Math _____