Independent Studies and Capstones

Program in Audiology and Communication Sciences

1975

An evaluation of videotaping for self evaluation by teachers of the hearing impaired

Ann Perry

AN EVALUATION OF VIDEOTAPING

FOR SELF EVALUATION BY TEACHERS OF THE HEARING IMPAIRED

BY ANN PERRY AND JAN RONNEBAUM

Introduction

The authors undertook a project using videotape as a tool in teacher self-evaluation for several reasons. Research has shown that specific teacher behaviors can affect the response of students in their classes. Studies also have demonstrated the need for feedback to produce changes in teacher behavior. It no longer is considered experimental to use videotape as a feedback technique. Teachers and student teachers have used it effectively for learning new skills, for increasing the occurrence of desirable actions, and for decreasing the occurrence of undesirable habits. Where videotape equipment is available, it is an efficient and effective instrument for self-evaluation by busy classroom teachers. In addition, it may be used in complete privacy to allay potential defensiveness on the part of teachers who are interested in modifying their behavior.

Review of the Literature

At least three studies dealing specifically with teacher self-evaluation have found improvement in teaching performance as a result of teachers seeing themselves on videotape and counting certain behaviors.

In a study by Thomas (1972), four teachers watched videotapes demonstrating three desirable teacher behaviors. Then each teacher was videotaped several times in her own classroom as she taught reading. After each taping session the teacher watched her tape and counted the occurrences of the three behaviors in the sequence specified by the experimenter. In every case, the teachers increased the occurrences of all three behaviors; each behavior increased as it in turn was counted.

Three different types of feedback have been investigated for their effectivness in modifying the behavior of teachers (Rule, 1972). Direct intervention by the experimenter was found to be the most effective method. Videotape scoring produced some changes in the teachers' behavior, but the change was smaller. When teachers were simply told what to do, and then provided with graphs of their performance by the experimenter, no significant improvement resulted.

In other research where observers or supervisors gave direct feedback to teachers, however, the results were equivocal (Cossairt et al, 1972, and Thomson, 1972). It may be that the complexity of human interactions produces mixed results when direct feedback is used. But the relative complexity of some behaviors may preclude the use of videotape for adequate feedback, and require direct intervention instead.

With any of these feedback methods, there is a question of whether teachers change more efficiently in a given direction if they have a specific criterion of performance to work toward. Saudergas (1972), looked at the effect of setting goals for teachers prior to videotaping them. The behavior he asked the teachers to focus on was praising students. He found that having teachers use videotape to count, graph, and attempt to reach a criterion rate was highly effective. When the criterion rate was high, the teachers increased the number of times they gave praise. But when the criterion rate was low, the teachers sharply reduced the occurrence of the same behavior.

Procedure

The present project was divided into two parts. Our objectives in

the first part were to select three appropriate behaviors for the study, to write definitions and scoring procedures for these behaviors, and to establish reliability for the scoring procedure. In Part II we investigated the effectiveness of this scoring procedure for a teacher attempting to change her behavior in the classroom.

Part I

The authors compiled a list of ten teacher behaviors selected for: (1) importance for teachers of the hearing impaired; (2) our ability to define the behavior accurately and precisely; and (3) anticipated interest on the part of teachers or teachers in training who would be involved in the project.

The list of behaviors (see Appendix A) was distributed randomly to ten staff members and teachers in training at Central Institute. Only five of the rating sheets were returned. Considerable weight was given to the preferences they indicated; their choices were modified somewhat by the authors' difficulties in writing definitions or scoring instructions for some of the behaviors. The raters unanimously chose "Comprehension Checks" as an important teacher behavior. "Teacher Expansion of Student Responses" also received a high rating. Since there was no agreement among the raters about the other choices, we chose to include "Teacher Interruptions of a Child's Utterance" because it was relatively simple to define.

Although one of the strongest appeals of videotape feedback was its potential for offering a teacher privacy while using it, privacy for the teachers taped in Part I had to be compromised for the sake of

establishing reliability. Perhaps this factor accounted for some of the difficulties we encountered in obtaining permissions to do the taping and in finding teachers willing to be taped and scored.

Several videotapes were made in an effort to satisfy the stipulations and circumvent the objections of supervisory staff at Central Institute. Staff concern was expressed to the authors about the following areas: (1) the possible disruption of classroom routine due to setting up equipment or distracting children during the videotaping; (2) obtaining permission from the parents of all children to be taped; (3) the possibility of the experimenters and other students criticizing the teaching performance of teachers on the C.I.D. staff; and (4) objections to practical classroom implementation of the three behaviors chosen for study.

For every videotaping session in this study, therefore, equipment was set up prior to the arrival of the class to be taped. Each teacher or student teacher followed the regular lesson planned for that day, without modification due to the videotaping. Only classes of children for whom the school had on file written permission from the parents for videotaping were used. Each member of an adult lipreading group signed a permission form (see Appendix B) prior to the videotaping of their lesson. Finally, the teacher and supervisor involved in Part II of the project were allowed to choose which behavior the teacher would work on.

First, one of the authors was taped for five minutes of an informal discussion with a class of nine-year-old deaf children. This was one of the tapes later scored for reliability.

The second tape for Part I was of a student teacher conducting a

lipreading lesson for four male adults.

In an attempt to establish inter-scorer reliability for our written directions and scoring procedure, several groups of college students and faculty members followed our written directions. They read the definitions, then scored one of the videotapes described above for the teacher behaviors we called "Comprehension Checks," "Teacher Interruptions of Student Utterances," or "Teacher Expansion of Student Utterances."

On the first attempt, written definitions and scoring instructions (see Appendices C, D, E) were distributed to nine college students and one staff member. The adult lipreading tape was viewed once by the group with no scoring. Then a ten-minute segment of this tape was shown again while a third of the group scored each of the three behaviors.

The scorers reported that they had considerable difficulty following the written directions and understanding the definitions. Results showed poor agreement among the observers (see Appendix F). Their oral and written comments led to our simplification of both the definitions and the instructions for scoring.

A second group of college students and one faculty member were asked to score both tapes using our revised instructions for the three behaviors (see Appendices G, H, I). This time there was good agreement among the observers (see Appendix J).

By the conclusion of Part I the authors were questioning the benefit of, or the need for, establishing reliability of the scoring procedure. Indeed,we began to doubt even the need for written definitions or instructions, and precedents for teacher self-evaluation using videotape without written definitions or instructions were discovered, such as the

checklist that has been used in the Minneapolis public school system (see Appendix K).

Perhaps it would be enough for a teacher to see herself teaching on videotape, to pick out a behavior she didn't like, to count its occurrence, and to attempt changing this behavior as she continued to count its occurrence on subsequent videotapes. It also was hypothesized that letting a teacher choose any behavior she wanted to change might eliminate the objections of school personnel which pertained to the three behaviors previously chosen.

Part II

In this stage, we tested the effectiveness of our entire procedure as a tool for self-evaluation by:

1.) Asking a teacher to select one of the three behaviors defined and selected in Part I. After she was video-taped each day, she was to score this behavior according to our written instructions. This was to continue for several days.

2.) Asking this teacher to select any behavior she wished to change while watching her first videotape, then counting it each day on a blank piece of paper.

One of the experimenters taped a teacher with her class of eleven and twelve-year-old deaf students for ten minutes on three consecutive mornings. Each afternoon the teacher watched the tape and followed our written instructions for counting "Comprehension Checks."

This teacher decided that she did not want to change the number of

comprehension checks she made. But she <u>did</u> want to decrease the number
of unnecessary gestures she made. So on each of the three days she
viewed the tape again and counted her unnecessary gestures -- without
written directions.

Results (Figure 1) show that the number of comprehension checks used
by this teacher increased during the three-day period from two to six to
seven, although she stated that she had not attempted to modify her use
of comprehension checks. The changes in lesson content each day may have
influenced the number of times the teacher asked the children to demon-
strate comprehension. The fact that the teacher was being videotaped
also may have affected her behavior.

She <u>did</u> intend to decrease the number of extraneous gestures she
made, and was successful in doing so (Figure 2). Her count of extraneous
gestures was 36 on the first videotape, but 22 on the second and third
days.

This teacher was not aware of how many gestures she used, prior to
seeing herself on tape. Using some gestures in communication is natural.
But too many gestures, or gestures which are ill-timed, may distract
hearing impaired children from the speech signal.

With the small time investment of about thirty minutes a day on three
consecutive days, the teacher in Part II gained awareness of the type and
number of gestures she used, and reduced the number of her superfluous
gestures.

Conclusions

Our experiences during the study suggest the following conclusions:

1.) The behaviors most suitable to videotape scoring are those which are simple, easily counted, and highly visible.

2.) A list of behaviors important to teachers of the hearing impaired would be a useful reference. Teachers and teachers-in-training could use it as a guide for selection of what to change about their teaching performance. Perhaps such a list could be compiled from the suggestions of faculty members in teacher-training programs.

3.) Apparently, neither written definitions nor written scoring instructions are needed to change some behaviors. But they might be useful for teaching special behaviors to teachers in other school districts.

4.) A teacher who wants to evaluate herself using videotape should have privacy. She will probably feel less threatened if she alone can observe and score her tapes. To this end it would be worthwhile instructing teachers to operate videotape equipment by themselves -- prior to its use in the classroom.

5.) Brief training sessions for teachers wishing to learn the scoring procedure suggested in this paper are needed. Special videotapes could be made and kept on file for practice. Once the technique was learned, the teacher could score her own tapes with greater confidence.

6.) If written definitions and instructions are used, they should be supplemented with examples on videotape. In general, written examples were not adequate in our study.

7.) Videotape segments to be scored should be short. Five minutes seems to be adequate for most teacher behaviors.

Overall, the authors feel that videotape is a useful tool for the self-evaluation and self-improvement of teachers and teachers-in-training. It requires only a minimal investment of the teacher's time and effort. Further, the procedure does not require the time and effort of others on the staff; it was designed for independent use. Videotape self-evaluation therefore is efficient as well as effective.

BIBLIOGRAPHY

Bailey, Jon S. and Wehr, Robert J. "The Effects of Videotape Feedback, Modeling and Direct Remote Instructions on Teacher Behavior: Some Preliminary Findings." Paper presented at the Second Annual Conference on Behavior Analysis in Education, May, 1971. University of Kansas, Lawrence, Kansas.

Cossairt, A., Hall, R.V. and Hopkins, B.L. "The Effects of Experimenter's Instructions, Feedback, and Praise on on Teacher Praise and Student Attending Behavior." Paper presented at Kansas Conference on Teacher Training, Lawrence, Kansas, 1972.

Garber, G.E. and French, S.L. "Closed Circuit Television Used to Train Teachers of the Deaf," The Volta Review, LXXXI (1969), 362-366.

Gordon, Thomas. Parent Effectiveness Training: The "No-Lose" Program for Raising Responsible Children. New York: Peter H. Wyden, Inc., 1970.

Rule, Sarah. "A Comparison of Three Different Types of Feedback on Teachers' Performance," in Behavior Analysis and Education -- 1972. Edited by George Semb.

Saudargas, Richard A. "Setting Criterion Rates of Teacher Praise: The Effects of Video Tape Feedback in a Behavior Analysis Follow through Classroom," in Behavior Analysis and Education -- 1972. Edited by George Semb.

Symposium on Research and Utilization of Educational Media for Teaching the Deaf. Reports presented at the Nebraska Center for Continuing Education, Lincoln, 1970. Reprinted in the American Annals of the Deaf, (October, 1974).

Thomas, Don Roy. "Self-Monitoring as a Technique for Modifying Teaching Behaviors." Unpublished doctoral dissertation, University of Illinois at Urbana-Champaign, 1972.

Thomson, C.L., Holmberg, M.C., and Baer, D.M. "The Experimental Analysis of Training Procedures for Preschool Teachers." Paper presented at the Kansas Conference on Teacher Training, Lawrence, Kansas, 1972.

Please choose three of the following teacher behaviors for use in a project. Rate them #1--first choice, #2--second choice, and #3-- third choice.

Use the following criteria in selecting the behaviors:
. . . importance in teaching
. . . importance in teaching hearing impaired children
. . . ease of specifying in observable terms (something you can see and count)

1. Proportion of time teacher requires all the students to respond simultaneously.

2. Teacher attention to students who are looking at her and teacher attention to students who are not attending. (Attention is any direct verbal or nonverbal contact with a child. Ex. "Johnny, look at me!", or stars for children who are attending.)

3. Proportion of teacher utterances relative to total teacher and child utterances.

4. Number of times teacher asks for a response from the child to indicate comprehension.

5. Number of times teacher requires student to use contextual cues in order to respond correctly.

6. Proportion of times teacher interrupts before completion of the thought relative to total child utterances.

7. Number of times teacher uses a potentially distracting gesture or verbal statement. (Ex. a noise in the hall, "Did you hear that?" T. pushes hair back from face, etc.)

8. Number of times teacher expands or elaborates on a correct student response.

9. Number of teacher utterances clearly available to lipreaders (environmental influences considered -- Ex. lighting, distance, turning head, objects occluding teacher's face.)

10. Number of times teacher inadvertently accepts a non-oral response from a child.

Choices _____

1. _____

2. _____

3. _____

Comments:

I hereby give permission to be videotaped on _____,
1975, at Central Institute for the Deaf, as part of an independent
study on teacher self-evaluation by Jan Ronnebaum and Ann Perry. It is
understood that the tape will not be used for any other purpose, and
will be erased at the conclusion of this study.

_____
(Name)

_____
(Date)

COMPREHENSION CHECKS

Name: _____

Date: _____

Instructions:

1. Read the definition below.

2. Watch the videotape one time before scoring.

3. View the videotape again and score.

4. Indicate the ratio obtained by placing your total score in the numerator and the time (10 minutes) in the denominator.

Definition: A teacher's request for a student response to indicate comprehension is any direct verbal check by the teacher, following a classroom presentation, which requires the student to demonstrate understanding. The teacher's presentation may be verbal or nonverbal, and so may the response requested from the student. Disregard the correctness or incorrectness of the response, or whether a response is given. Count only the number of times the teacher asks for a response.

Examples of teacher requests for response to indicate comprehension:

Ex. 1.) (Teacher points to spot on map).

Teacher: "Where is Alaska?"

(Susie shrugs.)

Ex. 2.) Teacher: "Stephen checked it out overnight. When can you get the book?"

Johnny: "Tomorrow."

COMPREHENSION CHECKS

Ex. 3.)   Teacher: "The vase is on the window-sill."
                     "Kathy, show me the vase."

          (Kathy runs over and points to it.)

<u>Instructions for scoring the videotape:</u>

Tally the number of times the teacher requests a student response to
indicate comprehension as defined above. Record the total number of
such requests in the space indicated at the bottom of the score sheet.

<u>Comprehension Checks</u>:

Tally:

Total:

<u>Total number of checks</u>
Total number of minutes

APPENDIX D

ELABORATION OF CORRECT STUDENT RESPONSE

Name: _____

Date: _____

Instructions: 1. Read the definition below.

2. Watch the videotape one time before scoring.

3. Watch the videotape again and score.

4. Indicate the ratio by placing the total number of elaborated correct responses over total number of correct student responses.

Definition: An expansion or elaboration of a correct student response is any additional verbal information or language supplied by the teacher directly following a correct response by a student. The rationale is to provide a learning experience for the student who demonstrates knowledge of the "correct" answer, as well as for classmates who may or may not have known it.

Examples of expansion or elaboration:

Susie: "I put it on the shelf."

Teacher: "Yes, you put it back on the shelf."

Johnny: "We went to a store."

Teacher: "Yes, we drove over to the bakery and bought some doughnuts."

Susie: "I saw a statue."

Teacher: "Yes, you saw a large statue of Thomas Jefferson at the Jefferson Memorial."

Teacher: "Oh, you went to the store, what did you buy?"

(Child holds up some candy)

ELABORATION OF CORRECT STUDENT RESPONSE

Teacher: "Oh, you bought some candy."

Instructions for scoring the videotape:

There are two columns on the score sheet for this behavior. The column
on the left is headed No Expansion or Elaboration; the column on the
right is headed: Expansion or Elaboration by Teacher.
Tally each correct response of the student not elaborated in the column
No Elaboration. Tally each correct response of the student that is
elaborated in the column Elaboration.
The videotape may be viewed as many times as necessary to obtain a count
in which your confidence is high.

To compute the final score:

Total each column separately, and record the final count for the right-
hand column at the bottom of the page in the space provided for Responses
Expanded or Elaborated. Then add together the totals for both columns
and enter the combined total at the bottom of the page in the space for
Total Number of Student Responses.

Expansion or Elaboration by the Teacher		No Expansion or Elaboration
Total: _____		
Total Elaborated Responses: _____		Total: _____
Total Correct Responses: _____		Total Correct Responses: ____

TEACHER INTERRUPTIONS OF CHILD UTTERANCES

Name: _____

Date: _____

Instructions: 1. Read the definition below.

2. Watch the videotape one time before scoring.

3. Watch the videotape again and score.

4. Follow directions for computing the final score.

Definition: An interruption of a child's utterance is any utterance by the teacher which causes a child to stop talking when it appears that the child has not completed a thought. It is irrelevant whether or not the teacher is promoting the child, or correcting him. Behavior of the child should also be disregarded.

Examples of interruptions:

Ex. 1.) Susie: "Can I stay in at recess to ...."

Teacher: "No, you can't stay in the room alone."

Ex. 2.) Teacher: "Did any of you borrow my blue pen?"

Tom: "Fell floor this morn......."

Teacher: "It feel on the floor this morning."

Tom: (Repeats)

Ex. 3.) Teacher: "Why is good weather important to farmers?"

Susie: "Crops need rain and sun and (pauses, looking at teacher's face to see if correct so far).

Teacher: (Nods) "But not too much of either one."

TEACHER INTERRUPTIONS OF CHILD UTTERANCES

<u>Final Score Computation</u>:

Tally each utterance of the child which is interrupted by the teacher.

Enter the total number in the space provided. Indicate the ratio by

placing the total number of interrupted utterances over the total

number of minutes (10 minutes).

Interrupted Utterances

Total: _____

Minutes: _____

Appendix F

Reliability Results for First Group

Behaviors	Observer	Counts	
Comprehension Checks	11	7	9

Behaviors	Observer	Counts	
Elaboration of Correct Student Response	3/8	10/10	14/14

Behaviors	Observer	Counts	
Teacher Interruptions of Child's Utterance	12	1	0

COMPREHENSION CHECKS

Name: _____

Date: _____

Instructions:

1. Read the definition below.

2. Watch the videotape one time before scoring.

3. View the videotape a second time and score it according to the directions below.

4. Follow instructions for computing the final score.

Definition:

A comprehension check is any question or command from the teacher which requires the student to demonstrate understanding of what the teacher said:

Examples:

Teacher statement: "The honor roll is on the bulletin board."

Comprehension checks:

a) "Where is the honor roll?"

b) "What is on the bulletin board?"

c) "Go get the honor roll."

d) "What did I say?"

e) "Are we talking about pets?"

f) "What are we talking about?"

The following are NOT examples of comprehension checks and should NOT be scored as such:

COMPREHENSION CHECKS

a) "Do you have a bulletin board at home?"

b) "How many of you were on the honor roll last month?"

c) "Who remembers the requirements for making the honor roll?"

d) "Listen while I read the names on the honor roll this month."

Instructions for scoring the videotape:

Make a check mark below each time the teacher checks for comprehension.

_____

_____

Computation of the final score:

Express the final score as a ratio. Put the total number of comprehension checks over 10 minutes.

Total comprehension checks =   _____
        minutes

APPENDIX H

EXPANSION OF STUDENT RESPONSE

Name: _____

Date: _____

Instructions:

    1. Read the definition below.

    2. Watch the videotape one time before scoring.

    3. View the videotape a second time and score it according to the directions below.

    4. Follow instructions for computing the final score.

Definitions:

An expansion of a student response is:

a) Any additional content information or

b) any expansion of the student's language

Either (a) or (b) is given by the teacher directly following a student verbal utterance.

Examples:

a) Additional content information:

    1. Susie: "I saw a statue."

        Teacher: "Yes, you saw a large statue of Thomas Jefferson at the Jefferson Memorial."

    2. Johnny: "We went to the store."

        Teacher: "We went to the bakery and bought some doughnuts."

EXPANSION OF STUDENT RESPONSE

b) Language expansion:

   1. Susie: "I put it on the shelf."

      Teacher: "Yes, you put it back on the shelf."

   2. Johnny: "I home."

      Teacher: "You are going home."

Instructions for scoring the videotape:

Make a check mark below each time the teacher expands a student

utterance

```

```

Computation of the final score:

Express the final score as a ratio. Put the total number of

expanded utterances over 10 minutes.

Total expansions = _____
      minutes

APPENDIX I

TEACHER INTERRUPTIONS OF STUDENT UTTERANCES

Name: _____

Date: _____

Instructions:

1. Read the definition below.

2. Watch the videotape one time before scoring.

3. View the videotape a second time and score it according to the directions below.

4. Follow instructions for computing the final score.

Definition: An interruption of a student's utterance is any utterance by the teacher while the student is still talking which causes the student to stop vocalizing. It is irrelevant whether or not the teacher is prompting the student or correcting him.

Examples of interruptions:

a) Susie: "Can I stay in at recess to....."

   Teacher: No, you can't stay in the room alone."

b) Teacher: "Did any of you borrow my blue pen?"

   Tom: "Fell floor this morn...."

   Teacher: "It fell on the floor this morning."

   Tom: (Repeats)

   Susie: "I lost my ...."

   Teacher: "Stop playing with the microphone!"

TEACHER INTERRUPTIONS OF STUDENT UTTERANCES

Instructions for scoring the videotape:

Make a check mark below each time the teacher interrupts a

student utterance

Appendix J

Reliability Results for Second Group

Behaviors	Observer	Counts

Comprehension Checks	8	1	7	Tape 1
	6	0	6	Tape 2

Expansion of Student Response	3	5	2	Tape 1
	5	3	5	Tape 2

Teacher Interruptions of Child's Utterance	0	0	0	Tape 1
	4	5	6	Tape 2

BEHAVIOR DESCRIPTION FORM

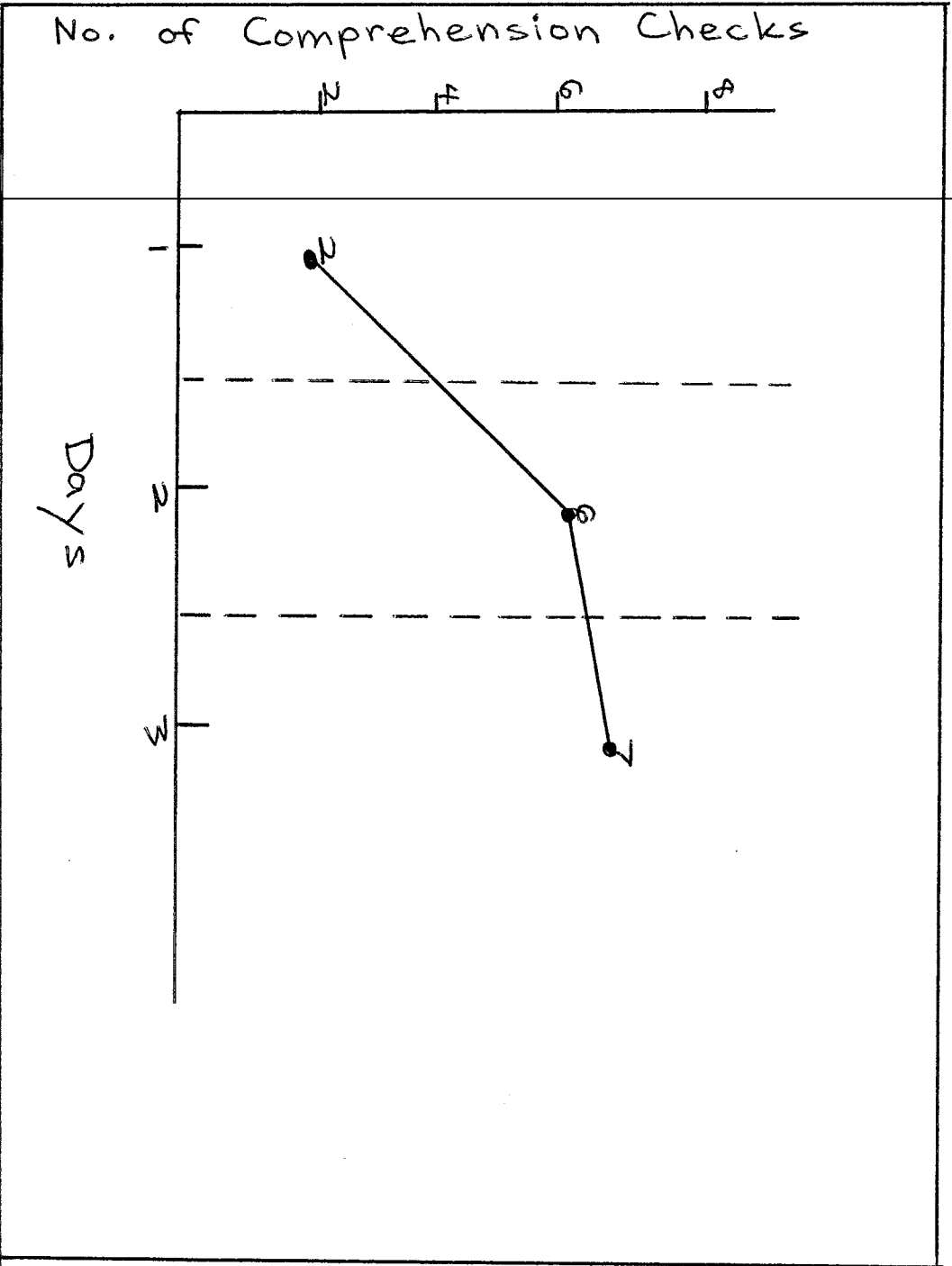| Method	Questions	Interraction (Teacher Talk / Student Talk)	Expressions-Verbal	Expressions-Non-Verbal
Control	Rhetorical -teacher supplies answer -no answer expected		Accepts Feelings	Acceptance -Smiles
Lecture		States own feeling	Touch-Warmth
Questions - Ans.	Basic -facts		Praise-Encourage	Eye Contact
Demonstrate		Accepts Idea	Ignores, Looks away
Direction	Leading -questions contain clues -questions prescribe right answer	Student Talk	Repeats Student Response	Impatience,Frustration
Drill-class response			Impatience	Tension, Anxiety (Voice,level,speed)
Clarification (stu.talk)			Rejects Idea	Cold, Aloof
Inquiry (tch. challanges, probes; child questions)	Probing -Open-end questions		Rejects feelings	Touch-Discipline
Dialogue (stu. to stu.)		Silence	Attacks, Sarcasm	Routine(none of above)
Repeats stu.Response Redirect same question to another student		Confusion	Interrupts	
			Threatens	
			Routine	
Room No.	Grade Level	Subject	Session No.	Group

Figure 1

Teacher Count of Comprehension Checks

Figure 2

Teacher Count of Gestures

No. of Gestures

Days

10   20   30   40

1   2   3

38

22

22