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ABSTRACT

The object of this study was to assess costs, practical problems, and personal attitudes connected with using videotape recording (VTR) as an adjunct to in-person supervision of student teachers. Student teachers' performance in the classroom was recorded by videotape technicians once or twice during their student teaching experience, and the tapes were delivered to supervisors as a supplement to in-person visits. Student teachers allowed to view recording of their teaching displayed favorable attitudes towards this use of VTR, while those not allowed to see tapes of their performance exhibited more negative attitudes. Supervisors' failure to give any feedback at all on a teacher's recorded performances resulted in even more negative student teacher attitudes toward this use of VTR. The student teachers wanted to know ahead of time that their performance would be recorded. Supervisors were moderately favorable towards this use of VTR, but they felt it was inferior to and more time-consuming than live observation. The costs for 17 all-day recording sessions and 12 videotapes totaled $512.69. This use of VTR appears helpful and feasible. Several recommendations for its use are made. (JK)

VIDEOTAPE RECORDING AS A SUPPLEMENT TO IN-PERSON SUPERVISION

By Donald K. Jarvis

INTRODUCTION

Over the past decade, videotape recording (VTR) has been repeatedly advocated as an adjunct to in-person supervision of student teachers. Reasons for this include the following:

1. Effectiveness: Properly used, VTR has been shown to be effective in developing teaching skills in simulated, focused pre-student teaching situations (micro-teaching).[1] Student teacher acceptance of video-tape use is high.[2]

2. Feedback: Feedback has been shown to be crucial to change.[3] By means of videotape recordings, performers can view their performance much as their audience saw it. Such feedback, when focused by supervisor comments, appears more effective than subjective supervisor feedback alone.[4] This is especially so when the audience reaction is included on the recording.[5] Some studies indicate audio recordings to be effective for lecture-type classes,[6] but personal experience of the author with audio recordings for supervision is that the loss of visual cues is frequently disastrous. Hearing the audio recording played back, the supervisor is frequently forced to ask the student teacher what was occurring in the class, and pupil reactions to teacher moves are difficult to assess. Interaction analysis as outlined by Flanders appears to be as effective as VTR, and is especially powerful as a change agent when combined with VTR.[7] Interaction analysis requires some training to record and interpret, and it was not included in this study. However, its use with VTR deserves further study.

3. Records: The videotape provides a record of teaching which has several valuable uses. With the consent of the recorded, these uses may include the

following: A) They can be shared with other student teachers in seminars. B) They can be used in methods classes more effectively than can live observation alone[8] or live closed circuit TV alone.[9] C) They can and are being used as an addition to the placement file.[10] D) They can and are being used for research purposes.[11]

4. Travel Costs: Under a system of specialist supervision, much expensive duplication of travel is incurred. As an alternative, a technician with backpack VTR equipment can tape up to six student teachers in a given locale per day regardless of the teachers' specialties. Travel savings should result if the technicians assist supervisors by recording student teachers and delivering the tapes to the supervisors at the university. Because technicians need not be highly skilled to do the recording, their time is usually less expensive to the university than is specialist supervision time. Delay in playing back tapes to the student teachers should not be a significant factor, as immediacy of feedback has been shown in micro-teaching to be irrelevant.[12]

Despite the above rationale, videotaping of student teachers has seldom been included as a regular component of student teaching. This is largely due to the bulk, unreliability, and incompatibility of past VTR equipment. At present, however, battery-operated VTR units no larger than briefcases with cameras the size of home movie cameras are available and are sufficiently reliable to be included as a part of student teaching supervision. Most one-half inch Japanese VTR equipment produced the last two years is compatible, so that tapes recorded on one brand are now playable on other brands.

The object of this study was to asses costs, practical problems and personnel attitudes connected with using VTR as an adjunct to in-person supervision.

PROCEDURES

Brigham Young University student teachers are assigned to their schools the full day for a teaching "block" of eight weeks. This project involved three blocks and a total of thirty-five foreign language student teachers supervised by six specialist supervisors, including the author. Students were recorded once or twice during the block on twenty-minute, one-half inch videotapes by student technicians using a Sony "Video Rover" AV-3400 recorder and a Sony AVC-3400 camera.

The technicans received a schedule complete with alternates each week from the author. At the first of the block, student teachers were advised that video recording would occur during their assignment, but they were no usually advised as to the specific day recording would occur. The technician was scheduled to record one day per week an average of five teachers per day. After recording, the technician returned the tapes to the author, who noted tapes received and then distributed them to the supervisors. Supervisors could play back the tapes either with or without the respective student teachers being present. If the student teacher was not present, the supervisor could either give feedback later or not at all, as he chose. Supervisors were expected to return all tapes within two weeks for erasure and reuse unless the teaching recorded was especially valuable for future observation.

At the end of each block, student teachers were asked to fill out a brief questionnaire on their perceptions and reactions to VTR as used in the project. Supervisors were asked to do the same at the end of the experience. Since each student teacher and supervisor experienced "live" supervision as well as video recording, a control was built into the project.

RESULTS

Costs

The student operator made seventeen recording trips, an average of 5.4 per eight week block. He took an average of 8.8 hours per trip for a total of 149.4 hours. At the rate of $2.27 per hour, total costs for labor were $308.69.

The operator delivered fifty-nine usable tape recordings to the supervisors, an average of 3.5 tapes per trip,[13] using a total of twelve twenty-minute, one-half inch tapes at $17 each for a total of $204. The supervisor decided to retain all twelve tapes for future use, but this expense could be reduced if it were not necessary to keep all tapes.

The operator traveled a total of 2,049 miles, averaging 121 miles per trip. It is extremely difficult to assess how much was saved on travel, but our student teaching office paid all costs, agreeing that in no case would the travel expense involved with VTR be more than that usually paid supervisors without VTR. Therefore, travel expense cannot be considered an extra expense at all.

Total expense attributable to the use of the VTR was $512.69 for seventeen recording trips and purchase of twelve one-half inch tapes.

Problems

During the coldest months of winter, some problems in video quality developed. These were eliminated by keeping the equipment warm between schools.

Audio quality has been greatly improved over that of earlier VTR units, but audio pickup of pupils not on camera was sometimes weak. This was improved by setting the camera at the side of the room and panning more frequently to the pupils. A second microphone and mixer might be worth the trouble in some cases.

Some supervisors found playback equipment availability to be a problem.

The worst organizational problem concerned getting student teachers' schedules to the coordinator. It was difficult to collect schedules and start recording before three or more weeks of the eight had elapsed. Flexible scheduling presented coordination problems whenever encountered.

Attitudes: Student

Seventeen student teachers responded out of thirty-five video recorded. The questions from the questionnaire are reproduced below with results summarized in brackets following each question.

1. How many times had you already been video recorded prior to student teaching? /average = 2, range = 11/

2. How many times were you recorded by BYU videotape during your student teaching? /average = 1.5, range = 2/

3. As compared to a live visit by my supervisor, VTR distracted me A. much more /2/ B. some more /5/ C. about as much /9/ D. some less /1/ E. much less /1/

4. As compared to a live visit by my supervisor, VTR distracted my pupils A. much more /6/ B. some more /7/ C. about as much /4/ D. some less /0/ E. much less /0/

5. As compared to a live visit by my supervisor, with VTR my pupils were A. much more unruly /1/ B. some more unruly /6/ C. about the same /5/ D. some more cooperative /4/ E. much more cooperative /1/

6. How many times did your supervisor play back a VTR or part thereof in your presence? /5 respondents answered "once"/

7. If he did play back a VTR in your presence, how would you rate the experience as compared with a normal, non-VTR conference with your supervisor? With VTR it was A. much more useful /1/ B. some more useful /4/ C. about

as useful /0/ D. some less useful /0/ E. much less useful /0/

8. Did your supervisor ever fail to provide feedback on a taped performance of yours? /7 answered "no," 7 answered "yes"/ If so, how often? /average = 1.5 times/

9. How much time generally elapsed between the time you were recorded and the time you received feedback from your supervisor as to your performance? /average = 1 week/

10. What is your overall feeling as a student teacher about VTR as practiced with you? A. very positive /6/ B. somewhat positive /3/ C. neutral /1/ D. somewhat negative /6/ E. very negative /1/

(The three questions below were open-ended. Responses listed here were modal.) How can we improve the system? /"pre-arrange the taping period" (5)/ What did you like best? /"self-evaluation opportunity" (6)/ What did you like least? /"poor follow-up" (2)/

Correlations between feedback and attitude toward the project are striking: students who were permitted to view their recordings all marked "very positive" /4/ or "somewhat positive" /1/, while those not permitted to view recordings of their performances marked question #10 in the following manner: A. very positive /3/ B. somewhat positive /2/ C. neutral /1/ D. somewhat negative /6/ E. very negative /1/. If the positive responses are grouped and compared with negative and neutral responses for "view" and "non-view" conditions, Fisher's exact test gives a probability of .02 for these results. Results of not providing feedback of any kind on a taped performance were similar: only one who received no feedback felt "very positive" about the use of VTR. The rest were either "somewhat negative" /4/ or "very negative" /1/. There was no discernible correlation between previous experience with VTR and attitude toward VTR used in student teaching.

Attitudes: Supervisor

All six supervisors completed questionnaires on their attitudes toward the project. Questions from that instrument are shown below with results (excluding the author's responses) summarized in brackets following each.

1. How many VTRs did you receive this year? /average = 10.6, range - 11/

2. The video recording of the visual aspect of the teacher's performance was A. much worse /0/ B. some worse /3/ C. about the same /2/ D. some better /0/ E. much better /0/ . . . than a live visit to my student teacher.

3. The VTR of the visual aspect of the pupils' reactions was A. much worse /1/ B. some worse /4/ C. about the same /0/ D. some better /0/ E. much better /0/ . . . than a live visit to my student teacher.

4. The VTR of the audio aspect of the teacher's performance was A. much worse /0/ B. some worse /2/ C. about the same /3/ D. some better /0/ E. much worse /0/ . . . than a live visit to my student teacher.

5. The VTR of the audio aspect of the pupils' reactions was A. much worse /2/ B. some worse /3/ C. about the same /0/ D. some better /0/ E. much better /0/ . . . than a live visit to my student teacher.

6. The time required to view and counsel with a student teacher, using VTR was A. much more /1/ B. some more /2/ C. about the same /0/ D. some less /2/ E. much less /0/ . . . than the time required by a live vist to my student teacher.

7. How much time usually elapsed between recording and your feedback session to the student teacher? /average = 6 days/

8. Compared with a session not involving VTR, a session where a VTR was played for student teachers was A. much more useful /3/ B. some more useful /0/ C. about equal in use /1/ D. some less useful /1/ E. much less useful /0/

9. What is your overall feeling as a supervisor about our VTR program as it

was working toward the end of the year? A. very positive /0/ B. somewhat positive /5/ C. neutral /0/ D. somewhat negative /0/ E. very negative /0/ (The following two questions were open-ended. Responses listed here were modal.) What do you like best about our use of VTR to augment supervision? /"student opportunity to view self" (2)/ What do you like least about our use of VTR to augment supervision? /"playback scheduling difficult" (2)/

SUMMARY, CONCLUSIONS, AND FURTHER RESEARCH SUGGESTIONS

Student teachers were videotape recorded by a technician once or twice during their student teaching experience, and the tapes were delivered to supervisors as a supplement to in-person visits. Student teachers allowed to view recordings of their teaching displayed favorable attitudes toward this use of VTR, while those not allowed to see tapes of their performances exhibited more negative attitudes. Supervisors' failure to give any feedback at all on a teacher's recorded performances resulted in even more negative student teacher attitudes toward this use of VTR. The student teachers expressed a desire to be informed beforehand of the time of the recording session.

The five supervisors involved in the project registered moderately favorable attitudes toward this use of VTR, but felt that both audio and video aspects of the VTR of pupil behavior to be inferior to live observation. Two felt that VTR use required more time than did live observation.

Collecting student teachers' schedules proved to be the most serious organization problem in the project.

Costs for seventeen all-day recording sessions and twelve videotapes were $512.69.

The use of technician-run VTR to augment in-person supervision appears both helpful and feasible, especially if the following recommendations are incorporated:

1. Allow each student teacher to view at least one VTR of his performance, preferably with supervisor present at the replay to focus the teacher's attention.

2. If the student teacher cannot view a VTR, always provide some sort of feedback to him on his recorded performance.

3. Have the operator set up at the side of the room and focus frequently on pupils.

4. Inform the student teacher beforehand as to when he will be recorded.

5. Make playback equipment easily available to the supervisor.

6. To reduce costs, incorporate a maximum number of subject specialties in the project and concentrate on a minimum geographic area.

Further research could include a replication of this project with larger numbers, more subject areas, and with each supervisor giving feedback to half his teachers and no feedback to the other half. In the project reported above, some selection-treatment interaction may have occurred. Further experimentation needs to be done on the use of interaction analysis plus VTR in student teaching supervision. Another helpful study would be a comparison of technician-operated and delivered VTR versus supervisor-operated VTR with immediate playback. The limits of playback delay should also be explored.

FOOTNOTES

1. James M. Cooper and Dwight W. Allen, "Microteaching: History and Present Status" (Washington, D.C.: ERIC Clearinghouse on the Teaching of Foreign Languages, 1970, ED 036 471), p. 14.

2. Ibid.; Joe E. Shively, Adrian P. Van Mondrans, and Cheryl L. Reed, "The Effect of Mode of Feedback in Microteaching" (paper presented at the annual meeting of The American Educational Research Association, Minneapolis, Minnesota, March 1970, ERIC No. ED 037 391).

3. Cooper and Allen, p. 14.

4. Roderick E. Deihl, Myles P. Breen, and Charles U. Larson, "The Effects of Teacher Comment and Television Video Tape Playback on the Frequency of Non-fluency in Beginning Speech Students," The Speech Teacher, XIX (September, 1970), 185-189.

5. James C. McCroskey and William B. Lashbrook, "The Effect of Various Methods of Employing Video-Taped Television Playback in a Course in Public Speaking," The Speech Teacher, XIX (September, 1970), 199-205.

6. Shively, Mondfrans, and Reed.

7. E. C. Wragg, "The Influence of Feedback on Teachers' Performance," Educational Research, XIII (June, 1971), 221.

8. Gerald S. Lesser and Herbert Schueler, "New Media Research in Teacher Education," AV Communication Review, XIV, No. 3 (1966), 330-35.

9. Graham Pogue, "Student Teaching: The State of the Art" (Ball State University, Indiana, ERIC No. ED 030 587), 4.

10. Charles H. Lang, "Instant Replay for Placement," Journal of College Placement, XXXI (December-January, 1971), 38-42.

11. A.E. Cartmell, "The Use of CCTV in the Assessment of Teacher Effec-

tiveness," Programmed Learning and Educational Technology, VIII, No. 3 (1971), 173-85.

12. Cooper and Allen, p. 14.

13. The number of usable recordings would have been higher if the operator had realized earlier the importance of keeping VTR equipment warm during winter travel.

VITA

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