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ABSTRACT

This paper discusses two studies that suggest the use of the videotaping procedure as an effective staff development technique for both preservice and inservice teachers. The Krajewski Study in 1970 studied the effects of a clinical supervision model that included videotaped review of preservice interns, none of whom had previous teaching experience. The ESEI Study in 1988 used videotaped lessons conducted by inservice science teachers for the purpose of evaluating their performance. The discussion includes descriptions of how the studies were conducted, the results of the evaluation/staff development process, and a summary of a participant attitude survey. Implications for preservice and inservice evaluators are discussed. (JD)

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VIDEOTAPING

A STAFF DEVELOPMENT TECHNIQUE

FOR

PRESERVICE AND INSERVICE TEACHERS

Videotaping - A Staff Development Technique for Preservice and Inservice Teachers

With the publication of the numerous papers reporting the state of education in this nation, the Age of Accountability in education has resulted in much research, reform, debate and controversy. Researchers are seeking new answers to old questions with renewed fervor. Interestingly, many researchers are rediscovering promising theories and practices that, though researched in earlier years, have failed to be thoroughly developed and/or uniformly implemented. One such practice is the use of a videotaping staff-development procedure for preservice and inservice teachers.

Each decade since the early sixties has produced significant research supporting the practice of videotaping as a staff development technique. Its use and effectiveness has been suggested from elementary (Gardner, 1982; ESEI, 1988) to the preservice teacher in college classrooms (Love, 1978; Krajewski, 1970; Ajayi-Dopemu, 1986; Rabozzi, 1977), through the improvement at the college instructor level (Taylor-Way, 1981), and in the medical education (Foley, 1977) field.

This paper will focus on two studies that suggest that the use of the videotaping procedure is an effective staff development technique for both preservice (Krajewski, 1970) and inservice teachers (ESEI, 1988). Though different in varying degree on process and participants, both studies include an investigation of the effects of self-analysis, expert analysis and follow-up on teacher behavior in the classroom.

Krajewski Study, 1970

The Krajewski MAT Study, 1970 studied the effects of a clinical supervision model - with one component being that of video taped review - on preservice interns. The subjects of the research were 41 MAT (Master of Arts in Teaching) Interns; all were graduate students whose undergraduate degrees were not in the field of education. None had previous teaching experience. They were a carefully selected group from home backgrounds representing 19 states, and educational backgrounds including 27 colleges and universities located in 15 states.

During the academic year, the MAT interns taught full-time in secondary schools (33 different junior and senior high schools in 3 different states). All 41 interns received regular supervision visits from the appropriate university supervisor. In addition, the experimental group interns received five clinical supervisory visits during which their lessons were subjected to video analysis and FIAC (Flanders Interaction) analysis.

During the classroom period the clinical supervisor taped 10-12 minutes of sections of the period. At no time was a single 12-minute length tape of continuous class action made.

During and after the viewing of the tapes by the interns, the clinical supervisor used a supervisory approach of guided self-analysis. He asked questions occasionally, but teacher improvement was mainly self-initiated.

Results Total Group:

1. The MAT experimental group sustained an attitude mean gain during the teaching year, while the MAT control group realized a substantial mean attitude loss during the same period.

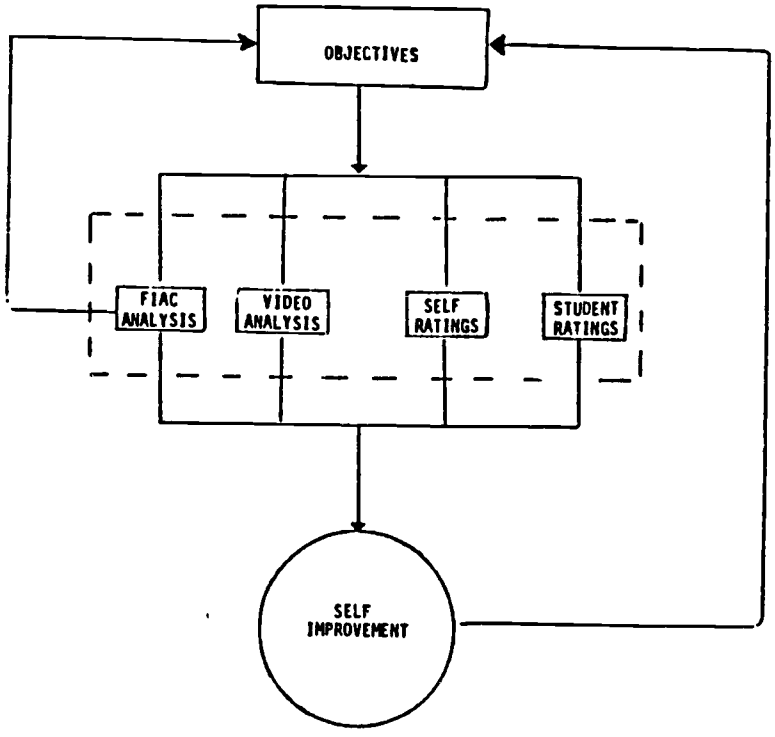
2. Students taught by interns who experienced video analysis rated their teachers higher than did those students taught by interns who were supervised in the conventional manner.

3. The MAT experimental group, having experienced video analysis during the teaching year did exhibit better teaching and more accurate post self-perception evaluation of their teaching than did the control group.

4. In this research study, the MAT intern experimental group became more indirect in their approach, talked considerably less, praised more, used student ideas more, and as evidenced by the inverse variation between teacher talk and student talk, students increasingly initiated more active participation and interaction in the classroom.

A Developed Model

For illustrative purposes, the following Krajewski Study model is presented with explanation:



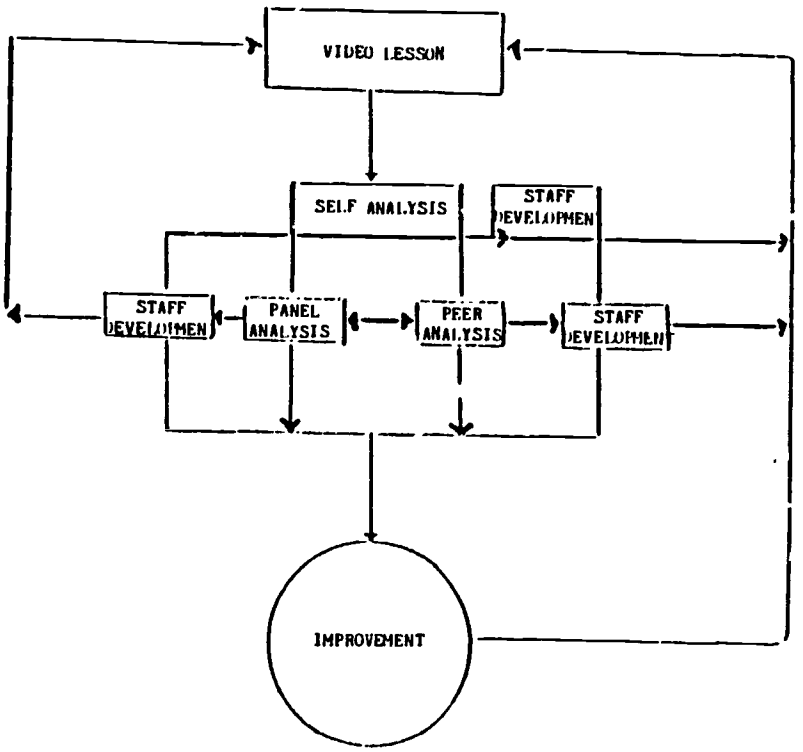
Briefly, the model suggests that the teacher list objectives, then analyze with any or all of self ratings, student ratings, video analysis and FIAC analysis. The dotted line implies that instead of moving directly to self-improvement, the teacher may, after analysis with any or all of the 4 analysis instruments, modify or restate objectives and then move to analysis again. After self-improvement occurs, the teacher recycles back to objectives.

ESEI Study, 1988

Unlike the Krajewski, 1970 experimental study which focused on preservice interns, the ESEI Study, 1988 was a spin-off of an Elementary Science Education Institute (ESEI) conducted at the University of Tennessee, Martin Center of Excellence for the Enrichment of Science and Mathematics Education (CEESME). One purpose of the institute, made up of participants selected statewide, was to increase, enhance and refine teaching skills in science instruction. The decision to use video taped lessons for evaluation was based on the preponderance of research suggesting the successful use of videotaping as the data gathering procedure of an evaluation process, and the dispersed locations of the participants throughout the state.

Though the use of videotaping for evaluation has been researched rigorously the ESEI model differs somewhat. The ESEI videotaping process not only includes the customary self-analysis, supervisory and/or peer analysis component but includes a jury panel of three exemplary teacher evaluators - one Career Ladder III classroom teacher, one Career Ladder III principal and one staff-development trainer.

The flow chart with the accompanying explanation explicates the process



Using portable video equipment (see attachment 1 for explanations and description) teachers videotaped one entire lesson. Self analysis of the tape was completed using the same instrument that would be used by the panel. After self analysis the teacher could choose the peer evaluation, staff development, or panel evaluation component. At any time during the process the evaluator/s or the Institute participant could choose staff development or to discard this lesson and recycle. After a successful panel evaluation with written feedback at each level, and/or the formal staff development option, the participant was charged to incorporate the needed improvements in the next videotaped lesson. The process was repeated three times for each of the 15 participants.

Results of Evaluation/Staff Development Process

Eighty percent of the participants showed significant increases from first to third videotaped lessons as measured on the ESEI Teacher Evaluation instrument, containing all the objectives from the Tennessee Career Ladder and the state (TN) adopted local evaluation instruments.

12 of the 15 showed improvement
1 stayed the same
2 decreased from 2nd to 3rd videotaped lessons

Attitude Survey Component

A successful evaluation process without acceptability among the populus to be evaluated is useless. Therefore the ESEI staff and two members of the evaluation panel developed the Attitude Survey. The Likert scale survey sought opinions on such items as the use of a permanent record of teaching, effect of the video equipment on teacher and student behavior in the classroom and confidence in the process for evaluation. The survey, distributed to more than 500 professionals across the state had a return of 266 and yielded the following results:

1. This group of selected teachers was neither strongly supportive of nor opposed to the use of video tape for evaluation for Career Ladder II and III.

2. Race was not a significant variable in teachers' attitudes about the use of video-taping for Career Ladder evaluations.

3. Sex was not a significant variable in teachers' attitudes about the use of video-taping for Career Ladder evaluation.

4. Educational position held was not significant in teachers attitudes toward video-taping.

5. Career Ladder III status was a significant variable in teachers attitudes. Career III teachers rated video-taping for III and II status significantly lower than any other group.

6. Career I, II teachers, and those teachers not on the Career Ladder, had significantly higher attitude scores about the use of video-taping, than did their Career III counterparts.

7. Memphis teachers had significantly lower attitude scores about the use of video taping for Career Ladder II and III evaluation, than did their counterparts in any other part of the state.

Frequency Distribution of Respondents on Demographic Variables

VARIABLE	NUMBER RESPONDENTS	PERCENT OF TOTAL
SEX		
Male	54	20%
Female	208	78%
RACE		
Native American	7	3%
White	222	85%
Black	30	11%
Oriental	1	0%
EDUCATIONAL POSITION HELD		
Secondary Teacher	72	28%
Elementary Teacher	161	63%
Principal	12	5%
Supervisor	11	4%
CAREER LADDER STATUS		
I	178	67%
II	11	4%
III	26	10%
Not On Ladder	11	4%
GEOGRAPHIC REGION		
UTM	71	27%
Memphis	61	23%
Knoxville	63	24%
Middle TN (Rural)	37	14%
Chattanooga	14	5%
West TN (Rural)	20	8%

To ascertain the attitude of the ESEI participants toward the use of videotaping, the attitude surveys were administered before and after the evaluation process. The average response of the

state wide survey participants on the scale - 1 represented "strongly disagree" and 5 respresented "strongly agree" - was 2.51. However the average score of the ESEI participants was 3.47. This indicates that they are more supportive than the selected Tennessee teacher population who had not been exposed to the process. This suggests to these researchers that this data gathering procedure could expect increasing acceptance with familiarity with the process.

Implications for Preservice and Inservice Evaluators

1. Using a panel of "expert" evaluators increases consistency and reliability of the process. Diversity among panel members reduces the possibility of prejudices and bias.

2. Submission of teacher-selected videotape involves the teacher in the decision making aspect of the process.

3. The teacher becomes an active participant in the evaluation/staff development plan. He/She is no longer "acted upon." The teacher can observe and validate behaviors and help develop the improvement plan.

4. Peer evaluations build needed collegiality and peer coaching within groups/schools.

5. Submission of videotapes in lieu of some, not all observer visits, reduces the cost of evaluation and increases the number of observations.

6. Viewing many diverse lessons, teachers can see many classroom applications of effective teaching theories and can develop a repertoire of alternative teacher behaviors.

7. Unlike the recall from written data teachers can recall the emotions of the moment that precipitated certain behaviors, positive or negative.

8. Analysis and follow-up can be scheduled at the convenience of the teacher and evaluator allowing more and better quality time for the process.

Summary

In the time spanning a decade from the Krajewski study 1970 to the ESEI study 1988 many notions about evaluation and evaluators have changed. However, many have remained constant. "Evaluation..... creates apprehension in most situations and fear in others..... These feelings are shared by both the evaluatee and the evaluator" (Bordinger, 1984). Teachers want to do well on evaluations and will strive to improve, yet they do not always have a realistic view of their strengths and weaknesses (Simon, 1978; Krajewski, 1976). Any change in the already nebulous process increases stress (ESEI, 1988, Bordinger, 1984).

The use of videotaping for staff development for preservice and inservice teachers, though rigorously researched lacks development and implementation. Though not an answer to the cry for accountability at every level of teacher training and retraining, it certainly may be one effective tool that lies dormant.

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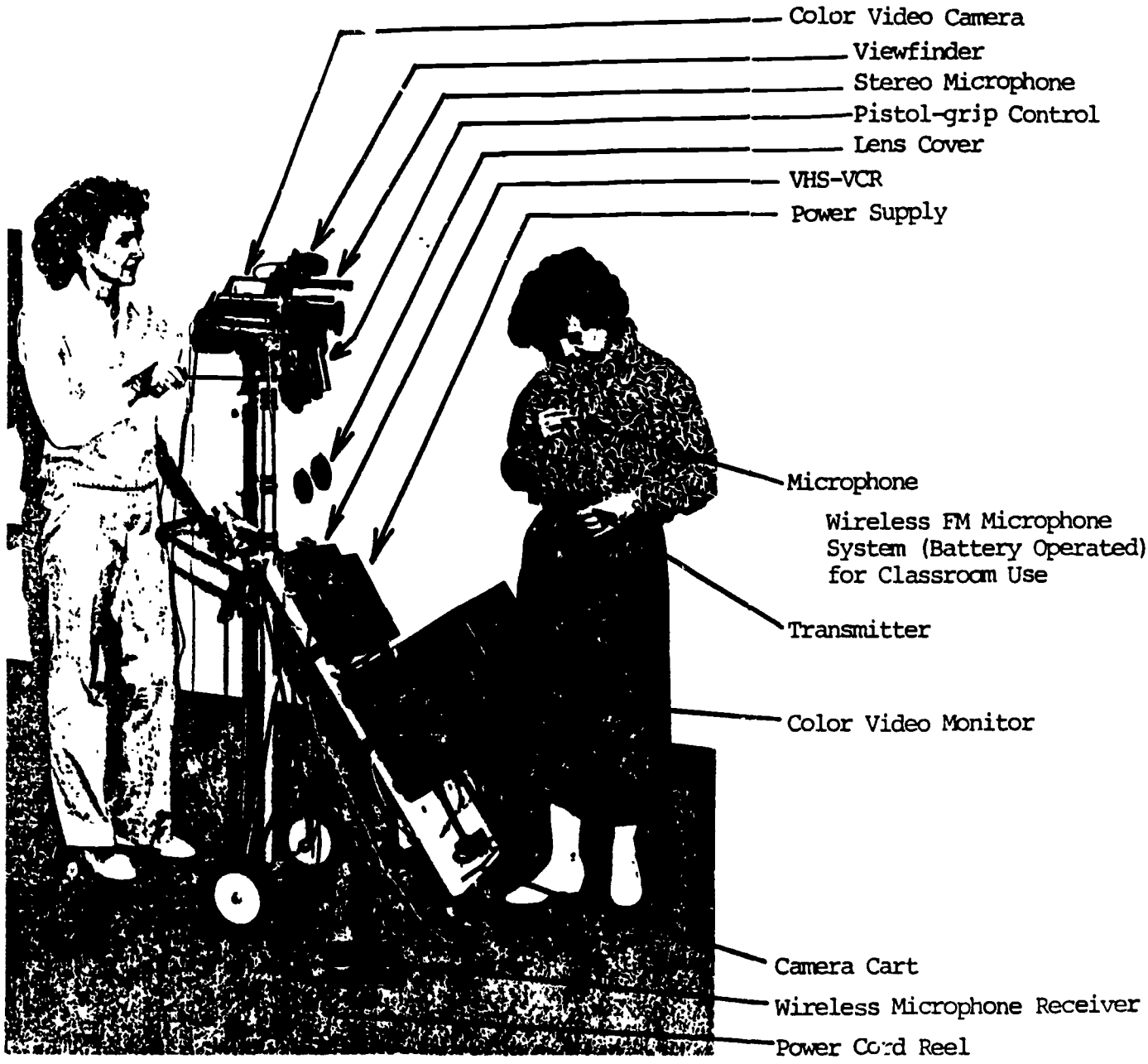
PORTABLE VIDEOTAPE RECORDER/MONITOR FOR ASSESSING CLASSROOM TEACHING PERFORMANCE IN THE ELEMENTARY SCIENCE EDUCATION INSTITUTE (ESEI)



Elizabeth Acree (left) and Robbie Damron test a videotape unit, which was designed by James E. Hadden, Chairman of the Department of Elementary and Secondary Education, Maurice H. Field, Assoc. Dean of Education at the University of Tennessee at Martin, and Dr. Dale Doak, Director of the Instructional Service Center, University of Tennessee at Knoxville.

With funds provided by the Tennessee Higher Education Commission, eighteen units were assembled and assigned to eighteeen teams of teachers participating in the Elementary Science Education Institute for use in a 16-month program for the enrichment of elementary science instruction in their school systems. In addition to monitoring their classroom teaching performance, the teams were encouraged to use the equipment for developing and presenting public information videotapes for local promotion of science education and other activities related to improvement of elementary science instruction in Tennessee.

The following is a list of the items and connecting apparatus that need to be purchased for the video unit.

I.	Wheelit Camera Cart	The cart on which the items described in the following list are mounted. As a rule, we do not endorse a particular brand; however, this Wheelit cart is unique. This type is available only from the following company: Wheelit Inc., P O Box 7350, Toledo, OH 43615, Phone (419) 531-4900.
II.	Major Audio-Visual Equipment	
	A. Color Vido Camera	Power Source: 12V DC Dimensions (approx.) 7"W x 9"H x 12"D Position: Mounted on column base of the cart with attached threaded screw. Power Supply: Connected to VCR with a cable that is attached to camera. Additional connection: connected to receiver with a stereo cord which must be purchased separately.
	B. Video Cassette Recorder (VCR)	Portable VHS VCR Power source: DC 12V Dimensions 8-1/2"W x 2-3/4"H x 10-3/4"D Position - Rests on bracket on cart Power Supply: AC adapter. There are two type of adapters. One is inserted into bottom of VCR. Another type of adapter is a box which rests beside the VCR. Both adapters have a cable which must be connected to the VCR and a power cord which must be plugged into a power outlet.
	C. Color Video Monitor	Power Sourcce: 120 V AC Dimensions: 19.5"H x 20.9"W x 19.5"D Power Supply: Power cord connects to AC outlet Position: Rests on bracket on cart

D. Microphone System	2 piece wireless FM microphone system Receiver: connected to camera with stereo cord Power Supply: power cord connected to outlet Microphone: wireless Power Supply: battery operated

III. Miscellaneous Equipment

A. Stereo Cord	Connects camera to receiver 1/4" x 8'
B. Connecting Cable	Connects VCR to monitor - needs a female adapter
C. Female Adapter	Connects connecting cable to monitor
D. Cord Receptacle Reel (optional)	Attached underneath cart This atachment is not necessary but it eases the connecting of the video equipment to the power supply.
E. Triple Outlet Plug (optional)	If cord receptacle reel is used, this plug further simplifies the attachment of the video equipment to the power supply.

HOW TO OPERATE VIDEO SETUP ON WHEEL-IT CART (Model 1301)

1. Do not unplug or move anything. Everything is connected to cord reel underneath cart.

2. Plug extension cord at botton of cart into wall socket. Everything needing power is already plugged into extension cord reel.

3. Leave Power Switch on lower left corner of monitor OFF while taping. (Make sure the volume is on minimum when taping.)

4. Turn ON remote microphone receiver. Raise antenna. Adjust volume to 2 or 3. Adjust volume if need arises.

5. Push Power Switch to ON at bottom right of VCR.

6. Push eject button (on VCR) to load tape. Note: Make sure the CAMERA REMOTE switch is in the OFF position; otherwise, the VCR will not open.

7. Put tape into VCR properly (holes to bottom, arrow on top and towards machine.) Close cassette holder.

8. Remove lens cap from camera. Turn camera to ON position. Check and set white balance. Refer to white balance sheet in packet.

9. Give transmitter (mic) to subject and check audio through earphone. If there seems to be a lot of interference, try moving the unit to another location or adjust volume on microphone receiver.

10. Turn camera remote to ON position (front middle of VCR). The VCR is not in Record-Pause mode.

11. Begin taping by pressing small black button on camera grip.

12. To stop taping press black button on camera grip to return VCR to Record-Pause mode. Turn camera remote on the VCR TO Off.

13. Rewind tape. To play the tape, press PLAY and turn up volume on monitor. Stop and rewind when finished. Eject tape. Turn camera to STANDBY. Turn VCR, monitor, microphone, and microphone receiver to OFF. Return lens cap to camera.

14. Unplug unit. Be sure microphone and transmitter are returned to the unit.

NEED HELP? CALL ISAC (INSTRUCTIONAL STRATEGIES AND ASSESSMENT CENTER). 901-587-7207