

DOCUMENT RESUME

ED 280 845

SP 028 779

AUTHOR Putnam, Joyce; Johns, Betty
 TITLE Potential of Demonstration Teaching in Teacher Preparation and Staff Development Programs. Research and Evaluation in Teacher Education: Program Evaluation Series No. 14.
 INSTITUTION Michigan State Univ., East Lansing. Coll. of Education.
 PUB DATE Feb 87
 NOTE 26p.
 PUB TYPE Reports - Descriptive (141)

EDRS PRICE MF01/PC02 Plus Postage.
 DESCRIPTORS Audiovisual Instruction; *Demonstrations (Educational); Higher Education; *Instructional Effectiveness; *Learning Strategies; *Preservice Teacher Education; Staff Development; Teacher Behavior; Teacher Education Programs; *Teaching Methods

ABSTRACT

This article discusses the use of demonstration in teacher education programs, emphasizing demonstration's potential in teacher preparation and staff development programs, and detailing the practical problems associated with its use. Demonstrations serve: (1) to illustrate teacher instructional behaviors or thinking and decision processes related to planning and reflection; (2) as a step in the development of desired teaching behaviors; (3) to illustrate how to assess cognitive processing skills of pupils; (4) as illustration of the integration of theoretical research and practical knowledge; (5) as an opportunity for candidates or professors to critically question the rationale for use of and/or the effects of ideas demonstrated; (6) to develop professor credibility; and (7) as a means for professors to explore ideas and remain current about pupils. A review of research studies offers insights into both symbolic (written or verbal illustrations of instructional procedures) and perceptual (visual enactments of teaching practices) demonstrations. Problems related to the use of demonstrations are pointed out. A two dimensional planning model is described. The planning model phases (initial planning, planning aspects of demonstrations, and planning for the pre-observation and post-observation briefing sessions) are discussed and illustrated on charts. A list of references is included. (JD)

 * Reproductions supplied by EDRS are the best that can be made *
 * from the original document. *

ED280845

Research and Evaluation in Teacher Education

Program Evaluation Series No. 14

POTENTIAL OF DEMONSTRATION TEACHING
IN TEACHER PREPARATION AND STAFF
DEVELOPMENT PROGRAMS

Joyce Putnam and Betty Johns

Department of Teacher Education
and
Office of Program Evaluation



"PERMISSION TO REPRODUCE THIS
MATERIAL HAS BEEN GRANTED BY

B. West

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)

This document has been reproduced as
received from the person or organization
originating it

Minor changes have been made to improve
reproduction quality

• Points of view or opinions stated in this docu-
ment do not necessarily represent official
OERI position or policy

BEST COPY AVAILABLE

TO THE EDUCATIONAL RESOURCES
INFORMATION CENTER (ERIC)."

SP 028 779

Publication of

The Office of Program Evaluation
College of Education
Michigan State University

February, 1987

Program Evaluation Series No. 14

POTENTIAL OF DEMONSTRATION TEACHING
IN TEACHER PREPARATION AND STAFF
DEVELOPMENT PROGRAMS

Joyce Putnam and Betty Johns

The Potential of Demonstration Teaching as a Component for
Teacher Preparation and Staff Development Programs

Joyce Putnam and Betty Johns

The primary purpose of this article is to discuss the use of demonstration in teacher education programs. To avoid duplication with other works (e.g., Putnam, 1984), we will not comment on its role in microteaching or observational training models, nor will we describe its application in protocol materials. Rather, the discussion will emphasize demonstration's potential in teacher preparation and staff development programs and the practical problems associated with its use.

Demonstrations have multiple functions. They serve (1) to illustrate teacher instructional behaviors or thinking and decision processes related to planning and reflection; (2) as a step in the development of desired teaching behaviors; (3) to illustrate how to assess cognitive processing skills of pupils; (4) as illustration of the integration of theoretical, research and practical knowledge; (5) as an opportunity for candidates or professors to critically question the rationale for use of and/or the effects of ideas demonstrated; (6) to develop professor credibility; and, (7) as a means for professors to explore ideas and remain current about pupils.

In teacher education programs, two types of demonstrations illustrate aspects of the teaching-learning process. Young (1969) distinguishes between symbolic and perceptual demonstrations. Symbolic demonstrations are written or verbal illustrations of instructional procedures. Perceptual demonstrations are visual enactments of teaching practices. Generally, both have consisted of live, filmed, or videotaped illustrations of teaching methods.

BACKGROUND

Perceptual and symbolic forms of demonstrations have been the subject of numerous research studies. Koran (1969) used films of teaching skills as

demonstrations and found highly significant improvements in 121 interns' skills. Snow and McDonald (1971) compared the effects of written and videotaped demonstrations on the development of instructional skills, while the work of Martin and Fanslow (1980) included an investigation of the effectiveness of live versus videotaped demonstrations of laboratory teaching strategies in home economics. These two studies like many others, (e.g., Bandura and Walters, 1963; Borg, Kelly, Langer and Gail, 1970; Joyce and Weil, 1972; Garten and Hudson, 1975; and Thompson, 1979) examined the use of demonstration in combination with other training procedures. Because these combinations differed across studies, there is no conclusive evidence that one type of demonstration is better than another. However, results of these studies suggest that training programs incorporating demonstration are more effective than those which exclude it.

This conclusion is supported by the work of others. After reviewing more than 200 studies, Joyce and Showers (1983) developed a training model containing the following components: presentation of theory; demonstration of skills; practice; feedback; and coaching. Demonstration, like the other components, was selected for the model because of its frequent involvement in successful training programs.

Another training model including demonstration was designed by Putnam, Roehler, and Duffy (1986). This training model, developed over five years, was used in an intervention research project (TEP) which resulted in pupils from classrooms of treated teachers achieving significant gains in both achievement and awareness compared with pupils from control classrooms (Roehler, Duffy, Putnam, Book, Meloth, Sivan, 1986). The training model was divided into three phases. Phase one is the identification of problems that all participants agree need resolution (shared ownership). In TEP, the problem identified was a needed improvement in reading scores of low group readers. Phase two focuses on studying the problem, designing an intervention and contracting with participants. Phase three involves the

implementation of the intervention plan. In the TEP project, the intervention phase had five steps: 1) presentation of an idea and its underlying rationale; 2) demonstration of the idea; 3) guided practice; 4) providing feedback and coaching; and 5) independent practice with self evaluation. This phase of the TEP training model, like the one designed by Joyce and Showers, emphasizes the use of demonstration as one step. However, the TEP model focuses on demonstration of preactive, interactive and postactive teaching behaviors not just as an illustration of interactive methods. Within this project, demonstration topics fell into four categories: 1) teacher thinking while planning lessons with explicit instruction, 2) interactive instructional methods, 3) teacher/pupil interaction techniques, and 4) teacher thinking while reflecting on a lesson just taught and the use of reflective data. Demonstrations were used in this project to both illustrate new information, and to create dissonance when teachers incorrectly felt they were accurately transferring an idea to their practice. Further explanation of the types of demonstrations used in this project are provided later in this article.

The recognition of demonstrations' value as a training component for both preservice and inservice teachers led to its inclusion in other programs. For example, teachers had opportunities to see demonstrations of various teaching methods in traditional inservice sessions. Specific approaches to teaching, such as the conducting of classroom meetings (Glasser, 1969) and the presenting of information in social studies lessons (Taba, 1969) were incorporated into staff development programs. The use of demonstrations in staff development sessions, became more popular with the influx of Instructional Theory Into Practice (ITIP) workshops. ITIP Workshops based upon Madeline Hunter's (1984) science of teaching, are designed to familiarize inservice teachers with cause and effect relationships derived from theory and from research on teaching and

learning. Johns (1986) studied one of these workshops and found that the trainer's purpose in using demonstrations was to provide teachers with concrete examples of the techniques to be transferred to classroom practice. Johns criticized three aspects of the workshop demonstrations. First, the principles underlying the ideas demonstrated were not highlighted. Second, demonstrations involved teachers playing the role of pupils as they also did in what stood for guided practice. Third, all ideas demonstrated were presented as discrete compartmentalized teaching techniques. Johns found almost all teachers tried the techniques. She also found that teachers who used them only briefly stopped because they felt they were not appropriately reinforced. Additionally, she found that teachers who continued to use the techniques had previous exposure to the ideas or better pupil responses. Johns concluded that contrary to the trainer's perception, successful transfer required an understanding of the underlying principles. A second conclusion was that demonstrations in this project contributed only to the transfer of technical skills and then only for some teachers. Finally, she concluded that despite problems, demonstrations did contribute to the teachers' transfer of ideas to their own practice and length of use in another program.

In general, educators believe that demonstrating aspects of the teaching-learning process facilitates the transfer of demonstrated behaviors to the observers' teaching practice. Although this belief is supported by research on training, educators cannot precisely specify the contributions demonstration makes to establishing new behaviors. Putnam (1984) and Putnam and Johns (1986) attempted to address this issue in studies focusing on the content of demonstrations, their perceived contributions, benefits, and limitations.

In the initial investigation, Putnam (1984) found that five different demonstration techniques were used by professors within teacher preparation program. One instructor used videotaped lessons to illustrate differences in teaching skills, concepts and principles. Pre and postbriefing sessions accompanied these demonstrations. A second instructor used a series of 20 to 60 live demonstrations to illustrate preactive, interactive and postactive teacher behaviors accompanied by briefing sessions. A third provided a series of five to ten live demonstrations illustrating isolated instructional methods. A fourth used a single live demonstration to illustrate differences in pupil thinking (e.g., Piagetian tasks, science concepts) coupled with briefing sessions. The fifth used a series of eight to ten live demonstrations to illustrate the teacher's need for subject matter knowledge.

Putnam found that these approaches represented two different philosophical positions held by the teacher educators doing the demonstrations. One set of educators saw their role as teaching a series of methods and the role of teacher as a master technician. These professors demonstrated specific teaching techniques in isolation from other instructional variables such as planning and pupils. Putnam found that when preservice teachers viewed demonstrations which emanated from this philosophical perspective, they saw teaching as implementing isolated lessons with the most important aspect of the instructional process being that of selecting an interesting activity. The second approach to demonstration emanated from a perspective that took into consideration relationships among various aspects of the instructional process. Demonstrations entailed illustrations of different decisions and processes involved in planning, implementation, and evaluation of instruction, including pupil needs and abilities. Teacher educators holding this perspective, reported their role as helping preservice teachers understand how

their subject matter related to the learning and instruction processes. Putnam also found that preservice teachers, who viewed demonstrations by professors holding this point of view, saw teaching presented to them as a decision making process which included adapting curriculum and instruction to the needs of students.

Finally, Putnam (1984) found that teacher educators and teacher candidates both preferred live demonstrations over all other types. Putnam found teacher educators preferred live demonstrations because they could try new methods and get valid feedback from pupils. However, teacher educators spent more time on planning and instruction in courses that included demonstrations than in courses without demonstrations. Putnam also found that professors did not think the extra effort was rewarded, even though they felt the benefits, such as increased credibility and opportunities to explore, outweighed the limitations. Other findings indicate that the teacher educators' perceptions were accurate. Both pre- and inservice teachers reported that after watching teacher educator demonstrations, they saw them as credible models. The findings also indicated that preservice teachers preferred live demonstrations because they saw how management and organization was handled, how the demonstrator dealt with the contextual disruptions, and how the emotional responses of pupils changed during the lesson.

In the second study, Putnam and Johns (1986) investigated preservice and inservice teachers' perceptions of demonstrations. They surveyed 150 preservice teachers and 60 inservice teachers. The responses of the preservice and inservice teachers were classified into one of two groups.

The first group of preservice and inservice teachers (primarily inservice) valued live demonstrations of teaching methods immediately applicable to classroom practices. They reported preferences for demonstrators who possessed

practical rather than theoretical knowledge of teaching. Members of this group reported that during observations they focused on 1) the instructional style of the demonstrator, 2) the pupils' affective responses to the lesson, and 3) the organizational and management procedures that they felt were critical for a smooth implementation of the activity. Members classified in this group indicated they were likely to transfer the demonstrated activity to their own practice when 1) they observed that the pupils liked it, 2) it fit their personal teaching style, 3) the idea did not create management problems or disrupt currently established systems, 4) all materials were provided for them to use, and 5) someone observing them trying the demonstrated behavior would evaluate and provide feedback on their performance. Other factors contributing to transfer, were similarities between the teachers' situations (e.g., content, grade level) and the demonstration.

Putnam and Johns (1986) stated that inservice and preservice teachers classified in the second group (primarily preservice) valued demonstrations that illustrated 1) connections between theory and practice, 2) pupil learning processes, and 3) information processing and decision making relative to preactive, interactive and postactive teaching processes. They found members of this group focused their attention, during observations and briefing sessions, on the 1) matches between content, method and pupils' needs, 2) pupils' cognitive responses, 3) teacher and pupil interactions, 4) principles underlying the ideas demonstrated, and 5) the information processed and decisions made by the demonstrator. Putnam and Johns found these teachers were most likely to transfer ideas to their own practice when they understood the underlying principles. The understanding was seen as necessary for making personal adaptations without losing the intended effects of the demonstrated idea.

Putnam and Johns (1986) therefore concluded that during demonstrations some teacher educators, preservice teachers and inservice teachers focused on aspects of the teaching and learning process (e.g., a single method) while others were concerned with understanding relationships in the teaching/learning process. Whether there is a relationship between the philosophical view held by teacher educators and those expressed by their students is not known. There is some research comparing beliefs and values held by preservice teachers at the time they complete their training with corresponding beliefs and values held by faculty members in their professional education program (Freeman, 1984). Findings indicate that these relations are likely to be strongest when faculty are consistent in their ratings of the importance of individual beliefs and in their descriptions of how program graduates should respond to each belief statement. In the study by Putnam and Johns (1986), the majority of inservice teachers were in the group that focused on a method, while preservice teachers fell primarily in the principles group. Putnam and Johns (1986) reported that inservice teachers had been involved in traditional staff development activities focused on technical use of methods while preservice teachers were involved in a tightly coordinated undergraduate teacher preparation program that focused on teacher decision making. This promising finding suggests that there may be clear relations between a program's goals, what participants focus on during demonstrations, and what they transfer to practice. However, further investigation is needed to determine if these relationships exist in other teacher preparation programs.

Problems Related to the Use of Demonstrations

The literature reflects numerous problems that must be faced by teacher educators using demonstration. First and foremost, demonstrations take more time than is required from teacher educators not doing demonstrations. For

example, extra time is needed to gain access to elementary and secondary pupils. This requires contacts in schools, time to develop relationships with administrators and teachers, and the transporting of observers to a school site, all in addition to planning for the demonstration lessons. To assure that this extra time is a worthwhile investment, we need to know more about the contributions demonstrations make. Until now, demonstrations were studied primarily as part of a series of activities, without focusing on identifying those critical elements which foster intended outcomes. Another problem is our inability to predict accurately what messages are received by observers. Teacher educators who are aware that unintended messages or misinterpretations can cause problems in transfer, can check for understanding during debriefing sessions and monitor classroom applications. Directly related to this is the problem of why some people do not transfer demonstrated ideas to their own practice. To further improve the use of demonstrations, an understanding of those factors contributing to their nonuse or misuse is needed.

Perhaps the most critical problem related to demonstration is that it has been used primarily to illustrate teaching techniques and methods. The literature is virtually silent on the use of demonstration to illustrate the full range of information processing and teacher decision making. For demonstration's potential to be realized, teacher educators must expand their concept of demonstration's role in the acquisition of knowledge and transfer to practice.

Realizing the Potential of Demonstration

We feel that to realize full potential, a demonstration plan must minimally consider 1) the ideas to be demonstrated, 2) the teaching process, 3) the nature of transfer, and 4) the anticipated and unanticipated observer reactions. Consideration of any of these factors alone results in instruction

that is not connected to the observers, needs or the teacher educators, expected outcomes. To facilitate teacher educators realizing the full potential of demonstration, we propose a two dimensional instructional planning model.

Planning for Demonstrations

This discussion of the planning model is based on several assumptions. First, demonstrations contribute to the successful transfer of ideas to practice. Second, preservice and inservice teachers need an opportunity for pre- and postobservation briefings. Third, demonstrations are used by teacher educators as one strategy along with many others. Fourth, teacher educators must teach observers to distinguish between critical elements and elements which are merely style or preferences. Finally, observers and demonstrators must collectively question the value, purpose and outcomes related to what is demonstrated.

The two dimension model we propose is based on the three phases of the teaching process and the nature of transfer expected of observers. The first dimension of the model is the teaching process and includes preactive, interactive and postactive behavior. Demonstrations of the preactive phase include information processing and decision making related to developing unit and daily plans. Demonstrations of the interactive phase include the implementation of lesson plans and the information processing and interactive decisions made during actual instruction. Postactive demonstrations include the reflective information processing and decision making that is done after instruction is completed.

The second dimension of the model consists of three types of transfer: initial; horizontal; and vertical. Initial transfer, being the process observers go through as they learn about an idea and put it in practice. For

example, a teacher educator might present a series of demonstrations on how to plan and teach a basic word attack skill using a basal reading text. These would focus on a single skill until observers successfully use the process. The purpose in repeating these demonstrations is to clarify the process and eliminate confusion about critical variables. The second type is horizontal transfer. Observers expected to make horizontal transfer focus their observations on identifying the factors within the idea that must be changed and those that need to remain intact for the expected pupil outcomes to be reached. These observations highlight the similarities and differences of particular ideas in similar situations. For example, a teacher educator next demonstrates how to plan and teach reading comprehension (different strand) lessons again using the basal. The observer would look for adaptations resulting from the change from one type of knowledge to another. Finally, vertical transfer occurs when observers transfer a familiar idea to a new and different situation. Vertical transfer requires additional adaptations in the idea and in related teaching behaviors. For example, a demonstrator could illustrate how to teach a sixth grade pupil how to read using commercial magazines. Here the observers focus on 1) adaptations in planning as the cues in the teacher's guide no longer exist, and 2) those factors which must change and those that must remain the same if the lesson outcomes are to be successful. Demonstration at this level highlights similarities and differences in the use of previous knowledge in new situations.

The two dimensional model for planning demonstrations can be illustrated in a 3 x 3 matrix which shows the relationship of the teaching process to the type of transfer (Table 1). While unresearched, the underlying principles of this model emanate from the research on teaching literature. Rosenshine and Stevens (1986) point out that three teaching functions, demonstration, guided practice

and independent practice, form the instructional core. Further, effective demonstrations include: 1) clarity of goals and main points, 2) step-by-step presentations, 3) specific and concrete procedures, and 4) checking for students' understandings. Use of the two dimensional planning model contributes to teacher educators becoming explicit about what they expect observers to learn to do and what level of transfer is required so that they can make demonstrations as effective as possible.

Insert Table 1 About Here

The planning model has three planning phases: 1) Initial Planning, 2) Planning Aspects of Demonstrations, and 3) Planning for the Preobservation and Postobservation Briefing Sessions (Table 2). In Phase I or initial planning, planning, teacher educators make four preactive decisions: (1) determine which concepts, principles and methods are best illustrated through demonstration; (2) determine which preactive, interactive and/or postactive elements of the concepts, principles and/or methods could be demonstrated; (3) decide what will actually be demonstrated; and, (4) determine the level of transfer expected of observers. In Phase II when teacher educators plan the demonstrations themselves, they make three additional decisions: (1) select the demonstration concept or principle, (2) identify specific elements that should be illustrated, and (3) identify linkages with pupils' prior knowledge that are suggested by the purposes of the demonstration. In the third phase, planning for briefing sessions, three additional decisions are made: 1) determine links between demonstration content and prior lectures, course readings, or demonstrations, 2) identify points observers will be told in preobservation sessions including what they are to look for, and 3) select key elements to be processed during debriefings.

Use of this model facilitates teacher educator processing of information about what to demonstrate, what teaching process needs to be illustrated, and the nature of transfer that is desired.

Insert Table 2 About Here

Use of Demonstration Planning Model

The following is an illustration of the nature of information processed and the decisions which are made when the demonstration planning model is used. It is based on planning for demonstrations occurring in the Teacher Explanation (TEP research project (Roehler, et.al., 1986). A problem researchers in this project faced was getting teachers to acquire changes in instructional behavior at an appropriate level quickly so that pupils could benefit from the changed instruction within one school year. The intended changes included asking teachers to 1) view reading skills as strategies, 2) think of reading as a strategic reader, 3) respond spontaneously to the restructuring of students' thinking in the process of interacting with them, 4) insure that all students acquired a working level of metacognitive awareness, 5) provide suitable assistance in response to pupils' difficulties, and 6) insure that the pupils developed an understanding of how to use strategies in real text.

The team selected the ideas that could best be taught through demonstration (Phase I, Decision One). They decided it was possible to illustrate how to: (a) evaluate material presented in basal text; (b) select the skills that could be changed to processes; (c) change a skill to a process; (d) introduce and teach a process to pupils; and, (e) identify differences between pupils' responses to traditional basal text questions and responses to questions related to strategic reading process outcomes. The research team then

identified the relevant teaching process for each of the ideas to be demonstrated (Phase I, Decision Two). For example, evaluating text, selecting skill, and developing the strategic process were preactive information processing; introducing the process to pupils was an interactive process; and reflecting on pupil responses made during the lesson was a postactive process. The team then selected those things they felt were essential to demonstrate (Phase I, Decision Three) (See Table 3). They, additionally, decided that all three teaching processes would be illustrated in each demonstration session. This decision was based on the belief that it is necessary for teachers to understand the relationship of principles to planning, and to teaching and pupil interactions. At the start of the project, expectations were that participants would be making initial transfer of the ideas to their practice (Phase I, Decision Four).

At this point, the researchers' planning entered Phase II, that of planning specific aspects of a demonstration. They decided that during the initial transfer demonstrations, they would highlight the variables necessary for teacher decision making. They planned to illustrate the use of underlying principles in planning, in handling deadends encountered when changing basal skills to strategic processes and in introducing and teaching the process to pupils (Phase II, Decision One). They decided that the teachers' thinking processes were the most critical elements to focus on during all initial transfer demonstrations (Phase II, Decision Two). Finally, it was decided that the most important information to be collected was how pupils processed the information being taught (Phase II, Decision Three). To facilitate transfer, demonstrators and teachers taught pupils at the same grade level using the same basal text materials. Finally, researchers completed Phase III of the planning model just prior to each demonstration session. This allowed for data from

researchers, classroom observations of teachers, initial transfer efforts to be incorporated into the demonstration and pre/postbriefing sessions. For example, observations by researchers indicated that teachers were unaware at first that pupils gave incorrect responses to their new questions. Thus, attention was given to teacher-pupil interactions when the problem was occurring.

Once teachers were able to plan and implement a lesson similar to those demonstrated, the focus of the demonstrations changed to promoting horizontal transfer. The focus changed from demonstrating how to select a skill similar to those demonstrated (e.g., decoding) to selecting skills of other types (e.g., comprehension). Once again, all three teaching processes were demonstrated. Pre/postbriefing sessions focused on teachers' abilities to identify factors critical to teaching a strategic process versus those that related to style, topic, or traditional skills. Again, the same process was followed as for the initial transfer demonstration (See Table 3). Once teachers were able to make horizontal transfers, the researchers focused on vertical transfer of knowledge. Here the focus was on using the strategies taught in reading to the reading of other school materials. Again, the preactive, interactive and postactive teaching processes were demonstrated and planning proceeded as in the previous steps (See Table 3 for examples of decisions).

The primary mode of demonstration for all three phases was perceptual. Symbolic (written, audiotape) demonstrations were used when an idea was first being introduced and when further explicitness was needed for the teachers to compare appropriate applications with inappropriate applications.

CONCLUDING COMMENTS

As in the intervention research project described above, we have considered the use of demonstration as a means to show preservice or inservice teachers how to do something. In this project, understanding the underlying principles in all three of the related teaching processes was important. However, demonstration can also be used to raise critical questions about practice. Teacher educators who do demonstrations in schools can help to create a valuable tension between outcomes of current practices and the potential of theoretical or research based ideas. This will challenge teacher candidates to reflect on the principles underlying current practices and to contrast these principles with other ideas.

Preservice and/or inservice teachers frequently receive collegial messages signaling that "real teachers" do not believe professors really know what will work in schools. But, professors who demonstrate in schools build credibility for themselves and for the ideas they present. Additionally, we have found that professors value teaching elementary and secondary pupils because it provides opportunities to check the validity of ideas in the real work setting. Demonstrations also provide both preservice and inservice teachers with the opportunity to observe the types of decisions teachers face daily. Consequences of these decisions can be observed and deliberations about them can occur during debriefing sessions.

While demonstration has been used primarily to illustrate technical applications, some educators are using demonstrations to foster the critical study of teaching. Demonstration's contribution to the study of teaching needs further exploration.

Further study of this instructional method is needed. As teacher educators gain information about the technique, they can apply it to its fullest

potential. Questions that need to be considered if our concept is to expand and our use become more effective, include: 1) How often should demonstrations be used? 2) What are the critical characteristics of an effective demonstration? and 3) How much information can be acquired from a single demonstration?

References

- Bandura, A., & Walters, R.H. (1963). Social learning and personality development. New York: Holt Rinehart & Winston.
- Borg, W., Kelley, M., Langer, P., & Gail, M. (1970). The mini-course: A microteaching approach to teacher education. Beverly Hills, CA: Macmillan.
- Day, C. (1985, June). Why teachers change their thinking and behavior: Case studies in professional learning through in-service activity. Paper presented at a conference of the International Study Association on Teacher Thinking, Tilburg, Netherlands.
- Freeman, D. (1984, February). Graduates' perceptions of their role as teacher. Paper presented at the annual meeting of the Association of Teacher Educators, New Orleans.
- Garten, T.R., & Hudson, J.A. (1975). A strategy in the use of videotape to evaluate recognition of component teaching skills. Audiovisual Instruction, 19, 24-25.
- Glasser, W. (1969). Schools without failure. New York: Harper & Row.
- Glover, E.D. (1978). Modeling--A powerful change agent. Journal of School Health, 48, 175-176.
- Hunter, E. (1980). A collaborative, connected, completely organic, all natural teacher education program. Journal of Teacher Education, 31 (4), 7-10.
- Hunter, E. (1984). Using what we know about teaching. Alexandria, Virginia: Association of Curriculum Development.
- Johns, B. (1986). A case study of an ITIP staff development program. Unpublished manuscript, University of Manitoba, Winnipeg.

- Joyce, B.R., & Showers, B. (1983). Power in staff development through research on training. Alexandria, Virginia: Association for Supervision and Curriculum Development.
- Joyce, B.R., & Showers, B. (1981, March). Teacher training research: Working hypothesis for design and directions for further study. Paper presented at the annual conference of the American Educational Research Association, Los Angeles.
- Koran, M., Snow, R., & McDonald, F. (1971). Teacher aptitude and observational learning of a teaching skill. Journal of Educational Psychology, 62, 229-234.
- Koran, M.L. (1969). The effects of individual differences on observational learning in the acquisition of a teaching skill. Dissertation Abstracts International, 30, 1450A. (University Microfilms, No. 69-17, 435.)
- Martin, R., & Fanslow, A. (1980). Videotape versus live model presentation in teacher preparation. Home Economics Research Journal, 8, 412-420.
- Putnam, J. (1985). Perceived costs and benefits of teacher educator demonstration lessons. Journal of Teacher Education, 36 (6), 36-41.
- Putnam, J., & Johns, B. (1986, October). Perceived benefits and limitations of teacher educator demonstration lessons. Paper presented at the annual meeting of the Midwest Educational Research Association, Chicago.
- Putnam, J., Roehler, L., & Duffy, G. (1987). The staff development model of the Teacher Explanation Project (Occasional Paper 108). East Lansing: Michigan State University, Institute for Research on Teaching.
- Reed, K. (1976). The role of videotape recordings in the training of teachers. International Journal of Instructional Media, 3, 117-124.

- Roehler, L., Duffy, G., Putnam, J., Wesselman, R., Sivan, E., Rackliffe, G., Book, C., Meloth, M., & Vavrus, D. (in press). The effect of direct explanation of reading strategies on low-group third graders' awareness and achievement: A technical report. (Research Series 181). East Lansing: Michigan State University, Institute for Research on Teaching.
- Rosenshine, B., Stevens, R. (1986). Teaching functions. In M. C. Wittrock (Ed.), Handbook of Research on Teaching, (3rd, ed., pp 376-391) New York: Macmillan.
- Taba, H. (1900). Teaching strategies and cognitive functioning in elementary school children (Research Project 2404). Washington, DC: U.S. Office of Education.
- Thompson, B. (1979). Relationships of role-ideals and educational philosophy preferences with preferences for conceptual models of teaching. Dissertation Abstracts International, 39, 4194A. (University Microfilms No. 79-01,200.)
- Young, D.B. (1969). Modification of teacher behavior using audio-videotaped models in a microteaching sequence. Educational Leadership, 26, 394-403.

Table 1

Demonstration Planning Model: Teaching Process and Types of Transfer

Types of Transfer	Initial	Horizontal	Vertical
Teaching Process			
1. Preactive			
2. Interactive			
3. Postactive			

Table 2

Decision Making Phases: Planning for the Use of Demonstrations as an Instructional Technique in Teacher Education

PHASE I: Initial Planning

- Decision One: For which of the concepts, principles or methods included in course would demonstrations be the best instructional method?
- Decision Two: What are the preactive, interactive and/or postactive elements of the particular concepts, principle or method being demonstrated?
- Decision Three: Which of the preactive, interactive, and/or postactive elements will actually be demonstrated?
- Decision Four: What level of transfer will observers be expected to make for each of the elements to be demonstrated?
-

PHASE II: Planning Aspects of Demonstration

- Decision One: What are the specific elements of the concept, principle, or method to be demonstrated?
- Decision Two: What are the critical elements of the concept, principle, or method that must be attended to during the demonstration?
- Decision Three: When demonstrations include elementary or secondary pupils, what connections must be made to pupils' current knowledge and what data does the demonstrator wish to collect during teaching?
-

PHASE III: Planning for the Preobservation and Postobservation Briefings

- Decision One: What connections must be made to observers' current knowledge?
- Decision Two: What should observers attend to during the demonstration?
- Decision Three: What will be discussed during the debriefing session?
-

Table 3
An Illustration of the Demonstration Planning Model

TYPE OF TRANSFER	INITIAL	HORIZONTAL	VERTICAL
TEACHING PROCESS:			
PREACTIVE	How to change a reading skill into a strategic reading process and identify critical features of process	How to change different skills into processes and their application in reading texts	How to plan for transfer of processes to other than reading texts
INTERACTIVE	Teacher explicitness of features of a given reading process	Teacher explicitness as transferred in teaching a variety of reading processes	Teacher explicitness as applied to different content areas
POSTACTI.	How to use pupil response information to determine whether or not lesson was learned, to develop independent practice materials.	How to identify critical aspects of pupil responses to determine if processes were demonstrated and linked to earlier learned process	How to decide which pupil response data to use when transferring skills taught in reading to content areas