

379  
NBH  
No. 4210

A COMPARATIVE ANALYSIS OF THE EFFECTS OF VIDEO-BASED  
VERSUS LIVE PRESENTATION STAFF DEVELOPMENT ON  
TEACHERS' COGNITIVE LEARNING AND ATTITUDES

DISSERTATION

Presented to the Graduate Council of the  
University of North Texas in Partial  
Fulfillment of the Requirements

For the Degree of

DOCTOR OF EDUCATION

By

Alan R. Cox, B.S., M.R.E., M.Ed.

Denton, Texas

December, 1995

379  
N8H  
No. 4210

A COMPARATIVE ANALYSIS OF THE EFFECTS OF VIDEO-BASED  
VERSUS LIVE PRESENTATION STAFF DEVELOPMENT ON  
TEACHERS' COGNITIVE LEARNING AND ATTITUDES

DISSERTATION

Presented to the Graduate Council of the  
University of North Texas in Partial  
Fulfillment of the Requirements

For the Degree of

DOCTOR OF EDUCATION

By

Alan R. Cox, B.S., M.R.E., M.Ed.

Denton, Texas

December, 1995

Cox, Alan R., A comparative analysis of the effects of video-based versus live presentation staff development on teachers' cognitive learning and attitudes. Doctor of Education (Curriculum and Instruction), December, 1995, 97 pp., 12 tables, 71 titles.

The problem of this study was the identification of effective and efficient means of providing quality staff development for reading instruction within a school-district setting. The study investigated the comparative effectiveness of two staff development delivery systems measured by 1) a cognitive test of a school district's reading program and 2) an affective measure of teacher attitudes toward staff development.

The sample was drawn from the teacher population of a large urban school district. The 46 subjects were elementary school teachers in grades K-5 randomly divided into two groups: Group A (videotape with a trained on-site facilitator) and Group B (face-to-face live presenter). Participants in the study received training using "The Fort Worth Reading Program," a staff development program designed by the researcher. In addition to the presentation of content information, which is the central component, the program features small group discussions, off-line activities, and question and answer periods. Both groups received the same treatment with the following exception. A central component to the Group A training was the presentation of content information in a videotape format. Group B did not view the videotape, but received the same information via live presenter.

Two instruments developed by the researcher were used in the study: 1) The Teacher Staff Development Questionnaire, a Likert-type survey to obtain

teacher attitudes toward staff development, and 2) The Cognitive Test of Reading Knowledge, an instrument designed to measure cognitive objectives of the district's reading program.

A multivariate analysis of covariance revealed no statistically significant differences between the groups. It was concluded that elementary classroom teachers, regardless of their attitudes toward staff development, learn content material equally well with either of the two delivery systems explored in this study.

Specific suggestions and recommendations for further studies are addressed and discussed. Examples of the measurement instruments are included.

## TABLE OF CONTENTS

	Page
LIST OF TABLES.....	v
Chapter	
1. INTRODUCTION.....	1
Statement of the Problem	
Purpose of the Study	
Research Hypotheses	
Significance of the Study	
Definition of Terms	
Limitations	
2. SYNTHESIS OF RELATED LITERATURE.....	6
3. METHOD AND PROCEDURES.....	29
Selection of the Sample	
Treatment Groups	
Contents of the Staff Development Program	
Development of the Instruments	
Procedure for the Collection of Data	
Training Schedules	
Treatment of Data	

Table of Contents (continued)

	Page
4. FINDINGS.....	41
Introduction	
Demographic Information	
Discussion of Demographics	
Findings of the Research	
Discussion	
5. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS.....	54
APPENDICES.....	61
Appendix A. The Teacher Staff Development Questionnaire	
Appendix B. The Cognitive Test of Reading Knowledge	
Appendix C. Biographical Information of Participants	
Appendix D. Principal Invitation Letter	
Appendix E. Teacher Invitation Letter	
Appendix F. Confirmation Letter to Teachers	
Appendix G. Facilitator's Handbook	
BIBLIOGRAPHY.....	90

## LIST OF TABLES

Table	Page
1. Sequence of Activities for Session One.....	33
2. Sequence of Activities for Session Two.....	34
3. Summary of Participants' Gender.....	41
4. Summary of Participants' Highest Degree Earned.....	42
5. Summary of Participants' Years of Teaching Experience.....	42
6. Summary of Participants' Classroom Teaching Assignments.....	43
7. Observed Scores in Content Knowledge.....	46
8. Means and Standard Deviations for Content Knowledge.....	47
9. Observed Scores in Attitudes Toward Staff Development.....	48
10. Means and Standard Deviations for Attitudes Toward Staff Development .....	49
11. Table of Adjusted Means.....	49

## CHAPTER I

### INTRODUCTION

In the Carnegie Report titled A Nation Prepared: Teachers for the 21st Century (1986), the task force concluded that the skills and practices currently being taught in teacher education programs will not be sufficient to meet the needs of students preparing for work in the 21st century. The changing needs of the workplace will require that teachers reevaluate their skills and behaviors, as well as the learning styles of their students. Many modifications in instructional practices will be necessary for teachers to prepare students to interact in a global society. The task force recommended that teachers participate in on-going staff development activities in order to improve both their knowledge of educational theories and practices and the content in their particular teaching fields. The Carnegie Report clearly states, "School or district-wide staff development centers are one of the most effective means of helping teachers design and complement local programs" (p. 78).

In the last decade, a number of documents have been disseminated to address concerns of declining literacy among American school children. One of the most notable documents is Becoming a Nation of Readers: The Report of the Commission on Reading (1985). This report cites the need for educators to have "career-long opportunities for growth, renewal, and access to new information" (p. 110). Further, the report states, "Renewed attention should be given to the professional growth of veteran teachers so that they can continue to approach teaching with zest and can have access to new knowledge that will



allow them to improve their teaching” (p. 111).

If improved teacher behaviors and attitudes are to be expected, a staff development component that is effective and comprehensive must be in place to assist already skilled practitioners in honing their craft, and to induct new teachers into the system, enabling them to become knowledgeable and skilled in their craft. This component should systematically train staff members in the knowledge and skills needed to alter the existing organizational practices.

The authors of the report Becoming a Nation of Readers state emphatically that ‘improving reading instruction in the United States is not possible without good teachers” (p. 105). It is unlikely that pre-service teacher training is sufficient to meet all the requisite skills for instructing students in the 1990s. Therefore, school districts need to look at staff development opportunities currently offered to teachers.

#### Statement of the Problem

The problem of this study was the identification of effective and efficient means of providing quality staff development for reading instruction within a school-district setting.

#### Purpose of the Study

The purpose of this study was to investigate the comparative effectiveness of two staff development delivery systems as measured by 1) a cognitive test of a school district’s reading program and 2) an affective measure of teacher attitudes toward staff development.

### Research Hypotheses

To carry out the purpose of this study, the following hypotheses were tested:

1. There will be no statistically significant difference at the .05 level in the teachers' learning of content knowledge of a district's reading program between teachers receiving face-to-face live staff development and teachers receiving staff development via videotape with a trained on-site facilitator.
2. There will be no statistically significant difference at the .05 level in teacher attitudes toward staff development between teachers receiving face-to-face live staff development and teachers receiving staff development via videotape with a trained on-site facilitator.

### Significance of the Study

This study is significant in that it explores the variables of alternative delivery systems in staff development and teacher attitude toward staff development. The timeliness of this study is important for several reasons. New staff development delivery systems are being scrutinized by educators in an effort to upgrade instructional practices. Staff development models integrating videotape with a trained on-site facilitator are being considered. However, a significant body of literature to corroborate this practice does not exist currently. Research regarding this form of delivery system requires further attention. For these reasons, a study of effective and efficient alternatives to traditional staff development is appropriate. This information will be useful for developing and implementing quality staff development.

### Definition of Terms

The following terms are important to this study and will be used as defined:

1. Attitude is an enduring system of beliefs and feelings about an object, situation, or institution that influences the individual's perceptions and behavior toward that object, situation, or institution (Worthen, Borg & White, 1993).
2. Effective in this context defines a system which meets the needs of the consumer, fulfills the stated purpose, and meets the predetermined objectives.
3. Efficient in this context defines a system which minimizes waste, especially in terms of financial resources, time, and personnel.
4. Facilitated distance education is an instructional activity, or series of activities, in which the learner and instructor are physically separated. Communication between them is through technical media (e.g., videotape or satellite link) with the assistance of an on-site facilitator.
5. Interactive television instruction implies two-way audio and video communication.
6. Interactive video is a learning medium resulting from the merging of computer and videotape technologies, frequently possessing high quality visual and auditory learning stimuli.
7. On-site facilitator is a trained educator responsible for managing the viewing and learning activities at the school site.
8. Staff development is an umbrella term for professional development. It includes educational opportunities to enhance an individual's professional growth, bringing about change in his/her beliefs, attitudes, and classroom practices.

9. Telecourse is an integrated learning system which uses television with both print and non-print materials.

10. Traditional face-to-face live presentation is defined as a staff development delivery system in which the instructor is physically present at the school site, interacts with participants, and assumes the major role in disseminating information.

#### Limitations

This study was limited to elementary teachers in one large urban school district which may limit generalizability. Care must be taken when attempting to generalize to small and/or rural districts. Also, any inferential interpretations based on this study must consider the limited sample size.

## CHAPTER I I

### SYNTHESIS OF RELATED LITERATURE

The review of the literature begins with an overview of current practices in staff development. This is followed by an examination of learner attitudes and expectations. The use of videotape in training adults is examined next, beginning with a discussion of video training in business and industry, and continuing with examples in educational settings. Because the study deals with adult learners, the chapter concludes with an examination of adult education principles and practices.

#### Staff Development

In effective staff development models, teachers are viewed as knowledgeable, capable practitioners who have the ability to share their wisdom and experience with others (Shanker, 1990). With this frame of reference teachers are seen as knowing a great deal about children's learning and are capable of learning much more. However, the American educational system's current approach to staff development, according to leading experts, has failed to mobilize teacher experience and knowledge. Fullan and Miles (1992) believe that many of the potential solutions aimed at upgrading teacher skills already exist in classrooms, but the traditional "closed doors" make such knowledge inaccessible for most.

For decades, the process of teaching has been basically one of isolation. The loneliness of the teaching profession and the way in which it inhibits

innovation are well known.

The traditional norms and habits of school reinforce isolation, leaving teachers to their own devices. This directly impacts the manner in which teachers plan for and participate in staff development (Fullan & Miles, 1992).

Unless teachers can engage in professional development work in the company and with the support of colleagues, they will be unable to access sufficient resources or sustain enough energy to make real changes in their practice. We see collegial professional development as a catalyst for breaking the isolation of the classroom and the norms of privacy that make it difficult for many teachers to remain engaged in their work (Miller, Lord & Dorney, 1994, p. 18).

Too often teachers remain an untapped resource for improving schools. Staff development practices, particularly the use of delivery systems such as videotape, can be restructured to capitalize on teachers' strengths, as well as integrate current technological innovations. Such restructuring involves change in varying degrees: new skills, new behaviors and new attitudes (Fullan, 1991).

One barrier which seems to prevent schools from moving beyond the status quo is the prevalence of staff development practices which are often in direct contrast to the ideal. Examples of these ideal concepts would include clearly defined goals and objectives of staff development initiatives, school-based and voluntary participation whenever feasible, embedded evaluation within staff development activities, emphasis on changing teacher rather than student behavior, multiple opportunities for immediate application and specific feedback, and a variety of delivery formats.

Changing staff development models is a complex process involving

redoing and rethinking of present delivery systems. Miller et al. (1994) state “Staff development must be rethought to include the potential for long-term investments in teachers as growing professionals. It should make room for practice, reflection, and experimentation” (p. 19).

According to Lieberman and Miller (1984), “When we facilitate for others, we should take care to provide rather than tell, teach rather than preach, and acknowledge complexity rather than rush to simplify.” When the central office mandates how to do everything, it denies teachers the freedom to act on their own wisdom (Tewel, 1991).

Changes in how schools conduct business, including staff development, are made on the basis of two assumptions. First, there must exist a prevailing sense of motivation and commitment of both students and educators to become better learners and better teachers. Second, the technical capacity and ability to change behaviors must be present. Newmann refers to these assumptions as the “will and skill” supporting school restructuring efforts (Newmann, 1991).

As with all effective staff development initiatives, there must be active, enthusiastic involvement and follow-through. In a healthy school culture, staff development should impact all the stakeholders, including parents, teachers, students, administrators, and the community-at-large (Miller et al., 1994; Joyce & Showers, 1988). To sustain the changes, there must also be a structure for managing the involvement. Equally important is an organizational framework for implementing the planned outcomes.

#### Learner Attitudes and Expectations

According to McBride, Reed and Dollar (1994), other attributes for successful staff development are the attitudes and expectations participants

bring to the experience. Bradley (1991) states that teachers' attitudes often facilitate what ultimately can be accomplished through staff development. This correlates with other findings during the last fifteen years which suggest that the needs of adult learners must be acknowledged and addressed when planning successful staff development initiatives (Zemke & Zemke, 1995; Wood, 1989; Brookfield, 1986; Loucks & Lieberman, 1983).

A major research project conducted by Richey (1991) examined learner attitudes toward employee training delivery systems and how such attitudes affected learning. The four studies related to industrial plant safety and operations, providing a basis for Richey to draw several conclusions. In three of the studies instruction was disseminated via lecture, group discussion, and supporting videotapes. In the fourth study participants were presented with similar content, but the format of instructional delivery had been converted to interactive video. The studies employed a pre- /posttest design and led the researcher to conclude: "Attitudes toward the various delivery systems do appear to play a role in influencing a range of training outcomes. Learners' attitudes toward delivery systems, in turn, are determined (in this research) by a complex interaction of more general attitudes toward past training, their perceptions of the organizational climate in which they work, and their own experiences" (Richey, p.10).

Robbins (1986) examined the impact of teacher attitude on training and concluded that "perhaps most important to the implementation of training is the participant's attitude toward the program" (pp. 155-156). In another study of adult learners, Barnard (1992) concurs that "Highly motivated learners, such as adults seeking additional professional education, seem most likely to accept video-based instruction, even without interaction, as a viable and desirable



option to the traditional classroom setting” (p. 48). This may be due to higher levels of maturity, intrinsic motivation for improving one’s skills, and other unknown factors.

In a study by Welch (1987), the effectiveness of a simulation-based staff development program was assessed to determine if teacher attitudes toward mainstreamed learning disabled students could be modified. The researcher created three groups and randomly assigned regular education teachers to each group. Group #1 participated in live simulation activities, while Group #2 had the same treatment, but received additional information regarding modifications via videotape. Group #3 served as the control group. A Likert-type scale was used throughout the study to collect data assessing teacher attitudes. An analysis of the data revealed there was a significant difference between the control group and the two experimental groups. Welch concluded that simulations were effective in modifying teacher attitudes toward the mainstreaming of learning disabled students.

In an adult education program it was shown that the use of video changed learner attitudes toward pleasure reading and improved reading comprehension (Forlizzi & Mallery, 1994). In a novel study of The Black Pearl, adult literacy educators capitalized on the prevalence of video in today’s society. Students experienced the story in two mediums - the original text and the film version recorded on videotape. They read the story, watched the video in planned increments, discussed the differences between the book and the video, and participated in a variety of activities resulting from reading and viewing the story. To measure affective outcomes, students completed a pre- and posttest questionnaire on attitudes toward fiction. Improved, more positive, attitudes toward reading fiction were noted at the completion of the program.

Participants in the novel study concurred that the visual supports (i.e. the author's original text and the videotaped rendition of the novel) enabled them to better access and comprehend the story. Because video is such a readily-available medium, this study suggests teachers may find its use to be valuable in the classroom. This conclusion is in agreement with the findings of Joyce and Showers (1988) which demonstrated the efficacy of using videotape and broadcast television to enhance instruction.

In order to measure the relationship between teacher attitude and involvement in staff development, Lehto (1994) designed a study which sampled teachers in districts with exemplary staff development programs and those in districts with nonexemplary programs. Lehto compared the attitudes of teachers based upon their involvement in various levels of staff development. The sample included two groups of equal proportions of elementary and secondary personnel from school districts of varying sizes. The researcher compared the groups against each other to obtain data and draw conclusions. Lehto developed a survey instrument to measure participants' attitudes toward educational topics. When the data were analyzed, overall results indicated there were no significant differences in attitudes toward educational issues among teachers from districts with exemplary and nonexemplary staff development programs.

Burke (1993a) conducted a study which reviewed the impact on learning of specific staff development practices identified in the literature as effective and efficient. Burke sampled 231 elementary and secondary teachers who had participated in distance learning inservices. His study was significant in that he attempted to determine which staff development practices led toward effective distance learning programming. Burke explored such areas as: degree of

teacher involvement in planning; time, program length and location of staff development; specificity and clarity of learning outcomes; administrative support; follow-up activities; teachers as trainers; motivation; evaluation of participant, organizational and student outcomes; and participant's attitude toward the presentation. In his study, Burke drew several conclusions, including the following related to attitudes: "The role of 'attitude toward the presentation' in the study was consistent with the research of effective face-to-face and EDE [Electronic Distance Education] inservice programs. The teachers' attitude toward the overall quality of the inservice program greatly influenced the effectiveness as perceived by the participant" (p. 126).

#### Business and Industry Training Applications

Video-based training in business and industry has yielded promising results. In the words of Bunyan, Crimmins and Watson, "Video is successfully helping to manage the increased information and knowledge demands in business, schools, universities, government agencies at all levels and health care institutions. It is training more workers in less time, and educating more students for fewer dollars" (Bunyan et al., 1978, p. 24). As early as 1980, industry leaders predicted that their trainers could expect video to become an even more effective and important medium in the future (Smith, 1981). In 1987 the use of videotape in a classroom-based setting surpassed the traditional lecture method. The editors of Training magazine noted an important trend in the "1994 Industry Report," which surveyed U. S. businesses of 100 or more employees. The study reported that video continued to be the most popular medium of training (p. 53).

Examples of institutional - or training - videos are widespread. For

instance, many specific programs are designed in industry to explain safety regulations to employees. Training videos have the capability to outline company procedures and instruct workers on the proper use of equipment via videotape demonstration. Industry leaders include Phillips Petroleum, John Deere, Fisher Scientific Company and Eastman Kodak (Bunyan, 1987; Hausman, 1991).

In a different twist to video training, Martin-Marietta Electronic Systems and Apple Computer Co. have placed direct video hookups at employee workstations. The full-motion videos show line workers how to perform a task or particular operation. Introducing such technology on the assembly line floor has proven to be beneficial for corporations and consumers alike (Henry, 1989).

In a report sponsored by the Office of Vocational and Adult Education (1990), the authors reported on a study which assessed workplace literacy. They examined the areas of reading, writing, math, and problem-solving. The 116 participants in the study were craftsmen employed in the trowel trades and related work fields.

To test the effectiveness of instructional modes, three delivery systems were chosen to provide information and training in workplace literacy: videotape technology, individual tutoring and computer-assisted instruction. Of the three modes studied, videotape technology received the highest ratings for its effectiveness and feasibility. In general, participants reported the videotape technology best fit their scheduling needs in terms of family responsibilities, recreational life, work schedule and mental attitudes toward learning.

Research conducted by A T & T demonstrated that students learned more through a video-based system than their counterparts who were taught in a traditional face-to-face format (Chute, Balthazar & Porter, 1990). As early as

1980, A T & T officials began to study teletraining effectiveness to augment the continuing education of their employees. Citing rising travel costs and lost man hours associated with travel, the company explored alternative ways to keep personnel on the cutting edge of technology and information services. A review of previous research (conducted by A T & T) reinforced the company's decision to explore teletraining via videotape. Their search of the literature in business and industry revealed there was no significant difference between the amount students learn in teletraining classes and the amount learned in live face-to-face presentations. Officials at A T & T conducted their own study comparing face-to-face courses and teletrained programs. They discovered no significant differences were found at the .05 level of significance between the two delivery systems (Chute, 1986).

Another aspect of this study looked at participant appeal of videotape. Learner acceptance of the teletraining designed by A T & T received high marks. "Students indicate that teletraining [via videotape] is a viable medium for delivering content which addresses sales skills and technical information" (Chute, 1986, p. 11). Apparently, not only did company employees learn via teletraining, they also enthusiastically embraced the method of delivery.

Program developers at Pepsico enlisted the aid of marketing trainees to evaluate their educational video series. When considering items such as practicality, interest, and effectiveness, participating trainees gave the videos an average rating of 7.8 on a Likert scale of one to nine (Bunyan, 1987).

In another example, Hausman (1991) reported how institutional video assisted many companies to standardize their training procedures. A case in point is Domino's Pizza. Through the distribution of training tapes nation-wide, Domino's found a relatively inexpensive method to provide uniform standards of

employee education. Likewise, the Internal Revenue Service utilizes videotape to train agents in appropriate and ethical information-gathering techniques. IRS employees view videotaped segments of typical case scenarios. The training is mediated by a facilitator who periodically stops the video and leads participants in developing more appropriate strategies to solve problems in the workplace.

In sum, video has several advantages. It provides uniform quality of instruction to employees and clarifies institutional goals, policies and practices. Additionally, video provides on-line information directly in the workplace, which translates into increased productivity and higher levels of performance quality. It took less than ten years for the predictions of Bunyan and Crimmins (1977) to become reality when they hypothesized that "Video, in coordination with print material, may well become the preferred medium for the greatest part of corporate education. Companies have demonstrated that with the video cassette effective training and development programs for a world-wide audience can be created economically" (p. 15).

While there appears to be a growing trend toward alternative training delivery methods, a review of the literature suggests that classroom-based training remains the preferred method of delivery in business and industry (Dulworth & Shea, 1994). Nevertheless, the researchers point out that much of the presentation portion of a training course can be more efficiently and effectively presented via some form of multimedia learning, thus reducing the time and cost of classroom delivery (Dulworth & Shea, 1994; Lawrence & Price, 1987). Indeed, if this reflects current practice, additional research is necessary to ascertain why institutions continue to rely upon traditional classroom-based delivery.

### Applications in Educational Settings

In order to understand how an adult learner's attitude toward a presentation impacts the effectiveness of a training program, an investigation of alternatives to traditional classroom settings is warranted. For two decades, multimedia instruction has played a major role in training adults in a variety of occupations, including medicine, industry, military and education. Hatfield and Bitter (1994) report that learners using interactive video in the form of videotape demonstrate positive attitudes toward their learning. Likewise, when accessing new knowledge via videotape, they tend to learn as well as or better than through the traditional face-to-face formats.

Videotape was one of five components included in a community college program designed to instruct math and science students in the application of the metric system. In her report, Thrall (1990) described the creation of a Metric System module which included: 1) a pretest; 2) viewing of a videotape; 3) computer tasks; 4) compiling a student portfolio; and 5) a posttest. One hundred percent of the community college instructors who were selected to evaluate each component of the Metric System module indicated overwhelming support for the module. The evaluation team recommended its adoption and periodically reviewed assessment data to monitor student learning. Through follow-up surveys, the viewing of the videotape was established as an integral component of the learning module.

Educators in Italy produced a series of teacher training materials and reported on their effectiveness in improving science instruction in elementary schools (Viglietta, 1992). The teacher training package includes a facilitator's guide, videotapes, and teacher reference books to augment background information. Results of the study revealed that the videotapes captured the

attention of adult viewers and promoted positive attitudes toward learning about astronomy. Of even greater consequence was the finding that implementation of this teacher-training packet produced change in the instructional practices of science teachers (Viglietta, 1992).

Reported outcomes of Viglietta's study revealed 1) the videotape component should be interactive whenever possible, allowing for discussion mediated by a trained facilitator and opportunities for viewers to participate in off-line activities and 2) the content and identified learning outcomes should be conveyed through engaging, real-life classroom scenarios, not just talking heads.

Rae (1994) described a recent trend in training and development which supports Viglietta's assertions. "Teacher packets seem to be moving away from text presentations in favor of video formats" (Rae, 1994, p. 19). Rae concludes, however, that even the most sophisticated technology will not be able to replace the human element. The support of a live facilitator or trainer, in conjunction with a technology tool such as video, is a critical factor to the success of any delivery system.

Prager and Hantman (1987), reported increased uses of the video medium in the classroom and in the field. They were interested in discovering if the video medium could be utilized by social work students to deepen their understandings of issues they would typically face in the workplace. With this in mind, Prager and Hantman developed an innovative application of the video medium. As part of their course of study, students developed a "video thesis" in which they defined and communicated in-depth understandings on topics related to aging.

When considering the training of undergraduates in gerontology, Prager



and Hantman identified several potential advantages of video sequences, including its multidimensional character and flexibility. "The [video] medium is ideal for taking a particular issue and examining students' understanding; an understanding that is based upon a multidimensional approach to learning, and that includes observing, questioning, explaining, reflection of feelings and attitudes, and editorializing" (p. 481). At the end of the course, students perceived the video project as a unique challenge in learning and creativity. They expressed general satisfaction in working with a medium which required them to assimilate their research and field observations, as well as to communicate their findings at a more sophisticated level than merely submitting a written report.

Stempleski and Tomalin (1990) studied classroom applications of video technology. They also concurred with the multidimensional aspects of the video medium and drew these conclusions: "Using a video sequence in class is the next best thing to experiencing the sequence in real-life. In addition, video can take your students into the lives and experiences of others" (Stempleski & Tomalin, p. 3).

Varied studies in teacher education have revealed much the same thing. Reyes, Torp and Voelker (1993) found videotape to be an effective way to communicate important teaching concepts to undergraduate and graduate education students. As they progress through their college coursework, the attainment of effective teaching concepts becomes greatly emphasized. Some of the teaching concepts include corrective feedback, time-on-task, questioning strategies, wait time, expectations and probing. The authors- faculty members of the Department of Curriculum and Instruction at Northern Illinois University - advocate establishing a videotape library for teacher educators to use when

demonstrating particular effective teaching concepts such as those mentioned above. "The collection of videotapes developed from linear videotapes of classroom teaching helps instructors become more effective teachers themselves and to model the use of technology to promote the learning goals of the course" (p. 296).

In a report of instruction in foreign language classrooms, Joiner (1990) looked at how video technology was utilized to improve comprehension and encourage more active learning. As a rationale for conducting her report, the researcher noted the model of facilitated video learning - one in which the instructor facilitates comprehension through the purposeful manipulating of videotape and VCR - is quickly becoming the standard for foreign language classrooms in today's schools and colleges. Joiner reported how teachers judiciously choose and use video by serving as mediators in the students' learning environment. "The teacher will enhance the comprehensibility of the video by replaying certain segments, pausing the tape at appropriate moments, and advancing the tape frame-by-frame in order to allow students to focus on details" (p. 53).

Joiner reiterated that video-based teaching will not necessarily promote active learning and comprehension in and of itself. It is the careful selection and planning on the part of the instructor, in tandem with video technology, which ultimately will promote change in student learning.

In an undergraduate reading methods course forty randomly selected pre-service teachers were trained to use the Directed Reading Activity (DRA). The sample was split into two groups of equal number in order to compare two methods of delivering direct instruction. The purpose of the study by Klesius, Searls and Zielonka (1990) was to compare the effectiveness of direct

instruction delivered in a traditional format (defined as lecture and discussion) with instruction delivered via videotape.

The study took place over a period of five weeks. Klesius et al. reported the two methods of delivering direct instruction were equally effective in the early observation periods (i.e. weeks two and three). However, in the latter periods of observation (weeks four and five), results revealed a different trend. Researchers discovered that the videotaping and roleplaying of lessons enabled pre-service teachers in the videotape group to learn and retain DRA skills better than their cohorts who learned through traditional lecture and discussion.

The results reported by Klesius et al. lend support for methods course instructors wishing to utilize videotape demonstrations and simulations of teaching concepts. However, field experiences remain important opportunities for learning as well. The researchers point out that additional occasions for modeling and practice must be established to fit within the time constraints of a methods course.

Teacher pre-service education supervisors at La Salle University produced two videotapes to inform cooperating classroom teachers of their mentoring roles and responsibilities (Bednar, Ryan & Sweeder, 1994). In a follow-up study conducted at La Salle, university personnel found the videos to be authentic and flexible, thus enabling the cooperating teachers to recapture their own student teaching experiences in hopes of better preparing them as mentors. Reported outcomes demonstrated that “experienced classroom teachers indicated that videos are particularly instructive in delineating program philosophy, goals, and procedures” (p. 293). Videotape technology was chosen as the medium by La Salle faculty members because it met a variety of

needs. First, video has the potential to convey much information in a brief period of time. Second, the medium is flexible; learner control enables the viewing and reviewing of selected episodes. Third, researchers have demonstrated in other studies that instructional video fosters growth in metacognitive abilities. Fourth, videotape is a motivational tool which also provides a standardized model for the viewing audience. Finally, video technology is capable of reproducing realism in the workplace which creates a more authentic and meaningful learning experience. These factors were instrumental in the success of Bednar's video-based teacher training and confirm the earlier findings of Joyce and Showers (1988).

In their summary report "Staff Development for Teachers," researchers Miller, Lord and Dorney conclude that educational institutions will assume greater responsibility for providing technical assistance to practitioners. Innovative sources designed to enhance staff development (e.g. video, hypermedia, & electronic networking) will continue to emerge as important factors in developing teachers as learners (Miller et al., 1994). "If teacher education is to meet its responsibility of preparing teachers for the challenges of restructuring schools and educating students in an information age, teacher education programs have a professional responsibility to provide leadership in developing the full potential of the emerging technologies" (Burke, 1993, p. 33).

Videotape technology is used widely for teacher training at all levels. Joyce and Showers (1988) reported how the use of videotaped recordings in classroom research has assisted researchers in observing classroom teaching in order to determine those factors related to teaching effectiveness. In a study of twenty-six college students assigned randomly to one of three instructional settings, Ritchie and Newby (1989) compared the effectiveness of different

delivery systems. In their study, each treatment group observed a thirteen-minute lecture, followed by a multiple-choice test on the information presented. Students in the televised instruction group scored highest. Students in the traditional classroom setting with instructor and those in the television studio with instructor scored slightly lower.

The measurable benefits of video are many, as documented by Bunyan (1987). In one case, special education students who received video lessons increased their learning and retention rates by 80%, as a comparison of pre- and posttest scores revealed.

The results of an investigation of reading techniques by Lawrence and Price (1987) suggested that an interactive video approach was equally effective as classroom instruction. The researchers focused their attention on a specific feature of reading instruction, i.e., the language experience approach. In addition, Lawrence and Price reported that generally pre- and posttest outcomes reflected favorable student attitudes and efficiency in student instructional time.

### Videotape as a Self-Improvement Tool

The opportunity for teachers to reflect on their classroom instructional practices has received much attention in the staff development literature (Storeygard & Fox, 1995). A variety of evaluation procedures has been developed to enable teachers to observe their own teaching and reflect on what occurred. During the 1960s, the Multi-State Teacher Education Project (M-STEP) was one of many nation-wide studies to first explore the uses of video media in teacher education programs. Bosley (1968) reported that "In dozens of institutions stimulating beginnings had been made in finding innovative uses

for video media in teacher education programs, especially after portable videotape recorders had begun to appear on the scene. In many instances the new devices were seen to offer direct use functions which met felt needs of long standing" (Bosley, 1968, p. 2). In particular, researchers affiliated with M-STEP reported videotape processes enabled student teachers and interns to develop better teaching practices through self-evaluation. In the study, participants were asked to rate the value of videotaping as a tool in indicating areas where self-improvement was needed. More than 88% of the teachers and interns reported the technique was "very valuable" (Bosley, p. 11).

Three decades later, improved videotape technology continues to enhance self-evaluation procedures. Struyk and McCoy (1993) noted these advantages for including an evaluation component via videotape in teacher preparation programs:

- 1) Pre-service teachers can learn a great deal about their teaching performance.
- 2) The opportunities to view and re-view teaching episodes allow teachers to reflect frequently on their practices, thus accepting more responsibility for their learning.
- 3) Self-evaluation via videotape enables teachers to experiment, reflect, monitor and adjust - all without fear of punitive consequences.

Another form of self-reflection addressed in the literature is "video deliberations." Levine (1992) describes how deliberations provide opportunities for novice teachers to view and critique their own practices. The researcher also notes how the videotaped lessons provide continuity in self-improvement programs and, over time, document a novice teacher's progress toward becoming a better teacher.

## The Adult Learner

Because this study deals with a population of adults, it is important to characterize the adult learner. In his masterwork The Adult Learner: A Neglected Species (1984), Knowles presents four definitions of *adult*, spanning the biological, legal, social, and psychological domains. With regard to learning, he determined that the most important definition relates to the psychological realm. Knowles wrote “We become adult psychologically when we arrive at a self-concept of being responsible for our own lives, or being self-directing” (p. 55). Also relevant to this study is Knowles' definition of the social adult. He states that we become adult “when we start performing adult roles, such as full-time worker” and the like (p. 55).

Darkenwald and Merriam (1982) define an adult learner as someone whose predominant role in society takes on adult attributes and who participates in organized, on-going learning activities with the main intent to bring about change in the individual. Such change encompasses knowledge, skills, behaviors, and attitudes. This definition builds upon Verner's study of adult learners in the 1960s. Verner (1962) found the distinguishing feature for delineating adult education to be the systematic learning opportunities constantly supervised by a facilitator or other educational agent.

The following set of basic principles of adult learning has been constructed by this researcher and emanates from a review of articles, textbooks, and research reports.

- 1) Learning activities should contain a reflective element if learning (change) is to occur (Zemke & Zemke, 1995). A series of deliberate learning episodes is necessary for change. Typically these life-changing episodes might include reflecting, listening, practicing, reading, and observing (Tough, 1982).

2) Learning experiences should be relevant to the learner's personal goals, acknowledging what already is known (Zemke & Zemke, 1995). Prior experiences are a major resource in learning situations (Knowles, 1984; Brookfield, 1986).

3) Learning experiences must transfer to the real work environment.

a) Strategies for facilitating this transfer include pre- and post-training activities such as discussion groups, support groups, information to read for reflective purposes, new skills and behaviors to practice between training sessions, and opportunities to interact with the training leader.

b) Adult learners should recognize the relationship of their educational activities to society and, in a broader sense, find purposeful application of the new learnings in the workplace (Darkenwald & Merriam, 1982).

4) Adults are more aware of their particular learning needs due to real-life events such as marriage, children, employment. They are life-centered in their orientation to learning (Brookfield, 1986; Knowles, 1984).

a) Adults prefer self-direction, but this is only effective when they have some basic level of experience with the content. According to Tough (1982), the self-directed learner is both efficient and eclectic in his choice of media and method.

b) They want to learn new skills and/or acquire new knowledge which they can apply immediately to the workplace (Knowles, 1984). Adult learning should be problem centered (Zemke & Zemke, 1995).

c) Adults typically seek out new learning experiences when faced with life-changing events (Zemke & Zemke, 1995).

5) Learning experiences, regardless of the media used, should be straightforward how-to content, as this is the preference for most adults. "The



methods adults use to learn, and those that they prefer, are closely related to their particular educational needs and interests” (Darkenwald & Merrian, 1982, p. 129). Approximately 4 of every 5 adults polled in one study cited the need to learn new applications and how-to information as their primary motivations for reentering continuing education courses (Zemke & Zemke, 1995).

6) Active learner participation is important to motivate adults and facilitate new learning (Brookfield, 1986). Likewise, engaging realistic activities, as opposed to artificial exercises, are preferable (Zemke & Zemke, 1995).

Verner (1962) developed a conceptual framework to identify and classify the processes of adult education. His work is significant in that he was one of the first researchers to clearly articulate the identification and development processes related to adult learners. Verner described the framework as the methods, techniques, and devices of education. Verner defined method as the “relationship established by the institution with a potential body of participants for the purpose of systematically diffusing knowledge among a prescribed but not necessarily fully identified public” (p. 9). Examples of Verner’s methods range from the traditional lecture course in college and correspondence coursework, to present-day methods such as distance education programming and interactive computer software.

Verner defined technique as the “relationship established by the institutional agent (adult educator) to facilitate learning among a particular and precisely defined body of participants in a specific situation” (p. 9). In this context, technique refers to the processes and instructional activities directed by educators to implement and sustain learning.

To facilitate the learning process, Verner coined the term devices to acknowledge the importance of instruments and environmental factors. These

devices had the capability of improving the efficiency and effectiveness of an instructional technique, but were not singularly responsible for bringing about new learning.

Twenty-five years later, Burnham and Seamons (1987) updated Verner's theories. They suggested that devices, especially electronic devices and systems, could not only affect methods but even create new methods. They proposed that "consideration of environmental devices, the needs of individuals, and the needs of the institutions can help determine method and techniques" (p. 10). The use of multimedia, particularly videotape, is a means of tapping into environmental devices to create new methods and techniques. Although Verner could not have predicted the technology currently available to adult educators, such environmental devices enable educators to reach an adult population of learners through an even greater number of non-traditional delivery systems.

### Summary

In conclusion, videotape technology has been found to be an effective and powerful teaching aid (Torrence, 1994; Hatfield & Bitter, 1994; DeLuca, 1991). "The power of video is that it is a vicarious learning experience that can present sounds, pictures, graphic representations, and real-time serial motion that could never be replicated in a classroom" (Torrence, p. 29).

A report from The Office of Technology Assessment (OTA) released in 1989 showed that staff developers in schools were utilizing technological innovations in much the same manner as their business counterparts. That is, technology was accepted as an efficient means of providing professional development. As noted in a study by Burke (1993a), much of the research on

the effectiveness of videotape technology dealt with training adults in business and industry. However, an intriguing paradox seems to exist. According to Richey (1991), "The entire area of the influence of delivery system preferences on learning outcomes seems to be largely unexplored for adult learners" (p. 3).

While the relative effectiveness of videotape instruction in many fields of training has been established (Barnard, 1992; Bunyan, 1987; DeLuca, 1991), the appropriate use of videotape as a tool in delivering *reading* instruction to adults requires further attention. Staff development addressing this particular perspective - particularly with the inclusion of a trained on-site facilitator - needs to be researched in a substantial manner. It is the intention of this research to contribute to the larger body of knowledge describing efficient and effective delivery systems of staff development.

## CHAPTER III

### METHOD AND PROCEDURES

#### Selection of the Sample

The sample was drawn from the teacher population of the 68 elementary schools in the Fort Worth Independent School District, an urban district serving approximately 73,000 students. A prospective pool of teachers who had not viewed the videotape titled "The Fort Worth Reading Program" was identified.

The selection of teachers occurred in two phases. In phase one, a Principal Invitation Letter (See Appendix D) requesting participation in the study was sent to the principal of each elementary school in the district. The letter explained the purpose of the study and asked principals to identify their faculty's degree of exposure to the videotape by marking an appropriate descriptor on a continuum of statements. The descriptor statements ranged from "The videotape has been shown to all teachers at this campus" to "The videotape has not been shown at this campus."

The second phase of the selection process began after principals returned the Principal Invitation Letter. In this phase, a Teacher Invitation Letter (See Appendix E) was mailed to teachers at all campuses where the principal marked: "The videotape has been shown and some teachers have viewed it" or "The videotape has not been shown at this campus." The Teacher Invitation Letter gave teachers information regarding the nature of the study, but solicited the participation of only those who had not viewed "The Fort Worth Reading Program" videotape. To restate, teachers who had previously viewed

the videotape were excluded from the study. The Teacher Invitation Letter notified eligible participants of the time and location of the study, as well as provided background information describing the need for the study and how teachers would personally benefit as participants.

Teacher Invitation Letters were mailed to 310 potential participants and 246 responses were received. Of that number, ninety-five teachers agreed to participate in the study, while 151 declined. Most teachers who declined gave one of the following reasons: 1) They had already viewed the videotape; 2) they were scheduled to attend other district staff development on the training dates; 3) they were enrolled in an evening university course which conflicted with the training dates and times. A small number of those declining returned their letters without comment.

During the first mailing, 64 teachers did not respond and a second letter was sent requesting their participation. Of that number, 47 teachers responded of which 4 agreed to participate. In the second round, the majority of teachers who declined gave no reason. Those who did return the letters reported they were unavailable to take part in the study. After the second round of mailings was complete, a pool of 99 teacher subjects had agreed to participate. Of the 99 subjects, the actual participation of teachers numbered 46, all of whom met the criteria for the study.

The researcher attributes the disparity between the original number of 99 subjects and the 44 subjects who ultimately participated to several factors. First, the study was voluntary and took place outside the realm of the contract day. Second, incentives such as free children's books and materials were given, but monetary compensation was not offered. Third, unforeseen circumstances prevented some participants from attending both sessions.

All subjects were elementary school teachers in grades K-5. The teachers were full-time certified employees of the Fort Worth Independent School District.

Subjects were divided into two groups: Group A (videotape with trained on-site facilitator) and Group B (face-to-face live presenter). To accomplish this, the researcher created a listing of teacher names in the order the letters were received by return mail. Using a table of random numbers, the researcher placed teachers into two groups of equal number.

#### Treatment Groups

Participants in this study received training using "The Fort Worth Reading Program," a staff development program designed by the researcher. In addition to the presentation of content information which is the central component, the program also features small group discussions, off-line activities, and question and answer periods. (See Tables I and II)

Both groups received the same treatment and the same content with the following exception. A central component to the Group A training was the presentation of content information in a videotape format. Group B did not view the videotape, but instead, received the same information via live presenter. In this study, the researcher assumed the role of the presenter in both cases.

#### Contents of the Staff Development Program

The staff development video program used in this study was called "The Fort Worth Reading Program." The videotape was written and produced by the researcher, in collaboration with the Reading Department of the Fort Worth Independent School District. It provides teachers an introduction to the

philosophy, objectives, and best practices of the district's reading program. The videotape program is designed for use at the campus level and is one of many staff development opportunities available to all reading teachers.

"The Fort Worth Reading Program" videotape is 62 minutes in length. It is divided into 2 sessions; each session is divided into 2 modules designated A and B. The videotape includes the viewing of two extended demonstration lessons in a primary and an intermediate classroom. The videotape also features brief roundtable discussions where teachers share strategies for assessing reading comprehension, integrating ancillary materials, and differentiating instruction with special populations. Also, graphic illustrations are used throughout the videotape to highlight program and training objectives, definition of terms, summary points, and important lessons learned.

The sequence of activities and corresponding time allocations for these sessions are displayed in Tables I and II. The Facilitator's Handbook which accompanies the videotape program is included in the appendix. (See Appendix G)

## Development of the Instruments

### Instrumentation

Two instruments were used in the study: 1) The Teacher Staff Development Questionnaire, a Likert-type survey to obtain teacher attitudes toward staff development, and 2) The Cognitive Test of Reading Knowledge, an instrument designed to measure cognitive objectives of the district's reading program. Both instruments were developed by the researcher. Prior to the administration, the instruments were reviewed and evaluated by a panel of experts in the fields of reading and staff development. Based on their

TABLE I  
SEQUENCE OF ACTIVITIES FOR SESSION ONE

Module A: Videotape With On-Site Facilitator*	Minutes	Module B: Traditional Face-to-Face Live Presenter #
1. Off-line activity #1: "Pre-Activity Response Sheet" 2. Overview of handout: "Planning Your Lesson at a Glance" 3. Overview of lesson objectives for Session One 4. Presentation of content -Introduction to FWISD's reading program -Pre-reading strategies -Shared reading and guided reading -Learners with special needs 5. Break 6. Presentation of content (cont.) -Informal assessment -Use of ancillary materials -Interactive reading -demonstration lesson	10  2  2 16  5 16  10 4	1. Off-line activity #1: "Pre-Activity Response Sheet" 2. Overview of handout: "Planning Your Lesson at a Glance" 3. Overview of lesson objectives for Session One 4. Presentation of content -Introduction to FWISD's reading program -Pre-reading strategies -Shared reading and guided reading -Learners with special needs 5. Break 6. Presentation of content (cont.) -Informal assessment -Use of ancillary materials -Interactive reading -demonstration lesson
7. Off-line activity #2: Reviewing the components of interactive reading in small group format 8. Distribution of handout: "Teacher Classroom Activity Response Sheet" and summation of Session One [Dismissal]	10 4	7. Off-line activity #2: Reviewing the components of interactive reading in small group format 8. Distribution of handout: "Teacher Classroom Activity Response Sheet" and summation of Session One [Dismissal]

\*The components delivered via videotape appear in shaded boxes.

#The components delivered via live presenter appear in shaded boxes.



TABLE II

SEQUENCE OF ACTIVITIES FOR SESSION TWO

Module A: Videotape With On-Site Facilitator*	Module B: Traditional Face-to-Face Live Presenter #
1. Whole group discussion: "Teacher Classroom Activity Response Sheet" 2. Review of lesson objectives in Session One 3. Overview of lesson objectives for Session Two	1. Whole group discussion: "Teacher Classroom Activity Response Sheet" 2. Review of lesson objectives in Session One 3. Overview of lesson objectives for Session Two
4. Presentation of content - Literacy support-demonstration lesson - Evaluation and formal assessment - Use of ancillary materials - TAAS and effective reading instruction - Post-reading strategies - Applications in the content areas - Fix-up strategies - Listening and speaking activities	4. Presentation of content - Literacy support-demonstration lesson - Evaluation and formal assessment - Use of ancillary materials - TAAS and effective reading instruction - Post-reading strategies - Applications in the content areas - Fix-up strategies - Listening and speaking activities
5. Off-line activity #3: Planning next steps using "The Post-Viewing Response Sheet"  [Dismissal]	5. Off-line activity #3: Planning next steps using "The Post-Viewing Response Sheet"  [Dismissal]

\*The components delivered via videotape appear in the shaded box.

#The components delivered via live presenter appear in the shaded box.

comments, revisions such as wording of instructions, formulation of questions, and formatting were made.

To measure attitudes related to staff development, participants in the study responded to The Teacher Staff Development Questionnaire. (See Appendix A) This consists of fifteen statements on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). The responses were recorded on machine scoreable answer sheets.

To test the effects of the treatment in this study, participants also were administered The Cognitive Test of Reading Knowledge. (See Appendix B) This was a thirty-eight item multiple-choice test that measured cognitive knowledge of the district's reading program. The responses were recorded on machine scoreable answer sheets. In a pilot test to measure internal consistency, 25 individuals representative of the target population were tested. Cronbach's alpha yielded a score of .99, as noted below.

#### Procedure for Constructing, Piloting, and Validating the Objective Test

The multiple-choice objective test used in this study was designed and developed according to criteria outlined in Worthen, Borg, and White (1993) and Gronlund (1982). Construction of the test items adhered to the following criteria:

1. The material tested was relevant to the learning outcomes to be measured.
2. Answer options represented a single concept that appeared plausible to those who had not mastered the material.
3. Test items had four options which came at the end of the statement.
4. Words that needed to be repeated in each option were included in the stem for purposes of clarity.

5. Options such as “none of the above” and “all of the above” were used sparingly.
6. The stem of each item was clear to the test-taker without having to read all the options.
7. Each test item had only one correct or best answer; options occurred randomly.

To pilot the multiple-choice test, twenty-five teachers in the Fort Worth Independent School District were chosen to participate. The teachers were representative of the population to be studied in the actual study. The teachers were asked to: 1) complete a 43-item multiple-choice test; 2) make written comments regarding clarity of questions and answer choices; 3) record the length of time necessary for completing the test; 4) return the machine scoreable answer sheet and test instrument to the researcher within 3 to 4 days; and 5) maintain confidentiality by not discussing the contents of the test with others. As a measure of internal consistency, a Cronbach’s alpha score of .99 was achieved.

#### Procedure for Constructing, Validating, and Piloting the Likert Scale

The questionnaire used in this study was designed and developed according to the procedures for the construction and piloting of questionnaires as outlined by Worthen, et al. (1993), and Henerson, et al. (1978). In developing The Teacher Staff Development Questionnaire for this study, the researcher did the following:

1. Identified diverse beliefs and feelings about the attitude object (i.e. staff development).
2. Wrote statements for a Likert-type scale.

3. Classified the statements to identify those that were most clearly favorable and most clearly unfavorable.
4. Developed a pilot version of the attitude scale.
5. Administered and scored the pilot version with a group of individuals representative of the target population to be tested.
6. Deleted items that performed poorly during the pilot study.
7. Revised the Likert-type scale into a completed format.

#### Procedure for the Collection of Data

The Teacher Staff Development Questionnaire was used as a pretest and posttest in this study. Brief biographical data of the participants was collected as a part of The Teacher Staff Development Questionnaire. (See Appendix C) This included the number of years of service, gender, current teaching assignment, and highest degree earned. The request for biographical information was prefaced with a guarantee of anonymity in relation to participating teachers. The same form of The Teacher Staff Development Questionnaire was administered to Groups A and B as a posttest at the conclusion of the second session.

In addition, The Cognitive Test of Reading Knowledge was administered to subjects in Groups A and B as a pretest and a posttest. The pretest administration occurred at the beginning of the first session. The posttest administration occurred at the conclusion of the second session. The researcher was responsible for administration of all pre- and posttests.

To safeguard against possible experimenter bias during the delivery of the staff development programs, the researcher observed the following procedures. First, the researcher adhered closely to a scripted presentation.

This enabled both groups to receive equal amounts of time devoted to each topic, as well as the same depth of coverage. Secondly, all sessions were recorded on audiotape. These tapes were given to an educator not involved in the study who reviewed the tapes to confirm procedures used in both groups were consistent. This measure also ensured that the instructional delivery systems for Groups A and B were aligned accurately with the objectives of the staff development program.

In order to begin collecting the data, the researcher followed the sequence of events as outlined below:

March 6 - Principal Invitation Letters (See Appendix D) from the Research and Evaluation Department of the FWISD were mailed to principals of the 68 elementary schools.

March 22 - Principals returned the letters, indicating the degree of interaction with the videotape on their campuses.

March 23 - Based on this feedback, Teacher Invitation Letters (See Appendix E) were mailed to all teachers at the campuses which had indicated a pool of eligible participants.

April 6 - All teachers eligible and willing to take part in the study returned the Teacher Invitation Letter (See Appendix E) to the Research and Evaluation Department of the FWISD. A Confirmation Letter (See Appendix F) containing time and location of the study was sent to each participant.

Training Schedule for Subjects Using Videotape  
With On-Site Facilitator

Session 1 (April 18)

4:00-4:25 Pretest of The Teacher Staff Development

Questionnaire and The Cognitive Test of Reading Knowledge

4:25-5:30 The researcher delivers Module A: Videotape with On-Site Facilitator

5:30 End of Schedule for Session One

Session 2 (May 4)

4:00-5:05 The researcher delivers Module A: Videotape with On-Site Facilitator

5:05-5:30 Posttest of The Cognitive Test of Reading Knowledge and The Teacher Staff Development Questionnaire

5:30 End of Schedule for Session Two

Training Schedule for Subjects Using Traditional Face-To-Face Live Presenter

Session 1 (April 25)

4:00-4:25 Pretest of The Teacher Staff Development Questionnaire and The Cognitive Test of Reading Knowledge

4:25-5:30 The researcher delivers Module B: Traditional Face-To-Face Live Presenter

5:30 End of Schedule for Session One

Session 2 (May 11)

4:00-5:05 The researcher delivers Module B: Traditional Face-To-Face Live Presenter

5:05-5:30 Posttest of The Cognitive Test of Reading Knowledge and The Teacher Staff Development Questionnaire

5:30 End of Schedule for Session Two

### Treatment of Data

To investigate treatment effects, a multivariate analysis of covariance was employed by the researcher. Analysis of covariance was used to control for initial differences between groups by using the cognitive test and the staff development questionnaire as pretest covariants. According to Borg and Gall (1989), analysis of covariance is useful in causal-comparative studies because the researcher cannot always select comparison groups that are matched with respect to all relevant variables except the one that is the main concern of the investigation.

In this study, there were two dependent variables: 1) a cognitive test of a school district's reading program and 2) a Likert scale of teacher attitudes toward staff development. The independent variable was the treatment, i.e. the two delivery systems.

## CHAPTER IV

### FINDINGS

#### Introduction

The purpose of this study was to investigate the comparative effectiveness of two staff development delivery systems as measured by 1) a cognitive test of the school district's reading program and 2) an affective measure of teacher attitudes toward staff development. The findings of the research are presented after the discussion of demographics.

#### Demographic Information

The 46 participants in this study were certified employees of the Fort Worth Independent School District. All were elementary teachers assigned to kindergarten through grade five. The demographics of Group A and Group B are outlined in Tables III, IV, V and VI.

Table III

#### Summary of Participants' Gender

Gender	Group A		Group B	
	n	%	n	%
Male	1	5	2	8
Female	20	95	23	92



Table IV

Summary of Participants' Highest Degree Eamed

Degree	Group A		Group B	
	n	%	n	%
B.S.	12	57	20	80
M.A.	8	38	5	20
Ed.D.	1	5	0	0

Table V

Summary of Participants' Years of Teaching Experience

Years of Experience	Group A		Group B	
	n	%	n	%
0-3 yrs.	4	19	8	32
4-7 yrs.	2	10	3	12
8-13 yrs.	7	33	3	12
14-20 yrs.	3	14	5	20
over 20 yrs.	5	24	6	24

Table VI

Summary of Participants' Classroom Teaching Assignments

Teaching Assignment	Group A		Group B	
	n	%	n	%
Kindergarten	6	29	1	4
Grade One	2	10	4	16
Grade Two	2	10	4	16
Grade Three	2	10	4	16
Primary Mixed	4	19	2	8
Grade Four	2	10	5	20
Grade Five	1	5	3	12
Interm. Mixed	2	10	2	8

## Discussion of Demographics

Group A had 21 members and was 95 percent female. Only one male participated. More than half the participants held bachelor's degrees; more than one third held master's degrees; one held a doctorate degree. Slightly less than one third had 0 -7 years of classroom teaching experience. One third of the teachers had 8 - 13 years of experiences. Slightly more than one third had over 14 years of experience. The vast majority of participants in Group A were primary teachers representing kindergarten through grade three. Roughly one fourth of the teachers represented the intermediate grades four and five.

Group B had 25 members and was 92 percent female. Two males participated in this group. Four fifths of the participants held bachelor's degrees and the remainder held master's degrees. There were no doctorate degrees in the second group.

When compared to their cohorts in the first group, Group B had substantially less classroom teaching experience. Nearly one half had 0 - 7

years of classroom teaching experience. A small group ( $n=3$ ) had 8-13 years and almost half of the participants had over 14 years. The teaching experience of Group B members was clustered around two areas: 0-7 years and 14 and over years. A large portion (nearly two-thirds) were primary teachers representing kindergarten through grade three. However, in contrast to Group A, over one-third of Group B teachers represented the intermediate grades four and five.

### Findings of the Research

The findings of the research are organized around the two hypotheses stated in Chapter One. The hypotheses tested were:

Hypothesis One: There will be no statistically significant difference at the .05 level in the teachers' learning of content knowledge of a district's reading program between teachers receiving face-to-face live staff development and teachers receiving staff development via videotape with a trained on-site facilitator; and

Hypothesis Two: There will be no statistically significant difference at the .05 level in teacher attitudes toward staff development between teachers receiving face-to-face live staff development and teachers receiving staff development via videotape with a trained on-site facilitator.

According to Borg and Gall (1989), a MANCOVA assists the researcher in seeing data from a multivariate perspective. "Well-defined groups, such as those studied in causal-comparative research, are unlikely to differ from each other because of a single, superficial trait or ability. Rather, groups are likely to differ in some respects because of many interrelated differences in their personal background" (Borg & Gall, p. 560). The MANCOVA allows the

researcher to look at all the variables simultaneously. The nature of multiple effects can be analyzed in a more effective manner by utilizing a MANCOVA.

### Hypothesis One

Hypothesis One explored teachers' learning of content knowledge. The data collection instrument was The Cognitive Test of Reading Knowledge (See Appendix B). Teachers were asked to respond to a thirty-eight item multiple-choice test covering cognitive knowledge of a school district's reading program. The Cognitive Test of Reading Knowledge was administered to Groups A and B as a pretest and a posttest. The pretest administration occurred at the beginning of the first session. The posttest administration occurred at the conclusion of the second session.

To examine reliability and content validity of the instrument, a pilot test was conducted. For internal consistency, a pilot test was given to twenty-five teachers representative of the population to be studied. Content validity in the pilot test was validated by a panel of experts.

Table VII shows minimum and maximum scores obtained by participants on the data collection instrument in the actual study.

Table VII

Observed Scores in Content Knowledge

	Group A	Group B
Pretest		
Min.	16	21
Max.	33	33
Posttest		
Min.	18	21
Max.	35	36

Note. Highest Possible Score = 38.

On the cognitive test the highest score obtainable was 38. As Table VII indicates, the range of observed pretest scores for Group A was 17, with a low score of 16 and a high of 33. In the posttest, the range for Group A was also 17. The low score was measured at 18 and the high at 35.

For Group B in the observed pretest scores, the range was 12. The low score was 21 and the high was 33. In the posttest the range was 15. The low score was measured at 21 and the high at 36. Additional data relevant to Hypothesis One is presented in Table VIII which shows the means and standard deviations derived from The Cognitive Test of Reading Knowledge.

Table VIII

Means and Standard Deviations for Content Knowledge

	Group A	Group B
Pretest		
M	25.8	26.2
SD	4.9	3.6
n	21.0	25.0
Posttest		
M	28.2	29.6
SD	5.0	4.2
n	21.0	25.0

Pretest and posttest measures were analyzed using a MANCOVA, with pretest scores as the covariant. The analyses of pretest and posttest results presented in Table VIII indicate those who participated in the videotape format with an on-site trained facilitator (Group A) showed no significant differences in learning than those who participated in the face-to-face live presentation format (Group B). Although there was no statistically significant difference at the .05 level between the videotape staff development group and the face-to-face live staff development group, the results reflect a mean increase of one point (1.0) between pre- and posttests.

### Hypothesis Two

Hypothesis Two explored teachers' attitudes toward staff development. The data collection instrument was The Teacher Staff Development Questionnaire which presented fifteen statements concerning attitudes about concepts, principles, and practices relating to staff development. Respondents were asked to indicate how strongly they agreed or disagreed with each

statement on a seven-point Likert scale. The Teacher Staff Development Questionnaire (See Appendix A) was administered to Groups A and B as a pre- and posttest measurement. A pilot version was administered to a group of teachers representative of the target population. After scoring, items that performed poorly were deleted and a fifteen-item instrument was established to use in the actual study. Table IX shows minimum and maximum scores obtained by participants on the data collection instrument.

Table IX

Observed Scores in Attitudes Toward Staff Development

	Group A	Group B
Pretest		
Min.	56	64
Max.	94	95
Posttest		
Min.	59	66
Max.	92	101

Note. Highest Possible Score = 105.

On the Likert-type scale used in this study, the highest score obtainable was 105. As Table IX indicates, the range of observed pretest scores for Group A was 38, with a low score of 56 and a high of 94. In the posttest, the range for Group A was 33. The low score was measured at 59 and the high at 92.

For Group B in the observed pretest scores, the range was 31. The low score was 64 and the high was 95. In the posttest the range was 35. The low score was measured at 66 and the high at 101. Additional data relevant to Hypothesis Two is shown in Table X which presents the means and standard deviations derived from The Teacher Staff Development Questionnaire.

Table X

Means and Standard Deviations for Attitudes Toward Staff Development

	<u>Group A</u>	<u>Group B</u>
Pretest		
M	75.9	79.4
SD	10.1	8.2
n	21.0	25.0
Posttest		
M	77.1	78.8
SD	9.2	8.5
n	21.0	25.0

Pretest and posttest measures were analyzed using a MANCOVA, with pretest scores as the covariant. In Hypothesis Two analyses of the data indicated that those who participated in the videotape format with an on-site trained facilitator (Group A) showed a negligible difference in attitudes about staff development from those in the face-to-face live presentation format (Group B). In Table X the data shown in the far right column, Mean Differences, indicate the finding relevant to attitudes to be without statistical significance.

Table XI contains information showing the close proximity of the adjusted means to the same values on each of the values measured.

Table XI

Table of Adjusted Means

	<u>Group A</u>	<u>Group B</u>
Posttest Attitudes Total	78.20	77.99
Posttest Cognitive Total	28.62	29.37



In this study, a multivariate analysis of covariance revealed no statistically significant differences between the two groups ( $F(3,38) = 0.33$ ,  $p > .05$ ). This indicates that the groups did not differ significantly on knowledge learned and did not differ significantly on attitudes toward staff development. Follow-up univariate analyses were not carried out due to the results of the multivariate analysis.

### Discussion of the Findings

The study found no significant differences in cognitive growth or attitudes about staff development between a group receiving a videotaped presentation of a reading program and a group receiving a live presentation. To conclude that the presentations were equally effective would be invalid due to the findings that neither group showed any significant change in either cognitive or attitude measures from pre- to posttesting.

Several hypotheses could be offered as to why there was no growth from pre to post by either group. Perhaps, the design of the staff development program was itself flawed. It is possible the video and live presentations were actually equally ineffective due to a flaw in the program design. A pilot study did not reveal any deficiencies in the staff development program which was designed by the researcher. The program was similar to other staff development programs offered by the school district and contained no unique elements except for the video presentation. Therefore, the researcher had reason to expect that there would be significant increase in learning.

Another plausible explanation for the failure to show pre- to posttest gains might be that the cognitive test was not a valid test measure of the growth in the learning of the participants in the staff development program. The

multiple-choice format of the pre- and posttests may have been inadequate measures of the cognitive growth in learning about the reading program that was actually experienced by the participants. Another format that allowed for open-ended responses might have been a more accurate measure of the complex issues contained in the reading staff development program. The acceptance of this hypothesis involves examination of the current practice in staff development program evaluation. Teachers typically complete such instruments hurriedly in after-school workshop settings. Some take the instrument more seriously than others. Since there were no high-stakes consequences tied to performance on these tests, participants may not have taken care to seriously complete them. A related problem may be that the time between the pretest, the delivery of the staff development program, and the posttest was not sufficient for the participants to process the content adequately.

Another consideration for explaining the failure to show pre- to posttest gains might be that the skill levels of the participants affected their ability to learn from the staff development program in either of the alternative formats. The pretest revealed a low degree of understanding about reading instruction by the participants. The content of the staff development program may have been too complex for the level of skills that the participants had at the onset of the workshop. It is possible that the pretest could have been better used to diagnose the low level of understanding of the participants and to prescribe a different staff development program for them. The content of the staff development program was designed well in advance of the study for the two alternative presentations.

Finally, an explanation regarding the lack of growth from pre to post by either group might be found in the small sample size. Although 99 teachers

were expected to attend the reading staff development presentation, only 44 actually attended. Attendance at the program was voluntary. It might be reasonable to assume that those who did attend were more interested in learning about the reading program and were, therefore, more likely to learn from it. However, there is no way to construct the results that might have been provided by the larger number of participants. It is a typical occurrence for less than fifty percent of those who register for a workshop to actually attend. This is a problem inherent in staff development and is likely to affect any research on the effectiveness of staff development programs.

### Conclusion

The purpose of this study was to determine if staff development delivered to teachers via videotape presentation was as effective as staff development delivered through live presentation. This is a significant question. School districts are down-sizing central office staff and have fewer dollars to contract for staff development services at the same time that information regarding good instruction is growing. All school reform and restructuring efforts require significant amounts of staff development. The effective and efficient delivery of staff development is a critical need.

This study reports results that are inconclusive. If there are no significant differences in learning, one might conclude that using videotape presentations is more efficient than live presentations of staff development for teachers. However, the results of the study indicate that there was no significant learning with either delivery system. Whether the problem was in the design of the staff development system itself, the accuracy of the measures, or the nature of the

participants, this study cannot with confidence show that the videotaped presentation or the live presentation was effective.

## CHAPTER V

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### Summary

The purpose of this study was to investigate the effectiveness of two staff development delivery systems. To carry out the study, the hypotheses tested were:

Hypothesis One: There will be no statistically significant difference at the .05 level in the teachers' learning of content knowledge of a district's reading program between teachers receiving face-to-face live staff development and teachers receiving staff development via videotape with a trained on-site facilitator.

Hypothesis Two: There will be no statistically significant difference at the .05 level in teacher attitudes toward staff development between teachers receiving face-to-face live staff development and teachers receiving staff development via videotape with a trained on-site facilitator.

The sample for this study was drawn from the teacher population of the 68 elementary schools in the Fort Worth (Texas) Independent School District, an urban district serving approximately 73,000 students. The subjects were forty-six elementary school teachers representing kindergarten through grade five.

Subjects were divided into two groups: Group A (videotape with trained on-site facilitator) and Group B (face-to-face live presenter). Both groups received the same treatment with the following exception. A central component

to the Group A training was the videotaped element which provided the content information of a district's reading program in a videotape format. Group B, however, received the same information via live presenter and did not view the videotape.

Hypothesis One explored teachers' learning of content knowledge. The data collection instrument was The Cognitive Test of Reading Knowledge. Teachers were asked to respond to a thirty-eight item multiple-choice test covering cognitive knowledge of a school district's reading program.

Hypothesis Two explored teachers' attitudes toward staff development. The data collection instrument was The Teacher Staff Development Questionnaire which presented fifteen statements concerning attitudes about concepts, principles, and practices relating to staff development. Teachers were asked to indicate how strongly they agreed or disagreed with each statement on a seven-point Likert scale.

Both instruments were administered to Groups A and B as pre- and posttest measurements. Pre- and posttest scores were analyzed using a MANCOVA, with pretest scores as the covariant. The multivariate analysis of covariance revealed no statistically significant differences between the two groups ( $F(3,38) = 0.33, p > .05$ ). This indicates that the videotape group and the live presentation group did not differ significantly on knowledge learned and showed no change in attitude as a result of either type of staff development.

#### Recommendations for Practice

Personnel responsible for staff development should monitor closely the cognitive aspects of their training with the goal of identifying appropriate benchmarks to facilitate learning. This might include adjusting the length of

time between sessions (e.g., two weeks instead of one), or adjusting the total number of sessions planned. These or similar modifications are important when attempting to increase participants' opportunities for learning over a period of time.

Staff development planners also should build into workshop agendas a variety of activities for participants to receive new information, discuss the possible implications for classroom application, and receive immediate feedback concerning the appropriateness of their responses. For example, while learning about new state-mandated curriculum requirements, the presenter could provide time in the workshop for participants to analyze specific documents and determine how the new information would be shared at the campus. The participants could develop a possible sequence of activities, share their plan with the presenter, and hear suggestions for modifications before the workshop concludes. This practice would assist the presenter in determining the degree to which workshop participants are learning new information.

A result of this study suggests there may be other formats for delivering staff development, such as videotape technology. This includes individual viewing and viewing with a partner. Individual viewing of a videotape allows self-paced learning. Many adult learners prefer this method over other delivery modes, enjoying one's privacy and control of the information flow. For example, a teacher may wish to identify weaknesses in his/her own understandings of pedagogy and replay a key segment several times. Additionally, individual viewing permits the learner to organize the learning environment without having to negotiate with others.

On the other hand, viewing a videotape with a partner provides

opportunities for collegial discourse. With the viewer control afforded by videotape, partners can stop and start the video in selected areas to review material based on their interests and needs. Portions of the tape can be chosen for repeated viewings. This provides time for conversation and personal reflection. A new teacher and his/her mentor can view teaching scenarios, discuss the implications, and then transfer the learning experience into a classroom setting where additional opportunities for practice can take place. Some responsibilities of trainers' roles cannot be relegated to a videotape. In a well-articulated training program, observation, coaching, and corrective feedback are included as part of the staff development cycle. This would not preclude the use of video during the initial stages of training, provided appropriate follow-up is in place.

If videotape is chosen as a delivery system for staff development, the tapes should be produced by those with technical expertise in multimedia, working collaboratively with content area experts. The utilization of highly talented media technicians is an important factor when producing a quality training film for adults. Skilled practitioners in the field understand the media technology and have critical insights into production values, such as audio, script development, effects of lighting and background music, and picture clarity. The technical quality of the videotape must be professional because participants expect this when viewing a video, or any form of multimedia presentation. Ancillary materials and activities included with the videotape program are additional considerations. Support materials which increase learning are: program content outlines, a glossary of terms, graphic organizers to use during small group discussions, reprints of pertinent articles from professional journals, and a reading list for further study.



The preparedness of the presenter should be evaluated when considering learner outcomes in staff development settings. Very often, an audience equates the credibility of the speaker with the credibility of the information being delivered. When the presenter appears unprepared, the possibilities of losing the message increase. By the same token, the development and creation of videotapes requires extensive time and effort, thus presenters should be selected carefully for the assignment.

Personnel responsible for planning and delivering staff development have alternatives for using videotape technology in training. For example, staff developers can utilize videotape for new teacher inservice prior to the opening of school when large numbers of participants must be informed within a brief time frame. It is clear some aspects of content material are more appropriately delivered in small group settings and staff developers should consider this when planning.

Videotape can also be used effectively with new teachers hired after the opening of school to view at their campuses. This viewing could occur independently, but the best scenario would include the new teacher's mentor viewing with him/her, allowing for collegial interaction. After the videotape viewing, mentors or staff developers must plan opportunities for observation, coaching and feedback to maximize the learning experience (Joyce & Showers, 1988).

#### Recommendations for Further Study

This study was conducted by sampling a population of elementary school teachers. The findings indicate no significant differences occurred between the experimental and control groups with respect to grade level assignment. It

would be informative to replicate this study with secondary teachers (grades 6-12) to ascertain whether attitudes vary with different levels of classroom teaching assignments. This could contribute to the findings of Mann (1976) and Bau (1989) who studied staff development attitudes and reported that the higher the grade level, the more resistant teachers were to training.

Videotape technology may provide other opportunities to augment staff development. This study focused on an urban school setting with teachers and campuses in relatively close proximity. Nevertheless, the findings suggest implications for electronic distance learning via videotape. Such a delivery system is especially appropriate for training in rural communities. Accordingly, it is recommended that this study be replicated in a rural setting to establish if videotape is an effective and efficient delivery system for teachers who, because of geographical isolation, must rely on alternative staff development.

Given the current research demonstrating that teachers' years of experience often affect how teachers implement new innovations learned in staff development, additional studies are recommended. This study could be replicated with a much larger sample to determine if significant differences in learning occur among teachers with varying years of teaching experience when information is presented via both delivery systems.

Because of their increased availability and popularity, interactive video and CD-ROM provide opportunities for replication. It would be expedient to repeat the study and substitute these technologies for the role of the on-site facilitator. In this new design, learning would be mediated solely through technology. This would allow researchers to explore whether the absence of the human factor (i.e. the on-site facilitator) affects the learning of teacher participants.

Considering the design of the staff development program may have been flawed, the study could be replicated using a program which has been shown to be effective using live presentation. Other studies might examine the skills of the participants as one of the variables in the study, or use more open-ended responses of participants as a measure.

Finally, it would be meaningful to look at the various constructs measured in this study in terms of both attitude and learning. In a replicate study the number of dependent variables could be increased. For example, the researcher might break down attitude into subcategories, such as attitude toward staff development, attitude toward reading, attitude toward videotape technology, and attitude toward self as a learner.

APPENDIX A  
THE TEACHER STAFF DEVELOPMENT QUESTIONNAIRE

Form\_\_\_\_\_

### The Teacher Staff Development Questionnaire

The purpose of this questionnaire is to assess your perceptions regarding staff development. Please rate each of the following statements from SD signifying Strongly Disagree, MD = Moderately Disagree, D = Disagree, U = Undecided, A = Agree, MA = Moderately Agree, SA = Strongly Agree.

<u>BELIEFS, ATTITUDES &amp; PERCEPTIONS</u>	SD	MD	D	U	A	MA	SA
1. The primary purpose of staff development is to offer innovative approaches to teaching practices.	1	2	3	4	5	6	7
2. I shouldn't be required to attend staff development activities.	1	2	3	4	5	6	7
3. The staff development I attend ultimately improves student performance in my classroom.	1	2	3	4	5	6	7
4. I think staff development is unproductive in terms of enhancing my teaching practices.	1	2	3	4	5	6	7
5. The use of videotaped presenters is effective in teaching new skills and concepts.	1	2	3	4	5	6	7
6. The staff development activities I attend are irrelevant to my current assignment.	1	2	3	4	5	6	7
7. Most staff development presenters do not understand my role and responsibilities as a classroom teacher.	1	2	3	4	5	6	7
8. An important purpose of staff development is to reinforce already learned skills and concepts.	1	2	3	4	5	6	7
9. The opportunity to interact with the presenter during staff development workshops is an important factor in my learning.	1	2	3	4	5	6	7

	SD	MD	D	U	A	MA	SA
10. Staff development workshops introduce skills and concepts for increasing the level of my competency.	1	2	3	4	5	6	7
11. Administrators do not believe I am capable of identifying my own staff development needs.	1	2	3	4	5	6	7
12. Staff development is more effective when I am given opportunities to suggest, plan, and evaluate it.	1	2	3	4	5	6	7
13. Most staff development activities I attend are not well planned.	1	2	3	4	5	6	7
14. Staff development is more effective when offered at the campus site.	1	2	3	4	5	6	7
15. The opportunity to interact with other teachers during staff development workshops is an important factor in my learning.	1	2	3	4	5	6	7

**APPENDIX B**  
**THE COGNITIVE TEST OF READING KNOWLEDGE**

The Cognitive Test of Reading Knowledge

CIRCLE ONE: I have (I have not) seen the videotape.

Form \_\_\_\_\_

Directions: For each of the following, select the one best answer.

1. Which of the following is considered a formal tool for assessment?
  - (A) Anecdotal records
  - (B) Portfolios
  - (C) Standardized tests
  - (D) Peer assessment
  
2. Which of the following approaches is designed for the teacher to model and get students involved in strategic, motivated engagement with text?
  - (A) Literacy support
  - (B) Independent reading
  - (C) Paired reading
  - (D) Interactive reading
  
3. For assistance in learning more about reading, teachers should refer to which resource in the Macmillan/McGraw Hill Program?
  - (A) *Listening Library Cassettes*
  - (B) *Literature to Literacy Activity Pads*
  - (C) *The A to EZ Handbook*
  - (D) *Word Building Kits*
  
4. For emergent readers, which of the following would NOT be a major consideration when print is first introduced?
  - (A) Oral fluency
  - (B) Familiarity of text
  - (C) Repetitive language
  - (D) Context clues
  
5. When is the BEST time to build background and engage prior knowledge?
  - (A) After reading the text
  - (B) Only with non-fiction stories
  - (C) Before reading the text
  - (D) Never, as this is a student responsibility for learning



6. A Venn Diagram can be an effective tool for teaching which comprehension strategy?

- (A) Cause and effect relationships
- (B) Predicting outcomes
- (C) Sequencing
- (D) Compare and contrast

7. In the Macmillan/McGraw-Hill Program, "Writer's Choice" and "Book Talk" are examples of:

- (A) Writing response activities
- (B) Performance assessment opportunities
- (C) Graphic organizers
- (D) Proofreading strategies

8. "Turning Back to Literature," as presented in the Macmillan/McGraw-Hill Program, is intended for:

- (A) Reinforcing skills and concepts from the literature
- (B) Enrichment material for independent readers
- (C) Use with primarily second language learners
- (D) Portfolio assessment

9. Which of the following statements is TRUE regarding the FWISD Literature Units in the curriculum documents?

- (A) There are two units per grade level
- (B) They are correlated to district and TAAS reading objectives
- (C) They provide teachers with additional literature to share with students
- (D) All of the above

10. How many TAAS Reading Objectives are there?

- (A) Four
- (B) Six
- (C) Eight
- (D) Eleven

11. A teacher would be most likely to model a think-aloud strategy when

- (A) Reinforcing sustained silent reading
- (B) Emphasizing the reading-writing connection
- (C) Showing how good readers approach text
- (D) Creating interest before introducing a story

12. Which of the following activities are examples of fix-up strategies?
- (A) Rereading, asking questions, and using context clues
  - (B) Creating interest, reading aloud, and using context clues
  - (C) Asking questions, choral reading, and prewriting
  - (D) Echo reading, text chunking, and asking questions
13. The Macmillan/McGraw-Hill Program can be described as:
- (A) A phonics-based collection of poems and stories
  - (B) A collection of stories with controlled vocabulary
  - (C) A multicultural anthology designed for TAAS practice
  - (D) An anthology of literature divided into thematic units
14. In what Macmillan/McGraw-Hill resource will teachers find "Turning Back to Literature"?
- (A) *Book of Plays and Choral Readings*
  - (B) *Teacher's Planning Guide*
  - (C) *Skills and Strategies Practice Book*
  - (D) *Strategic Reading and Writing Transparencies*
15. Which of these scenarios BEST depicts an effective reading program?
- (A) Students undergo assessment periodically to determine reading deficiencies and are provided opportunities for remediation.
  - (B) Students take turns reading aloud to improve comprehension skills and work collaboratively in writing groups.
  - (C) Teachers focus on high-order thinking skills and minimize time allocations for students to talk and write.
  - (D) Teachers explicitly teach comprehension strategies and allocate time daily for independent reading.
16. Choral reading, echo reading, and text chunking are strategies designed to
- (A) Improve fluency
  - (B) Improve comprehension
  - (C) Reinforce collaborative learning
  - (D) Enhance decoding skills
17. Which of the following is considered an informal tool for assessment?
- (A) Anecdotal records
  - (B) Teacher-made tests
  - (C) Criterion-referenced tests
  - (D) Standardized measurements

18. What is non-fiction?
- (A) Make believe
  - (B) Opinions
  - (C) Fairy tales
  - (D) Informational writing
19. When reading a non-fiction text, when is the MOST important time to activate prior knowledge?
- (A) After reading the text
  - (B) Whenever students have relevant knowledge to share
  - (C) Before reading the text
  - (D) Before students respond to comprehension questions
20. In the Macmillan/McGraw-Hill Program, "Sum It Up" is an example of:
- (A) Proofreading
  - (B) Performance assessment
  - (C) Cause and effect
  - (D) Standardized measurement
21. Which of the following is an example of a teacher modeling a fix-up strategy?
- (A) Teacher directs students how to complete a skills sheet after reading a piece of text from the anthology
  - (B) Teacher provides additional time during the school day for slower students to answer comprehension questions
  - (C) Teacher gives instructions on the use of editing with a word processor and observes students working at the computer station
  - (D) Teacher models how to keep on reading after encountering an unfamiliar word
22. A Venn Diagram is a:
- (A) Phonics chart
  - (B) Graphic organizer
  - (C) Dictionary entry
  - (D) Resource guide
23. Which of the following statements is NOT an accurate description of shared reading?
- (A) Shared reading is similar to the bedtime story experience.
  - (B) Shared reading lays the groundwork for nurturing young readers.
  - (C) It provides opportunities for the teacher to demonstrate conventions of language and print.
  - (D) It is a strategy designed for use primarily with second language learners.

24. Which of the following statements is NOT true?
- (A) Vocabulary instruction is most effective when words to be learned are presented in a meaningful context.
  - (B) Good readers learn new vocabulary whether or not they have strategies for doing so.
  - (C) Teachers should model and reinforce effective reading practices for all students.
  - (D) Good readers who comprehend text have a variety of fix-up strategies at their fingertips.
25. "Amaze Your Students," "Artist's Craft," "Multicultural Perspectives" and "Exploring Ideas" are literature-based activities found in
- (A) *The A to EZ Handbook*
  - (B) *Turning Back to Literature*
  - (C) *TeamWork/ThemeWork*
  - (D) *The Classroom Library Collection*
26. When considering point of view, what is most important?
- (A) Generalization
  - (B) Cause and effect
  - (C) Word meaning
  - (D) Perspective
27. Echo reading and choral reading are effective strategies for:
- (A) Improving oral fluency
  - (B) Enhancing vocabulary development
  - (C) Improving reading comprehension
  - (D) Teaching fix-up strategies
28. What is interactive reading?
- (A) An extracurricular activity
  - (B) A language support system
  - (C) A means for readers to comprehend
  - (D) The development of multicultural awareness
29. Which of the following BEST describes an interactive reading lesson?
- (A) Teachers assess prior knowledge, then group students according to ability; students of low ability interact with the teacher while reading.
  - (B) Teachers preteach unfamiliar vocabulary while introducing the selection; students read the text on their own.
  - (C) Teachers build background as needed throughout the story; students become actively involved through role-playing and retellings
  - (D) All of the above

30. When is it recommended for teachers to introduce the "Vocabulary Focus"?
- (A) During the pre-reading activities
  - (B) Anytime during the lesson when decoding problems occur
  - (C) During independent reading time
  - (D) Before answering the comprehension questions

31. A fifth grade teacher is introducing a non-fiction book called The Spanish Conquest of Mexico. To find out what students already know and to set a purpose for reading, it would be appropriate to use a
- (A) Story pyramid
  - (B) KWL chart
  - (C) Venn diagram
  - (D) Circular story map

32. When differentiating instruction for students acquiring English, it is advisable to
- (A) Use pictures, gestures, & facial expressions to help convey ideas and concepts
  - (B) Emphasize the meaning of what's said, rather than pronunciation only
  - (C) Speak loudly and clearly
  - (D) A and B only

33. A primary teacher is beginning another book. She is focusing students' attention on the author, illustrator, and other special features. More than likely, this teacher is
- (A) Teaching inferences
  - (B) Providing literacy support
  - (C) Previewing the text
  - (D) Teaching point of view

34. In the Macmillan/McGraw-Hill Program, every story focuses on two comprehension strategies. How are these strategies designated throughout the Teacher's Planning Guide?
- (A) In red bold print
  - (B) With a check mark inside a box
  - (C) In the "More to Explore" section
  - (D) With a red apple

35. When considering cause/effect, what is most important?
- (A) Prefixes
  - (B) Sequence of events
  - (C) Opinions
  - (D) Imagination

36. Which of the following might a teacher employ as a pre-reading strategy?
- (A) Engaging prior knowledge
  - (B) Previewing the text
  - (C) Building background
  - (D) All of the above
37. A third grade teacher is introducing the meanings of the prefixes “re” and “un.”
- More than likely, this teacher is focusing on the following objective:
- (A) Alphabetizing high frequency vocabulary
  - (B) Using structural clues to determine word meaning
  - (C) Identifying cause and effect relationships
  - (D) Using graphic organizers to determine word meaning
38. The purpose of Literacy Support is to:
- (A) Promote sustained silent reading
  - (B) Provide more help for students
  - (C) Introduce strategic reading models
  - (D) Set purposes for reading

**APPENDIX C**  
**BIOGRAPHICAL INFORMATION**

Form \_\_\_\_\_

Biographical Information

For research purposes, please provide the data requested below. All information will be kept confidential.

CIRCLE THE RESPONSE WHICH BEST DESCRIBES YOU.

1. Gender: Male \_\_\_\_\_ Female \_\_\_\_\_
2. Highest Degree Earned: Bachelors \_\_\_\_\_ Masters \_\_\_\_\_ Doctorate \_\_\_\_\_
3. Years of Teaching Experience: 0-3   4-7   8-13   14-20   over 20
4. Current Teaching Assignment:  
Kindergarten   Grade 1   Grade 2   Grade 3   Grade 4   Grade 5  
Other Assignment: \_\_\_\_\_



**APPENDIX D**  
**PRINCIPAL INVITATION LETTER**

DATE: March 6, 1995

TO: [PRINCIPAL'S NAME]  
Principal, [SCHOOL NAME]

FROM: Paul Brinson  
Coordinator of District-Wide Studies

RE: Research Study of Staff Development

The Research and Evaluation Department is conducting a study on the effectiveness of videotape presentation as a form of staff development. As you are aware, the Reading Department has made available to schools a videotape entitled "The Fort Worth Reading Program." We are attempting to identify teachers who are unlikely to have viewed this videotape, either in whole or part, for further participation in the research project.

The reason for identifying these campuses and teachers is solely for research purposes. We are hopeful that the findings will be valuable in helping the district plan future staff development opportunities. All information will be kept confidential.

When choosing one of the selections below, please consider the teachers at your campus in grades one through five only. Mark the one statement which best describes your campus.

- The videotape has been shown to all teachers at this campus.
- The videotape has been shown and most teachers have viewed it in its entirety.
- The videotape has been shown and approximately one half of the teachers have viewed it in its entirety.
- The videotape has been shown and some teachers have viewed it.
- The videotape has not been shown at this campus.

Your participation in this study is valuable and appreciated. All information will be kept confidential. Please return this form in the enclosed envelope by Wednesday, March 22.

Thank you for your assistance.

APPENDIX E  
TEACHER INVITATION LETTER

DATE: March 23, 1995

TO: Teacher Addressed

FROM: Paul Brinson  
Coordinator of District-Wide Studies

RE: Research Study of Staff Development

The Research and Evaluation Department is currently conducting a study of the use of videotape as a form of staff development. We are seeking your assistance and participation. As you may be aware, the Reading Department has made available to schools a videotape entitled "The Fort Worth Reading Program." We are attempting to identify teachers who have not viewed this videotape.

The reason for identifying this pool of teachers is solely for research purposes. We are hopeful that the findings will be valuable in helping the district plan future staff development opportunities.

If you have not viewed the videotape, you are eligible for this study. However, if you have viewed the videotape, then you are not eligible to participate.

Teachers will be assigned to attend a two-part session of staff development conducted after school on [DATES] or [DATES]. Upon receipt of this letter, you will be notified of your particular assignment of dates and times. Each session is approximately 1 1/2 hours in length. Teachers attending both sessions will receive a certificate for their professional development records. Also, children's trade books will be given to each participant as an expression of our appreciation.

Please let us know if you wish to participate by checking one of the boxes below.

I would like to participate in this study. (A letter notifying you of the time and location will be mailed as soon as we hear from you.)

I am unable to participate in this study.

Your Name \_\_\_\_\_ School # \_\_\_\_\_

Again, we want to remind you that your participation in this study is valuable. All information will be kept confidential. Should you desire to withdraw from the study, you may do so at any time without penalty. Would you please sign and return this form in the enclosed envelope by [DATE]? If you have questions, please call Paul Brinson at 871-2422. Thank you for your assistance. We look forward to hearing from you.

This project has been reviewed by the University of North Texas Committee for the Protection of Human Subjects (817-565-3940).

APPENDIX F  
CONFIRMATION LETTER TO TEACHERS

DATE: April 3, 1995  
TO: Teacher Addressed  
FROM: Paul Brinson  
Coordinator of District-Wide Studies  
RE: Research Study of Staff Development

Thank you for volunteering to take part in our study of staff development practices. You will be making a valuable contribution by helping us better understand the preferences teachers have regarding reading and staff development. We also believe this experience will provide you additional opportunities for enhancing your own professional development.

Teachers attending both sessions will receive a certificate to place in their professional development records. Also, children's trade books will be given to each participant as an expression of our appreciation. Refreshments and soft drinks will be provided.

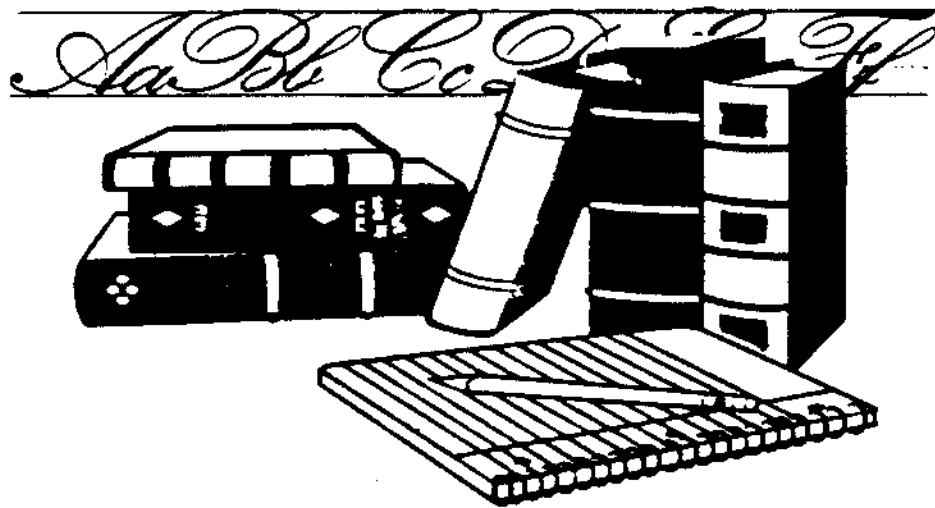
it is important that you attend both sessions. The first session is scheduled [DATE]. The second session is [DATE]. Please report to the Professional Development Center, Room 206, on both days. The Professional Development Center is located at 3210 West Lancaster. Sessions are from 4:00 to 5:30. Due to the nature of this research study, we ask that you arrive on time and stay for the duration of the session.

If you have additional questions, please call Paul Brinson's office at 871-2422. We look forward to seeing you [DATE]!

Thank you.

**APPENDIX G**  
**FACILITATOR'S HANDBOOK**

# THE FORT WORTH READING PROGRAM



The Reading Department  
1994-95



## Suggested Agenda For Reading Professional Development

### "The Fort Worth Reading Program"

#### Session One

Sequence of Activities	Approximate Time (Minutes)
1. Before viewing Part 1 of the video, ask participants to complete the Pre-Activity Response Sheet (Handout #1). Have them form small response groups (3 to 4 people each) for sharing ideas with others.	10
2. Distribute copies of "Planning Your Lesson at a Glance." Inform participants that this is the suggested planning format for the Macmillan reading series. The planner will be discussed in depth throughout the video and participants will find it helpful to refer to this during their viewing.	2
3. Display Transparency #1 to review the major points emphasized in Part 1 of the video.	2
4. Show the first segment of Part 1 of the video, "The Fort Worth Reading Program." Stop the video when the directive appears on the screen.	16
5. <b>BREAK.</b> During the break, ask teachers to discuss informally with a colleague topics and strategies addressed in the video. Questions to consider might include: What practices are you currently using which improve reading comprehension? How can you support emergent readers? Why is it important to use pre-reading strategies?	5
6. Return to the video and show the second segment of Part 1. Stop the video at the conclusion of Part 1. (A directive appears on the screen.)	16
7. After viewing this portion of the video, ask teachers to recall the major components of interactive reading. In pairs or small groups have them brainstorm key strategies/concepts associated with interactive reading. If time allows, invite small groups to report to the larger group. Select a recorder to write the responses on chart paper or a chalkboard, as each group reports.	10

(Continued)

---

Sequence of Activities (Continued)	Approximate Time (Minutes)
8. Distribute Handout #2 and ask teachers to try out at least one of the reading strategies they observed on the video. Inform participants they should bring the completed handout to the next session. Encourage them to be prepared to discuss successes and/or difficulties they encountered with the implementation. Before dismissal, address any questions participants may have.	4
<hr/> Approximate Session Time	1 hour and 5 minutes <hr/>

Prior to the session, the principal or designated facilitator should:

- duplicate copies of Handouts #1 and #2 for all participants
- make a transparency of Transparency Master #1
- duplicate copies of "Planning Your Lesson at a Glance" for all participants
- obtain one chalkboard or flipchart
- arrange for the necessary audiovisual equipment and the video, "The Fort Worth Reading Program"

## Suggested Agenda for Reading Professional Development

### -- "The Fort Worth Reading Program"

#### Session Two

Sequence of Activities	Approximate Time (Minutes)
1. Lead teachers in a discussion about their classroom implementations from the previous week's assignment. Refer them to Handout #2. Questions to initiate discussion might include: What strategy or practice worked for you? How do you know? How did your students respond? What did you learn from the experience?	10
2. Display Transparency #1 for review and emphasize the major points presented in Part 1 of the video.	2
3. Display Transparency #2 to focus teacher thinking to the key points which will be highlighted in Part 2.	2
4. Show Part 2 of the video, "The Fort Worth Reading Program." (A directive indicating Part 2 appears on the screen.)	30
5. Have teachers complete the Post-Viewing Response Sheet (Handout #3). Share responses in small groups. End session by asking teachers what they plan to do next. Before dismissal, address any questions participants may have.	12
<b>Approximate Session Time</b>	<b>56 minutes</b>

Prior to the session, the principal or designated facilitator should:

- make transparencies of Transparency Masters #1 and #2
- duplicate copies of Handout #3 for all participants
- arrange for the necessary audiovisual equipment and the video, "The Fort Worth Reading Program"

## Part 1



**Implementing "The Fort Worth Reading Program"**



**Pre-reading Strategies**



**Learners with Special Needs**



**On-going Assessment**



**Using Macmillan Resource Materials**



**Emergent Readers**



**Choices for Reading:  
Interactive Reading**

## Part 2



**Choices for Reading:  
Literacy Support**



**Formal Assessment**



**Reinforcement of TAAS  
Objectives**



**Applications in the Content  
Areas**



**Turning Back to Literature**



**Fix-up Strategies**



**Comprehension Strategies**



**Listening & Speaking  
Activities**

## Pre-Activity Response Sheet



**Things I am doing currently to introduce reading selections to my students:**



**Things I am doing currently to assess reading progress:**



**Greatest challenges I face with the reading series:**



**To further my efforts in becoming a more effective reading teacher, I would like to learn more about:**

## Teacher Classroom Activity Response Sheet



**New reading strategy or activity I used in my classroom:**



**What I learned:**



**How the use of this strategy or activity impacted—**

**my planning time:**

**the quality of student responses:**

**learner success:**

**the amount and frequency of student involvement:**

**my effectiveness in meeting the needs of all readers:**

**assessment opportunities:**

## Post-Viewing Response Sheet



**Things I saw in the video I will do in my classroom to improve reading instruction:**



**Strategies and activities I can use to assess reading progress (other than worksheets or comprehension questions):**



**Materials from the Macmillan program or from FWISD curriculum documents which I plan to use more frequently:**



## BIBLIOGRAPHY

- Anderson, R.C., Hiebert, E.H., Scott, J.A., & Wilkinson, I.A.G. (1985). Becoming a nation of readers: The report of the commission on reading. Washington, D.C.: National Institute of Education.
- Barnard, J. (1992). Video-based instruction: Issues of effectiveness, interaction, and learner control. Journal of Educational Technology Systems, 21 (1), 45-50.
- Beare, P.L. (1989). The comparative effectiveness of video, audio, and telelecture in delivery continuing teacher education. American Journal of Distance Education, 3 (2), 57-66.
- Bednar, M., Ryan, F., & Sweeder, J. (1994). Voices from the field: Teachers' responses to student teaching orientation videos. Journal of Technology and Teacher Education, 2 (3), 293-303.
- Borg, W.R. & Gall, M.D. (1989). Educational research: An introduction. White Plains, NY: Longman.
- Bosley, H. E. (1968). Video processes in teacher education programs. Baltimore, MD: Multi-State Teacher Education Project Publications.
- Brookfield, S. (1986). Understanding and facilitating adult learning. San Francisco, CA: Jossey-Bass.
- Budd, J.F. (1983). Corporate video in focus. Englewood Cliffs, NJ: Prentice-Hall.
- Bunyan, J. (1987). Why video works. White Plains, NY: Knowledge Industry Publications.

Bunyan, J. & Crimmins, J. (1977). Television and management: The manager's guide to video. White Plains, NY: Knowledge Industry Publications.

Bunyan, J., Crimmins, J., & Watson, N. (1978). Practical video: The manager's guide to applications. White Plains, NY: Knowledge Industry Publications.

Burke, M.A. (1993a). The Columbus experience: Institutionalization of distance education technology for delivering K-12 staff development programming. Dissertation Abstracts International, 54, 3718A. (University Microfilms No. 94-07, 411)

Burke, M.A. (1993b). Designing effective electronic distance education programs for K-12 staff development. The Clearing House, 67 (4), 233-237.

Burke, M.A. (1994). Long-distance learning for teachers. The Executive Educator, 16 (3), 24-25.

Burnham, B. & Seamons, R. (1987). Exploring the landscape of electronic distance learning. Lifelong Learning, 2 (2), 8-11.

Carnegie Forum on Education and the Economy (1986). A nation prepared: Teachers for the 21st century. (Report of the Task Force on Teaching as a Profession). New York: Carnegie Corporation.

Cennamo, K.A. (1994). Sprouting the couch potato: Techniques to increase the effort learners invest in video-based materials. Performance Improvement Quarterly, 7 (2), 62-80.

Chute, A.G. (1986). Research on teletraining: Student acceptance, learning effectiveness and cost benefits in the corporate environment. (ERIC Document Reproduction Service No. ED 267 760)

Chute, A.G., Balthazar, L.B., & Poston, C.O. (1990). Learning from teletraining: What AT & T research says, in Contemporary Issues in American Distance Education. M.G. Moore (ed.), Pergamon Press, Oxford, 260-276.

Darkenwald, G. & Merriam, S. (1982). Adult education: Foundations of practice. New York: Harper & Row.

DeLuca, S.M. (1991). Instructional video. Boston, MA: Focal Press.

Egan, M.W., Welch, M., Page, B., & Sebastian, J. (1992). Learners' perceptions of instructional delivery systems: Conventional and television. American Journal of Distance Education, 6 (2), 47-55.

Forlizzi, L. & Mallery, A. (1994). Video and other visuals excite adult students about literature. Adult Learning, 6 (2), 15-16.

Fullan, M. & Miles, M. (1992). Getting reform right: What works and what doesn't. Phi Delta Kappan, 73 (10), 745-752.

Gehlauf, D.N., Shatz, M.A., & Frye, T.W. (1991). Faculty perceptions of interactive television instructional strategies: Implications for training. American Journal of Distance Education, 5 (3), 20-28.

Glickman, C.D., Hayes, R., & Hensley, F. (1992). Site-based facilitation of empowered schools: Complexities and issues for staff developers. Journal of Staff Development, 13 (2), 22-26.

Graham, S.W. & Wedman, J.F. (1989). Enhancing the appeal of teletraining. Journal of Instructional Psychology, 16 (4), 183-191.

Hatfield, M.M. & Bitter, G.G. (1994). A multimedia approach to the professional development of teachers: A virtual classroom, in Professional Development for Teachers of Mathematics: 1994 Yearbook. Aichele, D.B., & Coxford, A.F. (ed.), NCTM, Reston, Virginia, 102-115.

Hausman, C. (1991). Institutional video: Planning, budgeting, production, and evaluation. Belmont, CA: Wadsworth Publishing.

Henerson, M.E., Morris, L.L., & Fitz-Gibbon, C.T. (1978). How to measure attitudes. Beverly Hills, CA: Sage Publications.

Henry, L. (1989). High-tech training for the high-tech factory. Training, 26 (8), 41-43.

Johnston, J.S. & Wilder, S.L. (1992). Changing reading and writing programs through staff development. The Reading Teacher, 45 (8), 626-631.

Joiner, E. G. (1990). Choosing and using videotexts. Foreign Language Annals, 23 (1), 53-64.

Joyce, B. & Showers, S. (1980). Improving inservice training: The messages of research. Educational Leadership, 37 (2), 379-385.

Joyce, B. & Showers, S. (1988). Student achievement through staff development. White Plains, NY: Longman.

Klesius, J., Searls, E., & Zielonka, P. (1990). A comparison of two methods of direct instruction of preservice teachers. Journal of Teacher Education, 41 (4), 34-44.

Knowles, M. (1984). The adult learner: A neglected species. Houston, TX: Gulf Publishing.

Lawrence, P. & Price, R. (1987). A project to measure the treatment effects of the use of interactive video on the teaching of the language experience approach to reading instruction. (ERIC Document Reproduction Service No. ED 291 367)

Lehto, J. (1994). A comparison of teacher attitudes based upon their involvement in various levels of staff development. Dissertation Abstracts International, 55, 3815A. (University Microfilms No. 95-13, 797)

Levine, M. (Ed.). (1992). Professional practice schools: Linking teacher education and school reform. New York: Teachers College Press.

McBride, R.E., Reed, J.L., & Dollar, J.E. (1994). Teacher attitudes toward staff development: A symbolic relationship at best. Journal of Staff Development, 15 (2), 36-38.

McCarthy, M. (1993). Personal variables affecting K-12 art teacher attitudes toward staff development. Dissertation Abstracts Internation, 54, 149A. (University Microfilms No. 93-11, 389)

McInnes, J. (1980). Video in education and training. New York: Focal Press.

Miller, B., Lord, B., & Dorney, J. (1994). Staff development for teachers: Summary report. Newton, MA: Education Development Center.

Mills, B.J. (1994). Faculty development in the 1990s: What it is and why we can't wait. Journal of Counseling and Development, 72 (5), 454-464.

Office of Vocational and Adult Education. (1990). Literacy and trowel trades project: Evaluation report. (ERIC Document Reproduction Service No. ED 324 442)

Paul, D. (1994). An integration/in-service model that works. T.H.E., 21 (9), 60-62.

Prager, E. & Hantman, S. (1987). Adding an experiential dimension to undergraduate gerontological education: The "video thesis". Educational Gerontology, 13 (4), 479-486.

Reyes, D., Torp, L., & Voelker, A. (1993). Using videotape and videodisc technologies in the teacher education curriculum. Journal of Technology and Teacher Education, 1 (3), 291-297.

Richey, R. (1991). Adult attitudes toward alternative delivery systems and industrial training outcomes. (ERIC Document Reproduction Service No. 335 005)

Ritchie, H. & Newby, T.J. (1989). Classroom lecture/discussion vs. live televised instruction: A comparison of effects on student performance, attitude, and interaction. American Journal of Distance Education, 3 (3), 36-45.

Robbins, P. (1986). The Napa-Vacaville follow-through project: Qualitative outcomes, related procedures, and implications for practice. The Elementary School Journal, 87 (2), 139-157.

Rojewski, J.W. & Pollard, R.R. (1993). A multivariate analysis of perceptions held by secondary academic teachers toward students with special needs. Teacher Education and Special Education, 16 (4), 330-341.

Seller, W. (1993). New images for the principal's role in professional development. Journal of Staff Development, 14 (1), 22-26.

Smith, J. (1981). Are you up to date on video's many training capabilities? Training, 18 (6), 71-78.

Stempleski, S. & Tomalin, B. (1990). Video in action. New York: Prentice Hall.

Storeygard, J. & Fox, B. (1995). Reflections on video: One teacher's story. Journal of Staff Development, 16 (3), 25-29.

Struyk, L.R. & McCoy, L.H. (1993). Pre-service teachers' use of videotape for self-evaluation. The Clearing House, 67 (1), 31-34.

Thrall, M. (1990). A college level program for instructing the metric system. (ERIC Document Reproduction Service No. ED 329 299)

Torrence, D.R. (1994). Training with television. Performance and Instruction, 3 (3), 26-29.

Tough, A. M. (1982). Intentional changes: A fresh approach to helping people change. Chicago, IL: Follett Publishing.

Verner, C. (1962). A conceptual scheme for the identification of processes for adult education. Washington, DC: Adult Education Association of the U.S.A.

Ward, A. (1990). Count the ways technology works for schools. American School Board Journal, 177 (9), A25-A35.

Warger, C.L. & Zorfass, J.M. (1994). Successful practices when using satellite technology to enhance districtwide staff development. Journal of Staff Development, 15 (2), 42-47.

Welch, M. J. (1987). Further investigation into the effects of teacher attitudes toward mainstreamed learning-disabled students. Dissertation Abstracts International, 48, 2602A. (University Microfilms No. 87-28, 309)

Westbrook, J.M. & Tipping, S.R. (1992). Improved site-based staff development through the S.O.S. program. Journal of Staff Development, 13 (4), 34-36.

Wilson, T. (1991). Here's what's on the school technology horizon. American School Board Journal, 178 (10), A11-A13.

Wood, F. & Thompson, S.R. (1993). Assumptions about staff development based on research and best practices. Journal of Staff Development, 14 (4), 52-57.

Worthen, B.R., Borg, W.R., & White, K.R. (1993). Measurement and evaluation in the schools. New York: Longman Publishing Group.

Zemke, R. (Ed.) (1994). Industry report 1994: Who's learning what? Training, 31 (10), 45-55.

Zemke, R. & Zemke, S. (1981). 30 things we know for sure about adult learning. Training, 18 (6), 45-52.