THE EFFECTS OF TWO INSTRUCTIONAL DELIVERY PROCESSES OF A DISTANCE-TRAINING SYSTEM ON TRAINEE SATISFACTION, JOB PERFORMANCE AND RETENTION

DISSERTATION

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By

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* * * * *

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ABSTRACT

This exploratory, descriptive field case study compares the effects of two distinct instructional delivery processes embedded within a distance-training system (DTS) on trainee satisfaction, job performance and retention outcomes. The two instructional delivery processes vary on instructional design considerations including method, distance delivery technologies (media), and instructional techniques. Trainees' cognitive style and other learner characteristics were measured to determine differences between the two intact groups. In addition to the instructional delivery processes and trainees' attributes, other parts of the DTS include the trainer, manager involvement, and work environment.

This study was conducted within an organizational setting that utilized a systems approach to training design. The theory of transactional distance (Moore, 1972; 1973; 1983) was applied to analyze the transformation of the initial instructional delivery process of the sales training program to a second instructional delivery process. The original sales training program's course structure and instructional techniques for dialog were changed when videoconferencing technology was introduced into the DTS. A second training delivery process resulted. Analysis of the findings suggest that there was no statistically significant difference in the dependent variables of trainee satisfaction, placements, or dollar billings when the two groups were compared based on participation in the two levels of the distance training delivery processes (DTDP). However, practical
differences at the organizational level in the two groups were noted. Those trained by DTDP 1 (the self-instructional method with print, videotapes, and manager as trainer delivery approach) had a higher retention rate. However, those trained by DTDP 2 (the group method with print, videotapes, and corporate instructor via videoconferencing) had a higher average number of placements resulting in higher billing production. Multiple regression analysis indicates the independent variables describing the DTS (delivery process, trainer, work experience, sales experience, industry experience, years of education, GEFT score, sex, hours of interaction, manager involvement and work context) were able to explain approximately 20% of the variance in both trainee satisfaction and number of placements. Partial regression coefficients suggest that work experience and manager involvement were statistically significant in explaining trainee satisfaction. Partial regression coefficients suggest that sales experience, manager involvement, and work environment were also statistically significant in explaining the number of job placements.

This study helps further the understanding of the influence a distance training system may have on trainee satisfaction, job behavior, and retention. This information is important to researchers and practitioners in the human resource development (HRD) field.
Dedicated in gratitude to my mother and father,

Theresa and Paul Hruby,

for their inspiration and continued support of my dream;

to my best friend, Fenton E. Moore,

for his understanding and challenges that made it a reality

and to Pat Smylie,

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CHAPTER 1

INTRODUCTION

Changes in population demographics, global competition, and advanced technology require constant learning in the workplace (Drucker, 1996; Marquart & Kearsley, 1999). More than ever before, employees are asked to solve problems, make decisions, and function in new ways (Candy, 1991; Howard, 1995). As the nature of work has become more demanding and complex, managers increasingly view the issue of employee competence as one of the most important variables for organization success (Hamel & Prahlad, 1995; Jacobs & Jones, 1995; Pfeffer, 1994). Likewise, the problems caused by a lack of knowledge and skill in this new work environment can seriously impact the organization’s overall performance (Rummler & Brache, 1995).

Background

Human resource development (HRD) is the field of study and practice that focuses on improving an organization’s performance through its people (Swanson, 1994) by developing employee capabilities (Jacobs, 1990). In general, HRD professionals are responsible for supporting organizational performance by designing and implementing training, career development, and organizational development interventions. HRD’s focus is mainly on learning and performance in an organizational setting. From a
theoretical perspective, HRD draws mainly upon economics, psychology, and systems theories (Swanson, 1998). As an interdisciplinary body of knowledge, HRD literature is found in education, systems, economics, psychology, and organizational behavior (Jacobs, 1990). Using systems as a unifying framework, Gilbert (1978) and Rummler and Brache (1990; 1995) offer conceptual models of performance analysis to focus HRD practitioners and scholars on individual and organizational performance.

One of the major HRD issues is on training that leads to performance. HRD professionals are responsible for ensuring that training interventions are delivered in the most effective and efficient means possible. Historically, most training programs have been presented in a classroom setting. In this training approach, employees come together outside the work setting to receive instruction from a trainer. This approach has been relatively effective in providing the intended knowledge and skills of the training event because of the opportunity for interaction between the trainer and the trainees (Yelon, 1992).

However, training effectiveness and transfer to the work site using the classroom approach are often complicated issues. Several HRD researchers suggest that the work climate is important for learning to transfer to the work site and to reinforce the training behaviors that lead to performance (Baldwin & Ford, 1988; Goldstein, 1993). There are also concerns about the efficiency of the classroom approach, the most prominent of which are costs associated with traveling to the training classroom. These costs include wages for travel time, lost productivity while away from the job, insurance for potential
accidents, travel accidents, plus the monetary resources required for meals, transportation, and accommodations (Chute, Hulik, & Palmer, 1987).

More recently, some HRD practitioners and researchers have considered the use of technology to deliver training directly to the workplace as a way to address organizational effectiveness and efficiency (Barry & Runyan, 1995; Westfall, 1994). Many studies have suggested that using technology is more effective and cost efficient than traditional training programs (Fredrickson, 1990; Hosley & Randolf, 1993). Likewise, training effectiveness and efficiency have been demonstrated by structured on-the-job training as an instructional approach within the work setting to improve the speed of transfer (Jacobs & Jones, 1995; Jacobs, Jones, & Neil, 1992).

Some challenge the effectiveness of using technology in education (Bates & Cowell, 1986; Simmonson, 1997). For HRD in particular, an editorial by Russ-Eft (1994) challenged the field to research the impact of technology on training. Presently, many new technologies are being introduced into training and education (Furst-Bowe, 1996; Robson, 1996). The literature associated with both the field of distance, adult education and instructional systems design suggests that technology can support efficient delivery of knowledge and instruction (Garrison, 1989; Kearsely, Hunter, & Furlong, 1992; Wagner, 1990). However, Shale (1988) and Juler (1990) propose that technologies vary in their impact on effectiveness. Other researchers also suggest training methods, instructional techniques, environment, and adult learner characteristics all impact effectiveness (Chan, 1996; Sadler-Smith, 1996; Verduin & Clark, 1991).
Those in HRD should view a training intervention as a whole system. Technology is only one part in a training delivery process. Using a performance analysis approach, an HRD professional should determine if the training intervention that uses technology ultimately improves individual job performance and achieves desired organizational outcomes. As noted by Swanson (1995), the desired outcome of any organizational system should be the dependent variable, which is ultimately improved organizational performance.

Statement of the Problem

A recurring issue for the field of HRD has been to seek out alternative training approaches for developing employee competence to improve organizational performance. Until recently, most training has been delivered by bringing individuals to a single location, outside the work context, such as a corporate classroom. Although this traditional training has been effective for many organizations, it also has obvious cost, time and transfer implications (Yelon, 1992). Thus, the overriding issue in seeking alternative methods of training has been on increasing training efficiency without losing effectiveness. HRD departments are faced with the need to enhance performance by using technology to deliver training more efficiently, while maintaining effectiveness.

The literature reports numerous instances where distance technology has been used to increase the efficiency of delivering educational programs (Alavi, Yoo, & Vogel, 1997; Webster & Hackley, 1997). Most educational studies compared the traditional live, face-to-face classroom to a variety of distance approaches and found that other than
efficiency, there were no significant differences in learning and satisfaction outcomes (Beare, 1989; Ritchie & Newby, 1989; Russell, 1999).

However, considering the benefits of technology for training efficiency, there appears to be a lack of research evaluating effectiveness of job performance outcomes and organizational impact. Most distance education studies have instead focused on educational settings and learning outcomes, not on workplaces and job performance. Many studies focus exclusively on the technology, instructor, or learners. Few studies considered the training system as a whole. No studies were found that reviewed the distance delivery process, which includes the methods, media, and instructional techniques used in the design of instruction (Lengnick-Hall & Sanders, 1997). Likewise, the trainee’s cognitive style and adult characteristics and work context were not considered together as a whole (Jacobs & Gedeon, 1984; Sadler-Smith, 1997).

As a result, whenever HRD professionals seek to design training systems using distance technology, they must rely upon information drawn from research related to other instructional and educational settings. By comparing a distance-training system with two distinct instructional delivery processes, this study may provide some insight into how technology transforms the delivery of the training in a workplace setting, and how that effects training satisfaction, job performance, and retention.

If organizations continue to use technology to address issues related to efficiency, and if a lack of information regarding which training design elements ensure training effectiveness, then more needs to be understood about the contribution of the parts of a distance training system (DTS). This is especially true of the distance-training delivery
process (DTDP) and its effect on organizational outcomes. Such information would be useful in determining how technology can best be integrated into training interventions.

The purpose of this study is to compare the effects of two DTDPs within a DTS on outcomes of trainees’ overall satisfaction with their training experience, their job performance, and the overall retention rate for each DTDP.

Research Questions

1. What are the characteristics of two groups of trainees trained by DTDP 1 versus DTDP 2 during the first half of 1997 on attributes of age, sex, years of work, sales, and industry experience, years of education, amount of interaction, and cognitive style?

2. Are there differences between the two groups in their level of overall satisfaction with the content and quality of their training based on the DTDP?

3. Are there differences for those in the two groups in their levels of job performance as measured by the number of placements made and the total dollars billed in one year?

4. Are there differences in the retention rates between these two groups of trainees after one year on the job?

5. To what extent is the variance in the dependent variable set (trainee satisfaction, number of placement and total dollar billings) explained by the DTS independent variable set (DTDP, trainer, trainees’ cognitive style, age, sex, education, work experience, sales experience, industry experience, interaction, manager involvement, and office context?)
Significance of the Study

This research study will make a contribution to the theory and practice of HRD. Primarily, this study will help practitioners and researchers alike understand how different distance-training delivery processes impact satisfaction and performance in an actual organizational setting. It will further our understanding of how distance technology transforms a distance-training system in terms of its design variables, and will also emphasize which DTS inputs are critical to developing and delivering effective distance training in the workplace. The impact these two DTDPs have on performance will assist HRD researchers in critically evaluating effectiveness outcomes. According to Robson (1996), there is also an urgent need for research into the relationship between the “virtual” classroom using technology and fundamental instructional design principles.

Definitions of Terms

Cognitive style is a distinctive and habitual manner that an individual uses to organize and process information (Witkin & Goodenough, 1981). It is measured in this study by the Group Embedded Figures Test (GEFT). According to Witkin and Goodenough (1981), there are two defined cognitive styles: field dependence and field independence. Field dependent learners use a holistic or global approach to learning, and field independent learners use an analytical, linear approach for learning. Field independence-dependence is a psychological construct identified and validated primarily through the work of Witkin and his colleagues (Goodenough, 1986). The field dependence construct describes differences in an individual’s ability to approach perceptual tasks and cognitive problem solving. Cognitive style, as measured by the
Group Embedded Figures Test (GEFT) (Oltman, Raskin, & Witkin, 1971), provides a score that ranges between 0 (extreme field dependence) and 18 (extreme field independence). A score of 12 is considered to begin to tend toward field independence.

Distance Training System (DTS) is defined as a system of training inputs, delivery process using technology, workplace environment, and feedback that lead to desired organizational outcomes (Hruby-Moore, 1997). Distance training is defined as job-specific instruction characterized by:

1) separation of instructor and trainee during a majority of the instructional process;
2) influence of the organization with evaluation;
3) use of educational media or technology in the learning process; and
4) two-way communication to unite the trainee and instructor in course content.

(Adopted from Keegan’s (1986) definition of distance education’s four defining elements.)

Distance training in this study is characterized as an instructional system. According to Romiszowski (1981), an instructional system is a goal-directed, preplanned teaching process that has considered how the learner will achieve objectives, test out, and check progress using a “map” so that others can retrace his/her steps. “It is thus the presence of precise goals or objectives (however arrived at) and the presence of careful pre-planning and testing out, that shall be taken as the main characteristics of our use of the term ‘instructional system’” (p. 4). The DTS is defined by 11 independent variables in this study. These independent variables are the type of DTDP, trainer, trainee characteristics (GEFT score, sex, work experience, sales experience, industry experience,
years of education, and hours of interaction), and work context (manager involvement and office structure). The DTS model is conceptualized and presented at the end of chapter 2.

Distance-Training Delivery Process (DTDP) is defined for this study as the combination of method, media (distance technology), and instructional techniques used to deliver the training. DTDP 1 and DTDP 2 were both characterized by having a course structure containing the same training objectives, a preplanned set of instructional materials with directions, a behavioral testing component, and performance standards. However, these two DTDPs used different methods (individual versus group), distance technologies (print and videotape, versus print, videotape, and videoconferencing), and interaction techniques (different ways to cause interaction with manager versus manager and corporate instructor) for the same training objectives.

According to Romiszowski (1981), “for our practical purposes, a system exists because we have chose[n] to consider it as that. We have drawn the boundary that limits the extent of the system, thus defining the components, or sub-systems that compose our ‘system of interest’” (p. 5). The DTS has two DTDPs, or subsystems of delivery. The DTS and DTDP are conceptualized in a model presented in chapter 2 and a detailed description as an independent variable is given in chapter 3. Feedback from the two DTDPs identified in this study was provided through a training evaluation.

Interaction is referred to as a question, directions, expected correct and incorrect answers, or feedback for each possible answer. Interaction is characterized as active participation of the learner and teacher in the instructional process (Yeager, 1993). Interaction is measured in this study as the number of total hours recorded by trainees
based on their record of interactions with the manager or instructor, participating in role plays, discussions, asking questions, receiving feedback, and involvement in practice sessions.

Job performance is “accomplishments” defined by Gilbert (1978). Bennett and Clasper (1993) suggest performance is “the action that a student must exhibit...a task activity or attitude that the student will have acquired by the end of the training” (pp. 29–24). It is an observable Level Three evaluation measure of job behavior (Kirkpatrick, 1996). In this study, performance is a measure of one’s competence in job tasks assessed by the organization. Actual company performance measures collected in this study were placements and total dollar billings. Placements refer to the number of successful sales or matches made by the trainee between what clients requested and customers ordered. Billings refer to the amount of money generated by the trainee based on the number of placements multiplied by commissions. Totals for both performance measures were calculated after one year on the job.

Retention is an organizational outcome measured by human resource management professionals to determine turnover. Retention was calculated in this study as a percent equal to the number of employees in each group remaining on the job after one year divided by the total number of employees who went through the two DTDPs of the DTS during the first half of 1997.

Satisfaction is considered by trainers as Level One evaluation (Kirkpatrick, 1996). Satisfaction refers to how participants in the training course reacted to the training. In this study, satisfaction was measured through the Basic Account Executive Training
Program Evaluation. This post-questionnaire, using 15 items with a 5-point Likert scale, describes the perceptions, feelings, and thoughts of participants about the content and quality of their training experience. A training satisfaction score was calculated by totaling the 15 items for each respondent.

Organization of the Study

This study is organized in five chapters. This first chapter discusses the focus of the study, the statement of the problem, research questions, definition of terms, and the significance of the study. Chapter 2 reviews several bodies of related knowledge. First, HRD as an emerging field of study is reviewed and its relationship to learning and performance in the workplace is examined. Second, distance education and the theory of transactional distance defines the DTS (Hruby-Moore, 1997) and categorizes the DTDP along instructional design variables. The instructional design variables of method, media, and interaction techniques contribute to “course structure” and “dialog” (Moore, 1973) as the two important aspects of transactional distance. The third section reviews studies focusing on adult characteristics and cognitive style in training and education. A conceptual model provides a framework for summarizing the characteristics of a DTS. The DTS framework provides the logic for the independent and dependent variables of interest in this study. Chapter 3 discusses the research design and methods used in this study as well as the independent and dependent variables. Chapter 4 reports the findings and data analysis based on the research questions. Chapter 5 discusses conclusions, implications for HRD, and suggestions for future research. References, sources, and appendixes of the materials used in this study are included at the end of this document.
CHAPTER 2

REVIEW OF LITERATURE

This chapter is organized into four sections. The first section reviews human resource development (HRD) in organizations, and specifically training as an intervention to improve organizational performance. The second section reviews the concept of a distance-training system (DTS). The third section reviews research on adult characteristics and cognitive style related to instruction and performance. The fourth section contains a model synthesizing the variables of the study.

Human Resource Development

This section is divided into three parts. First, human resource development, learning, and performance are defined. Second, the research foundations for HRD and systems theory are reviewed. System theory is the basis for performance analysis models, training, and instructional system interventions used in HRD. The third part reviews research literature on the impact of training on individual effectiveness and organizational performance. Training effectiveness as a measurable performance outcome is defined.

Definitions

This part defines human resource development, learning, and performance and their relationship achieving organizational objectives. HRD is defined by Swanson
(1987) as the process of improving an organization’s performance through its people. HRD is the human resource management function responsible for organizational performance, brought about through training, career, and organizational development interventions (Gilley & Eggland, 1989). Gilley and Eggland (1989) further described HRD as a comprehensive learning system designed to enhance individual performance for the purpose of organizational efficiency. HRD is also viewed as having three types of learning activities: on-the-job, off-the-job, and through-the-job learning.

HRD has also been defined by Nadler and Wiggs (1986) as “a comprehensive learning system for the release of the organization’s human potential—a system that includes both vicarious (classroom, mediated, simulated) learning experiences and experiential, on-the-job experiences that are keyed to the organization’s reason for survival” (p. 5). This definition suggests that learning in an organizational setting is inherent in the organizational system, and not confined to the classroom. Nadler and Nadler (1989) later updated their original definition to include organizational learning experiences provided by employers, within a specified period of time, to bring about performance improvement or personal growth. They defined three main HRD activities. First, training is defined as learning focused on the present job of the learner. Second, education is described as learning focused on the future job of the learner. Third, development is defined as learning that was not specifically job related.

In order for the field of HRD to agree on a common definition, the American Society for Training and Development (ASTD) facilitated the development of a Competency and Standards Taskforce directed by McLagan (1989). A conceptual model
was presented to define the field of HRD. In the work known as “Models for HRD Practice” (1989), HRD is defined as the “integrated use of training and development, career development and organization development to improve individual, group, and organizational effectiveness” (p. 52). According to McLagan (1989), HRD leads to the achievement of greater efficiency and effectiveness in the organization by contributing directly to the value of products and services (outputs) of an organization. HRD professionals use career development, organization development, and individual development and training as interventions or processes to produce measurable improvements in learning that ultimately lead to the desired individual and organizational performance.

The result of training, as an HRD intervention, is learning outcomes at the individual level (Rummler & Brache, 1995). The similarities and differences between learning and performance in terms of outcomes are important to note.

Learning at the individual job performer level has traditionally been defined as a change in behavior (Rummler & Brache, 1995). McGeoch (1946) stated, “learning, as we measure it, is a change in performance as a function of practice. In most cases, if not in all, this change has a direction which satisfies the current motivating conditions of the individual” (pp.3-4). McGeoch suggests early on that the outcomes of a learning process can be observed, but the internal process itself is not observable. A review of learning literature by Leidner and Jarvenpaa (1993) summarize that learning is best accomplished through active involvement. Other researchers suggest that our natural drive to learn
thrives when we can direct our own learning, share knowledge, emulate experts, and make mistakes (Argyris, 1978; Marsick & Watkins, 1993; Schon, 1987).

Performance has been defined as the accomplishments, or the outcomes produced by the behavior we value (Gilbert, 1978). It is this HRD focus on accomplishments that Gilbert (1978), Rummler and Brache (1990, 1995), Stolovitch and Keeps (1992), and Swanson (1996) have all cited as the dependent variable or output. Defining the desired accomplishment, and determining how the intervention influences performance, are the roles of an HRD professional. Performance can be measured and analyzed by HRD professionals to determine if organizational objectives are being met. Using a systems approach to performance analysis, Gilbert (1978) developed the Behavioral Engineering Model (BEM). The (BEM) is used to identify which variables relate to knowledge and skill for learning and performance, versus those that relate to motivation and environmental variables that lead to learning and performance. The BEM is an accomplishments-based, self-motivated selection, assessment and development system used to analyze and influence individual and organizational outcomes that benefit both the individual and organization (Gilbert, 1978). Others in the field of human performance improvement have extended this model (Rummler & Brache, 1995; Swanson, 1994).

Once performance is measured and compared to a standard, the identified gap requires an HRD intervention of training, organizational, or career development. Training is a solution used when a lack of knowledge or skill is the reason for performance not meeting the training objective (Mager & Pipe, 1970). Organizational
development includes a variety of solutions to effect learning and change in the work environment (Burke, 1992). Career development is a solution used to assess capability as well as motivate an individual to grow and develop skills that benefit the organization (Gilley & Eggland, 1989). (Organizational and career development will be referred to as non-training interventions.) The HRD professional, using a performance analysis approach, is skilled in determining the performance problem and proposing either training and/or non-training interventions. Non-training interventions, such as compensation, encourage self motivation to use the knowledge or skill acquired to perform work on the job. At the individual level, performance can be simplified into a job performer’s knowledge, skills, and abilities plus his/her motivation to achieve within a given job context (Gilbert, 1978; Heneman, Heneman, & Judge, 1995).

This section defined HRD and its relationship to bringing about learning and performance to meet an organization’s objectives. It addressed how performance analysis is used to identify problems and how HRD interventions are solutions.

Theoretical Basis for Human Resource Development

This part discusses the theoretical basis for HRD and its particular emphasis on systems theory. Systems theory has been the underlying framework for HRD research and practice. Systems theory is used to develop models for analyzing and solving performance problems in the workplace. Finally, systems theory is discussed in terms of training as an instructional system intervention.

HRD is considered to be a field of academic study in which colleges and universities offer degrees and develop professional practitioners (Pace, Smith & Mills,
Jacobs (1988; 1989; 1990) laid a foundation for HRD through his work using systems theory as a unifying concept to connect HRD to bodies of knowledge in education, economics, systems, psychology, and organization behavior. Because the field of HRD is still emerging, systems theory provides a framework for studying learning and performance within an organization. General systems theory is a basis for HRD to capture the complex nature of the many variables and their relationship to learning and performance. General systems theory (von Bertalanffy, 1956) has been applied in many fields, including economics, biology, engineering, and education, to understand the complex relationship of multiple inputs, processes, outputs, feedback, and environmental variables. In HRD, the organization is viewed as a system. The organizational system has inputs, processes, outputs, and uses feedback, to respond to its environment (Rummler & Brache, 1995). Systems theory assists HRD professionals with framing a performance problem and analyzing it in an organizational context. The performance outcomes of the system must be measured to determine if a gap exists (Swanson, 1994). As mentioned before, several system frameworks have been developed by leaders in the HRD field to further our understanding of these complex relationships. These models for analyzing all focus on improving performance in an organizational setting (Gilbert, 1978; Robinson & Robinson, 1989; Rummler & Brache, 1995). At the job performer level, training, as an HRD intervention, is applied when there is a gap in knowledge and skills necessary to do the job requirement. Training can be also be viewed as a system.
Training is an instructional subsystem within the organizational system (Jacobs & Jones, 1995). The training system is composed of inputs, processes, outputs, feedback, and is surrounded by the organizational environment or context. For this study, it is important to next define training and an instructional system. Training is defined by Goldstein (1986, 1993) as "the systematic acquisition of skills, rules, concepts, or attitudes that result in improved performance in another environment" (p. 3). Goldstein (1993) suggests training should be viewed as one subsystem that is interdependent with the larger complex system and its other parts. He says that, as part of the system, not only does an organization need to identify training requirements, but it also must understand its goals, the climate, the trainees, and have support of top management and key organizational members. Goldstein is an advocate of using a systems approach for training in organizations. Training can thus be viewed as an instructional system.

According to Romiszowski (1981), an instructional system is a goal-directed, preplanned teaching process that has considered how the learner will achieve objectives, test out, and check his/her progress using a "map" so that others can retrace the learner's steps. "It is thus the presence of precise goals or objectives (however arrived at) and the presence of careful pre-planning and testing out, that shall be taken as the main characteristics of our use of the term 'instructional system'" (p. 5).

A training system is a type of instructional system that operates within a larger organizational system. Training, as a system, suggests that the intervention be tied to an organizational goal or objective (Kaufman, 1994; Rummler & Brache, 1995). The concept of a systems approach has been widely used and adapted in the fields of
education and training (Crys & Lowenthal, 1970; Dick & Carey, 1985; Kaufmann, 1983). Because instruction is a systematic process, each input or component part is important to a successful learning outcome.

According to Crys (1997), a system is “anything that a planner says it is” (p. 53). This definition is confirmed by Romiszowski (1981), who says, “for our practical purposes, a system exists because we have chose to consider it as that. We have drawn the boundary that limits the extent of the system, thus defining the components, or sub-systems that compose our ‘system of interest’” (p. 5). A system is a number of subsystems that in themselves could be treated as individual systems. Crys (1997) says these subsystems are totally integrated in such a way that they interact to achieve predetermined system objectives that are observable and measurable.

The instructional system derived by Dick and Carey (1990) used systems theory as the basis for their instructional design model. They defined a system as a "set of interrelated parts, all of which work together toward a defined goal. The parts of the system depend on each other for input and output, and the entire system uses feedback to determine if its desired goal has been reached” (pp. 2–3). According to Silvern (1972, pp. 2–3), a system can emerge only if the following criteria are met:

1. There must be a structure or organization.
2. The structure or organization must be conceptualized as a whole.
3. The whole must be orderly and must have parts.
4. Parts can be shown clearly relating to each other.
5. Parts can be shown clearly relating to the whole.
Kaufman (1994) also identifies a number of defining characteristics of a systems approach directly related to training:

1. It is outcomes or results oriented.

2. It is learner centered where the student or trainee is the center of all planning and management decision with an emphasis on learner success.

3. A statement of clear, explicit, and meaningful learning objectives is the driving force behind the systems approach.

4. There is continuous feedback for evaluation and revision.

According to Cyrs (1997), an instructional system specifies what a student should learn and do after each module or lesson period and at the completion of the course. Using instructional design variables, the system will specify the means (methods and media) available to the student to master the learning and performance objectives, and how the student will be taught (interaction techniques) (Cyrs, 1997). The performance criteria determine when the student has mastered the stated objectives satisfactorily. A training system often goes beyond the classroom, because students are expected to master learning and achieve performance objectives. These performance objectives are defined to meet some required job outcome. For example, course objectives should be consistent with, and validly reflect, the goals and objectives of the organization, which are derived from the needs assessment or front-end training analysis (Kaufman, 1994).

Cyrs and Lowenthal (1970) suggest the instructional system incorporates all of the parts, including the students, teachers, content, instructional materials, instructional strategy and objectives, the physical environment, and the evaluation of instructional
objectives. Others have built on this concept of instructional systems design with slight variations and have applied it to training and performance in the workplace (Dick & Carey, 1990; Jacobs & Jones, 1995; Romiszowski, 1981).

This part discussed the theoretical basis for HRD and its particular emphasis on systems theory. Systems theory has been the underlying framework for linking HRD research and practice together. Systems theory also underlies the performance analysis models used to determine the gap between expected and actual outcomes in the workplace. Finally, systems theory was extended to training as a type of instructional system intervention. The next section discusses effectiveness and efficiency as training outcomes. Research on training transfer is also addressed.

**Training Effectiveness**

This final part discusses effectiveness and efficiency as outcomes resulting from training as an HRD intervention. Research on organizational performance and training effectiveness is highlighted. Effectiveness and efficiency are two measures cited in the HRD literature as indicators of cost of the intervention to the value resulting from it (Swanson & Gradous, 1986). The quality and economic benefits of the training outcomes are measured in an instructional system to see if organizational objectives are being achieved at the individual level (Jacobs & Hruby-Moore, 1998; Jacobs, Jones, & Neil, 1992).

Effectiveness is defined generally by Rumble (1986) as “the extent an organization produces outputs that are relevant to the needs and demands of its clients” (p. 211). Organizational effectiveness is the extent to which real outputs match desired
outputs of the total system. Training effectiveness is specific to learning. Cyrs (1997) recently stated, "effectiveness of an instructional system can be measured by determining the degree to which it provides for the learner, a system of learning” (p. 56). Banathy (1968) observed that effectiveness can be measured if the instructional system served its purpose or achieved its goals. Bathany suggests effectiveness is bringing about in the environment of the learner all the possible interactions that result in attaining the desired performance. Kaufman (1994) confirms this notion and suggests that training goals should support organizational goals and even societal goals.

Training efficiency refers to the cost of training in reaching the effective outputs (Cyrs, 1997). According to learning psychologists, instructional efficiency is a function of how information is structured, presented, and most quickly received by the learner and reinforced (Gagne, 1985). The cost to the learner is time; the cost to the organization is the planning in the instructional design process. Based on the behavioral research of Skinner, Gilbert (1961, 1962) laid the foundation for instructional technology (IT), which is the systematic approach to creating and delivering instruction that was both effective and efficient. IT also considered the environment as an influence on learning, plus the motivation of the learner.

Instructional systems design (ISD) is another method that incorporates contributions of cognitive psychologists in identifying the nature of skills and knowledge. Bloom (1956) organized cognitive objectives into a taxonomy related to what the learner was supposed to demonstrate. Later, Glaser (1966), Bruner (1969), and Gagne (1970) provided seminal works that linked the learning process to instructional events. ISD was
applied to learning tasks on the job. The result, task analysis, became important before instruction could be designed.

Behavioral objectives are another contribution from the instructional technology field (Mager, 1970). Establishing behavioral objectives suggested that instruction must be identifiable, observable, and measurable. Criterion-referenced evaluation was also adopted to give practitioners the techniques of proving that learning occurred. Instructional designers produce methods of instruction, such as self-instructional materials, tutorials, simulations, on-the-job training systems, and classroom instruction based on behavioral objectives (Mager, 1988).

Most recently, Goldstein (1993) concluded that traditional learning models, specifically the classroom alone, were inadequate for effective instructional environments. His research suggests that the type of learning involved (cognitive, affective, or psychomotor), and the instructional events being considered, must be understood first (Goldstein, 1986; 1993). Goldstein’s research has led others to study the transfer of training and the concept of transfer climate (Baldwin & Ford, 1988; Holton, Bates, Seyler, & Carvalho, 1997). Research on training transfer suggests that the organizational environment influences whether the knowledge and skill learned by an individual in training are actually transferred to desired job behaviors (Rouiller & Goldstein, 1993). Transfer of training is most often associated with non-training HRD interventions, organizational and career development that extends the learning and reinforces performance in the work environment. The transfers of training research findings have implications for performance on the job, which ultimately lead to
organizational system outcomes. Understanding this link between learning and performance is of importance to HRD researchers and practitioners.

This part reviewed organizational and training effectiveness and efficiency as terms to measure impact of an HRD intervention. The use of an instructional design process to achieve the instructional objectives results in training that is most effective and efficient in leading to performance on the job. Transfer of training research recognizes that learning extends outside the classroom and that organizational context can motivate performance.

In conclusion, this section reviewed the definitions of HRD within the context of learning and performance outcomes. The theoretical base for HRD is found in a number of research bodies of knowledge. System theory was presented as a foundation for linking these knowledge bases as well as for analyzing learning and performance problems in the workplace. System theory is also related to training as a system of instruction. Finally, HRD research on training effectiveness and transfer was presented to identify the value of HRD interventions to the organizational system.

Foundations and Theory of Distance Education

This section by presenting the foundations and definitions related to the field of distance education. The theory of transactional distance (Moore, 1972; 1973; 1983) and the concepts of structure and dialog in designing effective distance instruction is reviewed. Finally, a model of distance training system (DTS) (Hruby-Moore, 1997) is presented as an HRD intervention.
Distance Education Definitions and Foundations

This part defines distance education and its foundations in self-instructional systems. Distance education is also distinguished from distance learning, tele-training, and a distance-training system. A distinction is made in the research literature between distance education and other forms of instruction. Distance education defined by Moore (1987) is "any formal approach to learning in which a majority of the instruction occurs while the educator and learner are at a distance from one another." Moore and Kearsley (1996) more recently expanded the definition of distance education as follows:

Planned learning that normally occurs in a different place from teaching and as a result requires special techniques of course design, special instruction techniques, special methods of communication by electronic and other technology, as well as special organizational and administrative arrangements. (p. 2)

This definition acknowledges the importance of a systems framework for instructional design elements in constructing effective distance education. An important contribution to the definition of distance education was made by Keegan (1986). He suggested distance education has four defining elements:

(1) Separation of teacher and learner during the instructional process;
(2) Influence of an educational organization with evaluation;
(3) Use of educational media to unite the teacher and student in course content;
(4) Two-way communication between the teacher and learner.

The challenge most cited in the distance education literature is that learners are expected most of the time to work through designated learning experiences without the immediate and contiguous support of an instructor (Cookson, 1990; Verduin & Clark,
Because the learners are separated from the instructor, many fail because they depend on the teacher for coaching, feedback, and other motivational techniques (Garrison, 1989). Likewise, instructional designers are challenged to design courses that encourage the student to interact with the instructor or receive feedback (Shale, 1987).

Distance education was referred to as correspondence courses in its early history (Garrison, 1989). Traditionally, the primary medium for delivery of correspondence courses had been through print material. Correspondence was referred to as tutorials. A tutorial is an individual method of instruction and has been called “home study” by private, for-profit schools and “independent study” by the universities (Watkins & Wright, 1992). In the tutorial, questions were written that required written responses. Responses from students were mailed to the overseeing institution, and results and feedback were returned to the student. Although this was a slow process, access to information and instruction on subjects was often prohibitive to those who enrolled in any other form.

Distance education is different from distance learning. According to Chute (1995), distance learning “is a process that connects learners with distributed resources.” The major distinction he and others make is that education is teacher-centered, using a teacher centered approach, whereas learning is student-centered, using a student centered approach (Chute, 1995; Yelon, 1996).

Tele-training was also defined by Chute (1992) as “a complete system that integrates the planning, delivery, and management of training by using a combination of information technology and teleconferencing services” (p. 260). This definition reflects
distance training with an HRD orientation by focusing on an instructional system using technology within an organizational context.

The concept of a distance-training system was derived from tele-training and was refined by Hruby-Moore (1997) as:

A set of interrelated inputs (trainer, trainees, content, learning objectives, subject matter experts, instructional designers, a communication/technical sub-system, and a management/administrative sub-system) all of which work together in a training delivery process that results in a training outcome that leads to a performance goal. Coordination among the inputs is necessary to achieve planned learning objectives. The entire system uses feedback and situational context variables to determine if performance on the job has been achieved. (p. 281)

This definition also emphasizes a system, but reflects more of a focus on organizational performance outcomes and the importance of a distance-training system as an HRD intervention.

Theory of Transactional Distance

The second part of this section discusses the theoretical foundations of distance education. The theory of transactional distance, proposed by Moore (1972; 1973), contends that the learner, content, and instructor form the basic underlying relationship in distance education. Next, there are two instructional design variables, course structure and dialog, that can be manipulated to achieve a desired outcome. Finally, technology facilitates both course structure and dialog to achieve learning.

Moore’s (1972; 1973) theory of transactional distance is predominantly a pedagogical one based on an industrial, highly structured mechanical systems model as originally proposed by Peters (1983). However, Moore also adopted Holmberg’s (1983) concept of dialog and Wedemeyer’s (1971) perspective of andragogy because distance
education required adults to have high levels of self-direction during correspondence study. Holmberg (1983) and Wedemeyer (1971) took a learner-centered approach in their view of how “meaningful” education should occur. The learner should have an interactive relationship with a tutor and with the content. According to Wedemeyer (1971), more responsibility is required of the learner to overcome the obstacles associated with independent study.

The concept of self-directed, adult learning was espoused by Knowles (1985). Moore (1972) was attracted by the idea of learner independence and thought that distance could actually enhance self-direction. The freedom to carry on self-directed learning was proposed because the learners were separated from the content and the instructor. Moore (1972) presented Learner Autonomy: The Second Dimension of Independent Study and suggests that a model that included only teaching would be flawed. The learner was also important in understanding transactional distance.

According to principles of adult education, learners using distance education must be autonomous and highly motivated to gain knowledge and understanding (Garrison, 1989). Because of the motivation required of the learner, there must be a strong underlying intrinsic or extrinsic reason for the learner to engage in this type of learning process. The learner-centered approach versus a teacher-centered approach is considered appropriate for adults (Knowles, 1978) who are both motivated to learn and tend to be self-directed.

Moore’s (1973) theory of transactional distance suggests that for motivated, the two major instructional variables for effectiveness are: (1) course structure, and (2)
amount of dialog. Essentially, course structure and dialog are the two used by self-directed learners in closing their learning gaps. Course structure and dialog should be considered in designing effective instruction for self-directed learners. Given that the learner is motivated, course satisfaction and learner achievement will be based on how much dialog and course structure are required by the learner for success. Research in distance education with adults suggests that those who preferred instructor-centered and self-instructional methods, characterized by high structure and low dialog, had higher levels of satisfaction and achievement (Harasim, 1990; 1993). On the other hand, adults who prefer interactive or experimental methods, which are characterized low structure and high dialog, appeared to have higher levels of satisfaction and achievement (Eisley, 1992; Howard, 1987).

It appears from this research that in addition to these two instructional design variable considerations, learner preference is also an important variable. The theory of transactional distance identifies two variables, course structure and dialog, that can be manipulated by the teacher or by the learner to achieve effective learning outcomes.

Course structure is defined as the course elements in instructional design. Course structure includes the methods, learning objectives, content, information presentations, case studies, pictures, illustrations, exercises, projects, tests, and support (Moore & Kearsley, 1996). According to these researchers, structure is on a continuum from flexible to rigid for course objectives, strategies, and evaluation methods. Course structure describes the extent to which course components can accommodate or be responsive to each learner's individual need. Structure is often determined by the
educational philosophy of the organization, the teachers, learners, nature of the content, and the communications media employed. Although not mentioned by Moore, Peters’s (1971; 1983) focus and contribution were the application of course structure based on the industrialized systems model to distance education. Peters (1983) determined that inherent in the concept of distance instruction was the planning, organizing, and supervision of the system. This larger system of distance education shows course structure being a subsystem suggested by Peters (1983) where all of the parts must be carefully put together to achieve a desired learning outcome. According to Dwyer (1990), the instructional aspect of course structure is important today in the process of designing, developing, and delivering instruction. Again, course structure is on a continuum of high to low. High course structure is characterized by instructional design elements focused on specific learning outcomes. Low structure is characterized by discovery and experimental methods which allow for more creativity and problem solving.

Dialog is the other variable in Moore’s (1973) theory that helps reduce the transactional distance between the learner and teacher. Dialog is defined as the interplay of words, actions, ideas, and any other interactions between the teacher and learner (Moore & Kearsley, 1996). Dialog, then, can be referred to as interaction—usually written or verbal. Dialog is measured on a continuum of high to low. High dialog is defined by much written or verbal discussion and feedback between the teacher and the learner. Low dialog is defined by little or no discussion or feedback between the teacher and the learner. Holmberg (1981) initially suggested that the focus of distance education should be on the learner-teacher dialog as the fundamental idea underlying distance
education. He said distance teaching should be like a "guided didactic conversation." Using a method of guided didactic conversation implies that the character of good distance education resembles that of a teacher-guided conversation aimed at learning. Holmberg (1983) later concluded that higher levels of communication were associated with more motivated students.

Moore (1986) suggested that for the learning to occur, the learner and the instructor must share an interest in the content. The course structure and the dialog that result from this mutual interest enhance learning and stimulate further motivation. The technology, regardless of the type (print, video, audio), is only the way to facilitate course structure and to share a dialog around the content. In his theory of transactional distance, Moore (1973) defines "distance" as more than just time or geographic separation of learners and teachers; he also includes a distance of understandings and perceptions that must be overcome by teachers, learners, and the educational organization if effective, deliberate, planned learning is to occur.

According to Wagner (1992), instructional designers need to be concerned with efficiently and effectively providing content based on how the learner perceives, assimilates, interprets, stores, and retrieves information. This is where cognitive style becomes an input for analysis later in this study. Different learners need different combinations of course structure and dialog to learn effectively. A course can be highly structured with low or high dialog, or unstructured with low or high dialog. These four basic combinations are appropriate based on the desired outcomes of the program (Moore, 1986). For example, Piskurich (1993) defines self-directed learning as "a training
design in which trainees master packages of predetermined material, at their own pace, without the aid of an instructor" (p. 4). Based on this description, according to Moore, the optimal training system for self-directed learning would require high structure and low dialog.

According to Moore (1973), to reduce the amount of transactional distance for the student in distance education, course structure and dialog are two variables that can be manipulated in the instructional process primarily by the teacher. However, because the theory also requires a motivated, self-directed learner, a learner can also manipulate the instructional process. For example if the learner wants to achieve a specific goal during their instruction, dialog allows the learner to ask questions that the structure did not cover. Course structure and dialog are supported by a medium of communication or a technology to connect teacher and learner in a two-way interaction as a defining characteristic of distance education.

Because course structure and dialog are concepts related to instructional systems, further definitions are necessary to describe them in relation to a distance-training system. Likewise, technology must also be discussed to categorize its ability to facilitate dialog or interaction during the instructional process. According to Moore (1983), instruction as a process is guided by the course structure of the content and by the amount of dialog, or interaction, between the teacher and learner, learner and other learners, and learner with course content. Technology is used as a medium to support the course structure and the amount of dialog necessary in the instruction. Technology is used to unite the learner with the content, teacher or other learners.
Instructional Inputs

Instructional inputs include the methods, techniques, and media that produce the course structure and dialog variables in a distance education transaction. Models of instructional systems design have been applied by many in the field of distance education (Cyrs & Smith, 1990; Moore, 1990). A system of distance instruction that incorporates the learner and content elements into the design has been found to be especially important for distance education with adults and in higher education (Kulik, 1983; Kulik, Kuliik, & Cohen, 1979). Using training needs assessment, a distance-training system can be composed of the inputs, process, outputs, feedback, and environment. Based on that information, training requirements and a resulting instructional process can be developed. The training system will consist of methods, techniques, and media to elicit feedback and interaction during the delivery of the learning events to participants (Cyrs, 1997).

Method, media, techniques, and interaction are defined as critical inputs in the instructional design process of a creating a training system. The expected outcomes of the training system are training effectiveness and efficiency. There are different ways to measure for performance outcomes in an organizational setting. The rest of this section defines both the instructional system inputs that result in an instructional process and the expected outputs.

Method refers to how learners are organized: individual, small groups or large groups (Seaman & Fellenz, 1989). Methods also refer to “ways of doing something” (Romiszowski, 1981, p. 276). For example, lecture, discussion, tutorial, and demonstration are all referred to by Romiszowski (1981) as methods. Tutorial, mastery
learning, and programmed instruction are primarily individual methods of instruction that can be applied to any medium. Tutorials, mastery learning, and programmed instruction utilize a system approach that includes techniques to elicit immediate feedback. Methods and instructional techniques are often confused in the literature. Tutorials and mastery learning are characterized by four features that have been attributed to learning effectiveness: frequent quizzes, immediate feedback, a mastery requirement before progression, and adequate reviews (Kulik, 1978). Skinner (1954) proposed the revolutionary idea that small-step instruction with extensive feedback could significantly enhance learning. He created the first teaching machine using a method referred to as programmed instruction. Another method, classroom lecture, has been cited as an effective way of communicating a large amount of content to a large group. (Seaman & Fellenz, 1989). According to Yelon (1992), trainers or instructors deliver the method of instruction that designers decide is appropriate for the lack of knowledge or skill.

Classroom instruction as a method is a subcategory of one type of training solution for a performance problem that requires knowledge or skill solutions. The instructor is usually in control of the content or program being delivered. The advantages of classroom training are that the instructor can interact with the student, provide immediate feedback, and read behavioral queues and thus adjust the training to meet learner needs (Yelon, 1992).

Technique refers to the ways of organizing interaction of learners with the content, instructor, or other learners (Verner, 1962). For example, techniques such as demonstrations, panel discussions, role-plays, small group projects, and simulations all
facilitate different levels of interaction with either the instructor, the content, or other students.

Weston and Cranton (1986) have provided a special classification for application of methods and instructional techniques together for the distance classroom. Like Romiszowski (1981), these researchers have defined method to include techniques. They identified four categories: (a) instructor-centered, (b) individualized, (c) experimental and (d) interactive. According to Cyrs (1997), instructor-centered techniques are characteristic of the “chalk and talk” classroom where the instructor is the center of attention, with little or no interaction with students. The individualized method is characterized best as self-direction and self-paced instruction where performance objectives are achieved independently. Experiential teaching is defined as using simulations, role-plays, and field-based, clinical, or laboratory experiences.

Finally, interactive teaching methods combine the best of the three previous methods, plus promote the active communication and involvement of the students with each other in different field sites and with the instructor. For interactive teaching methods, the learning performance objectives dictate the type of interactive method used. For low level knowledge and comprehension, students can work alone while interaction is promoted for critical thinking and value exploration. Cyrs (1997) suggests that interaction promotes a cooperative and supporting environment, rather than a competitive student learning environment.

Media is defined as the instruments, devices, or technologies that support the delivery of instruction (Cyrs, 1997). Media can be classified as supporting asynchronous,
one-way communication or synchronous, two-way communication. According to Marquart and Kearsley (1999), asynchronous is defined as “interaction or transmission of information distributed over time” (p. 309). This definition is contrasted with synchronous, “interaction or transmission of information in real-time” (p. 310). Moore and Kearsley (1996) identify print, audio/video, radio/television, teleconferencing, and computers as the major media categories.

Studies by Beare (1989), Chung (1991), and Salomon and Clark (1977) reviewed media comparison studies of traditional face-to-face lecture methods to a variety of media communicating the lecture information, including videotape, computer-based, audio, audio-graphic, videoconferencing, satellite, and found few or no significant differences in outcomes. However, a study by Richie and Newby (1989) comparing methods and media together found significant differences in a classroom with discussion, versus remote televised lecture. Other studies have compared classroom lecture with print media to individual mastery learning systems with print media and found mastery learning to be more effective (Kulik, Jaska, & Kulik, 1978). Other research studies in instructional design show that the greatest comparative achievement gains of all instructional systems are with mastery learning systems (Verduin & Clark, 1991). Likewise, several meta-analysts have found a small, but significant advantage for programmed instruction over conventional instruction at all levels of instruction (Kulik, Cohen, & Ebeling, 1980; Hartley, 1978).

Based on the viewpoints of many in the area of instructional design, the question “Do media matter?” has been debated at great length (Clark, 1994; Morrison, 1994;
Winn, 1990). Many side with Clark (1994), whose research is consistent with, "the medium is not the message." However, cases for both methods and media have merit when the issue of interactivity is of concern. Although the media may not be important to effectiveness outcomes, some new interactive technologies allow the learner to react to the message and receive feedback more directly than previous media. The timeliness of feedback is often important in correcting the learner's behavior so that performance can be achieved in less time (Gilbert, 1978; Jacob & Jones, 1995; Stolovich & Keeps, 1992). Like instructional methods, media categories differ in their ability to support interactivity. Interaction with the content and instructor become important outcomes in the training process. Feedback can be immediate or delayed.

Interaction refers to questions, directions, expected correct and incorrect answers, and feedback, and is characterized as active participation of the learner and teacher in the instructional process (Yeager, 1993). Research by Lysakowksi and Walberg (1985) found evidence for three features critical to interaction: instructional cues, participation, and feedback. According to Wagner (1998), "Interactions enable active learner participation in the instructional, training, and performance improvement process" (p. 418). It is the interaction that enables clarification of new ideas, promotes transfer of new ideas to already held concepts, and promotes motivation when the information is relevant to some current issue or problem. Often interaction is associated with verbal communication with an instructor. However, there are many examples of instructional designs, such as programmed instruction or computer-assisted instruction, that do not require verbal interaction, but written interaction, in the learning process (Wagner, 1997).
Wagner (1997) identified 12 categories for focusing on what learners are to achieve as a result of an interaction with technology. These categories are interaction for: participation, communication, feedback, elaboration, learner control-self regulation, motivation, negotiation, team-building, discovery, exploration, clarification, and closure. Training that is designed as whole, with consideration of desired outcomes requiring interactive techniques, methods, and media, should be utilized to achieve those outcomes (Cyrs, 1997). Moore and Kearsley (1996) also suggest three types of interaction: teacher and student, student and student, and student and content. To achieve these three types of interaction, different media, methods, and techniques would be used.

The importance of interaction has been documented by many in education and training. First, interaction in the form of a dialog, either written or verbal, is the essence of education (Perraton, 1983; Howard, 1987). Second, some studies have shown that higher levels of interaction are associated with higher levels of achievement (Gorham, 1987). Third, interaction, as well as expected interaction, has been shown to positively influence student attitudes. For example, Yarkin-Levin (1983) found that both satisfaction and performance improved when there was interaction. The study also indicated that when students participating in a large group instruction were told they would have subsequent interaction with the instructor, they had more positive attitudes and recalled more facts than did those who did not anticipate interaction with the instructor.

Although educators have stressed the importance of interaction in the learning process (Shuy, 1987), the research has not yet established the effect of interaction in
distance education. There are a number of studies that suggest there is no significant
difference between instructional programs that compared high and low interaction (Chu

Matching instructional goals to methods and media is the essence of the
instructional design process. The type and level of interaction are outcomes of the design
process. The methods and media must work together as a system to produce the desired
outcomes of instruction. The differences in the research findings discussed here may be a
result of the environment or learner characteristics (Garrison, 1989; Moore & Kearsely,
1996).

Distance technologies can be used in different ways to bring about the
instructional objectives, and facilitate the instructional process. Media can be used in
both structure considerations as well as support interaction or dialog. Because distance
technology, or media, is a broad category, it is now defined for this study.

**Distance Technology**

Distance technology is the type of media that facilitates the process of instruction
over distance of time or space. The defining characteristics of distance technologies is
their ability to facilitate real time interaction. A non-interactive, asynchronous distance
technology is different from an interactive, synchronous distance technology. Research in
distance education that demonstrates the efficiency and effectiveness derived from
distance technology is also discussed.

Technology is defined as a tool, specialized knowledge, or the science of a
process (Webster, 1993). Distance technology in training is usually associated with media
selected to achieve efficiency in delivery (Furst-Bowe, 1996; Marquart & Kearsley, 1999). Distance technology is defined as print/text, audio, video/graphic, computer, or some combination of these four basic forms of transmitting information (Dede, 1998; Garrison, 1989). Information can be communicated either asynchronously, one-way with no immediate opportunity for feedback, or synchronously, two-way with immediate opportunity for feedback (Chute, 1995).

There are four major categories of distance technology delivery systems and numerous combinations to achieve course structure and dialog appropriate for meeting the learning objectives. Delivery systems with distance technologies are shown in Table 2.1.
<table>
<thead>
<tr>
<th>Delivery system</th>
<th>Technology/tools used in distance delivery systems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Print</td>
<td>Books, correspondence course, handouts, study guides, and workbooks</td>
</tr>
<tr>
<td>Audio</td>
<td>Radio, short-wave, telephone (wired and wireless), compact disc (CD), telephone conferencing, voice mail</td>
</tr>
<tr>
<td>Video</td>
<td>Videoconferencing, one-way television/two-way audio, two-way television/two-way audio, videotape, videodisc, compact disk (CD), broadcast television, compressed television, microwave, instructional television fixed service (ITFS), satellite television, and desktop video</td>
</tr>
<tr>
<td>Computing</td>
<td>Computer conferencing, e-mail, the Internet, multimedia, the World Wide Web, bulletin board, listserv, and fax</td>
</tr>
</tbody>
</table>

Table 2.1: Distance delivery systems with technology, adapted from Cyrs (1997)

Garrison (1989) proposed a model of distance technologies as four generations of delivery systems. The capability of the technology to enhance the timeliness of interaction increases with the newer distance delivery systems Table 2.2 shows the progression of the four generations of distance delivery systems and the technologies used in them.
<table>
<thead>
<tr>
<th>Type of Distance Delivery System</th>
<th>Primary Type of Technology Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generation One: Individual, Correspondence Study</td>
<td>Print</td>
</tr>
<tr>
<td>Generation Two: Individual/Group Teleconference</td>
<td>Audio, Graphic, and Video-conferencing Systems</td>
</tr>
<tr>
<td>Generation Three: Individual, Computer Based Instruction</td>
<td>Computer Hardware and Software</td>
</tr>
<tr>
<td>Generation Four: Individual/Group, Combination Methods</td>
<td>Interactive Multimedia</td>
</tr>
</tbody>
</table>

Table 2.2: Four Generations of Distance Delivery Systems, adapted from Garrison (1989)

Depending on the training objectives to be accomplished, the need for interaction is designed into the course structure and matched to the appropriate technology. According to Garrison (1989), the procedures to overcome the physical and psychological distance are instructional design and interaction procedures, because the "gap" is pedagogical, not geographic. Because the physical distance contributes to a communication gap, the result is a psychological space of potential misunderstandings between the behaviors of the instructor and the learners.
Combinations of distance technologies can take advantage of the synchronous (two-way) or asynchronous (one-way) nature of the communication. Each distance delivery system has its own advantages and disadvantages in terms of cost, degree of student control, degree of student and instructor interaction, flexibility, amount of instructor training required, ease or complexity of use and operation, amount and type of maintenance required, and portability (Garrison, 1989).

Videotape and videoconferencing are two particular technologies that can be distinguished by these characteristics and especially by their ability to promote interaction between the student and the teacher. These two technologies are relevant to this study.

Videoconferencing refers to transmission of television images between two or more sites. Different transmission channels such as satellite, microwave, cable, regular phone lines, and fiber optic networks, are used to carry voice and visual images (Marquart & Kearsley, 1999). This distance technology system is relatively recent and is implemented to make instant voice, picture, and graphic communication possible to different groups of people in geographically scattered locations (Cyrs, 1997). The same message can be delivered to selected sites simultaneously through telecommunication linkages with the appropriate receiving equipment. The message—a lecture, training, corporate announcement, sales presentation, or senior management broadcast—can be viewed simultaneously by many in real time. Videoconferencing simulates a face-to-face meeting. According to Kearsely (1985), videoconferencing as a medium “should be selected when ‘visual’ presence is felt to be critical or when the subject demands dynamic and visual presentation” (p. 66). He also suggests that a videoconference is a remote
extension of a classroom, where the technology will not improve a poor training program but only increase the effectiveness of a good one (Kearsley, 1985).

The "value" of instant communication, which allows for two-way information and data dissemination to multiple sites, has been recognized by many organizations with far-reaching operations. Some of these organizations include: Ford Motor Company (Filipczak, 1994), Xerox Corporation (Xerox Document University, 1993), the Veterans Administration (American Institutes for Research, 1995), and Caterpillar (Rogers, 1994), as well as school districts, colleges, and universities (Massoumian, 1989).

Videoconferencing used for quickly transmitting information to large groups of dispersed people has been shown to be efficient (Kearsley, 1985). The question of whether this technology also promotes effective learning is less clear (Wagner, 1994). Instructional research evidence for using videoconferencing for distance training is mixed. Anecdotal reports (Filipczak, 1994) and descriptive case studies are more prevalent than empirical research studies. In a broad examination of the literature on technology used in higher education, business/industry, and the military, the Office of Technology Assessment (1989) reported conflicting results on the effectiveness for these different adult groups. In a review of literature conducted by Moore and Thompson (1990), they conclude that overall there were no significant differences in learning outcomes when they compared the traditional classroom method of instruction with videoconferencing for transmitting the same instruction. This was confirmed again by Hunter (1995), who stated that research consistently shows tele-training using videoconferencing is at least as effective as classroom training.
Videotape is one of the most familiar media used by human performance technologists (Gayeski, 1992). In training, videotape technology is used in two ways: as a medium and as a teaching/learning tool. In the former, videotape is used to present prerecorded content while in the latter, video is used to record and play back a “performance” of a trainee to provide feedback (Kearsley, 1985). Although this medium can be expensive, the decision to use videotape can be cost effective. Videotape should be considered when there is a need to reduce travel cost, to eliminate repeated administrations of training, to repeat a message to a variety of audiences, or to make training available on a more flexible and individualized schedule.

Another advantage of videotape for instruction is that the user can control when to view it. The medium is portable with a VCR. According to Gayeski (1992), there is no other medium that can capture the sound, motion, color, consistency of delivery, immediacy of playback, pervasive availability, hardware standardization, audience acceptance, and ability to elicit strong emotional reactions. Like other well-designed mediated instruction, video can generally reduce the delivery time of training, as compared to classroom instruction. Sneed (1989) suggests videotape training can be more efficient than and as effective as the classroom method. For example, demonstrations that are too costly or hazardous to conduct live can be done once and played back repeatedly on tape. But perhaps the greatest advantage of video is its ability to present a credible and personable role model—one factor highly significant in attitude change (Gayeski, 1992). For example, video can present a well-scripted and delivered performance by an expert or professional.
The major disadvantage of videotape is there can be no interaction between the trainee and the videotaped person. However, when the trainee can interact with another on-site person who understands the video material, the results may be as effective (Gayeski, 1992). According to Fleming and Levic (1978), videotape research has shown that to change attitudes and increase motivation, the best video image and message source is an attractive, but not unattainable, role model. Students should be able to envision themselves being as good as the “trainer” on the video.

Distance technology systems used in the delivery of education have been studied and found to be both cost efficient and an effective way to provide knowledge to people in different locations (Moore & Kearsley, 1996). For example, a study by Showalter (1983) concluded that $86,636 was saved from travel alone through the use of audio-teleconferencing versus classroom instruction with similar learning results. A two-way video, compressed video, and audio delivery system for technical training at Lockheed Space Operations resulted in $50,000 reduction in travel expenses (Hosley & Randolph, 1993) with similar results from classroom training. A study by AT&T (Chute, Hulik, & Palmer, 1987) suggested a savings of $1.8 million when travel and lost productivity were analyzed against the cost of an in-house tele-training system using satellite and computer technologies. Videoconferencing supported by an electronic mail system was shown to pay off in year two of the system (Rule, DeWulf, & Stowitschek, 1988) and is still achieving intended objectives. Economies of scale in training delivery can be achieved, as demonstrated by U.S. Department of Defense studies for the Navy, Air Force, Army, and National Guard (Barry & Runyan, 1995; CNET Briefing, 1994) with no significant
differences in learning and satisfaction outcomes. Similar reports of cost savings using technology for delivery of instruction are also reported in educational institutions (Rumble, 1981) with no significant difference in grades and test scores.

Technology used in self-instructional programs allows employees to gain knowledge on their own, at their own pace, when they do not have the time for traditional classroom training (Filipczak, 1995; Martin & Bramble, 1996). Klink (1993) cites a number of cases of corporate training programs that use technology, which includes videotapes and videoconferencing systems, to increase speed and access to information. Clark (1994) says that from an instructional design perspective, the medium is usually selected based on the level of interaction required to achieve the instructional objectives. Clark suggests if interaction can be achieved equally well with two media, then the least expensive one should be used.

For example, the Nevada State Department of Human Resources (1990) was interested in achieving the same level of interaction of a traditional continuing education seminar classroom by installing a one-way video, two-way audio system and using printed curriculum guides and supplemental videotapes. Study results indicated similar achievements in the amount of interaction at a reduced cost of $10,000 per course. Technology used in the educational process has provided efficient solutions to instructional problems created by a separation of teacher and learner by space or time (Garrison, 1989). Distance education uses technology to allocate limited resources such as teachers, classrooms, and content materials (Wagner, 1990).
However, the question of effectiveness is still a concern. A study by Ellertson, Wydra, and Jolley (1987) suggested that a distance delivery system was able to bring a limited teacher resource to 15 sites where students would not have had the opportunity to receive that information locally. Although the learning was cost-efficient, as a question for further research, Ellertson et al. (1987) asked how effective this learning experience was for the remote students, because there was no verbal, real-time interaction with the instructor. Other researchers have asked this same question. For example, regarding long-term behavior change and performance outcomes, there is a question whether technology contributes to the organization (Verduin & Clark, 1991; Wager, 1990). There are also researchers who have criticized studies in distance education for their lack of rigor in empirical findings (Morrison, 1994; Winn, 1990). Most important, according to a review by Clark (1994), many instructional designers argue that human interaction is the essential component in the learning process, which is often lacking in the poor designs of distance education. He suggests that the learners, instructional methods, and delivery media together, not just the technology, all have important influences on the cost and speed of learning. Perhaps it is these design elements that have implications for designing effective distance-training systems (Kearsley, 1984; Wagner, 1998).

Efficiency and effectiveness research in distance education for this study was found in a variety of scholarly publications in distance education, instructional technology, communications, and management. Overall, studies conducted in educational settings over the last 45 years suggest that for groups of learners, there are no significant differences between the traditional face-to-face method of instruction and a
variety of distance instructional methods (Russell, 1997). Hunter (1995) states in a review of literature that research “consistently shows training using videoconferencing is at least as effective as classroom training” (p. 81).

With the advent of videoconferencing and other information technologies, the ability for more types of interaction and two-way communication appears to enhance the learning transaction (Garrison, 1989). Research suggests that the quality and level of interaction, attributable to the technology, will influence the instructional effectiveness at distant site (Kuklik, 1991). Two-way distance education systems that allow high levels of interaction and learner control have been found to best meet the instructional needs of adult learners (Moore & Kearsley, 1996). Interactivity allows distant learners to engage in a form of personal involvement essential to learning (Whetzel, Felker, & Williams, 1996). Fulford and Zhang (1993) reported that adult learners who perceived interaction to be high had more satisfaction with the instruction than learners who perceived interaction to be low. This study looked at the perception of interaction, not actual interaction.

A number of studies were also found that compared the effectiveness of interactive distance learning with the traditional face-to-face instruction. Specifically, studies that used adult populations (military personnel, university students, and managers) were considered. Christopher (1982) described a system for providing instruction to Air Force students at remote sites in eight states via the Tele-teach Expanded Delivery System (TADS). Results from this study showed that TADS students, with the ability to interact by means of a keypad, had learned at least as well as resident students. In
addition, the researcher expected the students' attitudes to be negative, however, attitudes were positive. Likewise, a study by Kruh (1983) reported academic achievement and student satisfaction from six university courses taught by teleconferencing. When teleconferencing classrooms were compared to courses taught in the traditional classroom manner, Kruh found no significant difference in satisfaction or learning outcomes.

Business, education, and government organizations have used a variety of information technologies to transmit information for a number of purposes, including training, for many years. As discussed earlier, there is much debate in the literature assessing the effectiveness of a traditional classroom approach to a variety of distance methods used. Early research in distance education using technology dates back to the late 1950s. Research assessing the effectiveness of satellite training has deep roots in the early research on televised, one-way instruction. Several studies conducted decades ago compared conventional classroom lectures to live lectures broadcast from remote locations. These studies also established statistical equivalence of both instructional modes in a variety of learning populations (Buckler, 1958; Janes, 1961).

An example of training through television is a study by Shaw (1988) reporting on Federal Express office down-links for FXTV broadcasts of training and corporate communications. Each morning, a broadcast is made that can be videotaped by the local offices. The broadcast would contain a short news program followed by training programs and tips for the day. For example, in 1988, a telecast on a program for reducing package damage was distributed. A month later, the results of that broadcast were
impressive, showing that package damage was down by 10% company-wide, and that FXTV sites showed a 31% improvement.

Chute, Bruning, and Hulick (1984) in an experimental study compared combination of distance delivery technologies on student achievement outcomes. There were two groups in this study. One group was taught in the traditional classroom, and the other group learned the same content using an electronic conference board, two-way voice, and graphics. The post-test scores of the tele-trained group were significantly higher than those of the traditional classroom group. Hackman and Walker (1990) found that interactive technology systems that allow learners to comment during class positively influenced satisfaction with distance education. Yet another study by Souder (1993) suggested the distant group also learned better. His study compared a traditional classroom course with a two-way satellite delivery of a master’s degree program in the management of technology. The significant finding was that the satellite group actually performed better than the one with the live instructor on exercises that were practical (e.g., case studies), but the classroom group performed better on exams. However, a concern with this last study is that the distant student group was significantly different. It was composed entirely of part-time students with full-time jobs with more work experience, whereas the other group was full-time university students.

A case study of management training by interactive video conducted by Kirkwood (1993) studied the short- and long-term effects of a British Telecom course on appraisal and counseling on management performance. Evidence was found using a survey after the course that 61% thought the course was relevant to their current job. Later follow-up
interviews with the trainee managers suggested that qualitatively, the training had transferred and influenced their performance on the job. According to Kirkwood (1993), “it was clear that the working environment of managers influences their attitudes and behavior in terms of appraising and counseling their staff” (p. 351). However, this study did not provide any quantitative data to support the long-term impact of the training.

The study by Whetzel et al. (1996) assessed the effectiveness of a satellite-training program for achieving a variety of learning requirements, which ranged from simple recognition and recall of information to the psychomotor performance of a specific job procedure. The study also compared satellite training with traditional classroom training for two courses using the same methods. Results showed similar learning outcomes from both systems, but statistically significant differences for performance related to job skills were found with the traditional classroom with the instructor on-site.

The Florida Tele-training Project (Martin & Bramble, 1996) was an evaluation research study that tested the feasibility of providing various military courses to the Reserve Components using community college personnel and two-way interactive video system. Results showed that all students passed the performance tests, students and instructors were positive about the strategies that were designed for the teletraining courses, and students rated the learning methods useful and effective. The researchers concluded that the positive outcomes were due in part to careful design and delivery of the instruction, contingency planning and support management, and trained personnel. Their final comment was, “The bottom line is good instruction is good instruction, regardless of whether it is presented in a classroom or at a distance” (p. 99).
A case study of the FAA Academy (Lennon & Payne, 1995) delivered training via one-way video-conferencing using electronic response pads to allow trainees to respond to technical training questions asked by the instructor. This study showed that there was no statistically significant difference in training outcomes among the 10 training sites. This is an important finding; however, there were no reports given about other forms of interaction experienced by the individual trainees.

In this section, distance education was defined and distinguished from distance learning, tele-training, and a distance-training system. Based on the theory of transactional distance, instructional goals in distance education are achieved by designing course structure and dialog variables to bring about the desired outcomes. Instructional design inputs, which include methods, media, and techniques, result in interactions to match instructional objectives. Specifically, distance technology is discussed in detail with a review of videotape and videoconferencing used in the design process. Twigg (1995) suggests that technology should make distance learning effective and efficient. The issue for distance educators and trainers alike is incorporating the technology into the training to get the learner or trainee actively involved in the experience. Because the trainee is a significant part of the training system, identification of adult learning characteristics and cognitive style is presented next.

Adult Characteristics and Cognitive Style

This section identifies the adult learner as a key input into a training system. The HRD professional supports adults to be self-directed in the workplace. Self-directed, autonomous adults appear to perform better in distance education (Garrison, 1985; 1989).
However, adult learner's prior experience and their cognitive styles have also been shown to influence their satisfaction with learning and achievement (Verduin & Clark, 1991). Providers of training for adults often have to take into account these characteristics to provide for effective outcomes. This next section discusses the difference between these two learner characteristics, self-direction and cognitive style.

**Self-Direction**

Self-direction is defined by Knowles (1975) as a process in which individuals take the initiative, with or without the help of others, to diagnose their learning needs, formulate learning goals, identify resources for learning, select and implement learning strategies, and evaluate learning outcomes. According to Knowles (1980), there are differences between children and adults in terms of levels of self-direction, life experiences, developmental readiness, and problem-solving orientation. Knowles (1980) differentiated his theory and philosophy of andragogy, the art and science of how adults learn, from pedagogy, the art and science of how children learn. Because adults are often self-directed, they are often motivated to learn more independently than children. Adults, compared to children, have more life experiences, maturity, motivations, education, and problem solving skills (Cross, 1981; Mocker & Spear, 1982). However, Knowles (1980) did recognize that problem-solving orientation, which is related to cognitive style, can influence one's ability to be self-directed and thus impact learning outcomes.

According to Garrison (1992), distance education is easier for people who exercise "learner autonomy." Learner autonomy, which is similar to self-direction, is described as an ability of individuals to direct their own learning without an extraordinary
degree of direction, encouragement, and feedback. According to Moore and Kearsely (1996), the most important thing to remember is that more autonomous, self-directed learners need fewer interactions with an instructor and can structure their own learning. Self-directed learners are able to formulate their own learning objectives, identify resources that will help them achieve their objectives, choose appropriate methods of achieving the objectives, and test and evaluate their own performance (Brookfield, 1985; Hämstra, 1985).

Candy (1991) concurs that not all learners are able to be totally self-directed. Often their inherent personality characteristics and previous learning experiences can influence their ability to practice self-directed learning (Spencer, 1992; Piskurich, 1993). A study by Biner, Bink, Huffman, and Dean (1995) found that the personality profile of tele-course students, determined from the Sixteen Personality Factor Questionnaire (16PF), differed considerably from that of traditional students. Their research suggested that distance education students tended to be “more intelligent, emotionally stable, trusting, compulsive, passive and conforming” than traditional students. In addition, Biner et al. (1995) reported that self-sufficiency, introversion, laxness, and expediency were also associated with successful student performance in a distance context.

This part discussed self-direction as a characteristic of adult learning. Although adults may be motivated to exercise self-directed behavior, learning and cognitive style, is cited as one of the major adult characteristics influencing outcomes in distance education (Matthews, 1993; Pollard, 1994). The next section defines and discusses the implications of cognitive style.
Cognitive style

Cognitive style is defined as a distinctive and habitual manner of organizing and processing information (Oltman, Raskin, & Witkin, 1971). Cognitive style has been identified as a stable construct within learning styles (Flannery, 1993). The cognitive dimension includes the storage and retrieval of information in the brain and the information processing habits that a learner prefers for perceiving, thinking, problem-solving, and remembering information (James & Gardner, 1995). Two styles, a global holistic style versus an analytical style, are used in the cognitive psychology literature to describe the two extremes of cognitive style. The instrument by Herrmann (1990) uses “right brain” and “left brain”, and the instrument by Oltman, Raskin, and Witkin, (1971) uses “field independent” and “field dependent”. In a summary of the cognitive style literature for distance education, Ehrman (1990) explained that experts used similar terms to describe opposite ends of a continuum. His summary suggest that analytical, focused, left-brained, field independent learners prefer a detailed outline, and favor step-by-step instructions and, sequential, inductive, abstract, and objective processes. On the other hand, people with the global, holistic, right-brained, and field dependent cognitive style prefer a broad outline, and favor simultaneous, deductive, intuitive, concrete and subjective processes.

Cognitive style appears to be the more significant concern for instructional designer when assessing the capacity of an individual learner on efficiency and effectiveness of learning (Sadler-Smith, 1996, Rowntree, 1992). According to Grun (1986) and James and Galbraeth (1985), when instructors can target training to the
individual trainee's cognitive style, the trainees will learn faster and experience more success in their performance. The cognitive style construct that has been substantiated more than others in the literature is field dependence-independence (Witkin, Lewis, Hertzman, Machover, Meisser, and Wapner (1954). However, there are many measurement instruments used to assess cognitive style, as cited by James and Blank (1993).

According to Witkin and Goodenough (1981), the cognitive styles identified as field dependence and field independence have received the "greatest research attention" (p. 3). Field independence-dependence is a psychological construct identified and elaborated primarily through the early work of H.A. Witkin and his colleagues (Goodenough, 1986). The field dependence construct was able to describe differences in an individual's ability to handle perceptual tasks and cognitive problem solving. The reason they cite for the greater research investment in cognitive style versus others is that extensive laboratory research and theoretical framework make cognitive style possible to measure. Field dependence-independence has its conceptual home in the larger theory of psychological differentiation proposed by Witkin, Dyk, Fatterson, Goodenough, and Karp (1962).

Witkin, Lewis, Hertzman, Machover, Meisser, and Wapner (1954) were initially able to separate these two standards experimentally through three tests: the Body-Adjustment Test (BAT), the Rod-and-Frame Test (RFT) and the Rotating-room Test (RRT). The findings from these tests indicated a high degree of reliability and validity. When subjects were tested in the BAT, RFT, and RRT, they tended to be self-consistent
with regard to the degree of reliance on external field or body. For example, a subject that tilted his body far toward the tilted room in the BAT was also likely to tilt the rod far toward the tilted frame in the RFT and to align his body with the upright room in the RRT. This suggested that there was a tendency to use the external visual field, or the body itself, as the primary referent for perception of the upright. Two contrasting reference modes of establishing the upright were either from a visual frame termed "field dependent", or to the body termed "field independent."

Witkin et al. then developed the Embedded Figures Test (EFT) and Group Embedded Figures Test (GEFT) to establish field independence-dependence as a paper-and-pencil test. In this test, the subject is shown a figure with a complex design inside, such as a square with shaded triangles embedded within it. The subject is required to find the triangle within the complex design. To locate the figure, it is necessary to break up the organized pattern. Those who have trouble finding the simple figure are field dependent. Conversely, people who were field independent found it easy to locate the embedded simple figure.

According to Witkin (1954), field dependence-independence was conceived to be a perceptual-analytical ability that manifests itself pervasively throughout an individual's perceptual functioning. Further studies focused on two main issues: (a) the relationship between dis-embedding ability in perception and dis-embedding ability in intellectual functioning; and (b) the relation between dis-embedding ability and structuring ability. Research by Glucksberg (1956) and Harris (1962) suggested evidence that field-dependent individuals had greater difficulty in problem-solving tasks where the person
deals with symbolic representations. In terms of structuring, by Witkin et al. (1962) found evidence that field-independent people would impose structure on a field and experience it as organized, whereas field-dependent people would not. Field dependence was later designated as a “global field approach” and field independence as an “articulated field approach.”

Further evidence that people who are field independent in perception of the upright also function more autonomously in their interpersonal relations, show initiative, take responsibility, are self-reliant, and have the ability to think for themselves. In terms of interpersonal competencies, field-independent people who did well on the EFT were found to be “demanding, inconsiderate, manipulating others as a way to achieve personal ends, cold and distant in relations with others” (Witkin & Goodenough, 1977, p. 44).

On the other-hand, field-dependent people were found to be primarily female and to rely more on the use of information from others in arriving at their own view than do people who were field independent (Antler, 1964; Balance, 1967; Birmingham, 1974). In terms of social behaviors, field-dependent people demonstrate more interpersonal skills, favor situations that bring them into contact with others over solitary situations, prefer educational-vocational domains that are social in content and require working with people, and are more open with their feelings (Witkin & Goodenough, 1977).

This early research has provided the field of HRD with important implications for career, individual, and organizational development. For example, studies have shown that field-dependent individuals prefer careers that use interpersonal skills (Hansen-Strain, 1987; Goodenough, 1976). With respect to training and instructional design,
studies have suggested that field-independent individuals prefer self-instructional modules (Duchastel, 1990). For organizational development, one study found that field-dependent individuals performed better in group situations that required high amounts of interpersonal communication (McKenna, 1984).

More recent, a critical review by Tiedmann (1989) suggested that cognitive style is the most stable construct and is best measured by the EFT and GEFT. It is important to establish the terms “cognitive” and “style” and their relationship to the current stream of research on learning styles. First, “style” has been defined in the literature by English and English (1958) as “the sum total of the details of behavior that influence the attainment of a goal comparatively little but that give to an individual or to a particular performance a characteristic, almost an identifying, manner” (p. 531).

Witkin (1964; 1965) applied the term “cognitive style” as a construct to describe the bi-polar dimensions of field independence-dependence. Witkin and Goodenough (1981) stated that cognitive style “is a pervasive dimension of individual functioning, showing itself in the perceptual, intellectual, personality, and social domains, and connected in its formation with the development of the organism as a whole. Cognitive style involves individual differences in the “how” rather than the “what” of behavior. Finally, people’s standing on the dimension is stable over time” (p. 57).

No studies were found that specifically investigated cognitive style as a factor in assessing learner’s performance in distance-training situations. However, a study by Liu and Reed (1994) examined the different learning strategies of English as a Second Language and observed that the field-dependent learners watched video clips more often
to understand the vocabulary than did field-independent learners. These investigators attributed the difference to the tendency of field dependents to employ a global and spectator approach to learning, whereas the field independents were more comfortable manipulating the courseware to jump from one point to another. However, no statistically significant differences were found in achievement scores. Another study by Leader & Klein (1996) on the effects of search tool type in hypermedia and cognitive style on performance during database searches found field independents outperformed field dependents. Further evidence indicates that cognitive style was significantly related to achievement, tool use, and attitude.

The trainee is an important part of a distance training system. A self-directed trainee with a field independent cognitive style, would suggest a higher success rate in a DTS. However, retention, or attrition, has been identified as a problem with distance education more than with traditional educational institutions. A learner’s decisions to leave distance education classes before completion is attributed to a number of factors that are both learner based and institutional. This is why a systems approach is useful for analysis. According to Gibson (1998), learner factors include the characteristics educational aptitude and persistence before entry to the institution. These two characteristics are similar to cognitive style and self-direction. For example, educational preparation, previous success in an academic environment, self-confidence, and motivation were found important for retention (Garrison, 1985; Billings, 1988). Institutional factors include the educational institution, family and employer support, life events, supporting technology, and access to necessary resource to do assignments were
also important for retention (Powell, Conway, & Ross, 1990). As HRD is concerned with organizational effectiveness, retention is another outcome measure that should be considered in addition to learner satisfaction and performance in a distance training system.

Summary and Synthesis

This chapter is organized into four sections. The first section reviews human resource development (HRD) and systems theory as a foundation for understanding learning and performance in organizations. Training is an HRD intervention used to improve organizational effectiveness outcomes. The second section discusses distance education and the theory of transactional distance (Moore, 1972; 1973; 1986; Moore & Kearsely, 1996) as a framework for understanding the relationship of the instructional design variables within a system of distance training. Course structure and dialog are important in the instructional design of training for bridging the distance of understanding between the instructor and learner. The distance delivery process is dependent on methods, media (technology) and interaction techniques to accomplish training objectives. The third section reviews two primary characteristics of adult learners. Self-direction is viewed as motivation and under the control of the learner, whereas cognitive style is an inherent ability. The fourth section is a summary and synthesis of the literature for this study. A systems model is used as a framework for conceptualizing the study and a DTS. Based on the research reviewed, the important parts of a DTS are the instructional delivery process (which includes the method, media, and interaction techniques), trainee, trainer, and the training context. The independent variables and
their impact collectively as an effective HRD intervention on the dependent variables are of interest in this study. See Figure 2.1.

<table>
<thead>
<tr>
<th>INDEPENDENT VARIABLES</th>
<th>DEPENDENT VARIABLES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distance Training System (DTS) Inputs</td>
<td>HRD Effectiveness Outputs</td>
</tr>
<tr>
<td>Instructional Delivery Process</td>
<td>Trainee Satisfaction</td>
</tr>
<tr>
<td>Trainee Characteristics/Attributes</td>
<td>Job Performance</td>
</tr>
<tr>
<td>Trainer</td>
<td>Retention</td>
</tr>
<tr>
<td>Training Context</td>
<td></td>
</tr>
</tbody>
</table>

Figure 2.1: Conceptual Model of Distance-Training System Variables

In conclusion, HRD is necessary for bringing about effective learning and performance in organizations. Training is a specific HRD intervention that contributes to effective and efficient individual and organizational outcomes. A distance-training system (Hruby-Moore, 1997) was conceptualized based on the theory of transactional distance (Moore, 1972; 1973), and instructional systems design. Course structure and dialog were important consideration for effective instruction and learning in a distance education setting. Methods, media (technology), and instructional techniques are all part of a distance delivery process. Finally, adults who have been successful in distance education setting have been shown to have high levels of self–direction and field independence as the cognitive style. Chapter 3 will discuss the research methods used to analyze an actual distance-training system in an organizational setting.
CHAPTER 3

METHODOLOGY

The four sections in this chapter describe the methodology for this study: research methods and design, independent and dependent variables, instrumentation and research setting, and data collection and analysis procedures. A DTS as a whole, and its parts, is described and analyzed in an actual organizational setting. The two groups of trainees, participating in two levels of a distance-training delivery process (DTDP), are compared to each other on measures of training satisfaction, individual job performance, and organizational outcomes. The focus of the study is on the instructional delivery processes (DTDP 1 and 2) embedded in the DTS.

Research Methods and Design

This section is divided into two parts. Part one describes the research methodology and design used in this study. Quantitative data methods were used to gather data in a field setting. Part two discusses the use of partnership research (Jacobs, 1996) as a research approach used in Human Resource Development (HRD).

Method and Data

This part explains the research methods and data classification used in the study. Research methods refer to the general strategy followed to gather and analyze data to
address the problem and answer the questions under investigation (Ary, Jacobs, & Razavieh, 1990). This educational research study is classified as descriptive research (Ary et al., 1990), because the major purpose is it to tell “what is” a DTS and DTDP are, and their effect on individual and organizational performance.

This case study can also be classified as a field study because it describes a DTS in a natural setting. According to Holton and Burnett (1996), field research is common in HRD; it uses both qualitative and quantitative methods to explore existing situations in an organization, or to study a phenomenon within its context (Holton & Burnett, 1996).

This study primarily used quantitative data collection techniques; however, some qualitative methods were used to describe the DTS. Information from training program materials, observation of the training program being delivered, and interviews with the training staff and field managers assisted in developing the description and comparison of the two DTDPs of the DTS. Content analysis (Kerlinger, 1987) was used to analyze the evaluation comments.

Quantitative methods used were a survey, a psychological instrument, and a training evaluation to obtain objective measures of independent and dependent variables. A questionnaire developed by the researcher, with a panel of experts, was used to collect demographic information. Second, the Group Embedded Figures Test (GEFT) measured trainees’ cognitive style (Oltman, Raskin, & Witkin, 1971). Third, a training evaluation was converted to a satisfaction score measuring trainees’ perception of their training experience. Finally, job performance measures were obtained from company records and
verified through a standard interview question asked by the researcher over the phone to the managers.

**Partnership Research and Design**

Partnership research, an emerging research approach in HRD, is an inductive process used to generate research problems from HRD practice, irrespective of the inquiry paradigm or methodology used to carry out the research (Jacobs, 1996). There are two major attributes that make this research approach distinct. First, research problems are derived from an analysis of HRD practice. Second, partnership research requires that both partners anticipate using the results of the research, even though each will use the information for different purposes (Jacobs, 1996). Such is the case for this research study. The opportunity to derive HRD research questions from current DTS practices arose when a Midwest, public franchise firm with over 700 field locations became interested in evaluating their videoconferencing training. Both the company and the researcher planned to use the information for different purposes. The practitioners, which included a vice president, director, instructors, administrative assistant and technology specialist in the training department, were interested in finding out which form of delivery was more effective in terms of company goals and objectives. The researcher was interested in expanding HRD’s current research base by exploring in-depth a DTS as an HRD intervention. The organization and the researcher both had a mutual HRD interest in improving the performance of the organization.
The research design used in this study was a static group comparison (Campbell & Stanley, 1963). Campbell and Stanley (1963) categorize a static group comparison design as pre-experimental research. Often, pre-experimental research designs are used in educational research when the setting does not allow for manipulation of the independent variable, or when it is impractical to do a true experiment (Ary et al., 1990). This is essentially an educational research study, conducted in an organizational field setting, where the major independent variable, DTDP, could not be assigned as a treatment. Descriptive research methods were used to collect data to describe the DTS, the two levels of the DTDP, the trainees as a group, the trainers, the content, and the organizational context.

A static group comparison, pre-experimental research design (Campbell & Stanley, 1963) using a partnership research, best describes this research design for this case study (See Figure 3.1). Data were collected to note differences in the two groups of trainees based on the two DTDPs because the research setting did not permit randomization of DTDP treatments.

\[
\begin{align*}
X_1 \text{ (Distance Training Delivery Process 1: DTDP 1)} & \quad O_1 \\
X_2 \text{ (Distance Training Delivery Process 2: DTDP 2)} & \quad O_2
\end{align*}
\]

Figure 3.1: Static-Group Comparison Design (Campbell & Stanley, 1963)
Independent and Dependent Variables

The DTS, with two different groups of trainees defined by two levels of the DTDP, two levels of trainers, two levels of manager involvement, and four levels to describe the office environment, is the major independent variable in this study. The two DTDPs are compared on instructional design variables: methods, media/distance technologies, and instructional techniques for stimulating interaction between the trainee and trainer. Dependent variables include trainee satisfaction, job performance and retention.

Independent Variable

The independent variables were the DTDP, trainees' age, sex, cognitive style, years of education, years of experience: work, sales, and industry; the trainer; the work environment (manager involvement and office context).

The organization utilized an instructional systems approach to its distance training. The original delivery approach referred to as DTDP 1 is a self-paced, print and videotape training delivery system. In 1993, the organization introduced communications technology, specifically videoconferencing, which resulted in DTDP 2.

The organization's vice president of training believes the DTS with its two delivery processes is a key source of competitive advantage for the company (Hill, 1997). The instructional methods, distance technologies, and techniques used to deliver the training content are distinguishing characteristics of the two levels of the DTDP.
DTDP was designed as a self-paced, manager-facilitated sales training program for new account executives. The corporate office used a train-the-trainer approach, in which the vice-president of training and corporate staff trained office managers in all aspects of the trainees' jobs. Once managers are established in their positions, they use the same instructional materials from their training to train their own sales staff.

In 1993, DTDP 2 was developed using videoconferencing with the original self-instructional training system. The new DTDP required the corporate training staff to learn new skills for using the new distance technology, the associated equipment, course scheduling, management support, and instructional design. In addition, DTDP 2 required a corporate trainer.

The organization supports a DTS with two very different delivery approaches. The DTDP variable has two levels of course structure (Moore, 1973: 1983). Course structure includes: (1) two different methods of instruction (self versus group), (2) two different combinations of distance technologies (print and videotape, versus print, videotape and videoconferencing), and (3) different use of instructional techniques for interaction between the trainer and trainee (manager as facilitator versus corporate instructor), to accomplish the same training objectives. The sales training objectives are tied to individual job performance. The corporate training staff restructured the original DTDP to launch a corporate university. DTDP 2 with videoconferencing was seen as an opportunity for virtual classroom training.
Each DTDP is described in detail. DTDP 1 is a self-paced, individual method of instruction. It uses a set of 30 videotape modules, a training workbook with end-of-module activities, and the trainee’s manager facilitates the training interaction. After the trainees view the modules, they work independently with the support of a manager to complete the training exercises. The training workbook requires each trainee to respond to end-of-module questions, engage in exercises, and assume four structured role-plays and practice sessions with the manager. Informal discussions may occur between the trainee, the manager, and others in the office based on the content of the video modules, questions, and insights generated by either the trainee or the manager. However, these interactions are essentially unstructured. DTDP 1 requires the manager to participate in the practice of skills. There was no way to measure the exact amount of interaction, or to determine if the practice actually occurred, except based on the trainees’ record. One survey question asks the number of hours of interaction with the trainee had with their manager during training; another asks whether the trainee perceived the manager to be involved in the training. The scheduling and pace of the trainee in DTDP 1 is also flexible. The trainee and the manager negotiate how much time the trainee has to complete each module. The training occurs on-the-job, in a designated office training area with print modules, videos, VCR, monitor, and access to a computer.

DTDP 2 is primarily a group method of instruction combined with the self-instructional print modules. DTDP 2 uses the same set of 30 videotape modules, a training workbook with end-of-module activities; however, the manager schedules the
training through the corporate training university to be delivered over two-way interactive videoconferencing. This training approach is more structured, consistent across administrations, and designed for interaction with both the manager or corporate instructor. DTDP 2 uses the same videotape modules as the basis for each 20–30 minute on-line session, but adds different interaction techniques. These techniques include: instructor directions, corporate expectations, online feedback to discuss workbook exercise outcomes, performance expectations and practice challenges, structured group discussion of material covered, and structured opportunity for group questions and discussion. This DTDP also has four structured off-line practice sessions to perform the skills supervised by the manager. The corporate instructor requires performance reports from each participant to share with the class following each practice session.

The manager’s responsibility in DTDP 2 is to provide the videotapes and materials, schedule the trainee with the corporate university, log trainees on to the corporate conferencing system at a scheduled time, oversee and participate in the practice sessions as designed. DTDP 2 is primarily an instructor-led training program. The trainees are located in various parts of the U.S. and are connected with the instructor by two-way interactive videoconferencing in a virtual classroom. Class size does vary.

In session one, the corporate instructor introduces the videoconferencing etiquette, presents an overview of the DTS, and provides direction for module one activities. Subsequent sessions are “chunked” into time on- and off-line to complete the training
modules according to a prescribed, structured schedule of approximately three weeks. A set of videotapes and print material modules are located in each participating office.

After each videotape module has been completed, the trainees, as a group, log on to the videoconferencing system and engage in structured discussions about the module with the corporate university trainer. Then, once the entire set of videotape modules has been viewed and discussed, the trainees are instructed to work with their local manager to practice and demonstrate specific skills. The training is completed with a graduation ceremony following completion of the last module. A certificate of completion and recognition by the organization is given at the end of the three weeks. The corporate instructor reinforces the concepts in the videotape modules, uses structured discussion questions, incorporates on-line activities, role plays, practice sessions, and requires performance reports of off-line job activities. During the three weeks, training occurs on-the-job, in a designated training area of a field office. Each office has the print modules, videotapes, a VCR and monitor with a PictureTel videoconferencing unit and access to a computer.

The content for both levels of distance training delivery is the same customized sales training program based on the industry. The skills being taught are higher order cognitive skills (problem-solving and a sales processes) with affective (e.g., interpersonal skills) and psychomotor (e.g., computer database skills) components. DTDP 1 and DTDP 2 differ primarily in terms of the course structure: (methods, distance technologies, and interaction techniques used) and who delivers the instruction. Table 3.1 provides a
summary of the differences in the two DTDP and compares them on method, media, techniques, and instructor.

Overall, similar interaction outcomes of the training would be expected, because the training was instructionally designed using different interaction techniques to achieve the same course objectives. Also, it is expected that trainees will interact with their manager, the corporate instructor, or other office members based on their learning needs. The level of manager involvement during DTDP 2 instruction does vary, because the corporate instructor is perceived to replace the manager as trainer. Some managers participate fully in the instructional process, whereas others participate only in the practice sessions, while still other managers delegate all training responsibility to the corporate trainer. This could not be controlled, therefore it was important to collect trainees' perceptions of whether their manager was involved in their training or not.
<table>
<thead>
<tr>
<th><strong>Distance training instructional variables</strong></th>
<th><strong>DTDP 1: Distance-training delivery process one</strong></th>
<th><strong>DTDP 2: Distance-training delivery process two</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Method</td>
<td>Individual method, self-paced instruction with manager as facilitator.</td>
<td>Group method, corporate instructor-led with manager support.</td>
</tr>
<tr>
<td>Weston &amp; Cranton (1986) Method classification</td>
<td>Individualized with some experiential method</td>
<td>Interactive method</td>
</tr>
<tr>
<td>Distance technologies (media) used in training delivery system</td>
<td>Manager Print Videotape Computer</td>
<td>Corporate trainer with manager support Print Videotape Computer Videoconferencing</td>
</tr>
<tr>
<td>Garrison (1989) distance delivery system Classification</td>
<td>Generation one – print</td>
<td>Generation four – multimedia</td>
</tr>
<tr>
<td>Training interaction techniques influencing course structure and interaction</td>
<td>Introduction by manager self evaluation exercises flexible review and feedback from manager Role play with manager Unstructured discussions with trainee &amp; manager</td>
<td>Introduction by corporate instructor Lecture Self evaluation exercises Scheduled review and Feedback from corporate instructor on exercises Role plays with instructor Role plays with manager Structured discussion with trainees &amp; instructor Structured Q&amp;A sessions with trainees Unstructured opportunities for trainees to interact with each other</td>
</tr>
<tr>
<td>Main instructor/trainer</td>
<td>Trainee with manager</td>
<td>Corporate instructor</td>
</tr>
</tbody>
</table>

Table 3.1: Differences in Methods, Distance Technologies, Training Techniques, and Instructor/Trainer Influencing Course Structure in DTDP 1 and 2
Other inputs to the DTS are trainee population, the trainer, office context, and training content. These other inputs to the DTS are important because they are also parts of the entire HRD intervention. Differences between these other independent variables follow.

First, the trainee population was composed of all trainees who had gone through either of the two levels of the distance training system during the first half of 1997. In May 1998, the company’s information services obtained a list of trainees who participated in either training system during January 1st – June 30th, 1997. The frame for DTDP 1 was 78 out of 119 original trainees, and 136 out of 408 original trainees for DTDP 2. It was not feasible for the researcher to compare respondents to non-respondents (trainees who left the company during the one-year period and for whom demographic data were not available). Next, attribute variables of the two populations were collected. Cognitive style and demographic data on trainees were collected to compare the two groups. Cognitive style was measured to assess how similar the two groups of trainees were in perceiving information. Because the two populations are salespeople, it was assumed their cognitive styles would be similar. Other demographic data describing trainee characteristics of the population were also collected on a separate questionnaire. The variables included were age, education, work experience, and sex. Age was reported as date of birth and converted to number of years old. Education was requested as the number of years of formal schooling. Experience included the total number of years of general work experience, the number of years of sales experience, and
the total number of years with specific industry experience related to their current selling. Sex was categorized as male or female. All of these demographic measures were self-reported. Interval level data was requested when appropriate. Again, population selection was based on two independent groups based on their participation in either DTDP 1 or 2.

Second, the levels of the DTS also differed on who delivered the instruction. The manager or the corporate university instructor are the two levels of trainer. The manager of the office (who can be either an owner or a professional office manager hired to carry out the operations of the business) was responsible for facilitating the trainee in their independent learning process. The manager received the same sales training with the V.P. of training as instructor when he/she was introduced to the franchise system. One of the assigned duties of the manager is supervising training of new sales associates. The corporate instructor for this study was the same across all nine training administrations. The corporate trainer had a goal-oriented, behavioral-based training approach, focused on sales performance and results, and had considerable subject matter experience. He also was able to consistently deliver the material with both the instructional approach and corporate values reflected by the organization.

Third, the training/office context was designed by the organization to be consistent across all offices. The organizational context is part of a franchise systems approach. All training takes place on the job, in the company's field office location, where the trainee was hired. All offices have similar organizational design, corporate
policies, management procedures, compensation practices, and workplace cultures. There is a designated office area specifically identified for training, supplied with the appropriate training materials and equipment. Approximately 350 of 700 these offices have the videoconferencing technology. The corporate headquarters provides the same information and support services to all owners and managers of these offices.

However, since each franchise office context could be influenced by the leadership style of the manager, the questionnaire asked trainees to describe their office work environment. Work environment could be selected as one of the following four categories: unstructured with focus on team (office) results, unstructured with focus on individual results; structured with focus on team (office) results, and structured with focus on individual results.

Fourth, the training content for this study is a sales executive training program. This program contains the essential requirements for gaining sales knowledge and skills to perform the job. The training content was technical. Sales behavioral skill components, with an underlying cognitive process on how to perform the skills in relation to job requirements and the industry, were trained. Computer skills are necessary to track information, so the corporate database program is also taught. The actual job performance requires cognitive, affective and psychomotor skills that result in a sales outcome. The essential outcomes of the training process are defined in terms of the dependent variables (discussed next). According to the director of training (Doner,
1998), it takes approximately six to eight months to become proficient in the complex tasks required in the sales process of this particular firm and associated industry.

**Dependent Variables**

The dependent variables of interest in this study are trainees’ satisfaction with the training quality and content, their current job performance after one year on the job, and retention rates of the two groups.

Trainee satisfaction measures how well the training met the trainees’ learning needs in terms of the content delivered and the quality with which it was delivered. Satisfaction was measured with a summary score obtained from the company’s training evaluation survey. A five-point Likert scale was used to rate fifteen statements related to the training content and quality of instruction. (See Appendix D.) Several open-ended questions allowed participants to provide feedback to the trainer and corporate university on how to improve the training. This type of qualitative information provided a more in-depth understanding of the ratings given by the trainee.

Job performance measures the accomplishments of the trainees on the job after one year. Job performance was measured by actual number of placements and total dollars billed during the trainees’ first year on the job. The number of placements and dollars billed were reported by the manager in a phone interview, and confirmed by the trainees in their survey information. Differences between the two figures were then matched to corporate records.
Retention was calculated as a percent of the number of trainees in the two groups remaining on the job after one year divided by the number that had gone through the training over the first half of 1997. In the event that the employee had been terminated or left the company as reported by the manager, a retention statistic was calculated by the researcher and reported in chapter 4.

Based on systems theory, the theory of transactional distance, and using an instructional systems approach, Figure 3.2 presents a model of the distance training system studied in terms of the independent and dependent variables in this particular organization. The conceptual model of a DTS (Hruby-Moore, 1997) was used to identify relevant inputs, processes, outputs, feedback, and organizational context variables.
<table>
<thead>
<tr>
<th>Inputs =&gt;</th>
<th>Process =&gt;</th>
<th>Outputs =&gt;</th>
<th>Feedback =&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTS trainee attributes</td>
<td>DTDP</td>
<td>Training/organization results</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>1: Self/Manager guided using self-instructional print and videotape modules using unstructured dialogue &amp; feedback</td>
<td>Training satisfaction Job performance placements billings</td>
<td>Retention Company total performance</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Experience</td>
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<td>work</td>
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<tr>
<td>sales</td>
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<tr>
<td>industry</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Years education</td>
<td>2: Group/Instructor directed using self-instructional print and videotape modules over video-conferencing using structured dialogue and feedback</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cognitive style</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>field dependent</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>field independent</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

**Instructional design elements**

**Interaction**
- amount of interaction with manager during training
- perception of manager involvement in training

**Course structure**
- manager as facilitator
- corporate instructor

**Work environment**: structured or unstructured with focus on individual or team results

Similar office setting, corporate policies and procedures, work tools, access to information, sales commission incentives and rewards were designed and implemented throughout the franchise organization system

Figure 3.2: Actual DTS Case with Two Levels of DTDP
Instrumentation and Research Setting

The Ohio State University Human Subjects review procedures, field and pilot testing, reliability, validity, conditions of testing, and research setting are all parts of this section.

Procedures

Instrumentation procedures began with a research study pre-approval request to the Ohio State University (OSU) Office of Research Risks Protection. First, the vice president of training had to approve the research proposal to do the study. Second, selection of the Group Embedded Figures Test (GEFT) and the OSU proposal request were filed with OSU Human Subjects on April 13, 1998. Approval was granted in May, 1998 with the stipulation that a call be made to the managers of the trainees selected to participate to ensure the managers' and the trainees' support of the study.

After OSU approval, a field study was conducted at the end of May 1998. First, the demographic survey and letter to managers were developed and reviewed with a panel of two experts from the company's training department and the research committee from OSU. Second, the training evaluation form was reviewed. Third, the GEFT order for the instrument was submitted to the vendor and instructions for its administration developed by the researcher for the field managers. From the December 1998 DTDP 2 training course, 20 trainees were selected and their managers were phoned. Eighteen trainees with their managers agreed to participate in the field study. A letter explaining the research request, a demographic data survey, the training evaluation form, and a copy of the General Embedded Figures Test (GEFT) (Oltman, Raskin, & Witkin, 1971) were sent to
the immediate manager. The manager was responsible for having his/her employee complete the survey and administer the GEFT within 2 weeks. (Appendixes A–E contain a copy of the letter, the GEFT with instructions for administration, the demographic survey sheet, and training evaluation.) Instructions to the manager provided guidelines for administering the GEFT. Feedback from the field study suggested that some of the demographic survey question items be reworded before full data collection took place during June–September 1998. Those changes were made so that full data collection for DTDP 1 could begin in June.

Reliability

Reliability is defined as the ability to measure phenomena consistently, dependably, and predictably (Kerlinger, 1987). The reliability of the self-reported data is dependent on the opinions of trainees. As part of the pilot study, test-retest reliability was conducted on the training evaluation for the 18 subjects in the field study. The original 18 training evaluations were pulled and compared to the field study evaluation responses; a test-retest reliability coefficient of .79 was obtained. Next, an independent sample of 100 evaluations was pulled from previous course evaluations from December 1997–April 1998 to test internal consistency reliability; a Cronbach’s alpha of .86 was obtained. For the demographic survey, data reported were taken at face value; however, performance measures were verified by managers during the phone approval, and matched to corporate reports. Reliability for placements and billings was 100% for the 18 participants in the
field study sample. Finally, the reliability of the GEFT developed by Witkin, Oltman, Raskin, and Karp is reported as .82 (Consulting Psychologists Press, 1971).

Validity

Validity is defined as the ability of an instrument to measure a construct or concept accurately (Hair, Anderson, Tatham, & Black, 1992). Construct and content validity were both addressed in this study. The Group Embedded Figures Test (GEFT) was specifically selected because of its research base and construct validity in measuring the cognitive style of trainees. As discussed in the review of literature, the GEFT’s construct validity is based on extensive research. For a list of research references, see Consulting Psychologists Press Manual by Witkin, Oltman, Raskin and Karp (1971). A score on the GEFT ranges from 0 to 18, where a score of 12 or higher is interpreted as field independent (Witkin et al., 1971).

To establish content validity for the demographic survey used to collect the data on the trainees, a panel of experts, made up of training department personnel and the research committee, reviewed the survey, letter, and instructions for the GEFT. The field test provided an opportunity to verify content validity and make appropriate changes. The guide for developing the letter and survey come from a book by Salant and Dillman (1994), noted experts in survey design.

Threats to internal validity identified for a static group comparison design are maturation, selection, and mortality (Campbell & Stanley, 1963). Maturation, is the term used by Campbell and Stanley (1963) to “cover all of those biological or
psychological processes which systematically vary with the passage of time, independent of specific external event” (p. 7). Maturation is a threat because there is no way to control for time over a one year period for either individuals or independent field office events. Selection is also a threat because independent offices may recruit trainees on different characteristics; the two groups could therefore be totally different based on their demographics. Finally, mortality is a threat because the dropout rate for either group over the year cannot be controlled. In addition, at the start of the study, 81 and 141 trainees in the two groups agreed to participate. However, during the 3 months of data collection for the study, 3 and 5 trainees respectively dropped out from the two groups (all of whom left for personal reasons). To control for maturation, both groups of trainees were measured on relevant characteristics. To control for selection, the organization authorized a selection instrument and a behavioral-based interviewing process to be followed by the managers as part of the standard hiring process. Finally, regarding mortality, a retention rate was calculated; speculation about reasons for the difference in retention rates for the two groups is discussed in chapter 5.

Conditions of Testing and Research Setting

The conditions of testing with the GEFT were discussed with the manager of the trainees selected for this study. The manager was instructed over the phone on how to administer the GEFT. During the phone interview, the researcher reviewed the expectations of the manager and emphasized the importance of administering the GEFT within the time requirement. The manager was told that a GEFT administration
instruction sheet was included in the package for the manager to read verbatim to the trainee. The script was to be read exactly to direct the trainee in filling out the GEFT (see Appendix B). The manager was also told to use a clock with a second hand to time the trainee. The trainee was to use the two OSU pencils included in the package. The GEFT instructions reinforced these requirements. Likewise, the researcher conducted four local sessions to during the field test period to identify administration problems.

The research setting is the corporate headquarters and the individual franchise offices across the United States that participated in the study. All correspondence and telephone calls were made from the corporate training department. The corporate training department is referred to as the “Corporate University.” The Corporate University supplies new knowledge and skill development opportunities to their field offices. This University is responsible for the design, development, delivery, implementation, and evaluation of all training services. The training staff facilitated and participated in the design of the research.

Data Collection and Analysis

Data collection for DTDP 1 began the first week of June, 1998 when results of the first half of 1997 company performance results were available. The first half of the 1997 trainee population frame list also had the managers’ names, addresses, and phone numbers listed. Approval by the trainees to participate in the study was necessary before the survey and the GEFT could be sent out. Once the manager was reached by phone, the following routine procedure was followed.
First, the researcher introduced herself and described the scope of the study. Second, she explained the amount of time the study would take and tasks the manager and the trainee would be expected to accomplish. Following agreement to participate, a letter explaining the research study, the instruments, the pencils, and a self-addressed stamped envelope with the researcher's home address were sent out from the corporate office. Confidentiality by the researcher was emphasized in the phone request and in the letter. (Again, the letter and the instruments sent to the participants in the study are included in the appendix.)

Data collection for DTDP group 2 started at the end of July 1998. Again, a list of trainees was obtained and the managers contacted. The data collection procedure previously described was also followed for this group. The data collection process was managed by the researcher and was completed in October 1998. Follow-up phone calls were made to those who did not return their instruments within the 2-week request. Problems and issues were discussed and resolved with the vice president and the director of training programs. The company's administrative staff was permitted to assist with some database and mail tasks.

Data was analyzed using SPSS for Windows (version 7.5) obtained from the OSU computer services center and installed on a home computer. Data were input into the computer during October and November 1998. Analyses were conducted from the end of November through December.
First, descriptive statistics were run to describe the attributes of the trainees in DTDP 1 and 2 on the same criteria: cognitive style, age, sex, work experience, interaction, and education. T-tests for independent groups (Frankel & Wallen, 1993) were run to compare the means for the two groups on these attributes.

Second, t-tests for independent groups were used to compare the dependent variables of interest in research questions two through four. The mean scores of the two groups on trainee satisfaction and job performance (number of placements and dollars billed) were compared. Retention rates for the two groups and total performance for DTDP 1 and 2 were calculated.

To answer question five, multiple regression analyses were run on each of the dependent variables: training satisfaction, number of placements and total dollars billed. Correlation analysis was conducted to determine if there was any correlation between the set of independent variables and dependent variables that would influence the multiple regression analysis. Chapter 4 reports the findings based on the five research questions and methods used to answer them.
CHAPTER 4

RESULTS

The results of the study are presented in six sections. Five sections follow the five
research questions posed in chapter 1, and the sixth section is a summary of additional
data. The section covering research question one reports descriptive statistics and
compares the differences between the two intact groups of trainees, based on the two
levels of the DTDP. Again, DTDP Group 1 used the self-instruction method with print
and videotapes delivered by the manager, and DTDP Group 2 used a group method with
the same print and videotape materials delivered by a corporate trainer over
videoconferencing. The sections discussing research questions two through four report
statistical comparisons of the two groups on trainee satisfaction, job performance, and
retention rates. The section covering research question five reports the multiple
regression analysis. An additional data section presents a summary of the comments and
responses to the open-ended questions included in the training evaluation.

Research Question One

This first section is divided into two parts. The first part reports the means,
median, and ranges (minimum and maximum) of trainee attribute variables collected to
compare the two groups. The next part compares the two groups by reporting the means,
standard deviations, t-tests results, and p values to distinguish statistically significant
differences between the groups on key attribute variables.

Descriptive Statistics

Tables 4.1 through 4.6 summarize the statistics for the two groups of trainees by the two DTDPs. Tables 4.1 through 4.5 report the mean, median, minimum, and maximum of the two groups on seven attribute variables. These independent variables include: cognitive style as measured by the GEFT, age, amount of experience in terms of the number of years of total work experience, sales experience, industry experience, number of years of formal education, and the number of hours of interaction with the trainees' manager. Mean and median provide measures of central tendency for each group. The range, with the minimum and maximum for each group, indicates the amount of dispersion within the trainees of the group. Table 4.6 reports the number and percent of males and females in each of the groups.

Table 4.1 reports a summary of the mean, median, minimum, and maximum for the GEFT score for each group of trainees by the two DTDPs.

<table>
<thead>
<tr>
<th>Group</th>
<th>n</th>
<th>Mean</th>
<th>Median</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTDP 1</td>
<td>78</td>
<td>11.33</td>
<td>12.00</td>
<td>3</td>
<td>18</td>
</tr>
<tr>
<td>DTDP 2</td>
<td>136</td>
<td>13.26</td>
<td>16.00</td>
<td>1</td>
<td>18</td>
</tr>
</tbody>
</table>

Table 4.1: Mean, Median, and Range of Group Embedded Figures Test (GEFT) Score
Table 4.2 reports a summary of the mean, median, minimum and maximum for the ages of trainees in each DTDP group.

<table>
<thead>
<tr>
<th>Group</th>
<th>n</th>
<th>Mean</th>
<th>Median</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTDP 1</td>
<td>78</td>
<td>42</td>
<td>43</td>
<td>25</td>
<td>60</td>
</tr>
<tr>
<td>DTDP 2</td>
<td>136</td>
<td>39</td>
<td>40</td>
<td>24</td>
<td>60</td>
</tr>
</tbody>
</table>

Table 4.2: Mean, Median, and Range of Age for the Two DTDP Groups

Table 4.3 reports a summary of the mean, median, minimum, and maximum for the number of years of work, sales, and industry experience of two groups.

<table>
<thead>
<tr>
<th>Group</th>
<th>Experience</th>
<th>n</th>
<th>Mean</th>
<th>Median</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTDP 1</td>
<td>Work</td>
<td>78</td>
<td>16.80</td>
<td>16.00</td>
<td>1.50</td>
<td>35.00</td>
</tr>
<tr>
<td></td>
<td>Sales</td>
<td>78</td>
<td>4.62</td>
<td>.00</td>
<td>.00</td>
<td>20.00</td>
</tr>
<tr>
<td></td>
<td>Industry</td>
<td>78</td>
<td>1.95</td>
<td>.00</td>
<td>.00</td>
<td>10.00</td>
</tr>
<tr>
<td>DTDP 2</td>
<td>Work</td>
<td>136</td>
<td>14.74</td>
<td>15.00</td>
<td>.00</td>
<td>40.00</td>
</tr>
<tr>
<td></td>
<td>Sales</td>
<td>136</td>
<td>7.13</td>
<td>4.00</td>
<td>.00</td>
<td>28.00</td>
</tr>
<tr>
<td></td>
<td>Industry</td>
<td>136</td>
<td>3.38</td>
<td>.00</td>
<td>.00</td>
<td>10.00</td>
</tr>
</tbody>
</table>

Table 4.3: Mean, Median, Range of Total Work, Sales, and Industry Experience reported by the Two DTDP Groups
Table 4.4 reports a summary of the mean, median, minimum, and maximum based on years of formal education of the two groups.

<table>
<thead>
<tr>
<th>Group</th>
<th>n</th>
<th>Mean</th>
<th>Median</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTDP 1</td>
<td>78</td>
<td>16.51</td>
<td>16.00</td>
<td>12.00</td>
<td>20.00</td>
</tr>
<tr>
<td>DTDP 2</td>
<td>136</td>
<td>15.18</td>
<td>16.00</td>
<td>4.00</td>
<td>22.00</td>
</tr>
</tbody>
</table>

Table 4.4: Mean, Median, and Range of Years of Education for the Two DTDP Groups

Table 4.5 reports a summary of the mean, median, minimum, and maximum for the number of hours of interaction with their manager reported by the trainee during their training period.

<table>
<thead>
<tr>
<th>Group</th>
<th>n</th>
<th>Mean</th>
<th>Median</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTDP 1</td>
<td>78</td>
<td>30.33</td>
<td>26.00</td>
<td>.00</td>
<td>90.00</td>
</tr>
<tr>
<td>DTDP 2</td>
<td>136</td>
<td>24.19</td>
<td>20.00</td>
<td>1.00</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Table 4.5: Mean, Median, and Range of Number of Hours of Interaction Reported by the Two DTDP Groups
Table 4.6 is a summary of the number and percent of females and males in each of the two groups and . Overall, there were slightly more women than men trained by the DTS, 110 females versus 94 males. The DTDP group 1 had more males 45 or (58%) than females 33 or (42%). The DTDP group 2 had more females, 87 or (64%) than males, 49 or (36%).

<table>
<thead>
<tr>
<th>Group</th>
<th>n</th>
<th>Females</th>
<th>Males</th>
<th>% Female</th>
<th>% Males</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTDP 1</td>
<td>78</td>
<td>33</td>
<td>45</td>
<td>42%</td>
<td>58%</td>
</tr>
<tr>
<td>DTDP 2</td>
<td>136</td>
<td>87</td>
<td>49</td>
<td>64%</td>
<td>36%</td>
</tr>
<tr>
<td>DTS Total</td>
<td>214</td>
<td>110</td>
<td>94</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.6: Number and Percent of Females and Males in the Two DTDP Groups

Comparison of Mean Statistics

This part reports on the statistically significant differences between the two groups on these same six variables. Table 4.7 reports the means, standard deviations, t-test statistics, and two-tailed significance at the .05 probability level. An asterisk signifies a statistically significant difference between the means of the two groups.

First, the GEFT score average for DTDP 1 group was 11.3 versus 13.3 for DTDP 2. These two groups differed statistically at the .05 level when the means of the two
groups were compared. Second, on the variable age, the average for DTDP 1 was 41 years old versus 39 years old for DTDP 2. Although the DTDP 1 group appears slightly older than DTDP 2, these two groups did not differ statistically at the .05 level when the means were compared. Third, the mean number of years of work, sales, and industry experience are reported as 16.8, 4.6, and 1.9 years respectively for DTDP 1 versus 14.7, 7.1, and 3.4 mean years for DTDP 2. Again, these two groups did not differ statistically at the .05 level for the total number of years of work experience. However, these two groups did differ on the amount of sales and industry experience when the means of the two groups were compared: DTDP 2 had significantly more sales and industry experience than the DTDP 1 group. Fourth, the average years of education reported for DTDP 1 was 16.5 versus 15.1 for DTDP 2. DTDP 1 had over one year more of education on average than DTDP 2, which was statistically significant. Fifth, the average number of hours of interaction reported by DTDP 1 was 30.3 versus 24.2 hours for DTDP 2. Statistically, these two groups did not differ on the amount of interaction.
<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>DTDP Group 1 (n = 78) Mean/Std. Dev.</th>
<th>DTDP Group 2 (n=136) Mean/Std. Dev.</th>
<th>t-test</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEFT</td>
<td>11.33  4.35</td>
<td>13.26  4.81</td>
<td>-2.91</td>
<td>.004*</td>
</tr>
<tr>
<td>Age</td>
<td>41.88  9.06</td>
<td>39.42  10.39</td>
<td>1.56</td>
<td>.120</td>
</tr>
<tr>
<td><strong>Experience:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work</td>
<td>16.80  8.13</td>
<td>14.74  10.37</td>
<td>1.51</td>
<td>.132</td>
</tr>
<tr>
<td>Sales</td>
<td>4.61   6.35</td>
<td>7.13   7.72</td>
<td>-2.43</td>
<td>.016*</td>
</tr>
<tr>
<td>Industry</td>
<td>1.95   3.11</td>
<td>3.37   5.73</td>
<td>-2.03</td>
<td>.043*</td>
</tr>
<tr>
<td>Education</td>
<td>16.51  1.72</td>
<td>15.17  2.73</td>
<td>3.92</td>
<td>.001*</td>
</tr>
<tr>
<td><strong>Interaction</strong></td>
<td>30.33  29.07</td>
<td>24.19  27.62</td>
<td>1.54</td>
<td>.126</td>
</tr>
</tbody>
</table>

Table 4.7: Comparison of means on GEFT Score, Age, Years of Experience (Work, Sales and Industry), Years of Education and Hours of Interaction for the Two Groups

Research Question Two

Section two reports the comparison data of the two DTDP trainee groups on the dependent variable of trainee satisfaction score. A t-test for independent groups was used to determine if there was any statistically significant difference at the .05 level between the mean trainee satisfaction score for DTDP 1 and 2.

The mean trainee satisfaction score measures the perception of the two groups on their opinion of the quality of their training experience. The score summarizes the average scores of the 15 Likert items, where 1 = poor and 5 = excellent. The summative
score ranged from 15 to 75. Trainee satisfaction, or reaction, is often called level one evaluation. Level one evaluation (Kirkpatrick, 1996) attempts to capture the trainee’s perception of the worth of the training activity. Statistical comparison of the satisfaction score indicates that at the .05 level the two groups did not differ significantly on overall reaction to their training experience. Those trained by DTDP 1 had a mean satisfaction score of 55.28 versus a 55.97 by DTDP 2. Table 4.8 provides the comparison.

<table>
<thead>
<tr>
<th>Group</th>
<th>n</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>T-test</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTDP 1</td>
<td>78</td>
<td>55.28</td>
<td>10.31</td>
<td>-.381</td>
<td>.704</td>
</tr>
<tr>
<td>DTDP 2</td>
<td>136</td>
<td>55.97</td>
<td>11.31</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.8: Comparison of Trainees’ Mean Satisfaction Score for the Two DTDP Groups

Research Question Three

Section three reports the comparison of the two trainee groups on the dependent variable of performance. A t-test for independent groups was used to determine if there was any statistical significant difference at the .05 level between the mean group performance for DTDP 1 and 2.

Job performance was measured in this study using the company’s definition: the total number of placements and dollars billed over one year of the training program.
Performance, or job behavior, is a level three evaluation (Kirkpatrick, 1996), which refers to the degree to which the knowledge and skills learned in the training transferred to the job. Results again indicate that there was no statistical significant difference at the .05 level between the two groups in the average number of placements and the average dollars billed. Those who went through DTDP 1 had a mean of 6.2 placements and billed an average of $71,635, and those in DTDP 2 had a mean of 5.5 placements and billed an average of $76,389. DTDP 2 had much more variability in billings, which may be attributable to higher value placements, or office commission structure. Table 4.9 provides a comparison of the two groups.

<table>
<thead>
<tr>
<th>Group</th>
<th>Performance</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>T-test</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTDP 1 (n = 78)</td>
<td># Placements</td>
<td>6.19</td>
<td>5.19</td>
<td>.952</td>
<td>.342</td>
</tr>
<tr>
<td></td>
<td>$ Billings</td>
<td>$71,635</td>
<td>$59,037</td>
<td>-.306</td>
<td>.760</td>
</tr>
<tr>
<td>DTDP 2 (n = 136)</td>
<td># Placements</td>
<td>5.48</td>
<td>6.69</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>$ Billings</td>
<td>$76,389</td>
<td>$152,405</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.9: Comparison of Trainees’ Job Performance in DTDP 1 and 2

Organization results, or level four evaluation (Kirkpatrick, 1996), refer to the degree to which a training effort supports business objectives. In this study, organizational results were measured as total placements and billings over a one year period (July 1, 1997 through June, 30, 1998) and retention rates for DTDP 1 and 2. Those
originally trained by DTDP 1 were 119 participants who produced a total of 631 placements and collectively billed $7,306,744. DTS Two started with 409 and collectively produced 1,370.5 placements and billed $19,097,316. A per desk average, or PDA statistic, was calculated to determine which training system performed better overall. The PDA is a corporate, year-end statistic currently used by the company to measure and compare office performance. In this case, it was used to measure and compare distance training system performance. PDA is calculated as the total placements and dollars billed divided by those remaining with the organization at the end of the year. DTDP 1 had a PDA of 8.1 placements and $93,676 in billings. DTDP 2 had a PDA of 10.1 placements and $140,421 in billings. In this study, DTDP 2, including the production of those who left the company, performed on average 33% higher. Table 4.10 provides a comparison of the total placements, total dollars billed, and per desk averages for the two DTDP groups.

<table>
<thead>
<tr>
<th>Group</th>
<th>n</th>
<th>Total: # Placements</th>
<th>$ Billed</th>
<th>Per Desk Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTDP 1</td>
<td>78</td>
<td>631.0</td>
<td>$7,306,744</td>
<td>8.1 $93,676</td>
</tr>
<tr>
<td>DTDP 2</td>
<td>136</td>
<td>1,370.5</td>
<td>$19,097,316</td>
<td>10.1 $140,421</td>
</tr>
</tbody>
</table>

Table 4.10: Comparison of DTDP 1 and 2 on Total Number of Placements and Total Dollar Billings with Per Desk Average Statistic Calculated
Research Question Four

Section four reports the findings of the comparison of the two trainee groups by retention rates. Retention rate is another measure used to assess level four, organizational impact of the two DTDPs. A retention rate was found for each group. Retention was calculated as the total number of account executives who remained on the job after one year and who participated in the study divided by the total number of participants who went through the two training approaches multiplied by 100. Results indicate an overall DTS retention rate of 39%. However, when comparing the groups based on the two DTDPs, there was a large practical difference: A retention rate of 66% for DTDP 1 and a 33% for DTDP 2 was calculated. Table 4.11 shows the DTS retention rate for the total number of trainees and the comparison of retention rates based on the two DTDP groups. Reasons for the difference in retention rates are discussed in chapter 5.

<table>
<thead>
<tr>
<th>Group</th>
<th>n</th>
<th>N = Total # Originally Trained</th>
<th>Retention Rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTDP 1</td>
<td>78</td>
<td>138</td>
<td>66%</td>
</tr>
<tr>
<td>DTDP 2</td>
<td>136</td>
<td>409</td>
<td>33%</td>
</tr>
<tr>
<td>DTS Total</td>
<td>214</td>
<td>547</td>
<td>39%</td>
</tr>
</tbody>
</table>

Table 4.11: Comparison of Retention Rates for Total DTS and by Two Groups
Research Question Five

Section five reports the regression analysis results to answer research question five. Multiple regression was used to determine which of the 11 independent variables describing the DTS had a significant impact on the dependent variables of trainee satisfaction and performance. The DTS is made up of many inputs including: trainees, trainers, DTDPs, and organizational context. Multiple regression analysis determines which DTS independent variables individually impacted satisfaction and performance (dependent variables), while holding all other variables constant. Regression also explains what percent of the variance can be explained by all the DTS independent variable set as a whole.

The independent variables that describe the DTS include the following: trainees' attributes (GEFT score, age, work, sales and industry experience, education, interaction, gender), DTDP (1 or 2), trainer (manager facilitator versus corporate instructor), and the work environment (manager involvement and office environment). These variables were entered simultaneously into a multiple regression equation. One analysis was conducted for each of the three dependent variables: trainee satisfaction, number of placements and total dollars billed. The general dependent and DTS independent variables are identified in Figure 2.1. Because the DTS independent variable set defined the distance training system, all the input and process variables were entered into the equation. Even though trainees differed on characteristics of GEFT, work experience, education, and gender, the multiple regression technique holds the variance constant. Next, the DTDP differed on the methods (individual versus group), media (no videoconferencing versus
videoconferencing), and instructional techniques (interaction with manager versus corporate trainer). Finally, work environment differed in two ways. First, how did the trainee perceive the manager—as involved or not involved in their training experience? Second, did the trainee perceive the office environment/culture as being structured or unstructured, and were results rewarded on an individual or team basis?

Technically, training satisfaction, number of placements, and total dollars billed were regressed on the DTS independent variable set. Each regression analysis was conducted as a linear, simultaneous analysis of the variables, which means all independent variables were entered into the regression equation at the same time. Variables with an interval or ratio level of measurement did not need to be altered for the regression analysis. However, categorical variables with two levels were dummy coded to carry values of zero or one for the purpose of this analysis. These variables included: trainees' gender (0 = male, 1 = female); the DTDP instructional approach (0 = DTDP 1: self-instruction with print, videotapes and manager as facilitator, 1 = DTDP 2: group instruction with print, videotape and video conferencing through the corporate university's virtual classroom); trainer (0 = office manager trainer, 1 = corporate trainer); trainees' perception of manager involvement (0 = manager not involved in training, 1 = manager involved in training). To measure work environment as well, one categorical variable, the office environment/culture, required three dummy variables to be re-coded as four items. The four office environment items on the questionnaire were: "unstructured with focus on team (office) results"; Dummy1 = "unstructured with focus on individual results"; Dummy2 = "structured with focus on team (office) results", and Dummy3 = "structured with focus on individual results."
For each regression analysis, the coefficient of determination ($R^2$) was examined to determine the amount of variance in the dependent variable predicted by the independent variable set. Next, the test statistic $F$ was examined to determine if the percent of variance explained by the coefficient of determination was statistically significant. The alpha level was set a priori at .05.

Standardized partial regression coefficients were examined for each analysis. Partial regression coefficients identify the relative importance of each of the independent variables. There are assumptions about the residuals that must be met to ensure stability of the results (Hair, et al., 1992). First, the Durbin-Watson statistic was examined for each regression analysis to determine if the assumption of no auto-correlation among the residuals had been violated. Second, the residuals were normally distributed with a mean of zero. Third, constant variance was found when the residuals were plotted against predicted $Y$. There was no indication in any of the three equations that these three assumptions regarding the residuals were being violated.

Next, each regression analysis was also examined for multi-collinearity. Multi-collinearity is a condition in which one independent variable is a linear combination of the other independent variables. To check for this condition, correlation matrices of each equation were examined. No high correlation coefficients were found. Next, tolerance and VIF statistics were examined for each regression equation. All tolerance values were close to 1, indicating that multi-collinearity is not a problem. All VIF values were less than 2. A VIF value that exceeds 10 indicates that multi-collinearity is a problem (Warmbrot Notes, 1996). In all three cases, multi-collinearity is not a problem.
The sample size rule of thumb used in multiple regression analysis is 10 to 20 cases per independent variable (Hair et al., 1992); this suggests a range for this study of 110 to 220. The total cases for this study was 154, which falls in that range.

Regression Equation One—Multiple regression analysis for trainee satisfaction—regressed on the eleven independent variables resulted in an $R^2$ of .20 which is interpreted as 20% of the variance in “trainee satisfaction” is explained by the linear combination of the eleven independent variables. Table 4.12 shows the results. The test statistic ($F = 2.732$) was significant at .05, indicating the variance explained by the full model is statistically significant. In this case, $H_0: R^2 = 0$ is rejected and we conclude that $R^2 \neq 0$.

Examination of the standardized partial regression coefficients identifies the relative contribution and importance of two independent variables that explain a statistically significant amount of the variance in trainee satisfaction. The two independent variables that were statistically significant included manager involvement ($\beta = .297$, $P < .05$) and work experience ($\beta = .451$, $P < .05$). To explain this further, for those trainees who felt their manager was involved in their training, training satisfaction would increase 13.8 points. This is a large number of points in a score that could range from 15 to 75 points. Likewise, for every 1 year increase in work experience a trainee possessed before this training, one would expect to see a .52 or 1/2 point increase in the training satisfaction score when holding all other independent variables constant. The variable of interest in this study was the type of distance training delivery process (DTDP). According to the results of this regression analysis, the DTDP was not
statistically significant in explaining variance in training satisfaction. The type of trainer, manager or corporate instructor, did not have a statistically significant influence training satisfaction.
<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>b</th>
<th>Standard Error</th>
<th>Beta</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTDP</td>
<td>3.69</td>
<td>2.29</td>
<td>.17</td>
<td>.11</td>
</tr>
<tr>
<td>GEFT Score</td>
<td>-0.25</td>
<td>0.19</td>
<td>-.11</td>
<td>.19</td>
</tr>
<tr>
<td>Work Experience</td>
<td>0.52</td>
<td>0.12</td>
<td>.45</td>
<td>.01</td>
</tr>
<tr>
<td>Sales Experience</td>
<td>-0.20</td>
<td>0.17</td>
<td>-.14</td>
<td>.23</td>
</tr>
<tr>
<td>Industry Experience</td>
<td>-8.82</td>
<td>0.24</td>
<td>-.04</td>
<td>.71</td>
</tr>
<tr>
<td>Education</td>
<td>-0.36</td>
<td>0.38</td>
<td>-.08</td>
<td>.35</td>
</tr>
<tr>
<td>Interaction</td>
<td>-2.01</td>
<td>0.04</td>
<td>-.05</td>
<td>.57</td>
</tr>
<tr>
<td>Gender</td>
<td>3.83</td>
<td>2.02</td>
<td>.17</td>
<td>.06</td>
</tr>
<tr>
<td>Trainer</td>
<td>-1.53</td>
<td>1.50</td>
<td>-.09</td>
<td>.31</td>
</tr>
<tr>
<td>Manager Involvement</td>
<td>13.78</td>
<td>3.92</td>
<td>.30</td>
<td>.01</td>
</tr>
<tr>
<td>Work Environment</td>
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<td>0.93</td>
<td>.02</td>
<td>.81</td>
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<td>Dummy 1</td>
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<tr>
<td>Dummy 2</td>
<td>-.18</td>
<td>2.47</td>
<td>-.01</td>
<td>.92</td>
</tr>
<tr>
<td>Dummy 3</td>
<td>.14</td>
<td>2.45</td>
<td>.01</td>
<td>.95</td>
</tr>
</tbody>
</table>

R = .450  
R Squared = .20  
F = 2.73  
Durbin-Watson = 1.89  
Sig. = .002  
Standard Error of the Estimate = 10.19

Table 4.12: Regression of Training Satisfaction on the DTS Independent Variable Set

Note Dummy Coding for the following variables:
DTDP: Self-Instructional Modules = 0; Group-Videoconferencing = 1
Gender: Male = 0; Female = 1
Trainer: Self/Manager Facilitator = 0; Corporate Instructor = 1
Manager Involvement: No = 0; Yes = 1
Work Environment: Unstructured with Focus on Team(Office) Results = 0  
Unstructured with Focus on Individual Results = Dummy 1;  
Structured with Focus on Team (Office) Results = Dummy 2;  
Structured with Focus on Individual Results = Dummy 3
Regression Equation Two—Multiple regression analysis for performance—measured as the number of placements on the DTS independent variables also resulted in an $R^2$ of .20. This result is interpreted as 20% of the variance in “placements” is explained by the DTS linear combination set. The test statistic ($F = 2.718$) was again significant at .05, indicating that 20% of the variance explained by the full DTS model is statistically significant. Again, $H_0: R^2 = 0$ is rejected and I conclude that $R^2 \neq 0$. See Table 4.13.

Examination of the standardized partial regression coefficients identifies the relative importance of four independent variables in explaining the variance in placements. The four independent variables that were statistically significant are manager involvement ($\text{Beta} = .21, p < .05$), sales experience ($\text{Beta} = .246, p < .05$), and work environment ($\text{Beta} = .24, p < .05$) with Dummy 3 ($\text{Beta} = -.22, p < .05$).

To further explain this result, those trainees who felt their manager was involved in their training, their number of placements would increase by 5. This result is important because the mean performance is approximately 6 placements in one year. This suggests that managers who are involved with their trainees help double their trainees performance versus trainees whose manager was not involved. Next in relative importance is work environment. For those who described their office culture as “Unstructured with focus on Team/Office Results” experienced a 1.2 increase in the number of placements. However, those who described their office culture as “Structured with Focus on Individual Results” experienced a decrease in the number of placements by 2.85. This would suggest that those in the team environment were more productive.
(increase of 1 placement), whereas those in the individualistic environments were less productive (decrease of 3 placements). Finally, in terms of sales experience, for every one year of sales training a trainee possessed before this training, one would expect to see a .18 increase in their number of placements, when holding constant all other independent variables.

Again, the variable of interest in this study was the DTDP which was not statistically significant in explaining any variance in the number of placements. Therefore, it can be assumed that neither type of delivery process influenced the number of placements more than the other holding all other variables constant.
<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>b</th>
<th>Standard Error</th>
<th>Beta</th>
<th>Significance</th>
</tr>
</thead>
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<td>DTDP</td>
<td>.31</td>
<td>1.18</td>
<td>.03</td>
<td>.80</td>
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<td>GEFT Score</td>
<td>-3.40</td>
<td>0.10</td>
<td>-.03</td>
<td>.73</td>
</tr>
<tr>
<td>Work Experience</td>
<td>-0.12</td>
<td>0.06</td>
<td>-.19</td>
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<tr>
<td>Sales Experience</td>
<td>0.18</td>
<td>0.09</td>
<td>.25</td>
<td>.03</td>
</tr>
<tr>
<td>Industry Experience</td>
<td>-7.11</td>
<td>0.12</td>
<td>-.06</td>
<td>.57</td>
</tr>
<tr>
<td>Education</td>
<td>-7.15</td>
<td>0.20</td>
<td>-.03</td>
<td>.71</td>
</tr>
<tr>
<td>Interaction</td>
<td>-1.14</td>
<td>0.02</td>
<td>-.05</td>
<td>.54</td>
</tr>
<tr>
<td>Gender</td>
<td>8.98</td>
<td>1.05</td>
<td>.01</td>
<td>.93</td>
</tr>
<tr>
<td>Trainer</td>
<td>0.34</td>
<td>0.78</td>
<td>.04</td>
<td>.66</td>
</tr>
<tr>
<td>Manager Involvement</td>
<td>5.04</td>
<td>2.04</td>
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<td>.01</td>
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<tr>
<td>Work Environment</td>
<td>1.24</td>
<td>0.48</td>
<td>.24</td>
<td>.01</td>
</tr>
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<td>Dummy 1</td>
<td>Excluded by SPSS</td>
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<td></td>
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<tr>
<td>Dummy 2</td>
<td>.67</td>
<td>1.28</td>
<td>.05</td>
<td>.60</td>
</tr>
<tr>
<td>Dummy 3</td>
<td>-2.85</td>
<td>1.27</td>
<td>-.22</td>
<td>.03</td>
</tr>
</tbody>
</table>

R = .449 \quad R \text{ Squared} = .202 \quad F = 2.718 \quad \text{Sig.} = .002^* \quad \text{Durbin-Watson} = 1.931

Table 4.13: Regression of Number of Placements on DTS Independent Variable Set

Note Dummy Coding for the following variables:
DTDP: Self-Instructional Modules = 0; Group-Videoconferencing = 1
Gender: Male = 0; Female = 1
Trainer: Self/Manager Facilitator = 0; Corporate Instructor = 1
Manager Involvement: No = 0; Yes = 1
Work Environment: Unstructured with focus on Team(Office) Results = 0
Unstructured with Focus on Individual Results = Dummy 1;
Structured with Focus on Team (Office) Results = Dummy 2;
Structured with Focus on Individual Results = Dummy 3
Regression Equation Three—Multiple regression analysis for performance—measured by the dollars billed in one year on the DTS independent variables resulted in an $R^2$ of .14. This is interpreted as 14% of the variance in “total dollars billed”. Results are shown in Table 4.14. However in this analysis, the test statistic ($F = 1.738$) was not statistically significant at .05, indicating the variance explained by the full DTS model was not helpful in explaining total dollars billed. In this case, $H_0: R^2 = 0$ is accepted.

Examination of the standardized partial regression coefficients identifies the relative contribution of only one independent variable explaining a significant amount of variance in total dollar billings. The independent variable that was statistically significant was work environment described at Dummy 3 ($\beta = -.252, \alpha < .05$). This suggests again that those who perceived their office culture as “Structured with Focus on Individual Results” experienced a decrease in their total billings. Caution needs to be applied here, because the DTS model is not statistically significant in explaining total billings. Again, DTDP did not influence total dollar billings.
<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>b</th>
<th>Standard Error</th>
<th>Beta</th>
<th>Significance</th>
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</thead>
<tbody>
<tr>
<td>DTS Instruction</td>
<td>$49,065.09</td>
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<td>.16</td>
<td>.13</td>
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<td>GEFT Score</td>
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<td>2,672.73</td>
<td>.11</td>
<td>.22</td>
</tr>
<tr>
<td>Work Experience</td>
<td>-1,622.31</td>
<td>1,631.92</td>
<td>-.11</td>
<td>.32</td>
</tr>
<tr>
<td>Sales Experience</td>
<td>3,000.98</td>
<td>2,323.10</td>
<td>.15</td>
<td>.20</td>
</tr>
<tr>
<td>Industry Experience</td>
<td>-2,015.88</td>
<td>3,345.45</td>
<td>-.06</td>
<td>.55</td>
</tr>
<tr>
<td>Education</td>
<td>5,737.71</td>
<td>5,311.25</td>
<td>.10</td>
<td>.28</td>
</tr>
<tr>
<td>Interaction</td>
<td>-474.82</td>
<td>499.10</td>
<td>-.09</td>
<td>.34</td>
</tr>
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<td>Gender</td>
<td>34,734.74</td>
<td>28,352.53</td>
<td>.12</td>
<td>.22</td>
</tr>
<tr>
<td>Trainer</td>
<td>-5,735.68</td>
<td>21,082.91</td>
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<td>.79</td>
</tr>
<tr>
<td>Manager Involvement</td>
<td>47,676.22</td>
<td>55,025.65</td>
<td>.08</td>
<td>.39</td>
</tr>
<tr>
<td>Work Environment</td>
<td>18,365.44</td>
<td>13,057.25</td>
<td>.14</td>
<td>.16</td>
</tr>
<tr>
<td>Dummy 1</td>
<td>Excluded by SPSS</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Dummy 2</td>
<td>-42,864.91</td>
<td>34,665.46</td>
<td>-.13</td>
<td>.22</td>
</tr>
<tr>
<td>Dummy 3</td>
<td>-84,974.97</td>
<td>34,338.48</td>
<td>-.25</td>
<td>.02</td>
</tr>
</tbody>
</table>

R = .373  
R Squared = .139  
F = 1.738  
Sig. = .059  
Standard Error of the Estimate = 142893.795  
Durbin-Watson = 2.183

Table 4.14: Regression of Total Dollars Billed on the DTS Independent Variables Set

Note Dummy Coding for the following variables:
DTDP: Self-Instructional Modules = 0; Group-Videoconferencing = 1
Gender: Male = 0; Female = 1
Trainer: Self/Manager Facilitator = 0; Corporate Instructor = 1
Manager Involvement: No = 0; Yes = 1
Work Environment: Unstructured with focus on Team(Office) Results = 0
Unstructured with Focus on Individual Results = Dummy 1;
Structured with Focus on Team (Office) Results = Dummy 2;
Structured with Focus on Individual Results = Dummy 3
This section reported the multiple regression analysis results. Two of the three multiple regression equations were statistically significant at $\alpha = .05$. This means that the linear combination of the independent variables used in this analysis as the DTS model explained some of the variance in the dependent variables of training satisfaction and placements. Regression equations one and two explained approximately 20% of the variance in trainee satisfaction and number of placements. Regression equation three was not statistically significant in explaining total dollars billed. This section also highlighted which independent variables were significant in explaining trainee satisfaction and number of placements. The next section will discuss additional results from the trainees’ comments on the evaluation form. SPSS output data for further evaluation is in Appendix H.

Additional Results

This final section reports additional results obtained from the qualitative comments provided by trainees in DTDP 1 and 2 on their Basic Account Executive (BAE) Evaluation Form. The comments were reviewed using content analysis (Kerlinger, 1987). The researcher looked for patterns while counting the number of responses to each question. Responses were grouped by common issues, words, or content themes for each question.

A total of 65 comments by trainees from DTDP 1 and 102 from DTDP 2 were received. Not all participants took the opportunity to fill out this section of the evaluation form (see the sample BAE Evaluation Form in Appendix E). All the trainees’ comments based on the evaluation questions are reported in Appendix H. In the discussion that
follows, the major responses to each open-ended question are tallied and summarized below.

**Question One:** What do you feel was the most important information you learned? The major response summarized from DTDP 1 was “the company System,” with 45 trainees writing something related to this on their evaluations. The major response summarized from DTDP 2 was also “the company System,” with 70 making this general comment.

**Question Two:** What did you find was the least helpful information covered in this program? The major response summarized from DTDP 1 was “the company’s computer software”, with 50 trainees writing this on their evaluations. The major response summarized from DTDP 2 was also “the company’s computer software”, with 97 making this general comment.

**Question Three:** What would you suggest to improve the value of the program for future participants? The major response summarized from DTDP 1 was “Follow the system,” reported by 15 trainees, with “Develop a Desk Specialty” reported by 12 trainees. The major response summarized from DTDP 2 was different. DTDP 2’s general comment was “Find Different Way to Train Database/Cannot Learn computer software over videoconferencing,” with 70 writing something to this effect.

**Question Four:** Do you feel the videotape (DTDP 1)/videoconference technology (DTDP 2) helped or hindered your learning? Why? The major response summarized from DTDP 1 was “helped,” with 55 trainees writing this on their evaluations. The major response summarized from DTDP 2 was also “helped,” with 87 making this general comment. The “whys” varied between the two groups. The general comment of the...
videotape group suggested that the videotapes were able to demonstrate the behavior they were to model (21 responses). The general comment for the videoconferencing group suggested that they could meet other sales executives from other offices (23 responses) and could see they were not the only ones having difficulties with learning the information (37 responses).

Question Five: Which subjects or skills covered in the program will you need to further develop? The major response summarized from DTDP 1 was “Planning, Computer Skills, or Using the System,” with 47 trainees writing either one of these on their evaluations. Likewise, the major response summarized from DTDP 2 was “Planning, Computer Skills, or Using the System,” with 61 making one of these general comments.

Finally, Question Six: What additional comments would you like to make about this program? This question had many responses. The major response summarized from DTDP 1 was positive about the “completeness” of the training system, with 32 trainees writing something about this on their evaluations. The major responses summarized from DTDP 2 were predominantly focused on providing feedback to the instructor, with 42 making positive and constructive comments about his capabilities and instructional techniques. Another 31 commented that their overall experience was predominantly positive.

Conclusions from the findings reported here and the implications for HRD will be discussed further in chapter 5.
CHAPTER 5

SUMMARY, CONCLUSIONS, AND IMPLICATIONS

There are four sections in this chapter: summary of the findings from the study, conclusions drawn from those findings, implications for HRD, and suggestions for future research. Because this is a case study, the conclusions are specific to this organization and its distance training system and should not be generalized outside of this study. Implications for HRD and future research are discussed within the context of HRD and organizational performance.

Summary of Findings

The field investigation just presented was designed to describe and analyze a distance training system (DTS) as an HRD intervention operating in an organizational setting. Specific attention is given to the distance training delivery process (DTDP) and the differences in methods, media and instructional techniques, to understand their impact on training satisfaction and performance. This final chapter reviews the findings in relation to the five research questions posed in chapter 1.

First, in answer to research question one, the two DTDP groups were different on trainee attributes of GEFT score, sales and industry experience, education, and gender. DTDP group 1 had more education than DTDP group 2. However, DTDP group 2 had a higher average GEFT score and more sales and industry experience. DTDP group 1 was
more evenly distributed in terms of the number of males and females than DTDP 2, which had more females. There was no statistically significant difference in the age, total work experience, or the amount of interaction by the two groups.

Second, for research questions 2 and 3, there was no statistically significant difference between the two DTDP levels of the DTS in terms of its influence on the 3 dependent variables. Group means for training satisfaction scores and job performance, in terms of the number of placements and billings, showed no statistically significant differences. In terms of organizational performance, DTDP 2 collectively had more total placements and billings, and a higher per desk average than DTDP 1. This was due to a greater number of trainees trained through DTDP 2 whose production was counted even though they left the organization.

There was a practical difference in retention rates for research question 4. After one year on the job, DTDP 1 retained a higher percentage of trainees than DTDP 2 (66% vs. 33%).

For research question five, canonical correlation was not necessary because the 11 independent variables and 3 dependent variables were not highly correlated with each other. Three multiple regression equations were then run to determine the impact of the 11 independent variables, defining the DTS. The 3 dependent variables: training satisfaction score, number of placements, and total dollar billings were regressed on the eleven independent variables. Two of the three regression equations, using the same 11 independent variables, were statistically significant in explaining approximately 20% of the variance in training satisfaction and number of placements. None of the partial regression coefficients suggest that the DTDP, or who the trainer was, were adequate in
explaining either satisfaction or performance. Finally, partial regression coefficients that were statistically significant in explaining variance in trainee satisfaction were trainees' perception of manager's involvement and trainees' total years of work experience. Also, partial regression coefficients that were statistically significant in explaining variance in job performance as measured by the number of placements were again, perception of manager involvement, as well as work environment, and number of years of sales experience.

Conclusions

Because this was a field study with no experimental controls, the outcomes should be interpreted with caution. These conclusions are only suggestions specific to this case study. Further investigation under more a controlled situation where the two levels of the DTS treatment can be randomly assigned, or where more equal populations are available, is recommended. The following are conclusions drawn from this study.

First, the two distance training delivery processes showed no impact on trainee satisfaction or performance. It is important to remember that the two DTDP groups were not equal in terms of gender, cognitive style, education, or work experience. However, it is possible that the trainee attributes counterbalanced each other when the two groups were compared on the dependent variables. The mean results of training satisfaction, placements, and dollar billings were approximately the same for each group. Even though the populations were different, the findings from regression analysis, holding all independent variables constant, indicate that the DTDP instructional approach and trainer did not explain a statistically significant amount of variance. Also, this conclusion is consistent with a recent research report by Russell (1999), who reviewed 355 research
studies in the distance education literature and concluded "no significant difference phenomenon" for satisfaction and learning.

Second, at Level Four Evaluation (Kirkpatrick, 1996) for organizational impact, results did show a practical difference between the two groups. The retention rate was greater for DTDP 1, but total performance in terms of placements and total dollars billed was greater for DTDP 2. The trade-off of lower retention for higher production should be an issue for an organization to consider. Studies by Garrison (1985), Billings (1988), and Bernard and Amundson (1989) suggest that learners in distance education settings have a higher dropout rate. The results of this study also support this finding. Being trained under the corporate videoconferencing approach may have had an impact on the trainee-manager relationship, which is not as much of an issue in the DTDP 1 approach with manager as trainer. It is possible manager support was not perceived by the trainee in DTDP 2 since the corporate instructor does most of the training. It is also possible that the trainee did not have the work or sales experience that makes the training more effective. However, from an efficiency perspective, DTDP 2 allowed more sales executives to be trained. Even though a greater percentage left the organization, these trainees did produce more placements than DTDP 1 resulting in billings that contributed to total organizational performance. Placements and billings for those who left the company are included in the total. The issue here is these newly trained sales executives have obtained the knowledge and skills, but are no longer with the organization. Did they drop out of this type of job and industry, or did they use their new knowledge and go to a competitor? Again, trainees may have left because they did not feel the manager was
involved, or because they did not have enough sales or work experience. This is speculation based on the multiple regression analysis.

Third, based on the regression analysis, manager involvement is important in both trainees’ satisfaction with their training experience and their job performance. It is recommended that managers remain involved in the training process and through the first year on the job regardless of which distance training delivery approach is used.

Fourth, work environment was statistically significant in improving the number of placements. Based on this, the organization should explore an office structure that emphasizes team results for first year sales trainees as opposed to a structured office culture that stresses individual results.

Fifth, based on the regression analysis, it appears that more work experience contributes to higher trainee satisfaction, and more sales experience leads to job performance. This would suggest that hiring people with work and sales experience enhances training effectiveness outcomes.

Finally, overall results from the multiple regression analysis suggest that a DTS needs to be looked at as a whole. Using 11 variables explained only 20% of the variance in trainee satisfaction scores and number of placements. This means that there are other variables influencing training satisfaction and placements that must be identified. Some suggestions for future studies are to measure trainee motivation and level of self-direction. Likewise, there may be specific manager and trainer characteristics that better define manager involvement and trainer attributes. Also, more precise work-environment characteristics must be identified to better define this variable. There may be other environmental factors (Gilbert, 1978) and performance variables at the process and
organizational level (Rummler & Brache, 1995), such as interaction and strategy, that should be considered in future studies.

Implications for Human Resource Development

This section reviews the implications of this research study for the field of human resource development. First, a DTS previously conceptualized as an HRD intervention (Hruby-Moore, 1997) was described and analyzed within an actual organizational setting. Second, applying videoconferencing as a distance technology to a self-instructional training program allowed the researcher to analyze the changes to a distance training delivery process with respect to the instructional design variables. Third, the research situation is unique in that two levels of a distance training system could be compared on organizational training satisfaction and job performance outcomes. Finally, an opportunity to use partnership research as an inductive approach to finding HRD research problems within an organizational context benefit both the practitioner and researcher.

Because HRD is a young field of study, it is important to use theory to guide practice. This research study borrowed from systems theory (von Bertalanfy, 1968) and the theory of transactional distance (Moore, 1973) to formulate the idea of a distance training system. HRD instructional and performance analysis models (Gilbert, 1978; Rummler & Brache, 1995) were also used to develop and analyze a DTS found operating in an organizational setting.

DTS is a concept that can serve as a framework for implementing distance technologies and other instructional inputs to produce the desired individual training and organizational performance outcomes. This case study can be used by HRD practitioners and researchers as a springboard for further exploring the concept of DTS as contributing
to individual and organizational performance. Likewise, the implications of manager involvement and work environment have relevance to the issue of transfer of training. Also, because this study came from partnership research, training satisfaction and job performance were measured based on the organization's parameters. The HRD field has some guidelines for measurement; however, more could be done in this area to guide research and practice in using standard performance measurements (Bates, 1999; Holton, 1999). For example, placements and billings are the "report card" (Doner, 1998) for this organization, but these quantitative measures have little meaning to the training staff in terms of improving their performance as DTS designers, developers, evaluators, instructors, and administrative supporters. Also, more research on the linkage between the DTS and impact at the individual, process and organizational levels is necessary.

Finally, because evaluation contains the word "value," it was important for the HRD staff to receive feedback from its trainees on what they valued in the training program. The qualitative data comments from the evaluation were especially important to the training staff. The following summarizes the trainees' qualitative comments.

First, the HRD staff learned that the two training approaches used in their DTS were consistent in what trainees found most important about their learning experience—the MRI system. Second, through the evaluation, the training staff made changes regarding how database and computer skills were taught. Third, the corporate training staff emphasized to new trainees what was important to the trainees who had gone through previous programs, and who were now successfully performing on the job. The group dynamics of a distance training system staff and participants are a research issue recently identified by Schieber and Berge (1998). Fourth, the technology—videotape or
videoconferencing—were both found to help in trainees’ learning; however, participants could not choose which DTDP they would prefer for training. Fifth, follow-up classes, job aids, and workshops should be offered to address specific skills that are difficult to develop during the initial training. Trainees suggested three particular areas of focus: planning/organizing, database/computer or closing. Finally, overall comments, the last question asked, provided an abundance of positive along with some critical comments that suggest areas for improvement. Almost all of them dealt with “communications” between the field office and corporate. For example, because the DTDP 2 trainees were on the front lines of the business during their practice sessions, the corporate staff heard what the trainees and their customers wanted. The training staff could translate the need into skill practice exercises the trainees needed. The corporate university was in contact daily with trainees in the field who participated in the videoconferencing (DTDP 2) method. Because of this, they could directly notify trainees of recent changes in the industry, training, or corporate policy. Communication in DTDP 1 was often the manager, using the self-instructional materials to train someone, calling the V.P. of corporate training to discuss training issues. Trainees in DTDP 2 offices with videoconferencing often cited the ease of direct interaction with corporate and other offices as beneficial. DTDP 2 trainees described the ability to develop a network with other offices, which was never mentioned by DTDP 1 participants. This ability to communicate more quickly and to form networks is an important finding with implications for both the company and HRD related to organizational strategy. For example, “value” can be defined as merit in both economic terms and character qualities. Because the values listed in this organization’s mission statement are: “to be a global
network...and the world's preferred and pre- eminent provider of…", DTDP 2 may be in a better position to support these values. This company is currently the industry leader. Both levels of the DTS support the organization’s performance goals; however, DTDP 2 may have more qualitative benefits in terms of supporting the organization’s mission and the greater ability for two-way information sharing among offices.

In conclusion of this section, the DTS in this study is able to meet the corporate training department’s and the company’s objectives with no significant difference between trainees’ average satisfaction, number of placements, and dollar billings. Economic value is gained by sales executives performing their jobs. DTDP 2 supports more total economic value based on the total production while DTDP 1 has a better retention rate. The company’s character can be measured by the trainees’ satisfaction with the training and their learning outcomes that lead to professionalism in their field. Both DTDPs support the development of sales executives who provide their customers with the solutions they desire. Based on the qualitative comments, DTDP 2 may provide more opportunity for interaction and networking within the organizational system. This leads to the discussion of issues for future research.

Future Research

This final section discusses issues for future distance training research to guide HRD practice. Four primary issues are cognitive style, interaction, transfer of training outcomes, and long term organizational impact.

First, training research on cognitive style suggests that matching cognitive style to type of training method may improve a person’s effectiveness in learning (Verduin & Clark, 1991). Currently, sales executives do not have a choice in which DTDP is used to
train them. There may be learning style preferences base on sales executives’ cognitive style that allow them to learn better in a one type of distance-training environment over another. Cognitive style and distance training for career occupations other than sales executives should also be explored.

Second, different types of interaction proposed by Wagner (1998) are thought to effect learning and performance. This study did not explore the types or the process of interaction, only the trainees’ perceived number of hours of interaction as an outcome. Since different instructional techniques were used to encourage participation in training, the interaction that occurred between trainees and other trainees, or fellow office staff, was not measured. This is recommended for future studies.

Third, in comparing the two levels of the DTS, the delivery process in terms of method, media, techniques, and trainer, did not appear to have any impact on training satisfaction or job performance. However, transfer of training is an issue as evidenced by the lower retention rate in DTDP 2. This study suggests manager involvement and work environment may be more important transfer climate variables to study for improving performance. These findings are consistent with the HRD research and discussion of transfer climate (Burke, 1997; Carvalho, 1997; Holton, Bates, Seyler, & Carvalho, 1997; Tang, 1997).

Finally, it is important to note that this study focused on the short-term impact (one year) of a DTS. The short-term DTS performance results may be different in their long-term impact. For example, is training more participants through DTDP 2, even if they don’t stay with the company, good for the organization in the long run? What impact does the cost of continuous recruiting and training have on this business over
time? Which delivery approach is more cost-effective in terms of actual long-term investments in technology to financial benefits? The concept of efficiency could be explored further to find out which DTDP is most beneficial to the organization in long run, especially if two delivery processes cannot be supported simultaneously into the future. Training with DTDP 2 relates to the issue of time and money. Can the manager afford to invest in the videoconferencing, and how much production can the manager generate because he or she is not using that time to train someone?

In conclusion, more needs to be understood about DTS and its impact. As an HRD intervention, a DTS’s effectiveness must be further understood in relation to the cognitive style of learners, the quality of the interaction, transfer of training issues, and the long-term effectiveness and efficiency of the delivery process. HRD practitioners and researchers must continue to focus on how individual and organizational performance can be improved with a DTS by studying the parts of the system: the instructional design variables, trainees, trainer, content, and work context, all of which are important to understanding the whole. A DTS may be a training, career, and organizational development intervention. Only the training aspect of HRD was studied here.

The development of distance and communication technologies spurred by the internet and videoconferencing are rapidly increasing in popularity (Imel, 1998; Schlosser & Anderson, 1994). Weinstein (1997) suggests that the appeal of these technologies is the interactivity of the teacher and students and their ability to share information through text, graphics, audio, video, and virtual reality experiences despite physical separation. In this study, interaction was required by the training objective, and the amount of interactivity was not statistically different for either instructional delivery
approach. Learning and performance outcomes are of most importance to the field of HRD. Interaction is needed for learning and acquiring information that leads to knowledge and performance. This DTS appears to support both learning and performance. This study suggests that with careful attention to course structure, which includes training objectives, distance technology can be used to support the trainees’ dialog and interaction in the training delivery process. This study begins to demonstrate that a DTS, regardless of the delivery process, supports learning and performance in an actual on-the-job workplace setting. Both forms of structured on-the-job training (Jacobs & Jones, 1995) approaches delivered by alternative media were effective. The HRD research and practice challenge for the future is to further our understanding of the organizational impact of trainee selection, the process of interaction, the training transfer climate, and long-term organizational impact of a DTS.
REFERENCES


Morrison, G. (1994). The media effects question: “Unresolvable” or asking the right question. Educational technology research and development. 42, 41-44.


APPENDIX A

Application for Ohio State University Human Subjects
APPLICATION FOR EXEMPTION FROM HUMAN SUBJECTS COMMITTEE REVIEW

All research activities that will involve human beings as research subjects must be reviewed and approved by the appropriate human subjects review committee, or receive exemption status, prior to implementation of the research.

Principal Investigator: Jacobs, Ronald L.

(First name) Ronald

(Academic Title) Associate Professor

(Department) Workforce Education and Lifelong Learning

(Mailing Address) 287 Arpa Hall - College of Education

(Co-Investigator(s)) Moore, Maria Hruby

(Protocols) The Effects of a Video-tape Method Versus An Interactive Video Method of Distance Training on Employee Learning, Performance and Attitudes

THE ONLY INVOLVEMENT OF HUMAN SUBJECTS IN THE PROPOSED RESEARCH ACTIVITY WILL BE IN ONE OR MORE OF THE EXEMPTION CATEGORIES LISTED ON THE BACK OF THIS APPLICATION.

CATEGORY: (Check one or more) ☑ 1 ☑ 2 ☑ 3 ☑ 4 ☑ 5 ☑ 6

SOURCE OF FUNDING FOR PROPOSED RESEARCH: (Check A or B)

A. OSURF: Sponsor RF Proposal/Project No.

B. Other (Identify) Departmental/Management Recruiter's International

Office Use: EXEMPTION STATUS: ☑ APPROVED ☑ DISAPPROVED

APR 21 1998

Date

Chairperson

** Principal Investigator must submit a protocol to the appropriate Human Subjects Review Committee.

IMPORTANT NOTICE TO INVESTIGATORS: Exempting an activity from review DOES NOT absolve the investigators of the activity from ensuring that the welfare of human subjects in the activity is protected and that methods used, and information provided, to gain subject consent are appropriate to the activity.
APPENDIX B

Group Embedded Figures Test (GEFT)
By Philip K. Olman, Evelyn Raskin, & Herman A. Witkin

Name ____________________________  Sex ______

Today's date ______________  Birth date ____________

INSTRUCTIONS: This is a test of your ability to find a simple form when it is hidden within a complex pattern.

Here is a simple form which we have labeled "X":

X

This simple form, named "X", is hidden within the more complex figure below:

Try to find the simple form in the complex figure and trace it in pencil directly over the lines of the complex figure. It is the SAME SIZE, in the SAME PROPORTIONS, and FACES IN THE SAME DIRECTION within the complex figure as when it appeared alone.

When you finish, turn the page to check your solution.
APPENDIX C

Letter to Manager of Trainees
July 10, 1998

Dear Mr.,

University has agreed to participate in a training research study through The Ohio State University. Thank you for agreeing to be part of this project! This study will further our understanding of the effectiveness of the Basic Account Executive Training Program for...

As we discussed, your Account Executive has been selected as part of a random sample of Basic AE Trainees in 1997 to participate in this study. Your involvement and your Account Executive's feedback in this data collection process is appreciated and will provide valuable information to both the research community and...

Enclosed you will find a copy of a survey as well as the Group Embedded Figures Test (GEFT). Please review the instructions and then schedule 45 minutes for you to give those instructions to your Account Executive to first complete the GEFT and then the survey with Basic AE Training program evaluation.

Thank you in advance for your participation and cooperation in this study. Please return the responses in the enclosed envelope within two (2) weeks. The surveys have been coded with the participant's initials to ensure confidentiality. Please tell your Account Executive to be honest with his/her responses. If you have any questions, please call me at (216) 221-0361 (my home) or email me at hruby.z@osu.edu. I will be happy to clarify any concerns. You may also call...

Sincerely,

Maria Hruby Moore
Doctoral Candidate
Human Resource Development

cc: Vice President of Training, Chairman
APPENDIX D

Instructions for administration of the GEFT
Group Embedded Figures Test (GEFT)
ADMINISTRATION INSTRUCTIONS FOR MRI MANAGER

Materials: Watch to keep time, GEFT booklet, and 2 sharpened pencils with erasers.

Directions: Distribute test booklet and pencils to the Account Executive. This timed test takes about 15 minutes. The manager says: “Now start reading the Direction, which include 2 practice problems for you to do. When you get to the end of the directions on Page 3, please stop. Do not go beyond Page 3.” The manager should be present in the room to make sure the Account Executive is doing the two practice problems correctly and that they do not turn past Page 3.

When the Account Executive has finished reading the directions on Page 3, the Manager says: “Before I give the signal to start, let me review the points to keep in mind.”
1. Look back at the simple forms as often as necessary on the back cover.
2. ERASE ALL MISTAKES.
3. Do the problems in order. Don’t skip a problem unless you are absolutely “stuck” on it.
4. Trace ONLY ONE SIMPLE FORM IN EACH PROBLEM. You may see more than one, but just trace one of them.
5. The simple form is always present in the complex figure in the SAME SIZE, the SAME PROPORTIONS, and FACING IN THE SAME DIRECTION as it appears on the back cover of this booklet.

Stress the necessity for tracing all lines of the Simple Form.“Are there any questions about the directions?” (Manager should pause to allow questions.)

The Manager then says: “When I give the signal, turn the page and start the First Section. You will have 2 minutes for the 7 problems in the First Section. Stop when you reach the end of this section. Go ahead!” This section is for practice with the format of the test. Manager should clarify concerns during this set of practice items.

After 2 minutes, Manager says: “STOP – Whether you have finished or not. When I give the signal, turn the page and start the Second Section. You will have 5 minute for the 9 problems in the Second Section. You may not finish all of them, but work as quickly and as accurately as you can. Ready, go ahead.” (Watch the time.)

After 5 minutes, Manager says: “STOP – Whether you have finished or not. When I give the signal, turn the page and start the Third Section. You will have 5 minutes for the 9 problems in this section. Do you need a new pencil? Ready, go ahead.”

After 5 minutes, Manager says: “STOP – Whether you have finished or not. Please close your test booklets, place the GEFT in the envelope. Now, please fill out the survey/evaluation. Once you are finished, place it in the same envelope and seal it. I will drop the sealed envelope in the mail. Thank you for your assistance in this Ohio State University in conjunction with MRIU Research Study.”
APPENDIX E

Demographic Information Survey
Directions for *OSU Survey*: Please fill in the blanks following each question.

1. Check the method of Basic Account Executive training you received:
   
   ___ ConferView
   ___ Videotapes with __________________ facilitating

2. How many years of schooling did you have before you came to
   
   ___  (GED/H.S. Diploma = 12; Undergrad Degree = 16; Masters = 18 years)

3. How many years of professional, full-time work experience did you have before you came to
   
   ___  (number of years, if none indicate 0)

4. How many years of sales experience did you have before you came to
   
   ___  (number of years, if none indicate 0)

5. On the job performance after one (1) year from completing the BAE training.
   
   ________ Total Number (#) of Placements Completed during first year
   ________ Total Dollars ($) Billed in first year on the job

6. How much interaction did you have with your manager during the training?
   
   ______  # of Hours during the Basic Account Executive Training Program

7. Was your manager's involvement in your learning to be an Account Executive appropriate for your training needs? Check Yes or No.
   
   ___ Yes       ___ No

8. Describe the work environment of your office:
   
   ___ Unstructured with Focus on Team (Office) Results
   ___ Unstructured with Focus on Individual Results
   ___ Structured with Focus on Team (Office) Results
   ___ Structured with Focus on Individual Results

9. Describe **YOUR** preference for learning new information?
   
   ___ Independently, on your own
   ___ With a group
APPENDIX F

Basic Account Executive Training Form
Basic Account Executive Training  
*PARTICIPANT'S EVALUATION*

Name: ___________________________ Office: ___________________________

Attendance Date: ___________       Instructor: ___________________________

### How would you rate:

<table>
<thead>
<tr>
<th>A. The content and value of subjects covered:</th>
<th>Excellent</th>
<th>Very Good</th>
<th>Good</th>
<th>Fair</th>
<th>Poor</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The MRI Search/Recruiting/Placement System</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>2. Marketing MRI Services</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>3. Selling &amp; Communication Skills</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>4. Business work habits: planning &amp; organizing</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>5. Using MRIware</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>6. The overall program</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

Comments: ______________________________________________________

### How would you rate:

<table>
<thead>
<tr>
<th>B. The effectiveness &amp; quality of instruction:</th>
<th>Excellent</th>
<th>Very Good</th>
<th>Good</th>
<th>Fair</th>
<th>Poor</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The MRI Instructional Videos</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>2. The review questions</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>3. The video conference interactive discussions</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>4. The pace of the program</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>5. The leader</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>6. The learning environment (facilities, equipment)</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>7. Opportunity to actively participate</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

Comments: ______________________________________________________

### How would you rate:

<table>
<thead>
<tr>
<th>The quality &amp; effectiveness of:</th>
<th>Excellent</th>
<th>Very Good</th>
<th>Good</th>
<th>Fair</th>
<th>Poor</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Other programs/instruction methods you participated in</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>2. Your ability to apply the material presented</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

Comments: ______________________________________________________

*Please Complete Page Two of this Evaluation*
APPENDIX G

Qualitative Training Evaluation Questions Form
Basic Account Executive Training:
PARTICIPANT’S EVALUATION

Please provide us with your feedback on the following questions:

1. What do you feel was the most important information you learned in this program?

2. What did you find was the least helpful information covered in this program?

3. What would you suggest to improve the value of the program for future participants?

4. Do you feel that the video conference technology helped or hindered your learning? Why?

5. Which subjects or skills covered in the program will you need to further develop?

6. What additional comments would you like to make about this program?
APPENDIX H

Responses to Qualitative Evaluation Questions by Distance-Training Delivery Process (DTDP) 1: Self-instructional Modules with Manger as Trainer
Qualitative Questions on Evaluation: Distance Training Delivery Process (DTDP) 1:

1. What do you feel was the most important information you learned in this program?

1-MRI has a great system from recruiting to close.
2-The MRI program -- the basics and how to achieve them.
3-In retrospect, the sections on closing candidates interest and questions techniques in general seem most important.
4-The MRI Way!
5-MRI system, the role playing.
6-The MRI system for searching, recruiting, selling, prepping, and placing candidates.
7-Learning and now using the MRI system
8-I think the most important information I learned was the importance of planning and the proper use of the MRIware and system. I would not want to do my without it!
9-MRI SYSTEM!
10-Focus.
11-Increase phone activity and use the system
12-the MRI system of recruiting, selling and closing.
13-The mechanics of the business and use of the MRI system.
14-Keep dialing.
15-General MRI System basic training, structured enough to give someone a successful program to follow yet flexible enough to allow personalization.
16-Emphasize closing techniques.
17-The MRI system
18-Individual problems facing AE and how to understand the dynamics of the candidate psychology and hiring authority.
19-The MRI system of training
20-MRI's Way of learning the business
21-The MRI recruiting and marketing process. The MRI system and processes were explained pretty thoroughly.
22-The MRI training process that you have to go through every day with recruiting and marketing. Also the planning and time management concepts which are essential an a daily basis.
23-The value of most to me was what was presented did not become evident until much later but the lasting lesson of managing a disciplined MRI sales system and processes continues to be of great value.
24-MRI system
25-Understanding clearly what each separate candidate and company are looking for and do not try to fore a match when there really is not a fit. That is the essence of the MRI system.
26-How to get past the cold call and never seeing the people you deal with.
27-MRI's system of training -- its great!
28-Videos and training system were most helpful.
29-The training system

System = 23
Qualitative Questions on Evaluation: Distance Training Delivery Process (DTDP) 1:

1. What do you feel was the most important information you learned in this program? (Continued)

39-Model role-playing with manager first was useful before first interaction with candidate and client.
40-How to’s of the MRI business system—practical, real world information in the videos and lessons.
41-MRI’s system of how to follow the placement process from the 1st SOD to making the placement and getting paid.
42-The MRI system and processes for success in the business.
47-Explanation of the entire process and system.
49-The most important information was shown in the videos on how to handle the various responses employers would give to us.
50-The MRI system including number of phone calls and presentations with manager present—Needed to get job orders and interviews.
51-The system of MRI instruction is great.
55-This training system was thoughtfully designed.
57-I am glad that my manager was around to help me through the system.
58-MRI’s system is complicated, but it helps to have it in parts.
59-The system MR uses to explain the job
60-The system is wonderful.
61-MRI has a science here with the training materials
63-The system is well laid out to follow and the videos help.
64-The MRI system of training
65-I was glad my manager had experience with this MRI system of instruction.
66-Recruiting, placements, and your MPC
67-The training takes you though the system step by step.
68-Sticking to the system.
69-The system prepares you for the desk.
70-MRI system
71-I know I can go back to the materials and review MR’s system.
72-The system is helpful as it covers everything.
73-I find the experience of my manager helpful when I could not understand something.
74-The most important thing I learned was that all the parts fit together and you have to become good at all of them.
75-The MRI way of recruiting is the best in the industry.
76-The MR System
77-The training allowed me to go at my own pace. Things I got stuck on, I could review again and then with my manager.
78-MRI SYSTEM

System = 22
Total System = 45
Qualitative Questions on Evaluation: Distance Training Delivery Process (DTDP) 1:

2.) What did you find was the least helpful?

1-MRIware videos – use a hands on teaching approach which seems much more sensible and it was quicker and easier to learn and remember.
2-Computer training on video
3-MRIware was confusing.
4-MRIware
5-The videos for MRIware were hard to see – learned more from my manager.
6-MRIware.
7-What can I say – the least helpful in training was the sessions on MRIware.
8-MRIware needs to change.
9-MRIware
10-MRIware and computer training – I need better of both
11-Can something be done to change the materials for MRIware.
12-The MRIware content was very confusing. A hands on approach is better.
13-MRIware
15-Never caught on to the buy words. There were too many at one time.
16-Review of the standard forms.
17-How to close placements.
18-MRIware
19-MRIware
20-MRIware was least helpful to me.
21-Selling MRI Services.
22-Role plays on early tapes seem unrealistic. Candidates and hiring authority were too easy.
23-MRIware
24-All of it seemed relevant to me since I had no experience on this side of the desk.
25-MRIware
26—MRIware should be taught on the computer
27-NA
28-MRIware is tough learn by video
29-Daily Statistical reporting in MRIware.
30-MRIware. You need hands on experience with the system before the data management program makes sense.
31-MRIware
32-MRIware on video is a waste.
33-Nothing stands out.
34-Some of the example exchanges between companies and candidates and AE did not seem realistic.
37-MRIware handouts. I learned more from using the software than from reading.
39-Videotape and MRIware do not go together.
41-can something be done to change the instructions for MRIware
42-MRIware

MRIware = 28
Qualitative Questions on Evaluation: Distance Training Delivery Process (DTDP) 1:

2. What did you find was the least helpful? (continued)

47-MRIware examples are poor
48-I found learning MRIware the most challenging – I think there is an easier way. I recommend that you put it on the computer so I can learn the computer and the program.
49-MRIware
50-I wish I could have caught onto MRIware
51-I learned MRIware better from the admin.
52-MRIware
53-MRIware could be improved and the instructions too!
55-The least helpful to me was the videos and materials on MRIware.
56-I don’t really know computers, but the MRIware needs you to know how to use them.
59-MRIware
60-MRIware is just too difficult to learn on video with handouts.
64-When is a new version of MRIware coming out?
65-Learning MRIware is a challenge. I wish someone would just show me how to use it. I had to finally ask my manager.
68-MRIware
70-MRIware
71-I hated the MRIware sections
72-Why don’t you take MRIware out of the training and have the manager teach it separately?
73-Definitely MRIware!
74-MRIware
75-MRIware
77-MRIware
78-MRIware is difficult to learn and to use.

MRIware = 22

Total MRIware = 50
Qualitative Questions on Evaluation: Distance Training Delivery Process (DTDP) 1:

3. What would you suggest to improve the value of the program for future participants?

1-Follow the MRI way.
2-Use the system and you will succeed
4-Everyone should develop a desk specialty
5-Desk specialization is the next step.
6-Update some of the video information to make the MRI system more credible. Leave the messages but make it more stylistic for after one is on the phone.
7-The VALUE IS IN THE SYSTEM
10-More interviews and sophisticated, true to life demonstrations of the techniques taught.
11-I think I would suggest developing an industry or desk specialty
12-Update the videos and more upbeat settings. Go on location.*
14-Continue to make sure videos are updated.*
17-The program could improve by updating the videos dealing with using MRIware.*
18-It was difficult at times to follow the steps in working with the program.
19-Structure training so you have a clue about what the business and industry is before sitting infront of the tapes.
21-The follow-up videos are very helpful because you understand the business. Now, we need information on desk specialties
24-Use the MRI system
25-The system is the way to go
26-Emphasize need to develop and focus on a particular industry relationships with clients and candidates – not just MPC marketing.
29-Could be updated to focus on current industry trends in the market – for example, how to leave a voice mail, email.
30-Keep focussed on the system and you will succeed
31-The tapes should emphasize a candidate driven market and industry demands.
32-Coding requirements and how to updating candidate and company file pump.
35-Update the tapes to reflect different industries to start developing an expertise. They need new faces and new places!
38-Use the system
39-The system was designed to help you succeed – so use it!
41-Update the tapes more often to add new and improved information.*
44-Discuss common set of obstacles that occur in the first year on the job and how different people have dealt with them.
45-Periodic refreshers on the basics.
47-You can use the training system over and over until you get it!
48-Develop a desk specialty.
49-Learn and understand the dynamics of a particular industry for jobs and candidates

Follow the System = 10   Develop Desk/Industry Specialty = 11   Update Videos = 4
Qualitative Questions on Evaluation: Distance Training Delivery Process (DTDP) 1:

2. What would you suggest to improve the value of the program for future participants? (Continued)

50-More on handling objections.
52-I am proud of the MR training system – it works!
55-Periodic reviews of key videos based on performance issues.
57-Follow the MRI system.
61-Develop your own niche with a particular industry
66-The MRI system is the best in the industry. I am glad I stick with it and recommend that others should too.
67-The videos are a bit unrealistic.*
68-I would prefer to shadow someone rather than sit in an office and watch videos.*
70-I think the materials and videos are good, just boring to learn this way.*
71-The recruiting business is difficult to learn. I learn more from my manager than from the materials. The system is good if you follow it.
74-I wish we had videoconferencing like some of the other offices. I think I would like that better.
75-I recommend that you have some sales experience before learning this job.
77-The one thing that could improve the value of the program for future participants is to make sure you manager is committed to your learning the business.
78-MRI’s system is always improving – so they are ahead of me on this question.

Follow the System = 5  Develop Desk/Industry Specialty = 1  Update Videos = 3

TOTAL: Follow system = 15  Desk specialty = 12  Update Videos = 7
3. Do you feel that the videotapes helped or hindered your learning? Why?

1-They helped immensely. Easy to rewind and review particular points and great to go back to after being on the phone even a year later. I could copy what the experts did.  
2-It is fine to convey basic information via videotape. It would be helpful to have extensive true to life examples of techniques and much more role playing exercises.  
3-Helped. It provided the basics.  
4-Helped. It illustrated proper behaviors and emphasized major points covered.  
5-It definitely helped. Visual aids are always the best learning tools for seeing how to do something.  
7-Helped. It was all that was offered.  
10-Helpful at that point in my career. The best tapes now are those that focus on individual AE style.  
11-Helped - especially examples of actual phone calls even though they seemed canned. They did prove the point and gave an example.  
12-Helped - can go at own pace and take the tapes home to re-review. This helps refresh the basics on areas of weakness and practice like the pros.  
13-I think it helped. How else would I have gotten know the job?  
14-Helped.  
15-Helped. The videos reinforced managers notes and content.  
16-Helped  
17-Helped me!  
18-Helped. Gave easy to understand principles and examples.  
20-I thought it was helpful, especially as an information tool to refer back to. It covered all the basics and even showed you how to do the job.  
21-Helped. There was a lot of valuable information that would otherwise would not have been available.  
22-Helped  
23-Helped in the self-paced approach without distractions from a large audience.  
25-It helped me. The videos are a bit outdated, but the information is still relevant to the job.  
26-Helped because I prefer independent training methods.  
27-Helped  
28-Helped to see the important points emphasized in the videos  

Helped: 24  

Model Behavior = 9
Qualitative Questions on Evaluation: Distance Training Delivery Process (DTDP) 1:

4. Do you feel that the videotapes helped or hindered your learning? Why?

29-\textit{Helped} – the videos were well produced and effective in their presentation.
30-\textit{Helped}.
31-\textit{Helped} greatly. Good for review and \textit{practice}.
32-\textit{Helped} to have \textit{live examples} \textit{especially before the role playing exercises}.
33-\textit{Helped} to cover the basics.
34-\textit{Helped}. \textit{I could use the people in the videos as role models}
37-\textit{Helped}. But I would prefer a classroom or on the \textit{job} training
40-\textit{Helpful}. \textit{The tapes helped me the most to see what success looks like}.
41-\textit{Helped} – good \textit{examples} of what to say and do in an actual phone calls
42-\textit{Helped} – covered the basics.
43-Hinderence – This material is too hard to learn alone
45-\textit{Helped}. The videos were a starting point for talking with my manager.
48-\textit{Helped}. Gave easy to understand principles and \textit{examples}.
50-I thought it was \textit{helpful}, especially as an information tool to refer back to.
51-\textit{Helped}. The videos can capture how \textit{to behave} as well as lots of valuable information that would be hard to read and visualize yourself doing.
53-\textit{Helped}, in the self-paced approach, I could learn on my own.
56-\textit{Helped} because I like to reflect and \textit{practice} by myself.
59-\textit{Helped} – the videos were well produced and effective in their presentation \textit{of what an AE had to do to be successful} in this business.
61-\textit{Helped}. I could \textit{see how to do in the videos} what I had to do to be successful.
62-\textit{Helped} – better then totally on your own
64-\textit{Helped}. The video vinettes were great to \textit{see what I would be doing} on my desk
66-\textit{Helped}. I think the videos were able to show \textit{examples} of real MRI life.
67-\textit{NO}, I hated learning this way
68-\textit{Helped} since I had no idea what to do.
69-I did not like the self-paced modules and thought the videos were unrealistic.
70-I would recommend that you find a better way to teach this. If it was not for my manager, I would have been lost!
71-\textit{Helped} to see others in a real \textit{situation so I could copy what they do}.
72-\textit{Helped}
73-The training is really \textit{helpful}, but the manager being there to guide you what gives all the materials and videos meaning.
74-\textit{You can tell videos are professional} – \textit{I don’t think that is really how it works}.
75-\textit{Helped} I guess.
77-\textit{It was helpful} to me, since I did not know anything about this business.
78-\textit{Helped}. \textit{I liked seeing others do the job in the videos}

\text{Helped} = 31 \quad \text{Total Helped} = 55
\text{Model Behavior} = 12 \quad \text{Total Behavior} = 21
Qualitative Questions on Evaluation: Distance Training Delivery Process (DTDP) 1:

5. Which subjects or skills covered in the program will you need to further develop?

1-Again, more stylistic skills. What to say, how to transition a phone call from recruiting to marketing. How to handle common market relevant objections.
2-Closing, prospecting, account development.
3-Effective planning the MRI way.
4-Time management/organization, additional tips for recruiting.
5-I would like to further develop the “scripts” I use while recruiting candidates.
6-Selling why MRI as a corporate entity is an advantage.
7-Customer focused selling
8-Planning
9-How to use an MPC to create a key account. This is not covered but it should be!
10-it is by far the best preliminary training I have ever received prior to beginning a job.
11-Closing techniques always.
12-Planning and organizing
13-MRIware
14-Hot sheets.
18-The recruiting and marketing process.
19-More sales techniques related to dealing with people in an advanced computer world. For example, dealing with voice mail, grabbers for electronic faxes, getting through to decision makers. I need to improve my computer skills too.
20-The ability to probe and gather information over the phone.
21-Continued account development and marketing training and skills.
22-Organization and planning
23-Plan – Organize – Close!
24-I need to plan more.
25-MRIware
26-I hope to practice planning and closing
28-I know the system can help to keep me organized.
29-PLAN AND YOU WILL ACCOMPLISH
30-Closing.
31-I need to plan better
32-My computer skills suck!
33-Need to spend time on MRIware.
34-Will be practicing with computer and MRIware
37-I need to develop better computer skills.
39-MRIware – what do you expect.
40-PLAN DO CHECK ACT!
41-ALL – I will practice using the system and I know I will be successful

Planning = 10  Computers/MRIware = 5  MRI System = 3

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Qualitative Questions on Evaluation: Distance Training Delivery Process (DTDP) 1:

5. Which subjects or skills covered in the program will you need to further develop?

42-I need practice with the whole system, mostly planning and organizing
43-Computers are not easy for me.
44-My MRIware skills.
47-Computer skills
49-MRI software and computer skills
50-JUST MAKE Phone Calls and USE THE SYSTEM.
51-How to handle objections.
52-Planning, Closing, prospecting, account development.
53-Effective planning using the MRI system.
54-Time management/organization.
55-I would like to focus on recruiting candidates.
56-Selling the MRI concept and using the system.
57-Selling, now that you have sold me on the system.
58-Planning
59-Creating a key account.
60-MRI's system and closing techniques.
62-Planning and organizing
64-Organizing my daily planner.
65-Using the system
67-Computer skills
68-The whole system, but especially recruiting and marketing.
69-Planning and Sales techniques.
70-Gathering information over the phone.
71-Account development and marketing training and skills.
72-Organization and planning
73-Plan – Organize – Close!
74-MRIware
75-Using the damn computer.
76-Practice putting the MRI system into action
77-MRI’s system and MRIware and data inputs.
78-Computer skills and using MRI software.

Planning = 10  Computers/MRIware = 9  MRI System = 10
Total: 47  Planning = 20  Computers/MRIware = 14  MRI System = 13
Qualitative Questions on Evaluation: Distance Training Delivery Process (DTDP) 1:

6. What additional comments would you like to make about this program?

1- The training tapes were wonderful in preparing me for the recruiting business. The interaction with the manager throughout the process opens the door for future comfortable communications as the process continues. A complete package!
2- It's a complete, start to finish training program.
3- I continue to run into customers upset with MRI for its inflexible attitude.
4- I came to MRI because I was told that they have the "BEST TRAINING" program in the industry. The training has been very good and I think that moving up to the board room presentations is a good next step.
5- The training program is well designed.
6- Need in-office quarterly refresher in the 1 and 2 years, semi-annual and after one year.
7- Have each MR Office submit a "problem of the month" and discuss how they overcame it or how they might have overcome it better afterwards. Call it OBSTACLES OF THE MONTH Club.
8- It is very good introduction into the life of an AE.
9- The tapes I saw where a little dated, but the content was worthwhile.
10- Great total package.
12- Need to update the videos.
13- Our business is changing so fast that I wonder if the training can keep up?
15- Complete MRI system explained in training.
17- The training package covers everything an AE needs to know.
18- Change the lady in the video - she is so fake!
19- I felt the training was great - covered everything on the job!
20- When will you update the videos?
22- We need more coverage on industry groups.
23- Does corporate come out to check how we are doing?
24- I just want to make money - the training was helpful, but there are too many details to cover it all.
25- JUST DO IT!
26- Training was complete and I felt good once I made it through!
27- I wanted more practice during training.
29- I was glad to be able to keep going back to the tapes.
30- The videos and materials covered the job.
31- Can videos be made about the different industry segments.
32- Excellent coverage on the MRI system.
33- More on legal issues is needed.
35- How to deal with the hiring authority would be a good video!
36- Very nice job – the training covered most topics pretty well.
37- Training provided a full picture of the business.
39- It covered it all - planning, marketing, recruiting, closing, MRIware, etc.

Complete = 15
Qualitative Questions on Evaluation: Distance Training Delivery Process (DTDP) 1:

6. What additional comments would you like to make about this program?

41-I could work with my manager and take the videos home.
42-Complete training at my own pace.
43-Covered the basics, but left a lot of details out.
44-I understood the process now I just had to do it.
45-Instruction appears to be dated – especially videos.
47-Glad the training is over – I hated that part.
48-Instruction was complete.
49-The system takes you through module by module
50-Good total package
51-Self instruction is difficult to do – glad I had my manager.
52-The whole training together was very thorough.
55-Each tape and material had something valuable to contribute.
56-Best training in the industry
57-I would prefer the videoconferencing that I hear other offices have.
58-THIS WAS BORING – I WANTED TO GET ON THE PHONE!
59-Great training package.
60-Totally complete!
61-Nice job to whoever thought this whole training out.
64-It was not the best training I have ever had.
66-Someone needs to update some of these videos.
67-Boring training – much more fun when I got on the phone
69-When my manager got involved with me, the materials began to make sense.
70-The training is like the MRI system - complete
71-Total MRI System Training!
72-Very complete from start to finish
73-Each module can stand on its own, but fits together to explain the system
74-Great job designing the training and explaining the system

Complete = 16
Total Complete = 32
APPENDIX I

Responses to Qualitative Evaluation Questions by Distance-Training Delivery Process (DTDP) 2: Videoconferencing Classroom with Corporate University Trainer
Qualitative Questions on Evaluation: Distance Training Delivery Process (DTDP) 2:

1. What do you feel was the most important information you learned in this program?

1-The importance of Marketing your MPC
2-The MRI terms and processes that make the system
3-The MRI system
4-Liked the time to work alone on marketing presentation.
5-MRI's system is great for learning the business
6-How important Attitude is – how to take rejection.
7-The different processes to learning help you to see the whole system
8-Selling Skills and the system
9-Stick to a plan – and the system
10-The overall MRI approach
11-The MRI system
12-Everything was useful and relevant
13-MRI System Basics!
14-How to talk on the phone about your MPC and using the MRI system to make the placement.
15-Using the MRI System
16-How to get additional information.
17-The system helps you to keep control.
18-Overcoming objections.
19-I love the MRI System!
20-How to prepare and use the MRI system.
21-The system
22-Networking and persistence coupled with an effective marketing plan = success.
23-Understanding the core business and how I can add value by following the system.
24-Focus and process.
25-Learning about problems you may encounter and how to handle them.
26-The MRI system and ware.
27-How to listen to questions
28-How to gather names.
29-Sticking to the system
30-How to close.
31-The MRI system
32-Challenged every answer by asking a question!
33-MRI ware and the system in general
34-The MRI WAY is the ONLY WAY!
35-The interaction with the instructor!
36-I needed to learn to take control by using the system.
37-Follow the SYSTEM – the whole training program allows me to see the process.
38-Being prepared and following the MRI system
39-Planning and organizing are the most important. System = 27

165
Qualitative Questions on Evaluation: Distance Training Delivery Process (DTDP) 2:

1.) **What do you feel was the most important information you learned in this program? (continued)**

51-The effectiveness of the MRI System.
52-All the suggestions that came from the different sites.
53-Great overview of the system.
54-The complete system
55-OPPORTUNITY IS OUT THERE! FOLLOW-The MRI SYSTEM.
57-Planning and organizing.
59-Closing techniques
60-The MRI system
61-How to get through the gatekeeper
63-Understanding MRI's Mission and System
64-How to close.
65-The MRI system
67-The basics of the MRI System: recruiting, selling and the business.
69-The different ways to get information.
71-Use of MRI software.
72-The MRI system and processes
73-The MRI system
74-The MRI system
75-Realistic expectations of what we have to learn.
77-The PHONE IS YOUR FRIEND!
78-MRI services, rest of the industry, best way to succeed is to use the phone and ask questions.
79-The MRI system and processes
80-MRI’s system is unique
83-Great training on the system.
84-The many different ways to contact a hiring authority and candidate control.
87-That people with very different styles and methods can be successful in recruiting.
88-The MRI system
89-Glad to see the connections of the recruiting, selling and documenting as parts of the system.
90-The MRI system
92-Basic recruiting tools are part of the system.
93-Organization and Planning
97-The MRI system, how a day is to be structured, that is the cornerstone of this business and you need to understand that before you can do anything.
99-Overall the mission of the account executive job with outlined steps on how to proceed.
Qualitative Questions on Evaluation: Distance Training Delivery Process (DTDP) 2:

1. What do you feel was the most important information you learned in this program? (continued)

100-How to develop a planner and properly SOD a candidate.
101-How to use and MRIware software and the importance of planning your day.
102-The company gave me the tools to be successful in the system.
103-What the company and MRI system was all about.
105-Overall Picture by presenting the MRI training as a system.
107-The MRI program – the basics and how to achieve them.
109-Learning how to qualify a candidate was the most important information I learned.
110-You can’t do this business unless you follow the system.
111-How to close the hiring manager and the candidate.
112-The system outline was important showing all the points in the placement process.
115-Basic information as the MRI philosophy and system at working with clients and candidates.
116-The MRI system.
117-The MRI system.
118-Process structured from planning daily activity to placement process (MRI system).
119-Time management and planning.
121-The MRI system and that it really works. That removed some concern of future success while trying to learn and entirely new business and job.
122-MRI’s system, MRIware and internet use.
123-The parts of the MRI system are important and integrated
124-Input from CSAMs.
125-This is the best training system I have ever been through.
126-To stay on the phone and make a lot of calls plus use the system.
127-The system.
128-The MRI system.
129-MRI uses a comprehensive system to explain all the information so you can learn it.
130-That this is a numbers game. The more activity generated the more changes for placements.
131-The MRI system.
132-How to communicate.
133-Meeting the MRI system goals will always produce results. If you fail to reach those goals you will have a higher chance of failing.
134-The general technique of acquiring job orders and candidates.
135-I got a basic view of recruiting as a whole system.
136-Negotiations and the MRIware/system.

System = 23

Total for System = 70
Qualitative Questions on Evaluation: Distance Training Delivery Process (DTDP) 2:

1.) What did you find was the least helpful?

1- I found MRIware to be the least helpful part of this training.
2- MRIware
3- MRIware – I think it is combination of the instruction and the program itself.
4- The videoconferencing technology was very tiresome, too long, this made me tired and I lost interest in the early part of the training session – first week. Especially for MRIware.
5- At home calls.
6- MRIware is best learned on the job with someone showing you how to do it.
7- I learned MRIware better with my manager.
8- MRIware was the worst session.
9- MRIware is difficult to learn
10- MRIware and videotapes or videoconferencing do not go together.
11- Is there a better way to learn MRIware?
12- MRIware over videos or videoconferencing
13- Nothing, it was all relevant, but MRIware was scant.
14- MRIware, since very few individuals in our office use it and are proficient in it. It would have been helpful to have a terminal in the room to follow along. I was very surprised that MRI did not have a windows based program – MRIware is archaic.
15- MRIware
16- The expectation at how to use MRIware were somewhat ineffective since it was often difficult to see the various screens on Configview and because it was easy to forget the instructions by the time you got back to your PC.
17- MRIware instruction.
18- How to use the computer.
19- MRIware sucks!
20- MRIware is too complicated.
21- MRIware was the worst part for me during the training.
22- MRIware is hard to learn.
23- After being in the business prior to this, I found some of the videos unrealistic and even hoky.
24- Don't teach MRIware with videos or over videoconferencing.
25- MRIware
26- The least favorite part of training was MRIware
27- Can something be done about training MRIware
28- MRIware
29- MRIware was taught to me by the admin person since I could not understand it during training.
30- Sometimes the MRIware instruction were not clear and reception on our video screens was also poor.
31- NA
32- MRIware

MRIware = 30
Qualitative Questions on Evaluation: Distance Training Delivery Process (DTDP) 2:

2.) What did you find was the least helpful? (Continued)

40-MRIware
44-The MRIware video; a hands on teaching approach seems much more sensible and it was quicker and easier to learn and remember.
45-Review questions.
47-Using MRIware due to the format of the instruction.
49-Terms and definitions. Too much of the classroom presentation focuses on this and not on HOW to make a placement.
50-MRIware
51-Change the way you teach MRIware
53-MRIware
54-Actual use of software
55-Marketing services information. While it plays a role in what we do, form my perspective it has little relevance to what I do on a daily basis.
56-MRIware
57-There was really no quality name gathering information
59-The MRI database is very weak for my desk specialty, banking. It takes more time to research companies and candidates than presented in the presentations.
60-MRIware
61-Probably say MRIware
63-MRIware
64-The least helpful was the information on planning. It was too complicated to remember the codes in MRIware to get around the computer because the were presented on computer screen that we could not see or read through the videoconferencing.
65-Use of MRIware
67-MRIware
69-Least helpful information was MRIware.
71-The videos. It is that they are not real conversations. I felt that hearing actual calls where anything could happen rather than a scripted call would have been more useful.
72-MRIware — there should be more exercises on how to use it.
73-We need more practice on MRIware.
74-Not enough on getting passed gatekeeper, internet recruiting
75-The tapes on the fee agreement were not necessary or could have been included with the “Taking a Job Order” video.
77-MRIware — there has to be a better way to get us to learn this.
78-Find a different way to teach MRIware
79-MRIware
80-MRIware is too hard to figure out with the training materials given.
83-MRIware
87-Can MRIware be improved?

MRIware = 30
Qualitative Questions on Evaluation: Distance Training Delivery Process (DTDP) 2:

2.) What did you find was the least helpful? (Continued)

90-MRIware
99-Teaching MRIware over videoconferencing does not work.
100-MRIware
103-MRIware
104-The number of tapes.
105-MRIware was difficult to follow on screen; many of the capabilities of the MRIware where not covered.
107-MRIware. It was impractical on TV. It needs to be on computer.
109-Computer training MRIware was fairly weak.
110-MRIware was a waste.
111-I learned MRIware from my boss.
112-MRIware is tough over video or videoconferencing
113-MRIware is old.
114-MRIware could be taught differently so you can learn it better.
115-MRIware is good, but I think it can be better.
116-MRIware can be frustrating. Can you train it another way
117-MRIware is not easy to learn or use.
118-MRIware is going to be difficult for me – the training was not good on this part.
119-Computer and MRIware was not effective.
121-I did not find any of the information “least”. All the information was relevant and important, but MRIware was tough to learn on videoconferencing.
122-Can’t say.
123-MRIware is a problem.
124-MRIware can be taught by my manager better than over videos.
125-MRIware
126-I hate MRIware.
127-I think MRIware is better taught online or on the job.
128-MRIware is a bit outdated.
129-MRIware- the instruction was not the same quality
130-Can MRIware be taught on the internet?
131-MRIware is a pain.
132-I know MRIware is important, but there has got to be a better way.
133-Why isn’t MRIware in windows format?
134-MRIware would be easier if you could point and click
135-What I liked the least was MRIware – the training was bad.
136-I think you can find a better way to teach MRIware

MRIware = 33
Total for MRIware = 97
Page 171 does not exist
Qualitative Questions from Evaluation: Distance Training System Two:

3.) What would you suggest to improve the value of the program for future participants?

1. More “real world” scenarios for successful AE’s.
2. It would be great if those with experience could sit out the extreme basics. That was boring and I missed phone time. I also think MRIware is best learned on the job.
3. Prepare them more for the reality of the real day on the job without a boss who is going to tell you what to do. More concentration on planning and organizing your day. How to name gather, how to find new MPCs, setting daily expectations, using MRIware, are all things that should be emphasized.
4. Basic recruiting training was good. Caution against using the computer during prime time for MRIware during primetime since it is difficult to learn.
5. I think you would do a central time zone program. It creates a scheduling problem for marketing and planning activities. MRIware could be taught at night.
6. A the very early stages, it might be helpful to focus more on MRIware and the basics and to focus less on things like closing techniques. By the time you get to a closing situation, you will have forgotten most of the information. By the Basics I mean how to use MRIware, make a recruiting call, how to make a marketing call, and how to get a referral.
7. Intersperse the instruction into portions – making a search call, with role play with manager, other participants, or live calls, then continuing with the next topic, role play, using MRIware to record it, etc. (practice the skill more)
8. Revise MRIware instruction to include personal demo with manager during training.
9. More emphasis on marketing MRI services.
10. Give more on how to search out and quality job orders. They are the backbone of our industry and without them, we don’t need candidates.
13. Give more time to interact in a mock setting. Give more examples of how a candidate might react to? or how a manager reacts to? Simulate MRIware case example.
15. MRI has an abundance of extremely good people like Gary Williams, Steve, Joley. They should be used more often to direct discussions with AEs and PCs.
17. Clarify images on use of software.
18. I think you’ve done it! Giving new people more opportunity for hands on with MRIware, system usage and time on the phone.
19. Longer and more follow-up maintenance of the basics – especially MRIware.
20. Update videos and MRIware.
21. Stress the level of focus needed to keep calls good!
22. Make all participants aware of the additional time required to do the research into the database. The database is only as good as the material and information put into it.
23. Have participants involved in MRIware and candidate search prior to training.
24. Do something about MRIware

MRIware = 17
Qualitative Questions from Evaluation: Distance Training System Two:

3. What would you suggest to improve the value of the program for future participants? (Continued)

26-Give a lesson and then a test on how to get through the key areas used on the MRI system. Then go over the answers to that test after it is completed. This can be done most effectively for the MRIware if you put it on the computer and test it.

27-Slow down the program and require more hands on assistance by the office manager as well as hands on with the instructor. Separate out the MRIware part.

28-More time to analyze real calls. What the AE did right or wrong and what improvements could be made in a real setting would be invaluable.

30-Focus on new innovative methods of conducting recruiting (the internet is cutting into our business). Also, MRIware is archaic – you need to work on a windows version.

33-Focus on how the internet can be used to our advantage.

34-Talk more about true recruiting and how to get in.

35-Less information in the time span. If is a little bit on the overload side.

36-MRIware is customized to our industry – but could be improved.

37-Improvement in presentation and comprehensiveness of the MRIware training.

38-Real world training – you actually get on the phone. That is great.

39-Spending more time on the fear factor and on computer training.

40-More time for questions and discussion. MRIware should be taught by the manager.

41-MRIware instruction was pretty useless.

44-I would suggest to future participants that they go online even if they don’t finish the videos. Pre-training on MRIware would be helpful first so you can focus on other stuff.

45-Monthly ongoing training for one year. You can do a refresher session on MRIware!

47-Bring students to beautiful Cleveland OH for the training!

49-Keep pulling people like me who are self-critical about being on TV and force us to speak. Stuff like MRIware and practicing with your manager you can do in the office.

50-I think we need more practice in the beginning of the class with how to use the videoconferencing equipment and even using a computer for MRIware.

51-Slow down the MRIware database section.

52-It is a lot of information to learn in a short amount of time.

53-Spend more time on overcoming objections.

54-Show us a good example of a presentation.

57-More hands on with MRIware.

59-Like to hear from some experienced account executives in other offices.

60-Would have liked more discussion on issues. MRIware is a waste.

61-Sometimes the training seemed disjointed – A lot of stopping and starting.

63-There has got to be a way to simplify the MRIware procedures.

64-A general discussion & practice on MRIware would be helpful before doing the video.

65-Three weeks is too short to learn all this stuff – take out MRIware.

67-Give more examples from real experiences of other account executives.

69-Either eliminate the videoconferencing or take and imaginary MPC through the whole process during the three weeks.

MRIware = 20
Qualitative Questions from Evaluation: Distance Training System Two:

3.) What would you suggest to improve the value of the program for future participants? (Continued)

71-It seems it might flow smoother if the call time was not interrupted by conferview or videos. In other words, leave call time uninterrupted.
72-Introduction to MRIware before class starts.
73-To hear from other experienced Aes.
74-A bit more time to process it all.
75-Learn more about the experiences of those in the class. Some are new and others not.
77-Limit participation on videoconferencing to students; mgrs. shouldn’t dominate.
78-On MRIware days, show the videos in the office by where the computer is set up so you can stop and start the tape.
79-Stick to a realistic time agenda – too much material for 3 weeks.
80-MORE DISCUSSION!
83-Videotapes should be updated.
84-Revamp the videotapes to be more realistic of our MRI world.
87-More phoe time during training to practice.
88-Tailor the videos to be watched by the PC for MRIware.
89-The schedule was inhibiting.
90-Spread training out over longer period of time.
92-Microphones should be off – otherwise it is distracting.
93-Nothing – it was all excellent.
94-We had too large a class.
95-Constraints made it difficult for interaction
96-Liked having the instructor lead us through the materials.
97-Where are the bagels and donuts? Usually I get those in training!
99-Slow down the pace.
100-Less time on MRIware and more on networking with other offices.
101-Need more phone time to apply what we are learning.
102-The pace is too fast.
103-Add a week to the program
105-Keep class size smaller.
107-Allow time for us to meet each other b4 the training, give more time together.
109-More practice time is needed. I need a secretary to do my MRIware inputs. I hope my manager will let me have one.
110-Add more discussion on recruiting.
113-Slow down.
117-Instructor should be on time.
119-Stick to the schedule.
123-It was too slow for me.
125-A little more interaction with the group should be provided.
128-Can a cheat-cheat be made for MRIware? MRIware = 11
Qualitative Questions from Evaluation: Distance Training System Two:

3.) What would you suggest to improve the value of the program for future participants? (Continued)

129-Is there a way to master one section before moving to the next? For example, I think you should master MRIware before taking conerview’s MRI system training.
132-I enjoy sharing my experiences over conerview.
133-A more structured environment is needed for conerview.
136-A slower pace to put this learning to use. There is just too much to learn in the short amount of time. I think a pre-training session on how to use a computer and MRIware would be extreme good use of time.

MRIware = 2

Total MRIware = 50
Qualitative Questions from Evaluation: Distance Training System Two:

4. Do you feel that the videoconference technology helped or hindered your learning? Why?

1-It helped a lot. Much easier to learn in an environment with live input and then review the videotapes independently and get back together to discuss it.
2-Neither. It was too slow at times and I received better quality, real life instruction from our co-manager.
3-Helped. Received a perspective that we would not have been able to have any other way.
4-EXCELLENT! There is no other way. I would not have gotten a sense for how I was doing, nor understood the structure behind the training program.
5-Neutral – you take what you can.
6-Helped. You feel like you are in a live classroom.
7-Helped, you get different views than just the philosophy in the office.
8-I believed it helped because the interaction was almost instantaneous and the feedback from others was helpful. However, I would request more actual role-playing and SODDING and recruitment.
9-Helped. Visual interaction is a better learning atmosphere.
10-It was really helpful. It allowed the new AE s to see the difficulties that others were having too.
11-It helped because it provided a live classroom atmosphere and the ability to interact with other attendees.
12-YES. It was good to interact with other new AEs and get their feedback.
13-Helpful, friendly outgoing approach.
14-Fine/helped.
15-Overall it was a BIG PLUS to someone coming into the industry. A secondary showing would be helpful later in ones career.
16-It was great to talk to others in the class with you.
17-Helped; I liked meeting and the interaction with other new recruits in other offices.
18-Helped. I saw other people in a similar situation.
19-Helped. I like meeting other trainees and hearing their input.
21-Helped, but in person is still preferred – at least I could measure myself to others.
22-I feel the videoconferencing helped my learning. I was able to make calls from my desk and then tune in to receive training.
23-Helped to answer questions.
24-Helped – nice not to have to have to go it alone.
25-Not as good as live class, but a good alternative.
26-Helped. Participants feel they are part of MRI, not just an office.
27-Helped. The input and questions from the other participants was helpful.
28-Hindered – it was a major distraction at first, but I got use to it. Helped = 22

Interact = 5 Meet others = 3 See others having difficulties = 8
Qualitative Questions from Evaluation: Distance Training System Two:

4. Do you feel that the videoconference technology helped or hindered your learning? Why? (Continued)

29-Definitely helped to be in an environment with other AE discussing our learning.
30-This technology helped me greatly, by allowing live interaction with our fearless leader and other class participants.
33-Helped. It was nice to be able to be in the office and get the appropriate training, and then practice what you learned.
34-I didn't have a problem with it.
35-Helped. I liked the interaction with other sites. Able to ask questions of instructor, meet and learn from others.
36-Helped. Getting the sense that many people are on the same page.
37-Yes, Absolutely.
38-Probably helped. It was difficult to share information like a real classroom would.
39-Videoconferencing was a hinderence from the standpoint of effective training of MRIware only -- it does not allow for hands on training to make it more meaningful.
40-I feel it helped because we were able to stay in our office and work in our own desk. By doing what we were taught to do helped to understand the importance of the training.
41-Helped. The ideas shared especially by the trainer was valuable.
42-Helped. Interacting and meeting with others in the class was great.
44-I really enjoyed videoconferencing to be able to draw on all the others questions and especially meeting the collective experiences of others.
45-I was helpful. It gives you a opportunity to hear others with different experiences.
47-Helped. It is just as effective as in person meetings without the expense of the travel and hotel room. I could go home to my wife at night. I liked that.
49-Great help to get feedback.
50-Videoconference is too long -- we need more breaks and individual training.
51-It has fantastic potential. But the instructor needs to be more animated to be effective.
52-Helped. The interactions were positive.
53-I would succeed without it!
54-It helped that different people from different areas could share their experiences.
55-Definitely helped. The live interaction among participants makes a better environment for learning and concentrating on what you are doing.
57-Helped. Live interaction with real people who are in the same boat as you!
59-Helped. It was 10 fold better than doing the videos alone -- I like being with others.
60-Helped. Could respond and offer suggestions immediately.
61-Helped. We could talk about similar issues.
63-Helped. It reinforced what we were doing in the videotapes with the trainer and other class participants.

Helped = 21

Interact = 5       Meet others = 6       See others having difficulties = 6
Qualitative Questions from Evaluation: Distance Training System Two:

4.) Do you feel that the videoconference technology helped or hindered your learning? Why? (Continued)

64-Helped. We could hear and see what other AEs were experiencing.
65-Very definitely helped. BUT the instructor’s body language was very poor. Sitting while he teaches I think encourages poor/sloppy body language.
66-HINDERED! Bridge problems and other technical issues made it difficult.
67-The technology is fine.
68-I had been a trainer for a large service company for 4 years and I found the videoconferencing technology very helpful. However, I would limit groups to 6 to allow for more discussion time and effective Q&A sessions.
69-I think it was helpful to see others perspectives.
70-Helped. It allowed me to meet new people, give information and get some too.
71-Helped. I like discussing problems and sharing insights from different offices.
72-It was good to hear the other students ideas concerning the materials and stimulated my thought processes.
73-Helped. No Question About It! I have met some new colleagues!
74-A tremendous asset, due to the blend of experiences in meeting other offices.
75-Videoconferencing helped me with my learning.
77-Helped by allowing interaction and different points of view.
78-Better than doing it alone.
79-Nice to hear from other offices and make new friends in the business.
80-Its great – but not like the real thing. Interaction with group still happens, but limited.
81-Helped. More interaction with meeting more people.
82-Helped to enable people from many areas to participate together.
83-Helped because of all the experience from the group.
84-Helped – the participation, interaction and discussion are all important for learning.
85-Helped. The interchange between participants was meaningful and key in making me feel part of an organized structure.
86-I feel it helped when used properly. I liked interacting with others without traveling.
87-It helped in two ways. Learning how to use the technology in real live situations and interaction with others in the class. It is good to meet others in the business.
88-Hindered – etiquette Is Important and it should be followed.
89-Helped to keep me ready for each new lesson.
90-Helped because of the input from other offices.
91-Helped as Aes could identify with each other.
92-It was ok after the first couple days.
93-Helped. Helped = 17

Interact = 5    Meet others = 5    See others having difficulties = 9
Qualitative Questions from Evaluation: Distance Training System Two:

4. Do you feel that the videoconference technology helped or hindered your learning? Why? (Continued)

94-Its cool and great to meet, talk and listen to instructor and others – although its hard if everyone wants to talk at once.
95-Definitely helped. I could observe and listen to the experiences of others.
96-Hindered. I feel more comfortable in a real classroom setting.
97-Helped. It put in perspective the steps involved in a search assignment and placement.
98-Helped because w/videos there is no interaction which helps in learning by hearing others responses.
99-It greatly helped my learning experience.
100-Helped to be at the same time and same place with others in the same training.
101-Only problem was during thunderstorms.
102-Hindered. I could not be seen or heard most of the time.
103-helped. The interactive comments and suggestions were timely and I love to network with my peers.
104-Helped. I think with all the training, seeing who you are learning from makes it easier to understand and more interesting too.
105-Helped. Allowed us to interact.
106-Helped since I am more hands on then book.
107-It was ok but just like college, if one person gets bogged down on something the rest of class suffers – while the other person is trying to understand, you are ready to move on.
108-I think it is more effective in person, but more efficient with videoconferencing.
109-I wanted more interaction.
110-Helped by allowing peer interaction during instruction.
111-It helped to know others were full of questions.
112-Helped. The problems we all had were common across the country.
113-To get others insights and share issues was invaluable.
115-Helped. Much easier than phone call to network with other offices.
117-Hinderence. The technology gets taking use to.
121-Helped because the trainer was very effective and maintained control.
122-Helped. Being able to interact with so many others in the same stage of the learning process. I feel I could call on other classmates to be my partner in IO and SO.
123-Both. I think the videoconferencing is good for meeting other Aes, but not this instruction – there is too much to learn in a short time.
124-Helped but I wanted more instruction and less participation.
125-Helped. Nice to know others are experiencing the same problems as I am.
126-Helped. Gave a feel for what other AE’s were going through. Also was good to meet future IOR partners.

Helped = 17

Interact = 6  Meet others = 6  See others having difficulties = 7
Qualitative Questions from Evaluation: Distance Training System Two:

4. Do you feel that the videoconference technology helped or hindered your learning? Why? (Continued)

127-Neutral to hindering. I felt somewhat isolated during those two weeks.
128-Very good – Early on I connected with the MRI network. Maybe meet those IOR Partners 1st hand experience to sell Conferview.
129-Very helpful. Good to interact with other offices and meet others.
130-I think it is more effective than getting the same information in a one-on-one situation. I have to say it helped and the structured nature of the program gives you a sense that you have received formal training and you are with others too which is comforting!
131-Helped. It is necessary to see how calls should be made and why. Having a live instructor to answer questions is also necessary. Replaces personal classroom training which is the ideal setting.
132-Helped. It was very to understand the MRI system and concepts.
133-It helped by letting us interact with other participants who were as slow as I was in catching to some of the concepts.
134-Great! Then I had a room by myself for concentrating on topics.
135-Helped. We saw how other offices handle business.
136-Helped. The feedback and ideas generated from a wider range of participants was useful. Meeting other classmates is a bonus.

Helped = 10

Interact = 2     Meet others = 3     See others having difficulties = 7

Total Helped = 87

TOTAL: Interact = 23     Meet others = 23     See others having difficulties = 37
Qualitative Questions from Evaluation: Distance Training System Two:

5. Which subjects or skills covered in the program will you need to further develop.

1-Sales and negotiations. Getting past gatekeeper and objections.
2-MRIware
3-Name gathering (I Hate it!), Interviewing, and **Planning** a balanced day.
4-MRIware – continue to develop selling and recruiting skills.
5-Marketing
6-I feel that I will always be honing my closing and pre-closing skills, but actually all of the subjects covered are things that I should try to improve on as I develop in my career.
7-Sales ability, ability and willingness to overcome objections, better usage of MRIware and closing techniques.
8-Developing a **daily plan** and sticking with it.
9-Closing skills with the hiring authority along with job order searching skills.
10-All
11-Closing skills
12-**Everything**
13-The dealings with candidates form the time you accept them to their start date with a client. Market trends both regionally and industry wide to cover more thoroughly what it takes to find a candidate that is a real fit.
14-**Planning and organization.**
15-Always **organization**
16-Setting up a **weekly plan.** A practical approach, not ideal or theoretical.
17-More emphasis on client and candidate development in the context of short-term POEJOEs and long-term key relationships.
18-CSAM input
19-Pre-closing
20-Recruitment calls and SODDING calls must be perfected and practiced at all times including building effective presentations in cold calling.
21-MRI hardware skills need more hands on training outside of the teleconference.
22-Linking with the new **MRI System.**
23-Use of **MRIware** as well as sales techniques.
24-Closing the fee and no resume sent.
25-**SODDING**
26-**Organization**
27-Stressing urgency is something that could be further developed. It is critical to the hiring process.
28-Always learning
29-**Planning and organizing** of desk for daily work. Each person organizes differently and you continually grow here with experience and time.
31-Closing, clients and candidate pump.
34-All of them should be continually covered and recovered – stick to the basics.

Planning=7 Computer/MRIware = 6 System = 3
181
Qualitative Questions from Evaluation: Distance Training System Two:

5. Which subjects or skills covered in the program will you need to further develop? (Continued)

38-Closing – never get enough.
39-MRIware and interviewing skills.
40-They all need more development.
41-Name gathering.
42-Getting past gatekeeper.
43-MRIware
44-I need to get on the computer more to improve my MRIware skills.
45-The ability to remember all the different ways to close.
46-MRIware and closing – I know they will come with practice.
47-Computer skills.
48-Planning and organizing.
49-Writing job orders.
50-Listening, building confidence and being selective.
51-Entering search codes.
52-Presentation skills.
53-Closing skills.
54-MRIware skills.
55-Closing.
56-MRI system use.
57-Actual call situation.
58-With everyday, the training becomes more clear – I need to develop everything!
59-All of them.
60-Nothing is really seated until you done it in the real world a couple times.
61-MRIware
62-MRIware
63-MRIware
64-Closing and selling techniques
65-Learning how to recognize buying signs better.
66-Handling objections.
67-Knowing when to keep my mouth shut.
70-Selling skills.
71-What questions to ask.
72-Marketing my MPC
73-Seriously look at a better method of teaching MRIware – several classmates recommend a computer tutorial.

Planning = 1   Computer/MRIware = 10   System = 3
Qualitative Questions from Evaluation: Distance Training System Two:

5. Which subjects or skills covered in the program will you need to further develop? (Continued)

74-GUESS – MRIware! Ugh.
75-I had minimal sales experience so presentation skills & further my knowledge base.
76-MRIware
77-Practice presenting MPC in presentations
78-Program should follow schedule.
79-practice quality responses.
80-Dealing with the hiring authority’s objections.
81-Trying to find the true needs of the company.
82-MRIware without a doubt.
83-I feel only OJT will make me feel more confident.
84-Strong fact finding
85-Knowing when to ask specific questions.
86-closing skills
87-Using MRIware
88-I need to practice it all.
89-all
90-Getting a comfort zone with making calls.
91-Presentations
92-MRIware
93-Closing
94-Sales process and closing.
95-Presentations and MRIware.
96-I can always improve my closing skills.
97-SOD pitches.
98-SODING—recruiting is easy, but market development is something I have to work on.
99-Planning and organizing.
100-MRIware and becoming computer literate.
102-Overcoming rejection
103-Marketing calls and recruiting.
105-Presentation and fact finding skills while on the phone.
107-Search skills.
108-MRIware.
109-Handling rejections and overcoming objections.
110-Organizing my time.
111-Keeping a sense of urgency
112-Application & mastery of MRI software. Find a way to make it efficient to use.

Planning=2 Computer/MRIware = 8 System = 1 Closing = 3
Qualitative Questions from Evaluation: Distance Training System Two:

5. Which subjects or skills covered in the program will you need to further develop? (Continued)

113-Most of them
115-MAKE MORE CALLS!
116-Develop better listening skills.
117-recruiting.
118-Selling techniques AND MRIware
119-Making a decision when to drop an MPC
120-Presentation of the job.
121-Getting past the gatekeeper.
122-my PC skills.
123-MRIware – it is not user friendly.
124-Call planning.
125-script writing.
126-Closing.
127-I believe that all of the skills covered will need further development because I am just now beginning to touch the surface with these newly acquired skills. I will need to continue to improve my skills as a recruiter.
128-MRIware and better organization skills.
129-Closing and Planning the search.
130-More networking with candidates and calling their home and use of MRIware
131-Closing signals
132-I am too new at all of this – so all of them – especially MRIware
133-Negotiations of MPC Salary & clients willingness to pay.
134-Developing persuasive skills in selling.
135-More practice on guiding and controlling the conversation.
136-All of them – MRIware. Rejections and rebuttels.

Planning = 3 Computer/MRIware = 6 System = 2

Total Comments: 61

Planning = 13 Computer/MRIware = 36 System = 12
Qualitative Questions from Evaluation: Distance Training System Two:

6. What additional comments would you like to make about this program?

1- Good way to start career with MRI. Let’s you know up front what you are getting into.
2- Good overall – although the interview will never replace the “Real Recruiting”, let us take advantage of our network and our numbers.
3- I would like consideration given to doing this program on central time- trial class?
4- It is a good place to start, but should be supplemented with one-on-one training for support and encouragement. Cliff cannot do that from afar.
5- The program was very good. I would however like to see experienced AEs helping with some kind of mentoring program.
6- I was glad it was over! Some videos were very boring. Cliff is exciting.
7- Possibly need more live interaction with the instructor and student.
8- Great instructor!
9- Program is good. A little relaxing here and there would help a lot.
10- The overall basics are good. However, if someone is coming to the it new, they have to learn the industry as well as the MRI procedures.
11- Overall, very valuable. A great deal of information due to the extent of its detailedness I retained about 40%.
12- It’s the only way to acquire knowledge to do what we do in a short time period.
13- I feel very fortunate to be with MRI. I believe in the system. As time goes by, however, I find what I learn from my manager and others in the business to be equally important as the initial training. I am not sure I agree with the Selecsys profile of an ideal recruiter. Cliff was an ok instructor.
14- More emphasis should be made on how to expect and work through the rejection inherent in our profession.
15- Continuous improvement – Cliff could use some!
16- I would suggest more work study on cold calling techniques to increase the effectiveness of our presentations.
17- MRI is cutting edge but must continue to improve to stay that way or we will become obsolete overnight. Cliff has to keep up where the materials can’t.
18- Overall, it was very good. As with anything, the most valuable lessons come by doing rather then discussing. But, it did help to get a feel for how to begin.
19- It was fine. True training came by watching someone doing it.
20- Again a follow-up 6 months later would be a plus. This would be a good way to improve areas relevant to you.
21- None
22- On the whole – considering the short duration of training, it was good preparation for continuous on-the-job growth.
23- None
24- It was pretty good overall.

Instructor Comment = 8

Overall Program Comment = 9
6. What additional comments would you like to make about this program? (Continued)

27-Overall good.  
28-I feel this is a very successful program and learning tool. Keep up the good work.  
30-It is nice to be in a group together to learn this information.  
31-Instruct all participants to keep mute button on so that noise does not cause visual interruption so that when the noise gets picked up by the system, that person appears briefly on the screen. Cliff tried to keep control.  
33-GOOD JOB!  
35-Allow a little more time for learning more about completing the candidate data sheets.  
37-Overall very good and didn't take much time away from building the business.  
39-Cliff was a very good trainer.  
40-The knowledge and enthusiasm of the instructor was great! Cliff provided valuable insights into the recruiting industry.  
41-I was impressed with MRI's interest in having a really great training program and it was effective for me. Cliff was sometimes too rough.  
42-I really feel this program is very valuable.  
43-The advanced technology where all offices can share is a real strength.  
44-Excellent overall. Cliff was great.  
45-Cliff kept the process moving, interactive and very interesting.  
46-Gets Aes off to a good start.  
47-Love to know I have all this support – especially from Cliff.  
48-Stick to the time schedule. We need some time for coffee breaks and restroom  
49-I'm glad I was able to participate in MRIU  
50-Great training for the basics.  
51-Keep up the good work and provide follow-up graduate programs.  
52-It definitely helped to get an overview of the system – how it works and what I have to do – Now I just have to do it!  
53-Training class, although it was hard work, was fun and enjoyable – Glad we had Cliff  
54-Cliff made us laugh which helped me to relax.  
55-I know I can do this job now that I have the knowledge!  
56-Excellent instructor and discussion leader  
57-I loved the real talk, about real issues in real time.  
58-I was concerned that I would be bored, but I was not  
59-I learned better ways to sell.  
60-Well done and organized. Cliff kept us on track!  
61-A great way to start people out  
65-Well done Cliff.  
66-Excellent job Cliff  
67-Cliff is really informative – but too fast.  
68-Cliff can be overbearing at times.

Instructor Comment = 15  
Overall Program Comment = 10
Qualitative Questions from Evaluation: Distance Training System Two:

6. What additional comments would you like to make about this program?
   (Continued)

69-Don’t let one person dominate on conference, otherwise the training was great.
70-Training is excellent – but agenda times were poorly met. This is bad when others need to use the conference room.
71-Bad and continuous problems with the bridge.
72-Once again, Cliff does an outstanding job in this environment – time is an issue.
73-Cliff did an excellent job of fielding questions and moving the program along.
74-I liked Cliff’s personal experiences. Overall the training was awesome!
75-Change the videos – it would increase student retention and enthusiasm.
76-Thanks for all the help Cliff. Great training experience.
77-Good job Cliff. Keep relating training tapes to real world examples.
78-Cliff is a good instructor, but domineering at times.
79-I wanted more in-depth discussion.
80-I liked real life situations over the videotapes.
81-We need more time to fill out the answers on the worksheets.
82-We need a computer in the training room for the MRtware.
83-Follow up meetings would be helpful.
84-Cliff was a wonderful instructor with good insights. He makes you use the system.
85-Can we do it again Cliff?
86-If possible, I think the program should be lengthened to allow for more practice in between sessions.
88-I believe Cliff was excellent and helpful. The Training is Excellent too!
90-Good training. I feel I can call Cliff at corporate if I have a problem.
91-Great Program! I feel I am part of a bigger organization.
92-It’s a great program but it is time for some tweaking.
93-Thanks Cliff – great job.
94-I like that we have to dive right in and start making calls immediately.
95-Gets your nerves up and gives you a better sense of the business.
96-Thanks for the opportunity Cliff.
97-Cliff – Keep up the good work.
98-Cliff is a great facilitator and instructor.
99-Cliff can be opinionated.
100-It would be nice if some classes started on time.
101-I enjoyed the virtual classroom setting and meeting others from different offices.
102-I feel I can call on Cliff in the future.
103-I think it should be a mini-course – there is just too much to learn – break it up.
105-This is the first training class that I have taken that is at such a high quality level.

Instructor Comment = 15
Overall Program Comment = 9
Qualitative Questions from Evaluation: Distance Training System Two:

6. What additional comments would you like to make about this program?  
(Continued)

106-Very good – Cliff was great
107-I should have been in this business a long time ago. I hope it stays this much fun.
110-Good structure and guidance from Cliff.
111-I think it is great how willing to help everyone form the other offices are.
114-Overall very good.
115-A lot of info to consume in short time.
116-It is nice to be able to see people you are talking to.
117-I am glad Cliff will take my calls later when I have more questions.
120-Cliff’s extensive knowledge is great.
121-I would like to see a better way to use the computer and MRJware. The paperwork is out of control
122-Periodic refresher courses would be great.
124-Discussions in the future on specific industries or techniques will allow us to get back together.
127-I am looking forward to more advanced courses.
130-I enjoyed the training with Cliff.
132-Learning atmosphere is good and thoroughly qualifies people who are new.
133-The MRI system is great
135-I liked the whole thing – it all worked out doing all the different activities.
136-Instructor did a super job of presenting the material.

Instructor Comment = 6
Total Instructor Comments = 42

Overall Program Comment = 3
Total Overall Program Comment = 31