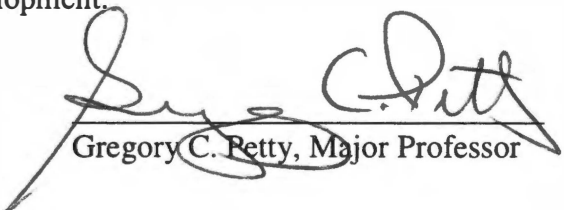


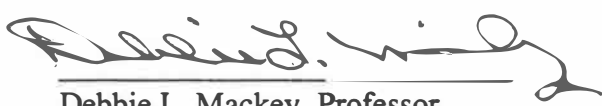
To the Graduate Council:

I am submitting herewith a thesis written by Gabe Dalton entitled "Training Performance Transfer between Web-based Instruction and Traditional Classroom Training." I have examined the final paper copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science, with a major in Human Resource Development.

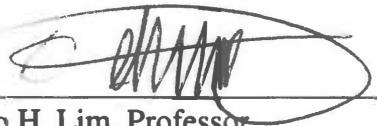


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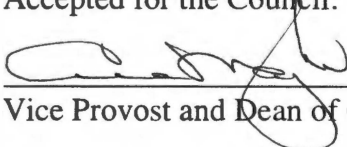


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Vice Provost and Dean of Graduate Studies

Training Performance Transfer between Web-based Instruction and
Traditional Classroom Training

A Thesis

Presented for the

Master of Science

Degree

The University of Tennessee, Knoxville

Gabe Dalton

May 2002

Thesis
2002
.D35

DEDICATION

This thesis is dedicated to my wife, mom, and 'gran and papaw'
for their continued support, encouragement, and unconditional love
that guides me throughout my life.

ACKNOWLEDGEMENTS

There are numerous people I would like to thank for their dedication, patience, and support for making my educational goals obtainable. Firstly, I owe a debt of gratitude to my major professor, Dr. Gregory C. Petty, for his guidance and encouragement throughout the entire process. His dedication and feedback to my work was deeply appreciated. Dr. Petty has always kept me motivated when I needed it most. Also, I would like to thank my other committee members, Dr. Doo H. Lim, and Dr. Debbie L. Mackey for their input on revisions included in the final adaptation of this thesis. Their time and efforts on my thesis are deeply appreciated.

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Lastly, I would like to thank my wonderful wife, Kim. She has given me strength, encouragement, and motivation to complete my personal goals. Without her love and patience I would have never been able to accomplish my dream.

ABSTRACT

The purpose of the study was to compare learners' perceptions of transfer of related training between WBI learners and traditional learners. Secondly, the survey investigated demographic factors to determine any differences between WBI learners and traditional learners. The Training Performance Transfer (Petty & Farris, 2001) was used to gather data for the study.

Respondents were undergraduate and graduate students enrolled in Human Resource Development classes at the University of Tennessee, Knoxville for the Fall 2001 semester. A total number of 324 surveys were e-mailed to the potential respondents, 127 surveys were completed for a 39% response rate.

Descriptive statistics including mean and frequencies were gathered for the demographic data to discover respondents' perceptions of transfer of related training. Pillai's Trace, a multivariate of analysis test was used to determine perceptions of transfer of related training between WBI learners and traditional learners. A test of between subjects effects was used to investigate differences between WBI learners and traditional learners based on the five subcategories of the survey (peer support, supervisor support, motivation, self-efficacy, and organization environment).

The major findings implicated (a) there are no significant differences in perceptions of transfer of related training for WBI learners vs. traditional learners and (b) there are no significant differences in perceptions of transfer of related training for WBI learners and traditional learners based on the demographic factors: years of full-time work experience, years experience as supervisor, gender, level of education, age,

number of previous online college courses completed, current occupational status, and online course experience.

TABLE OF CONTENTS

CHAPTER	PAGE
I. INTRODUCTION	1
Statement of Problem.....	2
Purpose of Study.....	2
Null Hypotheses.....	3
Rationale.....	3
Assumptions.....	4
Limitations.....	5
Delimitations.....	5
Definition of Terms.....	5
II. REVIEW OF RELATED LITERATURE.....	9
Web-based Instruction.....	9
Beginning of Web-based Instruction.....	10
Advantages of Web-based Instruction.....	10
Disadvantages of Web-based Instruction.....	12
Successful Implementation of Web-based Instruction.....	14
Comparison of Web-Based Instruction vs. Classroom Instruction..	16
Definition of Transfer of Training.....	18
Ways to Make Transfer of Training Work.....	19
Why Transfer Fails.....	25
Types of Transfer.....	26
Summary of Review of Related Literature.....	28
III. METHODOLOGY.....	30
Introduction.....	30
Population.....	30
Independent Variables.....	31
Dependent Variables.....	31
Instrumentation.....	32
Data Collection.....	33
Data Analysis.....	33
IV. ANALYSIS OF DATA AND RESULTS.....	35

Introduction.....	35
Demographic Characteristics.....	35
Instrumentation.....	43
Findings for Ho ₁	47
Findings for Ho ₂	49
V. SUMMARY, FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS.....	53
Introduction.....	54
Summary.....	54
Major Findings.....	56
Findings from Null Ho ₁	57
Findings from Null Ho ₂	57
Conclusions.....	57
Recommendations.....	58
Implications.....	59
REFERENCES.....	61
APPENDIXES.....	71
Appendix A Student Letters.....	72
Appendix B Letter of Permission.....	76
Appendix C Human Subjects Form A.....	78
Appendix D Training Performance Transfer Instrument.....	81
Appendix E Transfer of Training Factors Categorized.....	86
Appendix F Transfer of Training Inventory Factors.....	90
VITA.....	95

LIST OF TABLES

TABLE	PAGE
1. Mean scores and standard deviation scores for classroom learners and WBI learners.....	48
2. Cronbach’s Alpha for Items in Subcategories.....	48
3. Findings from Hypotheses.....	50
4. Findings for Item Subcategories.....	53

LIST OF FIGURES

FIGURE	PAGE
1. A Model of the Transfer Process.....	20
2. Transfer Action Plan.....	23
3. Years of Full-Time Work Experience.....	36
4. Years experience as a Supervisor.....	38
5. Gender.....	39
6. Level of Education.....	40
7. Age.....	41
8. Online College Courses Completed.....	42
9. Occupational Status.....	44
10. Online Course Experience.....	45
11. Respondent Classification.....	46

Chapter I

Introduction

Traditionally, instructor-led classroom training has been the dominant means of training (Meyers, 1986). However, with the advent of web-based instruction (WBI), the focus of training has begun to shift for corporate trainers and educators (Aase, 2000). According to a report by W. R. Hambrecht & Co. and International Data Corp., U.S. companies during the last year spent an estimated \$62.5 billion on training employees, of which \$3 billion of that total was allocated to WBI training (Koprowski, 2000). Aase asserted:

Almost one million students signed up for so-called distance-education courses, and this number is projected to grow by 33% annually, reaching 2.2 million by 2002. Likewise, Aase noted by 2002, 85% of two-year colleges and 84% of four-year colleges will be offering distance-learning courses, up from 58% and 62% in 1998, respectively. (p. 16)

As noted by Aase, there appears to be an increase in the advent of WBI. An abundance of studies investigating the effectiveness of web-based training have surfaced (Barron, 1999; Clark & Lyons, 1999; Koprowski, 2000; Marshall, 2000; Roberts, 1998). The transferability of the learning involved in web-based training could have a tremendous effect on corporations and educational institutions. If web-based training is a cheaper, faster, and easier way to train the learner (Sullivan, 1998) then we must examine transfer of training to see if it is an advantageous alternative to traditional classroom

instruction. It could be that other alternative methodologies using collaboration with traditional classroom instruction may be appropriate. Koprowski stated, "E-learning must be integrated into ongoing training processes at companies and viewed as an adjunct to face-to-face classroom instruction" (p. 124).

Statement of Problem

There is some evidence to suggest a recent surge involving WBI (Aase, 2000; Barron, 1999). A thorough examination of the transfer of learning from WBI would help determine the effectiveness of online learning. A comparison between WBI and traditional learning will help to estimate which type of learning has the best probability to produce transfer of training from classroom to the job (Jones, 1999; Neal, 1998; Schutte, 1997). Most of the current literature on WBI focuses on the advantages and disadvantages of online learning (Roberts, 1998; Sullivan, 1998). Little is known about the transfer of training involved in WBI. There is an evident gap in the knowledge base concerning online learning and transfer of training and its comparison to traditional classroom learning.

Purpose of Study

The purpose of this study is to compare learners' perceptions of the effectiveness of transfer of training for online learners with the effectiveness of transfer of training for traditional classroom learners. The transfer of training will be examined in both online classes and traditional classes. The Training Performance Transfer (TPT), developed by Petty and Farris (2001), will be used to determine the effectiveness of perceived transfer of training involved in online learning and classroom learning. Any differences between

groups will help determine which type of learning fosters the best chance to transfer training.

Null Hypotheses

Ho₁: There is no significant difference in perceptions of transfer of related training for WBI vs. traditional learners.

Ho₂: There is no significant difference in perceptions of transfer of related training for WBI learners and traditional learners based on years of full-time work experience, gender, years experience as supervisor, level of education, age, number of previous online courses completed, current occupational status, and online course experience.

Rationale

The majority of literature relating to WBI revealed information regarding the recent surge in WBI (Barron, 1999; Marshall, 2000; Koprowski, 2000). Moreover, a large number of studies investigating the advantages of WBI have been cited (Maul & Spotts, 1993; Huang, 1997; Sullivan, 1998; Roberts, 1998). However, factors relating to transfer of training of web-based instruction have only been modestly explored (Raths, 2000; Heckler, 1999).

A review of the research found studies that compare traditional classroom instruction versus web-based instruction (Maul & Spotts, 1993; Schutte, 1997; Jones, 1999), but transfer of training was not the main focus of these studies. Maul and Spotts conducted a study of 20 employees in a large manufacturing company. The employees

were divided into two groups consisting of computer-based training and classroom training. There were no significant differences found in relation to knowledge learned. However, Maul and Spotts did ascertain that an economic justification for CBT should be considered because of a significant reduction in instructional time. Schutte conducted a study at California State University at Northridge comparing web-based learners to traditional learners. Schutte reported a 20% higher score for web-based learners compared to traditional learners. Schutte hypothesized the increase in learning resulted from group interaction among the students in the web-based class. Jones attempted to replicate Schutte's work by comparing performance differences and examining students' background to determine if any advantages surface when comparing web-based classes to traditional classes. Jones was unable to reproduce the same results as Schutte.

There is an evident gap in the knowledge base concerning WBI and transfer of training and its comparison to traditional classroom learning. More research is needed when comparing web-based classes to traditional classes. This study will add to the research base regarding transfer of training between WBI and traditional classroom training.

Assumptions

1. Questions will be answered as accurately and honestly as possible by the survey respondents.
2. This study assumed that those students enrolled in both an online class and a traditional class would only participate in the survey once.

Limitations

1. This study will be limited to individuals taking Human Resource Development classes at the University of Tennessee, Knoxville, and who volunteered to complete the survey.
2. The aspects of training transfer examined in this study was limited to those measured by the TPT.
3. This study was limited by the compliance of part-time or full-time students to respond in an appropriate fashion.
4. The TPT only measures perceptions of transfer of training, knowledge gained was not measured.

Delimitations

1. All transfer of training data analyses and conclusions will be based on the notion of transfer of training as defined and measured by the TPT.
2. This study measured the perceptions of transfer of related training for students enrolled for classes in the Fall semester 2001 in the Department of Human Resource Development at the University of Tennessee, Knoxville, College of Human Ecology.

Definition of Terms

The following terms have been defined for use with this study:

1. **Age-** differing periods of life (Morris, 1976). Age consisted of (a) 19 or under, (b) 20-26, (c) 27-35, (d) 36-55, and (e) over 55.

2. **Barriers to Transfer-** Perceived or actual variables that hinder the successful implementation of training objectives and act as roadblocks to the transfer of training (Broad & Newstrom, 1992).
3. **Current Occupational Status-** The amount of time participants' work. This study included, (a) no part-time job, (b) employed 50% of time or less, (c) employed 50% or less than full-time, and (d) full-time.
4. **Demographic Information-** Measures included (a) years of full-time work experience, (b) level of education, (c) gender, (d) age, (e) years experience as supervisor (f) number of online courses completed (g) current occupational status, and (h) online course experience.
5. **Gender-** The particular sex of the participant. Gender involved two levels, male or female.
6. **Level of education-** Measurement of the highest level of educational attainment. Included for this study (a) high school degree or GED, (b) 2 years of college or Associate's degree, (c) a Bachelor's degree, and (d) some Graduate work.
7. **Motivation-** An aspiration or need that promotes and directs goal-oriented conduct (Kleinginna & Kleinginna, 1981).
8. **Motivation to Transfer-** The desire possessed by the trainee to use the skills and knowledge learned in a training exercise on the job (Noe, 1986).
9. **Number of Online College Courses Completed-** Number of college courses completed via WBI. In this study, (a) 0, (b) 1, (c) 2-3, and (d) 4 or more.

10. **Online Course Experience-** Amount of experience participants had with regards to online courses. This study included, (a) none, (b) currently taking first online course, (c) have taken at least one online course, and (d) have taken more than one online course.
11. **Organizational Environment-** “The type of support or constraint that trainees will be likely to encounter in their job situations, concerning their use of training” (Rouiller, 1989, p. 4).
12. **Peer-** A person that is equal to another, in this case another student (Farris, 2001).
13. **Peer Support-** Interaction, backing, and corroboration from a worker support cluster that causes positive reinforcement (Baldwin & Ford, 1998, Wexley & Latham, 1991).
14. **Self-Efficacy-** “The belief in one’s capabilities to organize and execute courses of action required to produce given attainments” (Bandura, 1997, p.3).
15. **Supervisor Support-** Belief that a skill or ability will be used by the employee therefore fostering support and encouragement from the supervisor (Richey, 1992; Roiller, 1989).
16. **Traditional Learners-** Operationally defined for this study as respondents who have taken no online courses or are currently taking first online course.
17. **Training-** A designed learning experience intended to permanently alter one’s behavior (Noe, 1986).

18. **Training Performance Transfer (TPT)**- Barriers and enhancements determined to measure learners' perceptions of the transfer of training process (Petty and Farris, 2001).
19. **Training Transfer**- The extent or ability of trainees to use the knowledge, skills, and attitudes obtained from an educational program back to the job (Holt, 1994).
20. **Web-based Instruction**- Instruction delivered via a Web browser, (i.e., Netscape Navigator) through the Internet.
21. **WBI Learners**- Operationally defined for this study as respondents who had taken at least one online course or had taken more than one online course.
22. **Years experience as supervisor**- Amount of time participants have held a position as a supervisor. This study included, (a) none, (b) less than two years, (c) 2-8 years, (d) more than 8 years.
23. **Years of full-time work experience**- amount of time participants have held a full-time job. Years included (a) less than 2 years, (b) 2-8 years, (c) more than 8 years.

Chapter II

Review of Related Literature

This chapter contains a review of literature and research related to the transfer of training. The theoretical context for the perceptions of transfer of training, the history, and status of web-based instruction is provided along with a description of previous studies of transfer of training.

Web-based Instruction

Many employees have begun to see the recent surge in web-based instruction (WBI). International Data Corporation (IDC) predicted a 33% increase between 1998 and 2002 in the number of learners online (Barron, 1999). Also, IDC forecasted a potential market size of \$5.5 billion by 2002 (Barron). Marshall (2000) noted that Cisco E-learning estimated the market for WBI would grow from \$600 million to \$10 billion. Koprowski (2000) reviewed a report by W. R. Hambrecht & Co. and IDC that reported U.S. companies spent about \$62.5 billion in training, in which three billion was spent on instructional technology based delivery of training. Koprowski forecasted companies, with regard to technologically delivered education, would spend \$11.5 billion. Koprowski backed this assertion by stating that IBM saved \$200 million by reducing travel expenses for educational seminars through E-Learning projects. According to Kiser (1999), IDC predicted a compound annual rate increase of 64.5% between 1997 and 2003 in revenue from the sale of Internet-based training programs.

Beginning of Web-based Instruction

Marshall (2000) defined web-based instruction as, “any instruction that is delivered over the Internet through the World Wide Web (www) environment” (p. 4). In 1969, the Department of Defense created the Internet as a communication backup system in case a nuclear attack interrupted usual means of communication systems as well as a way to connect military researchers with researchers in private sectors and universities to allow a continuous sharing of research information (Marshall). Several years later, in 1990 at the European Center for Nuclear Research the World Wide Web was created in order for scientists to share documents more quickly (Marshall).

Advantages of Web-based Instruction

Most of the current research regarding WBI discusses the advantages of WBI compared to traditional classroom training (Marshall, 2000, Sullivan, 1998, Clark and Lyons, 1999, & Huang, 1997). Maul and Spotts (1993) cited the most significant advantage of WBI as a reduction in learning time. Marshall (2000) stated that WBI is more efficient and cost-effective. Also, Marshall saw the accessibility of the Web as one of its most important advantages. He stated that once WBI programs are developed and made available that large number of employees could receive training from across the globe. Furthermore, by delivering WBI via the Internet, the elimination of production costs will surface, as will the costs of travel time. Sullivan (1998) cited the advantage of WBT as being cheaper, faster, and easier to keep updated. Clark and Lyons (1999) reiterated Sullivan’s points by stating the benefits of WBI as being cheap and easy to

update, and also stated that it is ubiquitous. Huang (1997) believed the major advantage of WBI to be a reduction in personnel costs. In addition, Huang stated that one instructor could supervise several trainees at different locations. Trainees do not have to travel to receive one-on-one consultation. With e-mail, teleconferencing, and electronic bulletin boards trainees can share insights and support each other. Furthermore, online training can ensure privacy. Trainees that are normally too embarrassed to ask questions can ask trainers questions by e-mail without feeling insecure in front of others (Huang). Steed (1999) listed the advantages of WBT as:

1. Reduced costs and increased learning
2. Consistent and up-to-date materials
3. Ability of students to take course at a time and place of their choosing
4. Faster completion of training
5. Better content retention
6. Better utilization of instructors
7. Platform independence
8. Flexible course management (cited in Smith, 1999, p. 338)

Hall stated a 50% reduction in time and cost over classroom training (Roberts, 1998).

However, many of the early developers of WBI “caution that up-front costs to buy hardware and to make existing content web friendly increase the overall outlay” (Roberts, p. 99). More empirical research is needed in order to validate these advantages.

Disadvantages of Web-based Instruction

While WBI appears advantageous on the surface, there are still questions that need to be answered. Marshall (2000) stated, “Although WBI is more efficient and cost effective than conventional classroom instruction, what is less clear and what is noticeably absent in the articles about WBI is any discussion that articulates the relationship between WBI and learning” (p. 2). Furthermore, Marshall believed one of the biggest problems with WBI centered on the fact that presentations and formats from the classroom were simply transferred to the WBI. This caused programs to have too much text, limited the interactivity among students, and made the learning activities uninteresting (Marshall). Heckler (1999) viewed interactivity as a problem. Heckler believed WBI courses are not as interactive as instructor-led courses, which in turn, causes the majority of students to not push themselves as hard. Heckler cited immediate feedback on questions as another problem with WBI. When a student or employee has a question the question must be submitted to technical support and the student must wait for an answer to be returned. Heckler commented that if an instructor is present immediate help could be provided.

Sullivan (1998) claimed the classroom has many advantages over WBI. He asserted the ease with which human teachers could adjust the curriculum to the level of the students gave teachers in the classroom an advantage over their counterparts teaching WBI. Also, Sullivan claimed teachers could more effectively monitor progress. Aase (2000) reported, “Lack of face-to-face instruction is the biggest hurdle for most people when they try to imagine an online course” (p. 2).

Clark and Lyons (1999) identified interactivity as being a limitation of WBI. Huang (1997) believed that WBT's success or failure relies on whether "it can achieve the same credibility and quality as traditional training" (p. 36). Huang concluded by stating that the expectations for WBT trainers should be the same as the expectations for traditional trainers.

Steed (1999) claimed that some disadvantages might arise from students not familiarizing themselves with Internet browsers. Also, the Internet does not reach its full potential as a multimedia tool because of problems with current bandwidth size. As noted by Smith (1999), Steed believed that WBI is only part of an integrated learning system. It does not encompass an entire learning system in which an instructor monitors the students' learning. Heckler (1999) believed WBI can definitely be beneficial, but believed in order for it to be beneficial the topic to be taught and the individuals to be trained must be taken into account. Sullivan (1998) supported Heckler's statement by claiming that WBI is not always the best choice, the best choice depends on whom and what you are teaching. Aase (2000) cited several disadvantages to WBI. She suggested facelessness was a pitfall to WBI. She asserted a lack of verbal and facial cues as well as body language creates another problem with WBT. Aase described computer glitches as another shortcoming of WBT. Technological breakdowns can create a deterrent to WBT as well.

Furthermore, Aase (2000) believed the workload could create a problem. Aase suggested that a greater amount of work is required to implement, produce, teach, and take an online course. Finally, Aase identified the problem of finding incessant tech

support to be a deterrent to WBT. Huang (1997) viewed a challenge for training in the format used by trainees to transfer knowledge. He believed different channels to advise and supervise must be implemented in order to transfer knowledge from training to the workplace.

Successful Implementation of WBT

Marshall (2000) identified two guidelines that must be followed in order for the successful implementation of WBI to occur, “First, builders of web-based instructional programs should continue to build on the best practices of learner-centered instructional design and secondly, builders need to incorporate more of the principles of cognitive learning theory into WBI” (p. 18). Kiser (1999) developed eight guidelines to follow when adding online courses to an already existing training program:

1. Bring your techies to the table
2. Don’t dump data online and call it training
3. Don’t expect people to train on their own time
4. Keep your lessons short
5. Keep your traffic moving
6. Keep your training unplugged
7. Make sure everyone knows the basics
8. Don’t forget the human touch (pp. 68-72)

Heckler (1999) suggested integration as a possible medium for a successful training venue. He stated:

The best strategy may be to integrate instructor-led training and computer-based training. Let employees choose the mix they want. People spend their entire lives learning; let them tell you how they prefer to learn. Some of the best design programs use instructor-led training reinforced with computer-based exercises and reviews. (p. 104)

Heckler believed employees should have a hands on approach when choosing the type of training they receive. He asserted by having a choice, the likelihood of a successful training program increases.

Moreover, Clark and Lyons (1999) offered another suggestion with the successful implementation of a WBT course in mind. The authors believed that an analysis of the learner characteristics and of the job the trainees performed must be the prerequisites to the type of instruction employed. Clark and Lyons asserted that the instructors must use methods that coincide with skills and knowledge the trainers are teaching and should take into account adult learning principles. Huang (1997) commented on the need to have a basic knowledge of operating a computer that had connections to a network. Also, trainees need to be more self-motivated than traditional trainees (Lyons, 1995). Huang continued by explaining a need for trainees to develop the necessary skills in order to be capable of interacting with trainers and fellow trainees electronically. Finally, Huang identified the need for information searching skills. He stated that there are almost unlimited information sources online, which trainees need the capacity to be able to effectively filter through. Koprowski (2000) believed integration to be important when discussing online learning. According to Koprowski, E-learning should be integrated into

ongoing training programs and viewed as an adjunct to face-to-face classroom instruction. Koprowski noted, an integration of E-learning into traditional training programs will likely occur which will afford companies the opportunity to improve upon their training programs. With this in mind, Koprowski (2000) identified four levels of learning that need to be reached if employers are going to be able to properly train their employees:

One is basic knowledge transfer-an imparting of information about an industry, a line of business, or particular process used within a field. Another is interactive learning, in which the student takes the basic knowledge and applies it to a given scenario in a simulation. Then comes collaborative learning, and finally there's group-level instruction or conferences. (p. 125)

Roberts (1998) asserted the need to build in instructor-led components. He believed that at the beginning and occasionally throughout a web-based program that an instructor-led component should be inserted into the training program. This in turn, will give students the motivation and feedback they need from an instructor.

Comparison of CBT vs. Classroom Instruction

Maul and Spotts (1993) conducted a study of 20 employees selected from a large manufacturing company. Ten of the employees were given computer-based training (CBT), whereas the other ten received classroom training. The 20 employees were randomly divided into two groups. They used a multiple-choice test as a pretest and the same test after the course was completed. Maul and Spotts concluded that the evidence did not show an increase or decrease in knowledge learned from the computer-based

class when compared to the traditional classroom instruction. A t-test was used to determine the differences between the set of averages ascertained from the testing. The statistical tests did not render a significant difference in learning between the two types of instruction. Nonetheless, there was a significant difference in instructional time. CBT showed a large decrease in instructional time. In closing, Maul and Spotts concluded, "Because CBT proved to be as effective and significantly reduced instructional time, economic justification for CBT should be considered" (p. 26). Marshall (2000) claimed that web-based training should be easier for corporate trainers to incorporate than for educators. He stated that corporate trainers' philosophy is that training should be done as efficiently as possible. On the other hand, educators normally view training, "as something more than a product that can be packaged and sold for a profit" (p. 17).

In another study, Jones (1999) attempted to replicate a study conducted by Schutte (1997) in which an all web-based class was compared to a traditional class. Schutte's study reported a 20% higher score for web-based learners compared to traditional learners. The study took place at California State University at Northridge. Schutte hypothesized the reason for the increase in learning in the web-based class resulted from group interaction among the students in the web-based class.

However, Schutte's (1997) findings have been criticized. Neal (1998) criticized the research design and methodology employed by Schutte. With these factors in mind, Jones (1999) attempted to replicate Schutte's study. The main objectives of Jones's study were to compare the performance difference between web-based and traditional classroom learners, to examine students' background to see if there was a difference in

who prefers web-based classes to traditional classes, and to determine if any, advantages may arise when the technology used in web-based classes plays a role in the learning objectives. The subjects for the study were 89 students taking an introductory statistics course at Texas A&M University, Corpus Christi. Results showed that average scores on the final exam were only six points higher in the web-based classes. The pretest scores showed an even smaller difference. Schutte claimed that students taking a web-based class were more likely to ask others for help. However, Jones did not find this to be accurate. Jones claimed that every attempt to arrange the web-based class around a team assignment and introduce them to one another was strongly objected by the trainees. Jones stated, "The major conclusion of this study is that the results reported by Schutte (1997) do not appear to be reproducible, at least with our student population" (p. 7).

Definition of Transfer of Training

Defining transfer of training has been a complex task and many interpretations have surfaced through various research and experiences within training programs. Ford (1994) stated, "transfer must be defined within the context of what is relevant to the type of educational intervention and the intended objectives or outcomes of a particular program" (p. 22). Others have asserted that the effective application of knowledge, skills, and attitudes gathered from a training program then applied back to the job constitutes positive transfer of training (Foxon, 1995; Newstrom, 1984; Wexley & Latham, 1981). Furthermore, Baldwin and Ford (1988) believed, "For transfer to have occurred, learned behavior must be generalized to the job context and maintained over a period of time on

the job” (p. 63). Broad (1997) and Ford and Weissbein (1997) asserted that transfer of training must be defined as an effective and continuous application of newly acquired skills on the job.

Baldwin and Ford (1998) suggested that transfer is a by-product of three factors: trainee characteristics, work environment, and learning retention. Baldwin and Ford developed a model of the transfer process that outlined the training inputs, training outputs, and conditions of transfer (see Figure 1). Royer (1979) defined transfer as, “the extent to which the learning of an instructional event contributes to or detracts from subsequent problem solving or the learning of subsequent instructional events” (p. 53). Furthermore, Garavaglia (1995) claimed the success of training involves two phases, the attainment of a new ability or knowledge and the trainee being able to maintain the behavior when he/she returns to the workplace. Michalak (1981) believed when given an ample opportunity to use the skill in the workplace that trainees would maintain the behavior acquired during the training. Historically speaking, Bunch (1936) and Bunch and McCraven (1938) suggested transfer was a product of the method used to acquire information instead of what was learned.

Ways to Make Transfer of Training Work

Many researchers believe they have found various means to ensure transfer of training. Knowles (1984) and Scheer (1979) claimed that adults tend to learn only what they have a desire to learn and therefore believe trainees should be involved in the process of selecting the type of training they are to receive. With this in mind, Hicks and Klimoski (1987) found:

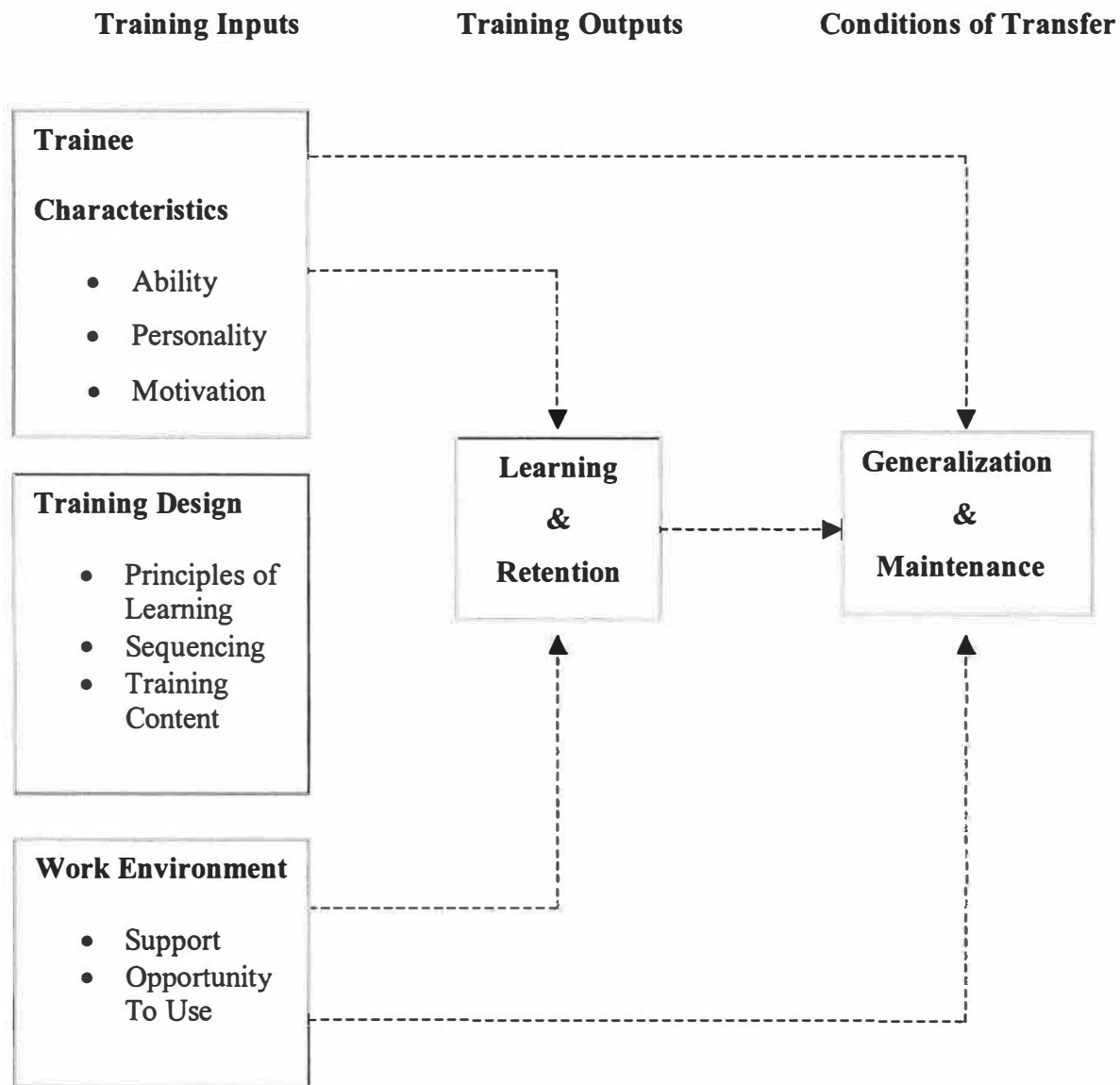


Figure 1. A Model of the Transfer Process

Those who had a high degree of choice were more likely to believe the workshop was appropriate for them to take, were better able to profit from training, and showed more commitment to their decisions to attend the workshop than trainees who received the traditional announcement and those who had a low degree of choice. (p. 546)

Ford (1994) claimed that the behaviors that are expected to change and the reason why they are expected to change must be obvious to the adult educators and to the participants. Also, Ford believed it is a necessity to know in what context training is expected to transfer and how often it is suppose to transfer.

A relapse prevention strategy that consists of both behavioral and cognitive components can be used to help promote positive transfer by educating the trainees on the problem of relapse (Ford, 1994). Fox (1994) believed learners should be involved on . planning committees. This provides an assurance to the planners that the training exercise and its goals are parallel with the trainees work environment. Fox continued by stating, “Need may be thought of as the discrepancy between what is and what ought to be. The potential learners’ estimates of this discrepancy provide valuable information about the level of motivation to learn and change performance” (p. 24). Nolan (1994) discussed the extent to which group discussions, practicums, and internships affected the transfer of training. He asserted when group discussions are done correctly that the extension of knowledge is stimulated and a forum provided where trainers are allowed to critique the knowledge to be applied in various settings. Also, he claimed practicums and internships gave the adults the needed opportunity to work in actual organizational and community

settings. This allowed trainees the chance to use the knowledge and skills acquired from training and receive feedback concerning their performance from experts.

The trainee's motivation to transfer skills can be affected by self-efficacy and outcome expectancies. Richey (1992) found the more experience in training and education that the trainee possessed, the greater the likelihood an increase in retention would take place after the training had occurred, but only when dealing with specific transfer, not general transfer. Cheek and Campbell (1994) discussed the idea of using training facilitators. Individuals such as peers, bosses, or family members could serve as these facilitators. In turn, support would be provided to the learner as well as the needed feedback concerning transfer. Also, Cheek and Campbell developed a transfer action plan, which emphasized activities after training occurred. Which in turn, established a level of ambition for putting skills learned in training into action when taken back to the job (see Figure 2).

Garavaglia (1995) asserted that trainers should help trainees identify specific barriers that may exist in a trainee's belief system and help to rid or change these beliefs in order for successful transfer to occur. Moreover, Garavaglia stated, "Attitudes toward one's previous training, work, training content, and delivery system affect transfer, as well as motivation" (p. 25). Garavaglia cited the importance of the supervisory role in transfer of training. He believed if the supervisor's behavior was parallel to the training goals, a greater chance existed for trainees to model the specific behavior displayed by supervisors and the likelihood for transfer would increase. Also, Garavaglia stated the importance of positive reinforcement when trainees return to their job. The importance of

<i>Figure 2</i>
<u>TRANSFER ACTION PLAN</u>
OBJECTIVE(S):
ACTIONS TO BE TAKEN:
POTENTIAL OBSTACLES:
NEEDED SUPPORT:
CRITERIA FOR SUCCESS:
ACCOMPLISHMENTS: (Check One): ☐ Not Accomplished ☐ Accomplished
If you did not accomplish what you had planned, what factors prevented you from doing so?
Follow-up Visit Date: _____ Person Reporting _____

Figure 2. Transfer Action Plan

feedback on performance and booster sessions, which allows the trainer and trainee time to reflect on the goals of training has been mentioned as well (Garavaglia). Olivero, Bane, and Kopelman (1997) identified the need for practice and constructive feedback. Olivero, et al., believed executive coaching provided this opportunity. The authors stated, "Coaching trainees once they return to the job can facilitate the transfer of training, especially if the coaching fosters the development and use of knowledge imparted during training" (Olivero, Bane, & Kopelman p. 461).

Moreover, Baldwin and Ford (1998) believed the creation of a buddy system could help the transfer of training. A buddy system consisted of pairing two trainees in order to reinforce or maintain the learning and give advice when needed to their 'buddy'. Ashby and Wilson (1997) and Kingsey and Wilson (1977) discussed the concept of a booster session. The authors viewed a booster session as an extension of training that involves occasional one-to-one contact between the trainee and trainer of a scheduled or unscheduled nature. Moreover, how and when practice is conducted may be a key concept for effective transfer of training (May & Kahnweiler, 2000). In addition, May & Kahnweiler stated, "Less classroom time and more time spent in one-on-one distributed practice, drilling to a level of automaticity, may be part of the solution to the transfer problem" (p. 15). Michalak (1981) claimed the appropriate investment by the manager in a training program was key in the transfer process. Without giving the trainees the appropriate investment in time and resources to gain intended knowledge and skills, training will fail from the onset. Kelly (1982) believed a thorough and specific content plan needed to be developed before the training program was selected or packaged.

Rossett (1997) believed, “Learning must be part of a consistent, clear message” (p. 20).

Why Transfer Fails

Voss (1987) suggested trainees had certain abilities that affect the transfer of training. Voss listed intelligence, prior learning or training, attitudes regarding a specific subject, and the utilization of cognitive skills in the learning situations. Voss believed these factors could increase or decrease the transfer of training. Maier (1973) asserted, if motivation to learn the content of a course is low or nonexistent, then in turn performance will be low, even for those individuals with the prerequisite ability to learn the content. Bavetta, Gist, and Stevens (1990) conducted a study that focused on goal setting. Bavetta, et al., found that trainees that focused on goals showed lower levels of transfer and performance when compared to self-management trainees. The conclusions of Bavetta, et al., suggested that goals might cause the trainee to focus on the ultimate outcome instead of the necessary process involved to achieve the goals. Garavalia (1993) suggested transfer does not occur when the environment at work does not support the training that was learned and when trainees do not believe the training was relevant. Rossett (1997) claimed:

Because most participants try to connect what they’re taught with what they have experienced and expect to experience at work, many of them become cynical. In such cases, they scoff, in covert and overt ways, at training as nothing more than a public display- without the organizational commitment that should be manifested in supervisory support, incentives, tools, and job design. (p. 22)

Rossett (1982) concluded by suggesting the preparations the trainees receive from the training program are insufficient for the 'real world' in which they will be attempting to apply the skills and knowledge they have learned. Factors such as inadequate learning and retention could be reasons why transfer does not occur (May & Kahnweiler, 2000). Moreover, Georges (1996) discussed an area where large amounts of training dollars are lost. Georges believed investments in training are lost, "When it comes to soft skills, companies and the 'trainers' they employ almost never do any training at all. What they do instead is education" (p. 49).

Types of Transfer

"Near transfer" is defined as a situation in which the application of skills from the transfer objective is quite similar to the initial learning event (Royer, 1979). On the other hand, "far transfer" is defined as a situation in which the application of skills from the transfer objective is somewhat different from the initial learning event (Royer).

Garavaglia (1995) stated that "horizontal transfer" encompasses the application of what the trainee has learned in a specific training program to a comparable situation in the workplace. In contrast, "vertical transfer" encompasses the application of what the trainee has learned in the training environment to a more profound level and more complex work situation. Royer defined "specific transfer" by stating a sharing of stimulus elements exists between the training and the transfer. In reference to "nonspecific transfer" there is no sharing of stimulus elements between the training and the transfer level.

Garavaglia (1995) commented on the difference that exists between positive and negative transfer. He asserted that if prior knowledge assists performance then positive

transfer takes place, but if previous knowledge hinders performance then negative transfer will take place. Royer (1979) stated, “Literal transfer involves the transfer of an intact skill or bit of knowledge to a new learning task” (p. 55). In contrast, figural transfer does not involve the transfer of these skills or bits of knowledge.

Swanson and Nijhof (1994) identified “generalization” and “application” as two types of transfer. The authors referred to generalization as the information and ideas individuals learn in which they are accountable for the application and generalization of these ideas and information to a various number of situations. Application referred to the trainees having learned only what they needed to know but still being able to perform above standards set forth in the training program. The “transfer-assumed” approach places a greater emphasis on the methods of how knowledge will be acquired by the learner during the training program than on application of knowledge after the learner returns to the work setting. In opposition, the “transfer-directed” approach addressed both performance needs and the ability to apply the needs to certain context (Sleezer, 1994). Thorndike and Woodworth (1901) proposed the “identical elements theory”, which was one of the first theories of transfer. Thorndike and Woodworth believed that transfer from the learning situation to the transfer situation would only take place if both situations shared identical elements. Furthermore, they believed the more shared elements that existed, the greater likelihood that the amount of transfer would increase. Osgood (1949) elaborated on the earlier works of Thorndike and Woodworth in his paper on the transfer surface. Osgood indicated the terms facilitative and inhibitory transfers were related to relationships regarding similarities and differences between various stimuli and

subsequent responses in relation to the original task and the transfer undertaking. Baldwin and Ford (1988) mentioned the concept known as “general principle”. General principles suggested that transfer was accomplished not only when the learners were taught the applicable skills, but the basic rules and the theoretical framework that underlies the training substance. Baldwin and Ford noted that Ellis (1965) defined stimulus variability as the idea that positive transfer is maximized when an assortment of related training stimuli is employed.

Rumelhart and Norman (1981) believed that various kinds of instructional objectives contribute to various levels of transfer. “Procedural objectives” entailed a sequence of steps being taught in order for the learning objective to be completed. In comparison, “declarative objectives” tend to be more formal in nature. Included in declarative objectives are concepts and principles learned so that the trainee can solve problems they might encounter in the future (Rumelhart & Norman). The authors concluded by noting that military programs preferred procedural objectives, whereas declarative objectives produce the type of knowledge preferred by advanced management training programs. Snow and Lohman (1984) discussed the ability-transfer relationship. They suggested that crystallized ability allowed the learner to identify past experiences and apply those experiences to newly discovered similar tasks. Also, they defined fluid ability as the ability of the learner to flexibly adapt skills to novel learning tasks.

Summary of Review of Related Literature

The review of related literature revealed a recent surge in WBI in educational and business settings. With regard to WBI, IDC forecasted a potential market size of \$5.5

billion by 2002 (Barron, 1999). Advantages and disadvantages of WBI were discussed. Subsequently, a comparison between WBI and classroom instruction was investigated. Aspects of transfer of training were also discussed. This allowed the researcher to compare WBI learners and classroom learners with regard to perceptions of transfer of related training. These findings are reported in chapter five.

Chapter III

Methodology

Introduction

The intent of this study was to utilize a quantitative approach to compare differences that might exist between web-based learners and traditional classroom learners with regard to perceptions of transfer of related training. The population consisted of University of Tennessee, Knoxville students enrolled in HRD undergraduate and graduate courses for the Fall 2001 semester. The Training Performance Transfer (TPT), developed by Petty and Farris (2001), was the instrument used to gather data for the study. The intent of this survey is to gather information regarding perceptions of the transfer of training process (Petty & Farris).

Population

Participants of this study were part-time and full-time students at the University of Tennessee, Knoxville Department of Human Resource Development, College of Human Ecology. The entire population of students taking Human Resource Development undergraduate and graduate courses at the University of Tennessee, Knoxville for the Fall 2001 semester was surveyed. This population was chosen based on the accessibility to the researcher and that online courses available were comparable to the number of traditional classroom courses available to students.

There were approximately 324 online graduate and undergraduate students. With regard to classroom courses there were approximately 180 graduate and undergraduate students. With regard to web-based courses there were approximately 144 graduate and

undergraduate students. The researcher entered each student's name into a database. Students who were taking both classroom courses and web-based courses were sent only one e-mail. This was to ensure that participants would not complete the survey twice. After a compilation of student names were completed an e-mail requesting completion of the survey and assuring anonymity was sent to each student (See Appendix A). Appendix B includes a letter from the head of the department encouraging student participation in the completion of the survey. Appendix C includes human subjects Form A, which allows the permission to conduct research involving human subjects.

Independent Variables

The independent variables included in this study were based on demographic information. The demographics included were: (a) years of full-time work experience, (b) gender, (c) level of education, (d) age (e) years experience as supervisor (f) number of previous online college courses completed, (g) current occupational status, and (h) online course experience.

Dependent Variables

The dependent variables included in this study were transfer of training as measured by the Training Performance Transfer, which consisted of five descriptors. These descriptors included: (a) self-efficacy, (b) supervisor support, (c) peer support, (d) organizational environment, and (e) motivation.

Instrumentation

The instrument used to survey the students was the Training Performance Transfer developed by Dr. Gregory Petty and Dr. Mark Farris at the University of Tennessee, Knoxville (2001). The TPT was used to measure the students' perceptions of the transfer of training process. The inventory is subdivided into two sections. The first section consists of 42 performance statements regarding students' perceptions following training. These 42 performance statements are categorized into one of five descriptors. The descriptors include: (a) self-efficacy, (b) supervisor support, (c) peer support, (d) organizational support, and (e) motivation. The TPT uses a 5-point Likert scale of 1 = never, 2 = Seldom, 3 = Sometimes, 4 = Usually, and 5 = Always. The second section consists of demographic information.

A literature review was conducted by the researcher to locate an instrument that was suitable for the purpose of this study. However, an instrument to measure perceptions of transfer of training with regard to WBI and classroom instruction could not be found. The reason for this could be the relatively newness of WBI. After reviewing the Trainer's Assessment of Proficiency TAP and the Wescshler Memory Scale III it was concluded that the Training Performance Transfer best suited the researcher's needs. The relevancy to transfer of training provided by these instruments was not as prolific as the TPT. The statements posed in the TPT better served the scope of this study and its population than the aforementioned instruments. Additionally, the TPT appeared to be more suitable to be administered online.

Data Collection

An e-mail explaining the purpose of the survey, assuring anonymity, and encouraging participation was provided to the entire selected sample population (See Appendix A). The e-mail contained a link the participants could follow to complete the survey. A requested return date of two weeks was included in the e-mail. A follow-up e-mail stating the importance of completion along with another link to the survey was sent out one week prior to the previously requested return date (See Appendix A). A last e-mail request with a link to the website containing the survey was provided to the participants two days before the completion deadline (See Appendix A). Once the participants completed the survey the data was sent to another website accessible only to the researcher. The data was put into an Excel spreadsheet after the completion date had passed. The survey was e-mailed to 324 students. Of which, 127 responses were returned. The rate of return for the survey was 39%.

Data Analysis

The data gathered was entered into a Microsoft Excel spreadsheet. Subsequently, SPSS 10.1 was used to analyze the data. The Training Performance Transfer was the lone instrument used for the study. Descriptive statistics including mean, standard deviation, and frequencies were gathered for the demographic data to discover students' perceptions of the transfer of training process. Also, descriptive statistics and Pillai's Trace, a multivariate of analysis test were used to breakdown the survey into the five descriptors (self-efficacy, supervisor support, peer support, organizational environment, and motivation) in order to gather students' perceptions of the transfer of training process.

Finally, descriptive statistics and Pillai's Trace were used to determine differences that might exist between web-based learners and traditional classroom learners regarding perceptions of transfer of training.

Chapter IV

Analysis of Data and Results

Introduction

The first objective of this study was to identify any differences that might exist between classroom learners and web-based learners in their perceptions of transfer of related training. The second objective was to identify any differences that might exist between classroom learners and web-based learners with regard to perceptions of transfer of related training based on years of full time work experience, gender, age, years experience as supervisor, level of education, number of previous online college courses completed, current occupational status, and online course experience. The information gathered for this study was attained via an e-mail sent to the participants that contained a link to a website to complete the survey. This chapter presents the results that were gathered from the survey of participants.

Demographic Characteristics

To better describe the population under review with this study frequencies are provided for the demographic variables. The demographic variables collected for this study include years of full-time work experience, years experience as supervisor, gender, level of education, age, number of previous online college courses completed, current occupational status, and online course experience.

Years of full-time work experience are shown in Figure 3. With regard to years of full-time work experience, 47 (37%) reported having less than 2 years of full-time work experience, 38 (29.9%) of the respondents reported to have 2-8 years of full-time work



Figure 3. Histogram- Years of full-time work experience

experience, and the remaining respondents 42 (33.1%) had more than 8 years of full-time work experience.

The number of years experience as supervisor was determined as shown in Figure 4. The majority of respondents 68 (53.5%) had no supervisory experience, while 23 (18.1%) of the respondents had less than 2 years, 22 (17.3%) of the respondents had 2-8 years experience, and 14 (11%) of the respondents had more than 8 years experience as a supervisor.

The gender of the respondents revealed that 81 (63.8%) were females and 46 (36.2%) were males. These findings are shown in Figure 5.

The demographic variable, level of education, is shown in Figure 6. No respondents reported to have less than a high school diploma. There were 9 (7.1%) respondents that had attained a high school degree or GED, while 52 (40.9%) respondents reported having two years of college or associate's degree, 13 (10.2%) respondents had completed a bachelor's degree, and 53 (41.7%) reported to have some graduate work.

The next demographic variable depicted, age is shown in Figure 7. There were 11 (8.7%) of the respondents that reported being 19 or under, whereas 51 (40.2%) were between the ages of 20-26, 28 (22%) reported being 27-35, 35 (27.6%) reported being 36-55, and 2 (1.6%) reported being over 55.

With respect to the next demographic variable, the number of previous online college courses completed was examined. These results are reported in Figure 8. Of the

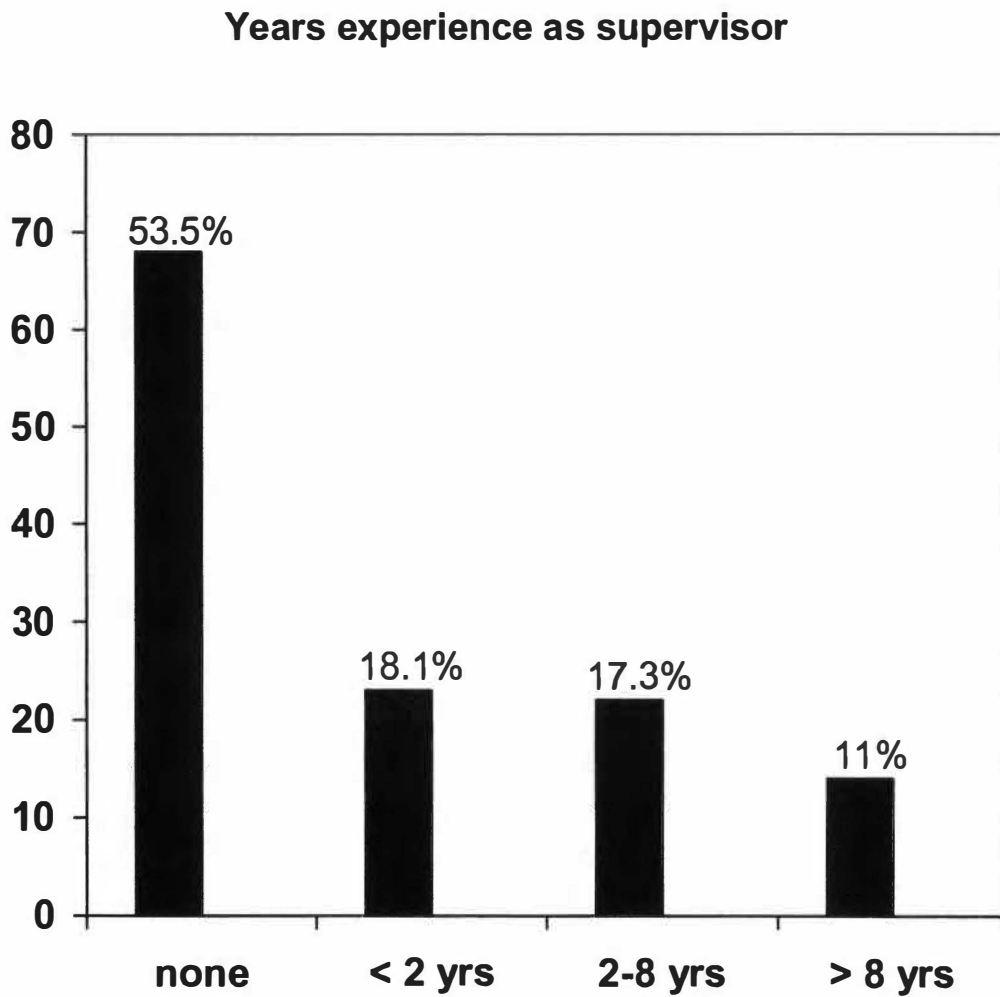


Figure 4. Histogram depicting years as Supervisor

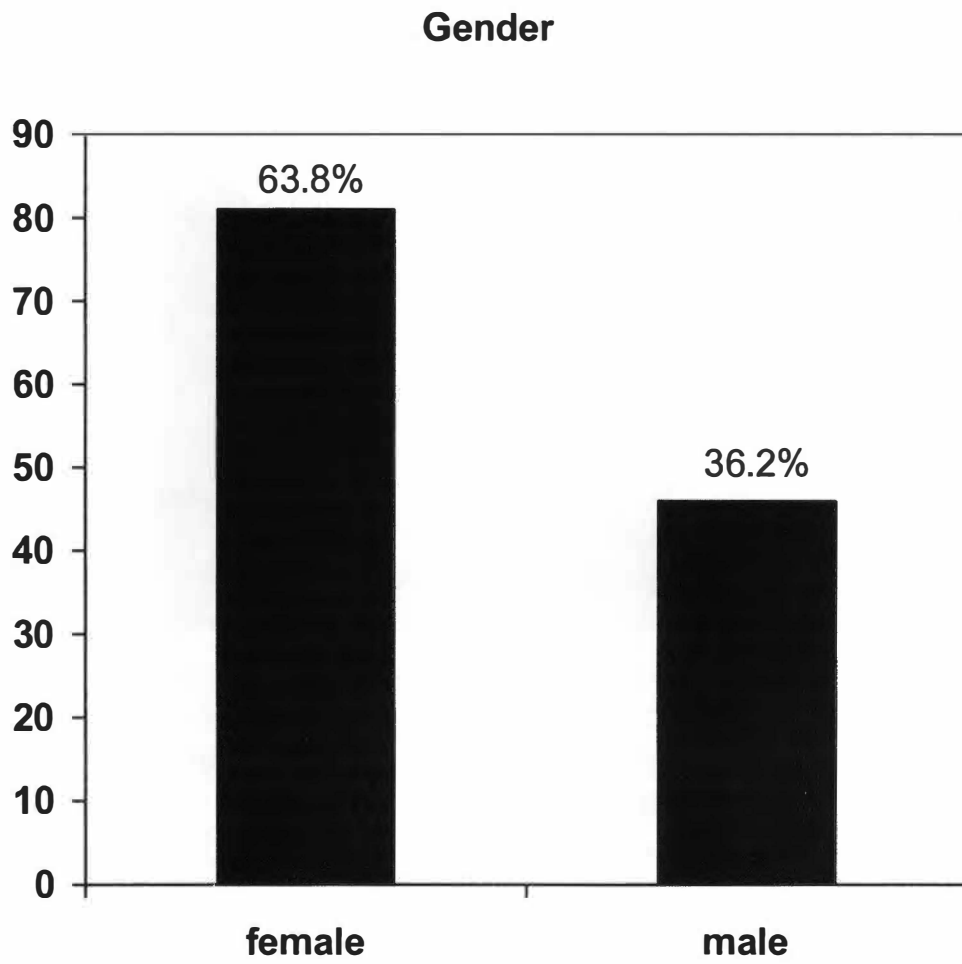


Figure 5. Gender

Level of Education

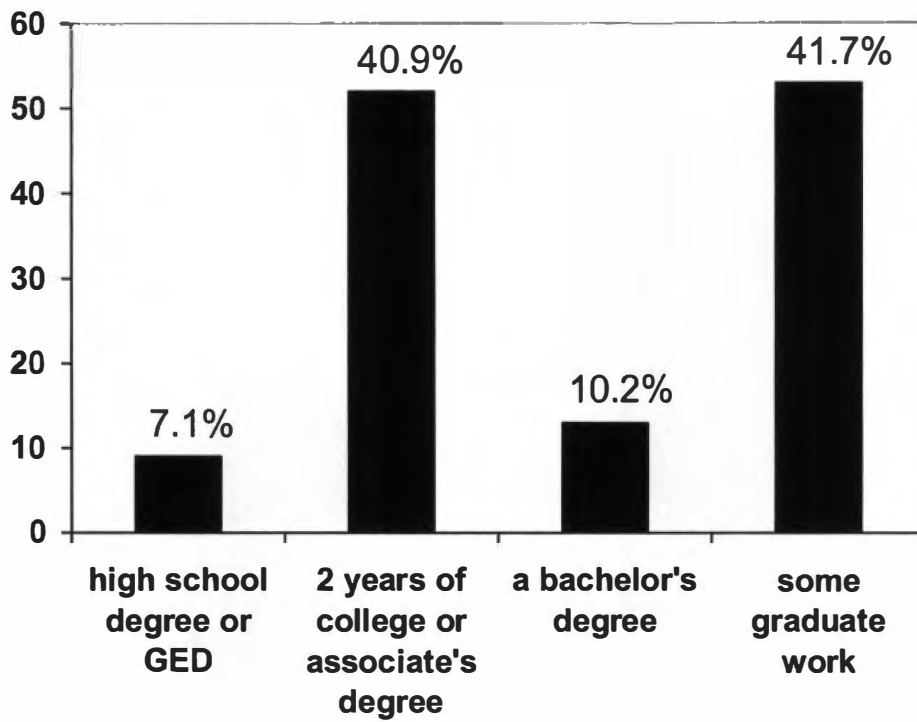


Figure 6. Level of Education

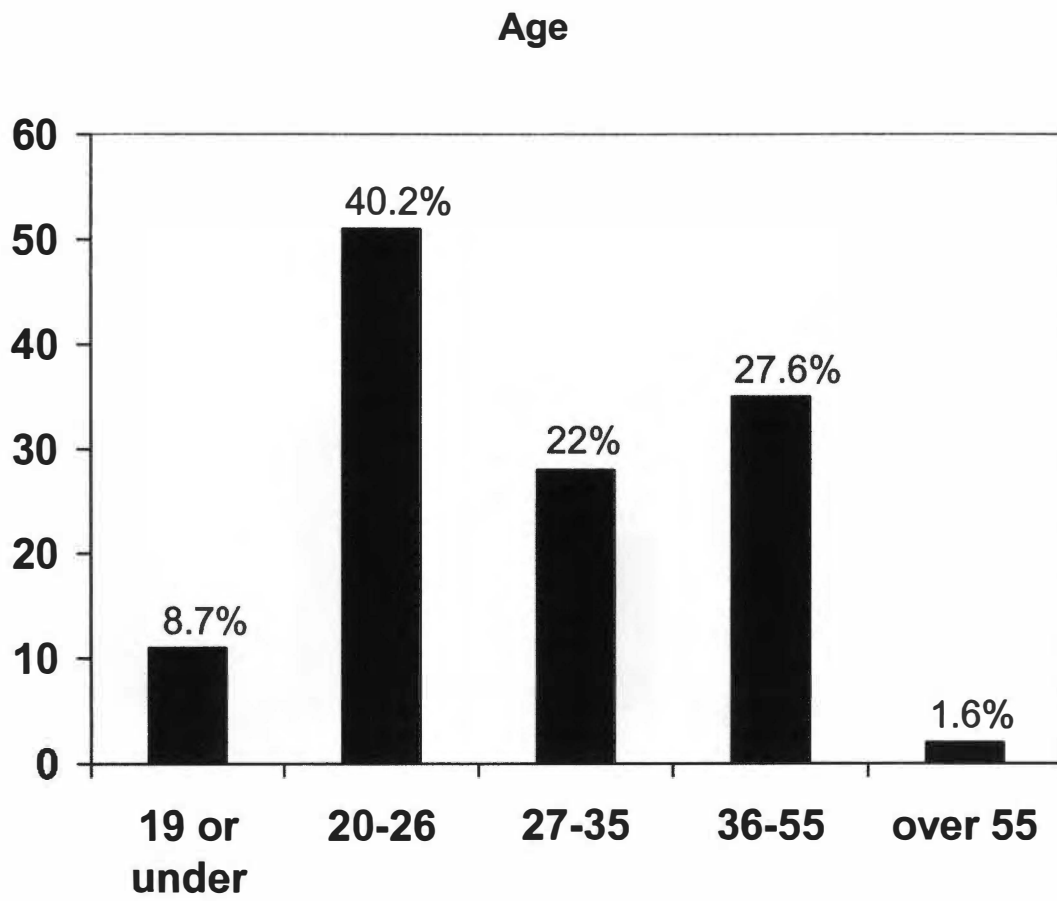


Figure 7. Respondents' Age

Number of previous online college courses completed

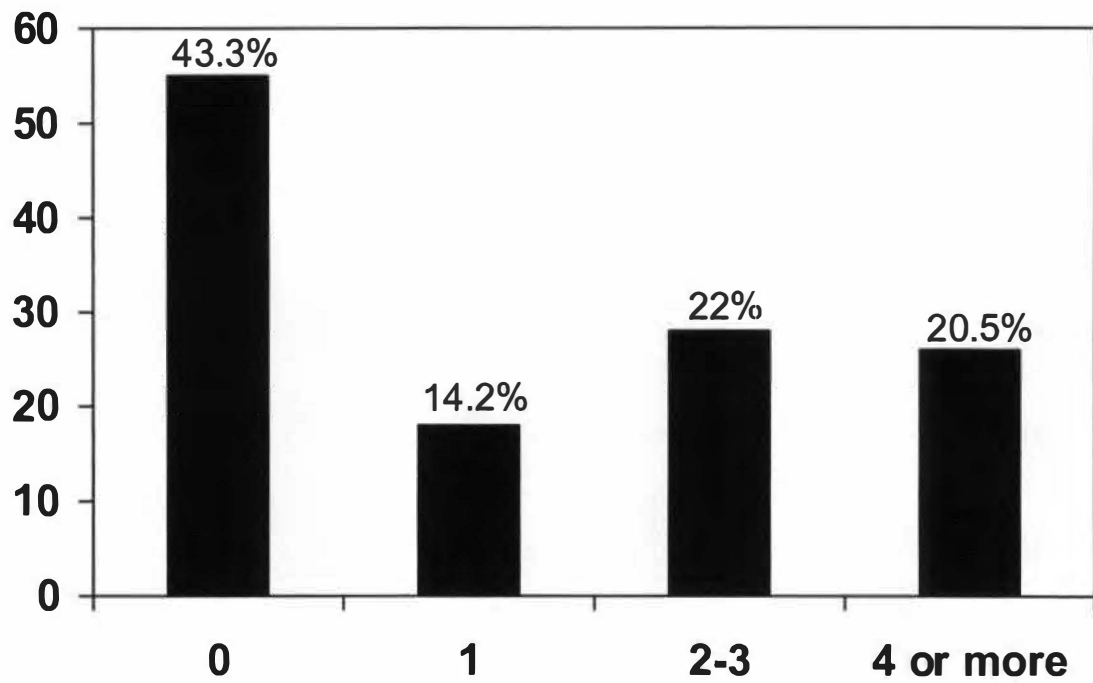


Figure 8. Online College Courses Completed

127 respondents, 55 (43.3%) reported to have never taken an online course, 18 (14.2%) of the respondents have taken only 1 online course, 28 (22%) of the respondents had taken between 2-4 online courses, and 26 (20.5%) of the respondents had taken more than 4 or more online courses.

Occupational status was also examined. As shown in Figure 9, 19 (15%) of the respondents had no part-time job, 23 (18.1%) of the respondents were employed 50% of the time or less, and 32 (25.2%) of the respondents were employed 50% or less than full-time, and 53 (41.7%) of the respondents work full-time.

Online course experience was assessed as a demographic variable. The results are depicted in Figure 10. There were 43 (33.9%) respondents that had no online course experience, while 16 (12.6%) were currently taking their first online course, 17 (13.3%) have taken at least one online course, and 51 (40.2%) have taken more than one online course. Respondents who answered none or currently taking first online course were operationally defined as traditional learners for this study. Whereas, respondents who had taken at least one online course or have taken more than one online course were operationally defined as web-based instruction learners. The number of respondents categorized as traditional learners was 59 (46.5%), while 68 (53.5%) of the respondents were categorized as web-based instruction learners. This is summarized in Figure 11.

Instrumentation

The five subcategories of this instrument were analyzed independently to better represent the subcomponents of training performance transfer. The following results are

Current Occupational Status

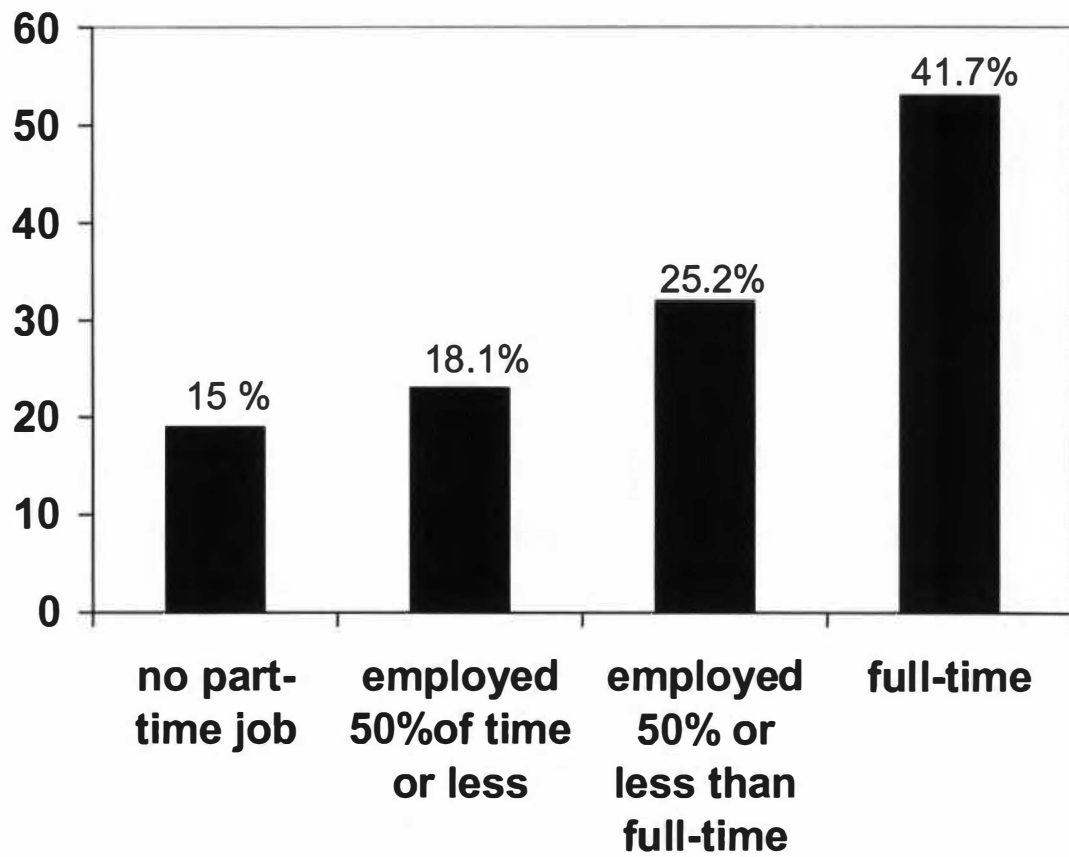


Figure 9. Occupational Status

Online Course Experience

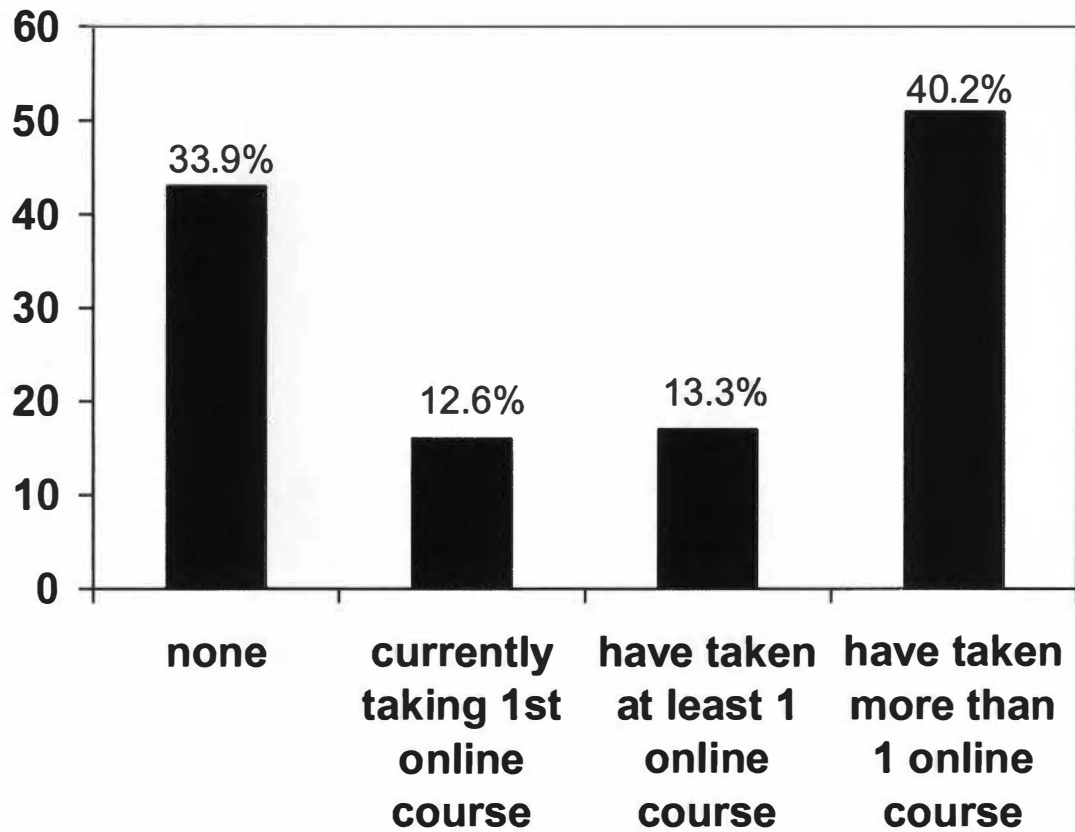


Figure 10. Online Course Experience

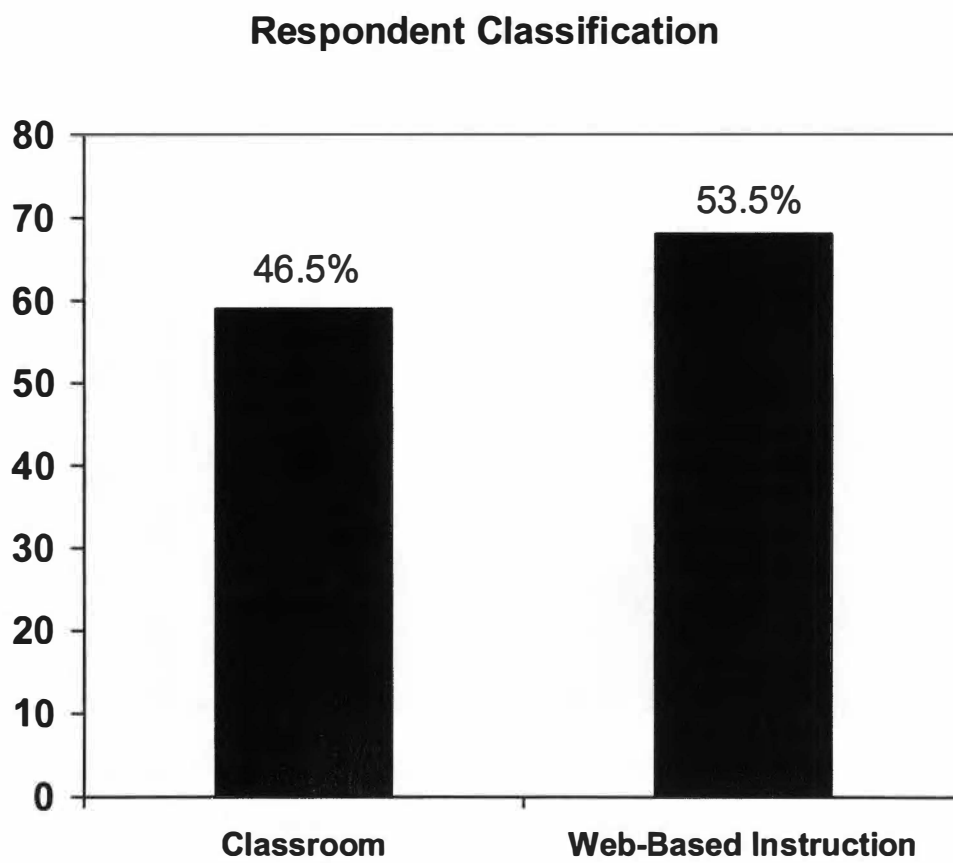


Figure 11. Respondent Classification

mean scores and standard deviation scores for classroom learners and WBI learners by the five subcategories. These results are reported in Table 1.

The following results are Cronbach's reliability coefficients for each of the five subcategories. Questions number 1, 5, 6, 8, 11, 12, 16, 22, 29, 31, 35, and 37 were part of the organizational environment subcategory. These questions had an $\alpha = .7634$. The questions in the supervisor support subcategories were: 4, 9, 15, 20, 24, 27, 32, 33, 40, and 41. The reliability coefficients for these questions had an $\alpha = .8781$. Then next of questions, 10, 21, 34, and 42 were in the subcategory peer support. The reliability coefficients for these questions had an $\alpha = .7933$. Questions number 2, 13, 19, 26, 28, 30, 36, 38, and 39 were in the subcategory motivation. The α for this subcategory was .6501. The final subcategory dealt with questions concerning self-efficacy. The set of questions for this subcategory were: 3, 7, 14, 17, 18, 23, and 25. This subcategory had a Cronbach's $\alpha = .7534$. This information is summarized in Table 2.

Findings for Ho₁

Ho₁: There is no significant difference in perceptions of transfer of related training for WBI vs. traditional learners.

To accept or reject this null hypothesis Pillai's Trace, a multivariate test was conducted.

Pillai's Trace established there were no significant differences between classroom learners and WBI learners at .741 significance level with an F value of .546 when dealing with perceptions of transfer of related training. Therefore, null Ho₁ was accepted.

Table 1.

Mean scores and Standard Deviation scores for classroom learners and WBI learners

	Classroom Learners		WBI Learners	
	Mean	SD	Mean	SD
Self-Efficacy	3.8087	.47574	3.8824	.49113
Motivation	3.5932	.40622	3.7124	.38835
Supervisor Support	3.5627	.61248	3.4441	.60923
Organizational Environment	3.4322	.49336	3.4387	.43088
Peer Support	3.4110	.55469	3.4375	.61900

Note. WBI = Web-based instruction

Table 2.

Cronbach's Alpha for items in subcategories

	Organizational Environment	Supervisor Support	Peer Support	Motivation	Self-Efficacy
Items	1, 5, 6, 8, 11, 12, 16, 22, 29, 31, 35, 37	4, 9, 15, 20, 24, 27, 32, 33, 40, 41	10, 21, 34, 42	2, 13, 19, 26, 28, 30, 36, 38, 39	3, 7, 14, 17, 18, 23, 25
Cronbach's Alpha	.7634	.8781	.7933	.6501	.7534

Findings for Ho₂

Ho₂: There are no significant differences in perceptions of transfer of related training for WBI learners and traditional learners based on years of full-time work experience, years experience as a supervisor, gender, level of education, age, number of previous online college course completed, current occupational status, and online course experience.

Pillai's Trace was again used to identify significant differences between the demographic variables. A demographic variable with a prescribed significance level of .05 would be considered a significant difference using Pillai's Trace. With regard to years of full-time work experience Pillai's Trace was determined to be at the .266 significance level with an F value of 1.241. Therefore no significant difference existed for years of full-time work experience by the respondents. With respect to years experience as supervisor the significance= .476 with an F value of .980, therefore no significant difference was found based on years experience as supervisor. The respondent's gender showed no significant difference as reported by Pillai's Trace at the significance level of .572 with an F value of .859. The researcher continued to investigate differences in demographic variables by testing the level of education obtained by the respondents. Using Pillai's Trace, a significance level of .067 with an F value of 1.622 was ascertained, therefore concluding there were no significant differences in perceptions of transfer of related training with regard to level of education. Subsequently, age was tested. A significance of .120 with an F value of 1.394 was gathered accepting null Ho₂, which stated there are no significant differences in perceptions of transfer of related training concerning age. With respect to the number of previous online college courses

completed an attempt to establish a significant difference in perceptions of transfer of related training for WBI learners was analyzed. Pillai's Trace showed a significant level of .194 with an F value of 1.310, therefore accepting null H_{02} . Current occupational status reported a significance level of .117 with an F value of 1.464. Again, based on the .05 significance level of Pillai's Trace no significant differences were found. Finally, online course experience reported a significance level of .770 with an F value of .714, therefore accepting null H_{02} . These data are summarized in Table 3.

The researcher attempted to break the demographic variables down into the five subcategories to test for significance. The demographic variable years of full-time work experience reported no significance differences based on organizational environment at the .842 significance level with an F value of .172, supervisor support .988 with an F

Table 3.

Findings from Hypotheses

	FWE	Yrs Exp. Sup.	Gender	L of E	Age	# Prev. OL Col Courses	Curr. Occ. Stat.	OL Course Exp.
Sig.	.266	.476	.572	.067	.120	.194	.117	.770
F Value	1.241	.980	.859	1.622	1.394	1.310	1.464	.714

Note. FWE= Years of full-time work experience, Yrs. Exp. Sup.= Years experience as a supervisor, L of E= Level of education, # Prev. OL Col Courses= Number of previous online college courses completed, Curr. Occ. Stat.= Current Occupational Status, and OL Course Exp.= Online course experience

value of .012, peer support at .090 with an F value of 2.465, motivation at .478 with an F value of .743 and self-efficacy at .134 with an F value of 2.048. Years experience as supervisor found no significant differences when divided into organizational environment at a significance level of .458 with an F value of .873, supervisor support at .362 with an F value of 1.078, peer support at .726 with an F value of .438, motivation at .529 with an F value of .742, and self-efficacy at .762 with an F value of .388. With regard to gender, no significant differences were found for organizational environment at .199 significance level with an F value of 1.640, supervisor support at .361 with an F value of 1.029, peer support at .637 with an F value of .453, motivation at .565 with an F value of .575, or self-efficacy at .675 with an F value of .395. With respect to level of education no significant differences were found for organizational environment at the .215 significance level with an F value of 1.514, supervisor support at .065 with an F value of 2.482, motivation at .464 with an F value of .862, or self-efficacy at .233 with an F value of 1.447. Peer support was the only subcategory that showed a significant difference at .022 with an F value of 3.359 regarding level of education. With respect to age no significant differences were found for organizational environment at the .117 significance level with an F value of 1.892, supervisor support at .448 with an F value of .932, peer support at .425 with an F value of .975, or self-efficacy at .974 with an F value of .124. Motivation was the only subcategory at .027 with an F value of 2.852 that showed a significant difference. With regard to number of previous online college courses completed no significant differences were found for motivation at the .159 significance level with an F

value of 1.764 and self-efficacy at .778 with an F value of .366. Differences were found for organizational environment at .027 with an F value of 3.176, supervisor support at .034 with an F value of 3.005, and peer support at .013 with an F value of 3.766. With respect to current occupational status no significant differences were found for organizational environment at the .133 significance level with an F value of 1.906, supervisor support at .060 with an F value of 2.548, motivation at .583 with an F value of .653, and self-efficacy at .914 with an F value of .174. The only subcategory found to show significant differences was peer support at .042 with an F value of 2.836. The final variable included WBI learners and traditional learners. The 5 subcategories showed no significant differences when broken down into organizational environment at the .885 significance level with an F value of .021, supervisor support at .719 with an F value of .130, peer support at .214 with an F value of 1.566, motivation at .625 with an F value of .240, and self-efficacy at .389 with an F value of .747. This is summarized in Table 4.

Table 4.

Findings for item subcategories

		FWE	Yrs. Exp. Sup.	Gender	L of E	Age	# Prev. OL Col. Courses	Curr. Occ. Stat.	OL Course Exp.
OE	Sig	.842	.458	.199	.215	.117	.027	.133	.885
	F value	.172	.873	1.640	1.514	1.892	3.176	1.906	.021
SS	Sig	.988	.362	.361	.065	.448	.034	.060	.719
	F value	.012	1.078	1.029	2.482	.932	3.005	2.548	.130
PS	Sig	.090	.726	.637	.022	.425	.013	.042	.214
	F value	2.465	.438	.453	3.359	.975	3.766	2.836	1.566
Mot	Sig	.478	.529	.565	.464	.027	.159	.583	.625
	F value	.743	.742	.575	.862	2.852	1.764	.653	.240
SE	Sig	.134	.762	.675	.233	.974	.778	.914	.389
	F value	2.048	.388	.395	1.447	.124	.366	.174	.747

Note. FWE= Years of full-time work experience, Yrs. Exp. Sup.= Years experience as a supervisor, L of E= Level of education, # Prev. OL Col. Courses= Number of previous online college courses completed, Curr. Occ. Stat.= Current occupational status, OL Course Exp.= Online course experience, OE= Organizational environment, SS= Supervisor support, PS= Peer support, Mot= Motivation, and SE= Self-efficacy.

Chapter V

Summary, Findings, Conclusions, and Recommendations

Introduction

The purpose of this chapter is to provide a synopsis regarding the researcher's findings. The overall purpose of the study was to determine differences between WBI learners and traditional learners with regard to their perceptions of transfer of related training. In addition, perceptions of transfer of related training based on the demographic variables provided within the survey instrument were examined. This chapter contains a summary of the study, the researcher's major findings, conclusions, and recommendations that were gathered from the study.

Summary

This study was based on the possibility that perceptions of effectiveness of training might differ between WBI learners and traditional learners. The review of literature revealed a substantial amount of findings regarding the disadvantages and advantages of WBI. However, the review of literature did not reveal a significant amount of information pertaining to transfer of related training dealing with WBI. The review of literature also did not investigate a comparison between WBI learners and traditional learners.

Participants of this study were part-time and full-time students at the University of Tennessee, Knoxville. The entire population of students enrolled in the department of Human Resource Development, College of Human Ecology undergraduate and graduate

degree program for the Fall 2001 semester was surveyed. The Training Performance Transfer survey was modified to complete this study. The demographic variables number of previous online college courses completed, current occupational status, and online course experience were added to better serve the identified population.

Two hypotheses were developed for this study. The first hypothesis focused on differences in the perceptions of transfer of related training for WBI learners and traditional learners. The second hypothesis focused on whether or not there were any significant differences in perceptions of transfer of related training for WBI learners based on years of full-time work experience, years experience as a supervisor, gender, level of education, age, number of previous online college courses completed, current occupational status, and online course experience.

The sample size for this study was 324 undergraduate and graduate students enrolled in Human Resource Development classes for the Fall 2001 semester. Respondents were e-mailed the survey that consists of 42 performance statements and eight questions pertaining to demographic information. The 42 performance statements were broken down into five subcategories: (a) organizational environment, (b) motivation, (c) self-efficacy, (d) peer support, and (e) supervisor support. A follow-up e-mail was sent out to the participants one week after the original e-mail was sent out. This e-mail contained a reminder of the importance of completion, the deadline for completion date, and a statement of appreciation for those who had completed the survey. Two days prior to the completion date a final e-mail was sent out to the potential participants

reminding them of the completion date and encouraging participation. A total of 127 surveys were submitted yielding a 39% response rate.

Chapter IV reported participant data using Pillai's Trace to determine if any significant differences existed with regard to demographic data dealing with WBI learners. In addition, Pillai's Trace was also used to determine if any significant differences surfaced in perceptions of the transfer of related training for WBI learners and traditional learners. Cronbach's Alpha was performed on the five subcategories to better represent the subcomponents of the Training Performance Transfer. Frequencies and percentages were reported for the participants' demographic data.

Major Findings

Included in this section are the findings on the respondents' demographic information and the two null hypotheses.

Findings concerning participant demographics:

1. This study consisted of respondents with various years of full-time work experience. The largest number of respondents 47 (37%) had less than 2 years of full-time work experience. Subsequently, 38 (29.9%) of the respondents had 2-8 years of full-time work experience. Finally, 42 (33.1%) of the respondents had more than 8 years of full-time work experience.
2. The majority of the respondents 68 (53.5%) had no experience as a supervisor.
3. The respondents were mainly females 81 (63.8%).
4. The majority of respondents 105 (82.6%) possessed either 2 years of college or associate's degree 52 (40.9%) or some graduate work 53 (41.7%).

5. The majority of respondents fell into 1 of 3 age ranges: 20-26, 51 (40.2%), 27-35, 28 (22%), or 36-55, 35 (27.6%). Only 10.3% were 19 or under, 11 (8.7%) and over 55, 2 (1.6%).
6. The majority of respondents 55 (43.3%) had never completed an online college course, whereas 18 (14.2%) had completed one online course. The remaining respondents had completed 2-3 courses 28 (22%) and 4 or more 26 (20.5%).
7. The majority of respondents 53 (41.7%) currently are employed full-time.
8. For the purpose of this study, the respondents were operationally defined as traditional learners or WBI learners. The number of respondents that were defined as traditional learners were 59 (46.5%), whereas 68 (53.5%) were defined as WBI learners.

Findings from Null Ho₁

In the analysis of null hypothesis one using Pillai's Trace, the findings indicated there are no significant differences in perceptions of transfer of related training for WBI learners vs. traditional learners.

Findings from Null Ho₂

In the analysis of null hypothesis two, the findings indicated there are no significant differences in perceptions of transfer of related training for WBI learners and traditional learners based on years of full-time work experience, years experience as a supervisor, gender, level of education, age, number of previous online college courses completed, current occupational status, and online course experience.

Conclusions

Based on the findings of this study, the following conclusions were reached:

1. Students do not believe there are any significant differences in the transfer of training process between traditional classes and WBI classes.
2. Based on demographic variables of the survey, students do not perceive WBI classes significantly superior or inferior with regard to transfer of training. The number of years of full-time work experience, years experience as a supervisor, gender, level of education, age, number of previous online college courses completed, current occupational status, and online course experience does not have a significant effect on how students perceive transfer of training.
3. The findings from this study could provide a baseline for future studies pertaining to students' perceptions of transfer of training. More research is needed in order to better understand differences between WBI learners and traditional learners.

Recommendations

Based on the findings and conclusions gathered from it, the following recommendations are included for consideration:

1. Given the recent surge in Web-based technology, future quantitative studies are needed to improve WBI classes. A significant amount of research has been examined with regard to advantages and disadvantages of WBI, but a minute amount of research has examined the transfer of training of WBI. Future studies investigating the transfer of training process in WBI should be implemented.
2. Given that no significant differences were found, further research is needed involving

a larger population sample to better investigate possible differences between traditional learners and WBI learners concerning perceptions of transfer of related training.

3. Further research is needed that entails more demographic variables that could effect perceptions of transfer of related training.
4. More studies using this survey would allow more reliability testing, which in turn would enhance the credibility of the conclusions.
5. Further research is needed to examine the significance of the five subcategories of the survey: motivation, organizational environment, self-efficacy, peer support, and supervisor support.
6. Research comparable to the study should be conducted in various educational institutions consisting of a larger population size.
7. With regard to this study, perceptions of transfer of relate training was examined. Additional studies using the Training Performance Transfer that include a pre-test and a post-test are needed in order to test for knowledge gained.

Implications

1. Students do not reveal any significant differences in transfer of training between WBI classes and traditional classes, therefore educational institutions should implement a mixture of both types of classes in order to better serve students learning to promote optimal transfer of training.
2. This study may indicate that web-based instruction is a viable, effective alternative to traditional instruction for college based courses.

3. HRD professionals should consider modifying the curriculum of traditional course offerings to include more curriculum utilizing web-based methodologies.

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Appendixes

Appendix A
Student Letters

Dear Fellow Student,

I am a master's candidate in the University of Tennessee Human Resource Development program. My advisor is Dr. Petty. We are trying to find ways of improving instruction in the HRD program, particularly online instruction. As a part of this we would like to survey everyone currently taking courses to determine your perceptions of the transfer of training from the instruction you have received to applications on the job.

The attached web site is a transfer of training survey developed by Dr. Petty and Mark Farris. For my research project, please try to interpret the instruction you have received through the courses you have taken in HRD or are currently taking as you respond to the items of the instrument. Your responses will be kept strictly anonymous according to all applicable confidentiality guidelines. Please take a few short minutes to complete the survey. Your response to this survey will be greatly appreciated. Please follow the provided link below to complete the survey.

Please complete and submit within two weeks of receiving this request.

Thank you.

Sincerely,
Gabe Dalton
Project Director
Training Performance Transfer in HRD

Dear Fellow Student,

One week has passed since my first e-mail request was sent out. I would like to thank those of you who have taken the time to complete the survey. The survey deals with perceptions of the transfer of training process. If you still have not completed the survey please take a few short minutes to help out a fellow student. I need a certain amount of responses in order to be able to successfully complete my Master's of Science in Human Resource Development. Your participation will be greatly appreciated. Also, your responses will be kept strictly anonymous according to all applicable confidentiality guidelines. Please follow the provided link below to complete the survey.

Thank You!

Sincerely,
Gabe Dalton
Project Director
Training Performance Transfer in HRD

Dear Fellow Student,

This is my final plea. November 7th is the last day to complete the survey. I would like to thank those of you who have completed the survey. If you have not completed the survey please help me out. My data collection is almost complete, but I still need more participants. Please take a few short minutes to complete the survey. Your participation will be greatly appreciated. Your responses will be kept strictly anonymous according to all applicable confidentiality guidelines. Again, thank you for your participation.

Sincerely,
Gabe Dalton
Project Director
Training Performance Transfer in HRD

Appendix B

Letter of Permission

Dear Gabe,

This letter is to grant permission for you to conduct your Master's Thesis research with the Fall 2001 undergraduate and graduate HRD students. It is my understanding that your research will investigate training performance transfer using the Training Performance Transfer developed by Dr. Petty and Mark Farris. When you have received the human subjects review form A approval you may proceed with your study. Good luck!

Sincerely,

Dr. Lane Morris
Interim Department
Head HRD

Appendix C
Human Subjects Form A

FORM A

IRB # _____

Certification for Exemption from IRB Review for Research Involving Human Subjects

A. PRINCIPAL INVESTIGATOR(s) and/or CO-PI(s): (For student projects, list both the student and the advisor.) Advisor – Dr. Petty Student – Gabe Dalton

B. DEPARTMENT: Human Resource Development

C. COMPLETE MAILING ADDRESS AND PHONE NUMBER OF PI(s) and CO-PI(s): Gregory C. Petty
Department of Human Resource Development 310 Jessie Harris Building Knoxville, TN 37996-1900 (865)-
974-2574 Gabe Dalton 159 Nicole Chase Ln Knoxville, TN 37924 (865) 933-1632

D. TITLE OF PROJECT: Training Performance Transfer

E. EXTERNAL FUNDING AGENCY AND ID NUMBER (if applicable): N/A

F. GRANT SUBMISSION DEADLINE (if applicable): N/A

G. STARTING DATE: (NO RESEARCH MAY BE INITIATED UNTIL CERTIFICATION IS GRANTED.)
Early to mid October 2001

H. ESTIMATED COMPLETION DATE (Include all aspects of research and final write-up.): December 2001

I. RESEARCH PROJECT:

1. **Objective(s) of Project** (Use additional page, if needed.): The objective of this project is to investigate the differences in transfer of training between online learners and traditional learners in selected undergraduate and graduate courses in the Department of Human Resource Development during Fall 2001.
2. **Subjects** (Use additional page, if needed): University of Tennessee, Knoxville undergraduate and graduate students enrolled in classes in the College of Human Ecology, Department of Human Resource Development for the Fall, 2001 term. Student responses will take approximately 15 minutes using an online survey.
3. **Methods or Procedures** (Use additional page, if needed.): All HRD students enrolled in online courses and classroom courses will be e-mailed a letter requesting participation in the survey.
4. The students will be provided with a link to a website that contains the survey. After completion, the student will submit the form into a database. Strict confidentiality and anonymity will be used to protect the students' identities. The P. I. will know only pertinent data. One week prior to a predetermined deadline the students will be sent a reminder letter to complete the survey. Again, strict confidentiality and anonymity will be used to protect the students' identities.
5. **CATEGORY(s) FOR EXEMPT RESEARCH PER 45 CFR 46** (see reverse side for categories):
_____1_____

J. CERTIFICATION: The research described herein is in compliance with 45 CFR 46.101(b) and presents subjects with no more than minimal risk as defined by applicable regulations.

Principal Investigator _____ Gabriel L. Dalton _____
Signature Name Date

Student Advisor _____ Dr. Gregory C. Petty _____
Signature Name Date

Dept. Review
Comm. Chair _____ Dr. Ernest W. Brewer _____
Signature Name Date

APPROVED:
Dept. Head _____ Dr. Lane Morris _____
Signature Name Date

Rev. 01/97

Appendix D
Training Performance Transfer
Instrument

Training Performance Transfer

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The purpose of this inventory is to obtain information about your perceptions of the transfer of training process. Your responses will be kept strictly confidential and your name is not required on this form. It is important for you to answer each item as truthfully as possible.

For each training performance statement listed on the following pages, **circle the number** that most closely reflects your opinion. There are five possible choices for each item:

<u>Never</u>	<u>Seldom</u>	<u>Sometimes</u>	<u>Usually</u>	<u>Always</u>
1	2	3	4	5

There is no right or wrong answer or time limit. However, please work as quickly as possible and respond to every item on the list.

After I receive training:

Performance Statement:	Never Always				
	1	2	3	4	5
1. My organization considers the application of skills I have learned high priority	1	2	3	4	5
2. I am motivated to use the information I have learned	1	2	3	4	5
3. I have knowledge about methods for using what I have learned	1	2	3	4	5
4. I get on the job reinforcement from my supervisor	1	2	3	4	5
5. Existing work demands are consistent with training I have received	1	2	3	4	5
6. I am quickly able to apply new training on the job	1	2	3	4	5
7. I have confidence when attempting to apply related theory to my job	1	2	3	4	5
8. What I have learned in training is relevant to the tasks I perform	1	2	3	4	5
9. What I learned in the classroom is supported by my supervisor	1	2	3	4	5
10. My co-worker's consistently support my use of training on the job	1	2	3	4	5
11. I experience pressure to do more on my job	1	2	3	4	5
12. I am encouraged to use new ways of doing my job	1	2	3	4	5
13. I previously learned the information taught in my training	1	2	3	4	5
14. I can easily concentrate when learning related theory	1	2	3	4	5
15. My supervisor assists me in using what I have learned	1	2	3	4	5
16. I understand what is expected of me	1	2	3	4	5
17. I deal well with unplanned work crises	1	2	3	4	5
18. I am aware of my strengths and weaknesses on the job	1	2	3	4	5
19. A challenging job assignment is important to me	1	2	3	4	5
20. I have the opportunity to use what I learned in the classroom	1	2	3	4	5
21. I am supported by coworkers when using newly learned skills	1	2	3	4	5

After I receive training:

Performance Statement	Never	Always			
	1	2	3	4	5
22. I am given the time to apply the instruction.....	1	2	3	4	5
23. I have confidence to use what I learned	1	2	3	4	5
24. My supervisor and I agree on how I should use what I have learned.....	1	2	3	4	5
25. I have the ability to learn or master the related training	1	2	3	4	5
26. I see obvious applications of my classroom instruction	1	2	3	4	5
27. My supervisor supports company changes	1	2	3	4	5
28. I prefer habits or old ways of doing things.....	1	2	3	4	5
29. There is a conflict between the classroom theory and practice on my job ..	1	2	3	4	5
30. I accept change in my job.....	1	2	3	4	5
31. I am furnished equipment to apply the training to my job	1	2	3	4	5
32. I have the authority to apply related instruction.....	1	2	3	4	5
33. I have supervisory support to use what I learned in the classroom	1	2	3	4	5
34. My co-workers support company changes	1	2	3	4	5
35. My company has supportive policies and procedures.....	1	2	3	4	5
36. I have motivation to use the information I have learned in the classroom ..	1	2	3	4	5
37. Little feedback is given to me on the results of my instruction.....	1	2	3	4	5
38. I am distracted by my personal problems.....	1	2	3	4	5
39. I think the classroom instruction is relevant to my job.....	1	2	3	4	5
40. My supervisor supports training so we can do new types of work.....	1	2	3	4	5
41. There is consistency with my supervisor's view of my work	1	2	3	4	5
42. I receive support from coworkers when using new information	1	2	3	4	5

(Please continue to the next page)

Demographic Information

Directions: Please check the appropriate response for each item. Completion of this inventory acknowledges your understanding that these data will be used for research purposes only and will be kept completely confidential.

(1) Years of full-time work experience

- ☐ less than 2 yrs.
- ☐ 2-8 yrs.
- ☐ more than 8 yrs.

(2) Years experience as supervisor

- ☐ none
- ☐ less than 2 yrs.
- ☐ 2-8 yrs.
- ☐ more than 8 yrs.

(3) Gender:

- ☐ female
- ☐ male

(4) Level of education:

- ☐ less than high school diploma
- ☐ high school degree or GED
- ☐ 2 years of college or Associate's degree
- ☐ a Bachelor's Degree
- ☐ some Graduate work

(5) Age:

- ☐ 19 or under
- ☐ 20 - 26
- ☐ 27-35
- ☐ 36-55
- ☐ over 55

(6) Number of previous online college courses completed:

- ☐ 0
- ☐ 1
- ☐ 2-3
- ☐ 4 or more

(7) Current Occupational Status:

- ☐ No part-time job
- ☐ Employed 50% of time or less
- ☐ Employed 50% or less than full-time
- ☐ Full-time

(8) Online course experience:

- ☐ none
- ☐ currently taking first online course
- ☐ have taken at least one online course
- ☐ have taken more than one online course

Appendix E
Transfer of Training Factors
Categorized

Organizational Environment

1. My organization considers the application of skills I have learned high priority
5. Existing work demands are consistent with training I received
6. I am quickly able to apply new training on the job
8. What I have learned in training is relevant to the tasks I perform
11. I experience pressure to do more on my job
12. I am encouraged to use new ways of doing my job
16. I understand what is expected of me
22. I am given the time to apply the instruction
29. There is conflict between the classroom theory and practice on my job
31. I am furnished equipment to apply the training to my job
35. My company has supportive policies and procedures
37. Little feedback is given to me on the results of my instruction

Supervisor Support

4. I get on the job reinforcement from my supervisor
9. What I learned in the classroom is supported by my supervisor
15. My supervisor assists me in using what I have learned
20. I have the opportunity to use what I learned in the classroom
24. My supervisor and I agree on how I should use what I have learned
27. My supervisor supports company change
32. I have authority to apply related instruction

- 33. I have supervisory support to use what I learned in the classroom
- 40. My supervisor supports training so we can do new types of training
- 41. There is consistency with my supervisor's view of my work

Peer Support

- 10. My co-worker's consistently support my use of training on the job
- 21. I am supported by co-workers when using newly learned skills
- 34. My co-workers support company change
- 42. I have support from co-workers when using new information

Motivation

- 2. I am motivated to use the information I have learned
- 13. I previously learned the information taught in my training
- 19. A challenging job assignment is important to me
- 26. I see obvious applications of my classroom instruction
- 28. I prefer habits or old ways of doing things
- 30. I accept change in my job
- 36. I have motivation to the use information I have learned in the classroom
- 38. I am distracted by my personal problems
- 39. I think the classroom instruction is relevant to my job

Self-Efficacy

- 3. I have knowledge about methods for using what I have learned
- 7. I have confidence when attempting to apply related theory on my job

- 14. I can easily concentrate when learning related theory
- 17. I deal well with unplanned work crises
- 18. I am aware of my strengths and weaknesses on my job
- 23. I have confidence to use what I have learned
- 25. I have the ability to learn or master the related training

Appendix F
Transfer of Training
Inventory Factors

Transfer of Training Inventory Factors	Source
1. My organization considers the application of skills I have learned high priority	Foxon, 1994; Foxon, 1995
2. I am motivated to use the information I have learned	Foxon, 1995; Huczynski & Lewis, 1980; Noe, 1986; Wexley & Latham, 1991
3. I have knowledge about methods for using what I have learned	Bandura, 1986; Noe, 1986; Schwoerer & Rosen, 1989
4. I get on the job reinforcement from my supervisor	Huczynski & Lewis, 1980
5. Existing work demands are consistent with training I have received	Blair, 1996; Foxon, 1994; Walton, 1989
6. I am quickly able to apply new training on the job	Huczynski & Lewis, 1980
7. I have confidence when attempting to apply related theory to my job	Foxon, 1995; Noe, 1986; Wexley & Latham, 1991
8. What I learned in training is relevant to the tasks I perform	Terborg, 1981; Quinones, et al., 1993
9. What I learned in the classroom is supported by my supervisor	Curry, Caplan, Knuppel, 1994; Facteau, Dobbins, Russell, Ladd, Kudish, 1995; Gregoire, Propp, Poertner, 1998
10. My co-workers consistently support my use of training on the job	Blair, 1996; Foxon, 1994; Walton, 1989
11. I experience pressure to do more on my job	Baldwin & Ford, 1988; Noe, 1986

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| 12. I am encouraged to use new ways of
of doing my job | Baldwin & Ford, 1988;
Noe, 1986 |
| 13. I previously learned the information
taught in my training. | Hicks, & Hennessy, 1997
Duckett, 1993 |
| 14. I can easily concentrate when
learning related theory | Foxon, 1995; Noe, 1986;
Wexley & Latham, 1991 |
| 15. My supervisor assists me in
using what I have learned | Huczynski & Lewis, 1980;
Wexley & Latham, 1991 |
| 16. I understand what is expected of me | Huczynski & Lewis, 1980;
Richey, 1992; Rouiller, 1989 |
| 17. I deal well with unplanned work crises | Huczynski & Lewis, 1980 |
| 18. I am aware of my strengths and
weaknesses on the job | Foxon, 1995; Noe, 1986;
Wexley & Latham, 1991 |
| 19. A challenging job assignment is important
to me | Baldwin, Magjuka,
Loher, 1991; Foxon, 1995;
Noe, 1986; Wexley &
Latham, 1991 |
| 20. I have the opportunity to use what
what I learned in the classroom | Ford, et al., 1992; Blair, 1996 |
| 21. I am supported by coworkers when
using newly learned skills | Baldwin & Ford, 1988;
Noe, 1986 |
| 22. I am given the time to apply the instruction | Huczynski & Lewis, 1980;
Wexley & Latham, 1991 |
| 23. I have confidence to use what I learned | Bandura, 1986; Noe, 1986;
Schowoyer & Rosen, 1989 |
| 24. My supervisor and I agree on how
I should use what I have learned | Huczynski & Lewis, 1980; |
| 25. I have the ability to learn or master
the related training | Gregoire, et al., 1998;
Maier, 1973 |

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| 26. I see obvious applications of my classroom instruction | Terborg, 1981;
Quinones et al., 1993 |
| 27. My supervisor supports company change | Huczynski & Lewis, 1980;
Richey, 1982; Rouiller, 1989 |
| 28. I prefer habits or old ways of doing things | Foxon, 1995;
Huczynski & Lewis, 1980;
Wexley & Latham, 1991;
Noe, 1986 |
| 29. There is a conflict between the classroom theory and practice on my job | Terborg, 1981;
Quinones et al., 1993 |
| 30. I accept change in my job | Baldwin & Ford, 1988;
Noe, 1986 |
| 31. I am furnished equipment to apply the training to my job | Broad & Newstrom, 1992;
Foxon, 1994; Long, 1990;
Mosel, 1957 |
| 32. I have authority to apply related instruction | Broad & Newstrom, 1992;
Foxon, 1994; Long, 1990;
Mosel, 1957 |
| 33. I have supervisory support to use what I learned in the classroom | Michalak, 1981;
Wexley & Baldwin, 1986 |
| 34. My co-workers support company change | Baldwin & Ford, 1988;
Noe, 1986 |
| 35. My company has supportive policies and procedures | Foxon, 1994;
Hendrickson, 1990;
Mosel, 1957 |
| 36. I have motivation to use the information I have learned in the classroom | Foxon, 1995
Huczynski & Lewis, 1980
Wexley & Latham, 1991
Noe, 1986 |
| 37. Little feedback is given to me on the results of my instruction | Brinkerhoff
& Montesino, 1995;
Cervero, 1985;
Foxon, 1997; |

- | | |
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| | Furze & Pearcey 1999 |
| 38. I am distracted by my personal problems | Huczynski & Lewis, 1980 |
| 39. I think the classroom instruction
is relevant to my job | Terborg, 1981;
Quinones et al., 1993 |
| 40. My supervisor supports company training
so we can do new types of work | Michalak, 1981;
Wexley & Baldwin, 1986 |
| 41. There is consistency with my
supervisor's view of my work | Blair, 1996; Foxon, 1994;
Walton, 1989 |
| 42. I receive support from co-workers
when using new information | Baldwin & Ford, 1988;
Noe, 1986 |

VITA

Gabriel L. Dalton was born in Knoxville, Tennessee in 1975, the only child of Marty L. Dalton and Rhonda J. Bailey. After completing his work at Carter High School, Knoxville, Tennessee in 1993, he entered Carson-Newman College in Jefferson City, Tennessee. He received the degree of Bachelor of Science with a major in Psychology and a minor in Management from Carson-Newman College in May 1997. Mr. Dalton was accepted into the University of Tennessee Graduate School in 1998 in pursuit of a Master of Science in Human Ecology. Mr. Dalton plans to stay in the Knoxville region to pursue his career goals in Human Resource Development.