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The impact of workplace design on training transfer as determined by the heuristic elicitation methodology

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I am submitting herewith a thesis written by Tharulatha Y. Reddy entitled "The impact of workplace design on training transfer as determined by the heuristic elicitation methodology." I have examined the final electronic 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.

Virginia W. Kupritz, Major Professor

We have read this thesis and recommend its acceptance:

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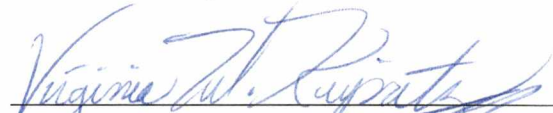Accepted for the Council:
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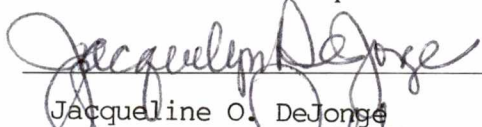Vice Provost and Dean of the Graduate School

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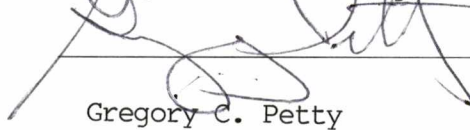
To the Graduate Council:

I am submitting herewith a thesis written by Tharulatha Y. Reddy entitled "The Impact of Workplace Design on Training Transfer as Determined by the Heuristic Elicitation Methodology." I have examined the final 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.
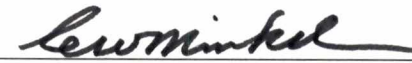
Virginia W. Kupritz, Major Professor

We have read this thesis
and recommend its acceptance:

Jacqueline O. DeJonge

Gregory C. Petty

Accepted for the Council:

Associate Vice Chancellor and
Dean of The Graduate School

THE IMPACT OF WORKPLACE DESIGN
ON TRAINING TRANSFER
AS DETERMINED BY THE HEURISTIC ELICITATION METHODOLOGY

A Thesis
Presented for the
Master of Science
Degree
The University of Tennessee, Knoxville

Tharulatha Y Reddy
May 2000

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DEDICATION

This thesis is dedicated to my parents

Mr. Madhusudhan Reddy

and

Mrs. Damayanthi Reddy

who have encouraged me

to be all that I wish to be

and to achieve all that I wish to achieve.

ACKNOWLEDGMENTS

ABSTRACT

The design of the workplace often has been unexamined as a contributor to training transfer although practitioners have been reporting complaints by trainees about the difficulties of transferring their skills that refer specifically to workplace design Research has been lacking that supports the association between the physical design of the workplace specifically as a contributor to training transfer Therefore, the purpose of the present study was to examine the impact that workplace design has on training transfer within the context of particular work practices The objectives of the study were 1) to identify design features that facilitate and impede training transfer, 2) to identify the significance of workplace design as an issue that organizations must consider in order to achieve successful training transfer, and 3) to introduce the Heuristic Elicitation Methodology (HEM) as a strategy for examining organizational issues impacting training transfer

Twenty-four office workers from the same large university who completed one of three supervisory training courses within a span of four months participated in the study. The methodology used to interview the 24 office workers was the Heuristic Elicitation Methodology (HEM) The methodology gives equal attention to both qualitative and quantitative methods and can easily be incorporated to accommodate the needs of social science research (Kupritz, 1996) For this study, the purpose of the methodology was to obtain information about organizational issues, including items and attributes, which facilitate and impede training transfer Each interview was open-ended in which a sequence of interlinked questions developed from the respondent's own

language The answers were recorded verbatim to retain accurate perceptions of the work environment and to identify the various organizational factors that have impacted training transfer

Supportive workplace design was the organizational issue that received the second highest cumulative response frequency for facilitating training transfer that followed positive management support Unsupportive workplace design was the organizational issue that had the highest cumulative response frequency in impeding training transfer Although positive management support received the highest cumulative response frequency in facilitating training transfer, lack of positive management support received the lowest cumulative response frequency in impeding training transfer

Although workplace design did not receive the highest cumulative response frequency of the top four organizational issues that surfaced in facilitating training transfer, it nevertheless did not lose in its credibility as an organizational factor with impact on training transfer The study also revealed that workplace design had the highest response frequencies for items and attributes among all organizational issues in facilitating and impeding training transfer Workplace design was concluded as a crucial factor to impact training transfer for particular work practices

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CHAPTER 1

INTRODUCTION

Within the past decade, U S organizations have demonstrated their

understanding of the need for fully trained employees to compete optimally in the

marketplace by heavily investing in training for their employees Among organizations

with 100 or more employees, the total spending for formal training programs for 1996

was approximately $59 8 billion dollars (Training Magazine's Industry Report, 1996)

The estimated expenditures for external sources such as hardware, computers, seminars

and prepared training programs the 1996 came to $13 billion dollars for organizations

with 100 or more employees (Training Magazine's Industry Report, 1996) For 1996, the

amount spent on formal training was $58 6 billion dollars (Training Magazine's Industry

Report, 1996)

Despite employers' heavy investment in training, employers have begun to raise

doubts about whether training adequately delivers results of improved productivity and

performance Training research indicates that evidence is lacking to suggest that training

programs have resulted in behavioral change in the workplace (Baldwin & Ford, 1988)

Studies investigating transfer of training have concluded that a low percentage of training

knowledge and skills actually transfers and that the training knowledge and skills that

actually transfers diminishes over time (Broad & Newstrom, 1992, Georges, 1988,

Grabowski, 1983, Kelly, 1982)

Transfer of training skills can be separated among various categories Some categories of training skills are consistently predisposed to a low level of transfer, whereas other categories may be predisposed to a significantly high level Conceptual, judgmental, and cognitive training skill categories, such as problem solving, management development, and interpersonal skills training, are often regarded as delivering no observable behavior changes as a distinction of transfer (Foxon, 1995) Thus, these categories tend to produce only a low level of transfer However, procedural and motor skills training frequently result in a high level of transfer (Foxon, 1995) Employers insist that they be used and indicate that a reluctance to apply the skills will result in a performance failure Gradous (1991)

Statement of the Problem

More employers are beginning to recognize the specific work practices that have positively and negatively impacted training transfer and the direct and indirect effect these practices have had upon worker performance However, employers have overlooked workplace design as a potential contributor that can influence the ultimate success or failure of a training intervention (Kupritz, 1999) The design of workplace can unnecessarily inhibit training transfer As an example, if trainees are situated in a physical environment with individual cubicles that do not accommodate teamwork after being trained to work in teams, worker performance may suffer (Kupritz, 1999)

The design of the workplace often has been unexamined as a contributor to training transfer although practitioners have been reporting complaints by trainees about the difficulties of transferring their skills that refer specifically to workplace design

Conversations with M Lauer (personal communication, September 30, 1998), a training

specialist at a major university, point to performance difficulties attributable to workplace

design when returning to the job

> Quite frequently, in at least half of the [development] workshops I present, the
> discussion turns to difficulties attributable to workplace design (M Lauer,
> OHRM, personal communication, September 30, 1998)

In addition, the trainer asserts the following concerning the Office of Human Resource

Management (OHRM)

> In order for us within OHRM to address the needs of both the organization and its
> employees, we need to know more about the effects of physical environment on
> work behavior (M Lauer, OHRM, personal communication, September 30,
> 1998)

> Employers have failed to recognize the potential impact of workplace design as a

means in effectively supporting the training experience back on-the-job However,

research is available for employers on the importance of fostering a supportive work

environment for their employees so that training transfer can result Employers who

utilize research conducted on training transfer are beginning to invest more time and

resources in developing and implementing methods that facilitate training transfer in the

hope that the organization will significantly improve in productivity and performance

Nevertheless, research has been lacking that supports the association between the

physical design of the workplace specifically as a contributor to training transfer With

the exception of Kupritz (1999), Human Resource Development research to date has not

examined the impact of workplace design on training transfer, although environmental

design research disciplines have developed theories that may apply (Bechtel, 1997)

Those disciplines have not, however, approached performance from a training and development perspective

An organization must evaluate current workplace design conditions and features to reap the financial and productivity benefits of training transfer For the majority of companies, facility-related expenses such as real estate and equipment, count as the second largest organizational asset, approximately 25% of operating costs, exceeded only by personnel operating costs at about 38% (Becker & Steele, 1995, Haworth, 1995) The physical environment is "not just a cost-center, but a benefit producer and a productivity tool that can be more purposively used" (Brill, 1993, p 33) Human Resource professionals must become involved within organizations to implement change by rethinking new office designs that improve communication and productivity among employees while, also, unintentionally cutting overhead (Bencivenga, 1998)

The successful application of training skills becomes evident when trainees apply the skills in a supportive work environment (Baumgartel, Reynolds, & Pathan,1984, Broad & Newstrom, 1992, Foxon, 1995, Richey, 1990, 1992, Rouiller, 1989) A supportive work environment should be provided for older and younger learners so that the application gap becomes narrowed once trainees return to their original work environment from the training environment (Kupritz, 1999) Sims, a Cornell University professor of facility management and planning and the author of *Team Space: Creating and Managing Environment to Support Highly Productive Teamwork* argues that companies must establish the link between the physical environment and work processes "The key is to integrate the physical environment with technology, management practices

and work practices This allows employees to move where they are needed and to work where they are most productive and will be supported " (as cited in Bencivenga, 1998, p 70) By maintaining group-organization boundaries, corresponding territorial control, and a supportive physical environment, organizations can impact worker performance successfully (Sundstrom & Altman, 1989, Sundstrom, De Meuse, & Futrell, 1990) Kupritz (1999) claims that when the physical environment fails to provide support for training transfer, efforts to train and develop employees may lose credibility as tools for positive organizational change

The present study introduces an ethnographic method, the Heuristic Elicitation Methodology (HEM), as a strategy for examining organizational issues impacting training transfer The HEM emphasizes the personal constructs of the respondent and does not superimpose categories that have already been established by investigators (Kupritz, 1996). The methodology gives equal attention to both qualitative and quantitative methods and can easily be incorporated to accommodate the needs of social science research (Kupritz, 1996) To date, the HEM has not been utilized to examine organizational issues impacting training transfer For this study, the primary purpose of the HEM is to obtain information about organizational issues, which facilitate and impede training transfer Although the HEM is not a device that supplies immediate answers, it allows for data collection to be completed faster than the long-term field work necessary for "true" ethnography, without hampering reliability and validity (Harding & Livesay, 1984)

Purpose of the Study

Workplace design is a potential contributor as an organizational issue that can impact training transfer Research has been lacking that supports the association between the physical design of the workplace specifically as a contributor to training transfer With the exception of Kupritz (1999), Human Resource Development research to date has not examined the impact of workplace design on training transfer, although environmental design research disciplines have developed theories that may apply (Bechtel, 1997) Those disciplines have not, however, approached performance from a training and development perspective   Therefore, the purpose of the present study is to examine the impact that workplace design has on training transfer within the context of particular work practices

Objectives of the Study

The study includes the following objectives

1   To identify design features that facilitate and impede training transfer

2   To identify the significance of workplace design as an issue that organizations should consider in order to achieve successful training transfer

3   To introduce the Heuristic Elicitation Methodology (HEM) as a strategy for examining organizational issues impacting training transfer

<u>Definition of Terms</u>

The following terms and definitions are provided to assist readers of this study
Each term has specific significance to this study

1   The Heuristic Elicitation Methodology (HEM)-derives its interpretations from the
    idea that language is a gateway in uncovering "cultural meaning structures" (Harding
    & Livesay, 1984, p 75) The purpose of the Domain Definition, or the first phase of
    the Heuristic Elicitation, is to uncover the full range of perceptions of the respondents
    to analyze their impact on the specific variables being examined in the study (Kupritz,
    1996) The methodology attempts to understand the meanings of beliefs, attitudes,
    and values for participants (Kupritz, 1996) Relating distinct items and attributes with
    distinct cultural values becomes the objective of the methodology (Kupritz, 1996)
    The purpose of the methodology for this study was to obtain information about
    organizational issues, including items and attributes, which facilitate and impede
    training transfer

2   Organizational climate-a component of organizational context that refers to the
    accumulated workplace atmosphere that is developed internally by the perceptions,
    feelings, and interactions that face the people and the organization on a regular basis
    (Childre & Cryer, 1998)

3   Organizational context-includes all eight elements of the organizational context
    organizational culture, task design/technology, mission clarity, autonomy,
    performance feedback, rewards/recognition, training and consultation, and the

physical environment (Sundstrom et al , 1990) One of the critical elements of the organizational context is the physical environment (Sundstrom et al, 1990)

4 Performance-the acceptability of output to customers within or outside the organization who receive team products, services, information, decisions, or performance events (such as presentations or competitions)" (Sundstrom et al , 1990, p 122)

5 Physical environment-"offices, factories, and other buildings controlled by organizations and features of their internal layout, equipment, furniture, and ambient conditions" (Sundstrom, Altman, 1989, p 178)

6 Training transfer-refers to the knowledge, skills, behaviors, and attitudes that have been gained from a training event or training experience and that have been applied back on the job over a span of time by the trainees (Campbell & Cheek, 1989, Ford, 1994, and Foxon, 1995)

7 Workplace design-defined through environmental conditions such as barriers and field characteristics (Zeisel, 1984) Barriers are defined as the physical elements that physically and symbolically serve to separate people or unite them through walls, screens, objects, and partitions (Zeisel, 1984) Field characteristics are defined as physical elements that alter the physical context perceptually through shape, size, orientation, lighting, acoustics, and air quality (Zeisel, 1984)

CHAPTER 2

REVIEW OF LITERATURE

The review concentrated on articles, books, documents, and dissertations from training and development, organizational development, and environmental design literature Empirical studies examining training transfer within an organizational environment using management development skills were used

Lack of Theory Development and Empirical Research

Many employers have begun to understand that a positive link exists between training transfer and high performance However, theory development and empirical research on training transfer has been lacking Royer (1979) claimed that no theoretical framework existed concerning the psychological processes that account for behavior that has been observed as a result of training transfer Voss (1987) and Tannenbaum and Yukl (1992) continued Royer's claim by noting that the lack of theory development on training transfer The lack of theory development on training transfer may be partially attributable to the apparent lack of theoretical models on training transfer noted by (Gradous, 1991)

Along with the general lack of theory development on training transfer, there has been a lack of concentrated efforts to conduct studies to document findings on training transfer as empirical research Foxon (1995) claimed that the literature on training transfer is based upon the insights of human resource development practitioners and is limited to how-to articles with little or no emphasis on tested theory and research results In addition, she stated that only a few organizational case studies on training transfer

have been conducted Furthermore, Foxon concluded that of the organizational case studies examined less than twelve were experimental studies of which only a few were conducted in organizations Researchers and practitioners should not exclusively rely upon practitioners' anecdotal experiences to develop insights about the effect of training transfer on employee performance for training transfer to gain the required credibility required to implement changes within organizations More theoretically, rigorous findings are needed

Defining Training Transfer

Various interpretations of the definition of training transfer have unfolded through researchers' and practitioners' conclusions from studies and experiences in training transfer Baldwin and Ford (1988) asserted that the application of skills and knowledge learned from a training program back to the job environment (training transfer) occurs when work-related behavior changes as a result of training Annett & Sparrow (1985) commented that the benefit of past training in obtaining a new skill or accommodating an old skill to a new situation could serves as a description of transfer of training Furthermore, Garavaglia (1995) asserted that two phases are involved in successful training "the acquisition of a skill or knowledge and the maintenance of behavior when the trainee returns to the job" (p 24) Moreover, Baldwin & Ford (1988) described transfer in terms of two conditions "generalization of material learned in training to the job and maintenance of the learned material over a period of time on the job"(p 64) Michalak (1981) claimed that maintenance of behavior requires that the opportunity to

use the skill should be given in the workplace and second, that trainees sustain a high standard of performance and quality in using an acquired skill or knowledge

<u>Adult Learning Theory in Relation to Training Transfer</u>

Precedent exists in adult learning theories for identifying the importance of context within it Adult learning theories such as the social learning theory helped the concept of training transfer derive its basis The interaction of an individual's behavior-both cognitive and overt-and social context became the baseline for the development of the social learning theory (Bandura, 1977, Merriam & Caffarella, 1991, Rotter, 1954) The orientation of the social learning theory emphasized the interaction of the individual's behavior with the physical and social context of the environment Some instructional design models have proposed that the design of the training environment should resemble psychologically and physically as possible to the actual work environment (Clark & Voogel, 1985, Laker, 1990) Instructional design models have acknowledged that the physical setting, in addition to the social context, as a component of the contextual environment, can facilitate or impede adult learning (Kupritz, 2000) Training transfer is most likely to occur when the conditions of the training environment and the work environment resemble one another (Clark & Voogel, 1985, Kupritz, 2000, Laker, 1990)

<u>Types of Training Transfer</u>

Researchers should examine the various distinctions among different types of training transfer to gain a more thorough understanding of its meaning Garavaglia (1995) commented that trainees' previous knowledge may aid performance as positive transfer,

or may hinder performance as negative transfer, or have no effect on performance as zero

transfer Negative transfer normally only becomes a problem between similar tasks when

differences in procedure are minor, however, it is important, when two tasks could be

easily confused (Annett & Sparrow, 1985) The transfer of knowledge or skills which are

superior to the trainees' current work situation from a training environment to a more

involved work environment is vertical transfer (Garavaglia, 1995, Foxon, 1995) In

contrast, the application and generalization of learning concerning work situations similar

to the trainee's current work situation is horizontal or lateral transfer (Garavaglia, 1995,

Foxon, 1995)

The transfer of general skills and knowledge from the training environment to

perform a wide range of tasks or situations in the work environment can be described as

general transfer (Garavaglia, 1995) When the stimulus elements in the training and

transfer environments are different, then nonspecific or general transfer has occurred

(Royer, 1979) On the other hand, specific transfer is the application of specific skills

applied to the performance of a given task (Garavaglia, 1995) When the stimulus

elements in the training and transfer environments are similar, then specific transfer has

occurred (Royer, 1979). Literal transfer entails the application of skill or knowledge

unaltered from training to a new work situation (Royer, 1979) Transfer that requires that

a portion of knowledge be used as a mechanism to think through a problem or issue more

effectively is referred to as figural transfer (Royer, 1979)

Researchers should differentiate between near and far transfer to correct any

potential obstacles to worker performance Near transfer is defined as the application of

skills to similar contexts as presented in training and far transfer is defined as the application of skills to different contexts than those presented in training (Garavaglia, 1995) Clark & Taylor (1992) remark on a phenomenon called the encoding specificity effect, which is relevant to near and far transfer They stated that an encoding specificity effect occurs when attempts to retrieve information from long term memory are unsuccessful because surface cues are different from the encoding environment established in training and therefore, training transfer fails Furthermore, Clark & Taylor (1992) claimed that in training that involves near transfer encoding specificity can facilitate transfer because learning objectives are written with the intention of incorporating practices that match the intended task However, in the case of far transfer, they commented that encoding specificity would hinder the trainees' ability to retrieve pertinent information because surface cues change from task to task Clark & Taylor (1992) concluded that the instructional strategies that are used for near transfer would be incongruent with the goals of far transfer

Near and far transfer have implications that are grounded in the theory of Identical Elements for effective worker performance This theory stated that identical elements that appear in two different situations will likely result in transfer (Garavaglia, 1993) Based upon this theory, instructional designers should ensure that the tasks, content, and activities that are taught in training are corresponded closely with the tasks employees perform on their jobs (Garavaglia, 1993) Moreover, some instructional design models have proposed that the design of the training environment should resemble psychologically and physically as possible to the actual work environment (Clark &

Voogel, 1985, Laker, 1990) Laker uses this idea to further elaborate on the identical

elements theory (Laker, 1990) The theory of Identical Elements identifies that as a

component of the contextual environment, the physical setting, can facilitate or impede

adult learning

Types of training transfer can also be classified in terms of the level of

involvement required by trainees when they return to the work environment The

generalization of a skill to a new situation or the replication of a procedure to an exact

situation describes different applications of training transfer (Foxon, 1995) The indirect

application of training outcomes occurs when new knowledge, skills, attitudes, and

behaviors are applied to a variety of new situations and settings whereas the direct

application of training outcomes occurs when knowledge, skills, attitudes, and behaviors

are applied to an exact situation or setting (Ford, 1994) The indirect application is

synonymous with the generalization of a skill to a new situation and the direct application

is synonymous with the replication of a procedure to an exact situation Generalization

requires a higher level of personal commitment on the part of trainees because it

comprises complex cognitive processes (Yelon, 1992)

Examining Workplace Design as Part of Organizational Context

Employers often evaluate workplace design as simply an aesthetic preference

made by workers with little impact on worker performance Furthermore, they overlook

the significance of employees' functional and ergonomic preferences on workplace

design in effectively applying training skills and knowledge back to the job (Kupritz,

2000) Workplace design should be regarded as a potential contributor to training transfer

because it can impact worker performance (Kupritz, 1999) Workplace design as a potential component for training transfer needs to be examined as part of the organizational context Organizational context includes the physical environment as a critical element (Sundstrom et al 1990) A systematic analysis of the physical environment can facilitate training transfer by matching worker preferences in workplace design in terms of aesthetic and functional qualities to the actual physical environment

Workplace design has been overlooked and unexamined as an organizational factor impacting training transfer and yet practitioners note that trainees often complain about difficulties in transfer that are attributable to workplace design For example, a trainer from the Office of Human Resource Management at the University of Tennessee describes evidence substantiating the relevancy of workplace design to the application of skills

> For instance, in a recent workshop on delegation skills, a supervisor cited her office's physical layout as an obstacle, in her opinion, the extremely open nature of the office makes it difficult to give effective feedback to employees, as other employees as well as students can hear all that is said Similar stories-detailing the effects of physical design on routine work activities-are recounted weekly (M Lauer, OHRM, personal communication, September 30, 1998)

The impact of workplace design on training transfer can be evaluated in terms of its capacity to facilitate transfer and improve worker performance with results of improved productivity for an organization. Studies that have researched individual, group, and organizational performance report that the design of the workplace can facilitate or impede the organizational effectiveness as a whole (Brill, Marguilis, Konar, & BOSTI, 1984, 1985, Davis, Becker, Duffy, & Sims, 1985, DeMarco & Lister, 1985, Springer, 1982, Vischer, 1996) Researchers have linked several scholarly disciplines in

search of information that can be used to reshape the future physical work environment in ways that will empower employees, in turn, to reshape their organization's effectiveness If researchers can establish theoretical links between the workplace design and training transfer, then organizations can use this research to improve productivity as well Brill (1993) determined that a supportive physical environment can yield a benefit in productivity that compares to a 2 to 5 percent annual salary increase in all job categories

New Role of Human Resource Practitioners

For an organization's productivity to improve, an organization must learn to expand their Human Resource practitioners' responsibility and ability to rethink and reform the physical design of the workplace design to encourage effective worker performance Bencivenga (1998) commented that human resource practitioners need to become involved in redesigning office space with office redesign teams by evaluating the manner in which employees perform their job By becoming involved in the redesigning of office spaces, human resource practitioners can facilitate effective worker performance by rethinking new office designs that improve communication and productivity among employees which, also, inadvertently cut overhead (Bencivenga, 1998)

Human Resource professionals should evaluate existing physical workplace designs that are dysfunctional so that those designs can be replaced with ones that serve to promote worker performance and reinforce training transfer An evaluation of the existing workplace design can become the groundwork for initiating alternative physical workplace designs Bencivenga (1998) stated that experts have claimed that an analysis of job duties and tasks should precede an evaluation of a workspace Different jobs

comprise different job duties and tasks which can mean different requirements of the work space Some particular jobs like software programming or copywriting may require that workers always have an office whereas such as HR executives require more interaction with other co-workers in open spaces in addition to private rooms for interviewing (Bencivenga,1998) Likewise, open spaces may facilitate the efficient work flow in customer service departments where employees benefit from having other employees to answer customer queries (Bencivenga,1998)

Impact of Workplace Design on Worker Performance

Employers often fail to evaluate adequately the current physical design of the workplace or think through alternative solutions that might best facilitate training transfer and worker performance Rather, they settle for a quick and easy solution such as office sharing in the expectation that it will positively impact a long-term goal of effective worker performance However, the solution of office sharing may transpose into an unforeseen long-term result of organizational ineffectiveness Brill (1993) claimed that the solution of office sharing, the sharing of one workspace and its telephone by several workers and the storage of their belongings in this same workspace, could not work unless only one person was present in the office at a time He stated that if more than one person is present in an office, performance diminishes for everyone except for one of the workers because either they become too crowded or they move to different workspaces without their belongings

Employers may need to reassess the internal physical layout of the current workplace design for its functionality for different jobs so that training transfer and

worker performance can be achieved Researchers have begun to recognize the necessity

of alternative solutions for workplace design to meet the different functional needs of

different jobs for worker performance to be facilitated Brill (1993) contrasted three

different types of office layouts that may accommodate workers' needs to perform their

particular jobs the Now office, the No office, and the New office The Now office is an

office is space that becomes available when a worker needs it, however, the office does

not belong to the worker, which means that the office does not stand empty when the

person is not present in it (Brill, 1993) The term, No office, refers to a situation in which

worker lacks any space designated as an office, but is able to transforms any place into

his or her office with the aid of transferable technology (Brill, 1993) The New office is

as a place that supports workers' movement back and forth from solo work to highly

complex and interrelated discourse within cross-functional teams. This interaction is

emphasized spatially through designated separate workspaces for each business unit

(Brill, 1993) The three solutions can provide a framework for an organization to evaluate

their internal physical layout in determining whether or not workplace design has become

an obstacle to training transfer and improvements in worker performance to be attained

Bencivenga (1998) commented that "the key is to integrate the physical environment with

technology, management practices and work practices (p 70)

   The restructuring of an existing workplace design in favor of a design that

matches the employees' job needs can empower workers to transfer their training skills

and knowledge to their work and to improve their performance The physical layout can

also provide opportunities for employees to interact more spontaneously and informally

Brill (1993) commented that "good workplace design must support the individual, the work group or team, and casual interactions" (p 38) The workplace design can encourage active communication in the form of "spontaneous interaction, spontaneous collaboration, and informal learning" (Bencivenga, 1998)

Bencivenga claimed that spontaneous interaction most often occurs within the main street or boulevard that passes by all the departments where sufficient space is available to set up a table for teamwork and a whiteboard for writing or drawing Furthermore, Bill Sims, a Cornell University professor of facility management and planning, claimed that to counteract the problems with cubicles, companies need to transform their physical environment to an environment that supports a "caves and common approach" in which quiet spaces are allocated for work individually and team spaces are allocated for spontaneous collaboration (Bencivenga, 1998)

In addition, Aring, a co-director of a survey whose results were on workplace design that were released in January 1998 by the Center for Workforce Development, stated that among the seven companies examined, "informal learning" was the most crucial element that "served to fulfill most learning needs, perhaps as much as 70 percent" (Bencivenga, 1998, p 73) According to Bencivenga (1998), the study's conclusion was that "employers that encourage informal learning-such as interaction between workers of different skill levels-can help employees acquire critical job skills more quickly and easily" (p 73)

The physical design of the workplace can significantly impact the intentions of trainees to transfer the knowledge, skills, behaviors, and attitudes that have been acquired

during a training event back to the workplace Noe & Schmitt (1986) asserted that the "motivation to transfer and perceptions of the favorability of the work environment for the use of new skills may influence training effectiveness" (p 519) Incorporating a physical environment that supports spontaneous interaction, spontaneous collaboration, and informal learning can encourage workers to transfer their training knowledge, skills, and work-related behaviors for effective worker performance to result

Components of Organizational Context

Sundstrom et al (1990) listed the following elements to be part of the organizational context organizational culture, task design/technology, mission clarity, autonomy, performance feedback, rewards/recognition, training and consultation, and the physical environment Figure 1 illustrates all the different elements included in the organizational context and serves as a framework to understand the significance of workplace design as an organizational component that can influence worker performance The physical environment is a component of the organizational context Workplace design is a component of the physical environment by definition and the physical environment is an element of the organizational context Figure 1 includes organizational climate as part of the organizational context The surroundings of the physical environment convey a functional and an aesthetic lay out, in addition, to the inferred messages and organizational images derived from the lay out, which in return can facilitate or hinder a positive organizational climate (Schein, 1992) A positive organizational climate can enhance the likelihood that training transfer will result in effective worker performance
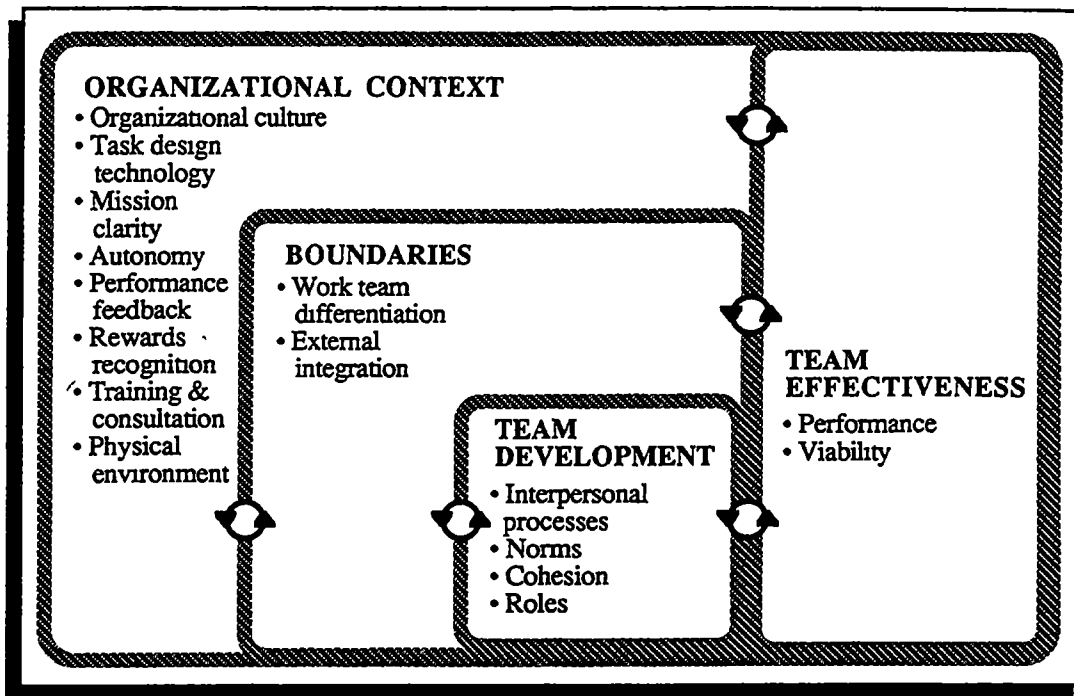
Figure 1 Ecological framework to analyze work team effectiveness and the components

of organizational context

Note From "Work teams applications and effectiveness ," by Sundstrom, E , De Meuse,
K , & Futrell, D , 1990, American Psychologist, 45(2), p 122
Copyright 1990 by American Psychological Association, Inc

Facilitating and Inhibiting Factors for Training Transfer

Facilitating and inhibiting factors for training transfer can be identified through a

systematic examination of the organizational environment (Foxon, 1995) Training

transfer can be positively or negatively influenced by the organizational context which

includes the physical setting, atmosphere, and design as essential components Employers

need actively to incorporate the researchers' findings on facilitating and inhibiting factors

of training transfer to retain positive influences and remove negative influences from the

organizational context Foxon (1995) grouped facilitating and inhibiting factors based

upon four major categories. training design factors, training delivery factors, individual learner characteristics, and organizational climate factors These major categories help determine and distinguish facilitating and inhibiting factors from one another so that employers can make accurate conclusions about how much of training transfer that is likely to occur or whether they can implement successful training interventions at all

Training Design Factors

Many different elements of the training design can impact the likelihood that trainees will transfer their training skills, knowledge, and work-related behaviors from a training environment back to the work environment Employers must assess their current conditions for training and identify training design factors that need to be modified so that training transfer can result Training design factors include the incorporation of learning principles (Bass & Vaughan, 1966), the sequencing of training material (Gagne, 1962, Tracy, 1984) and the job relevance of the training content (Campbell, 1971, Ford & Wroten, 1984) Instructional designers should keep in mind that previous history may influence a learner to a great degree and, therefore, they should design curricula with that premise in mind (Annett & Sparrow, 1985) Furthermore, supervisors need to become actively involved from the onset of the training to the end of the training as part of an effective training design team Garavaglia, (1993) claimed that managers need to verify that supervisors are familiar with the training requirements, ensure that supervisors provide input to instructional designers on the training content, train supervisors on how desired behaviors can be reinforced on the job, and inform supervisors on the expected outcomes and benefits of training

<u>Training Delivery Factors</u>

Many employers have also begun to recognize the impact that the delivery of training can have upon whether or not it facilitates or inhibits training transfer Training delivery factors include insufficient methods, media and delivery style and a low level of trainer credibility (Wexley & Baldwin, 1986) Facteau, Dobbins, Russell, Ladd, & Kudisch (1995) concluded the following in a study that was conducted on managers

Managers who perceived more intrinsic reasons to attend training, who had a more favorable view of the agency's training efforts, and who were less likely to attend training because it was required, reported higher levels of motivation to attend and learn from the agency's supervisory and managerial training programs (p 17)

Intrinsic rewards to attend training may become lessened if the training efforts are perceived as unfavorable by the learner either because of inadequate training methods, poor media, and or ineffective delivery style Thus, a failure to learn the training content can result Adequate training efforts that accommodate trainees' needs can undo a lack of learning that occurred in previous training and can furthermore, ensure that training transfer is the most likely outcome from the learning

<u>Individual Learner Characteristcs</u>

Individual learner characteristics can possibly make a more of an impact on training transfer than training design or training delivery factors Baldwin & Ford (1988) stated that individual learner characteristics encompass the following components "ability or skill, motivation, and personality factors"(p 64) Moreover, Tannenbaum and

Yukl (1992) claimed that at the end of training, trainees' individual human characteristics including personal skills, ability and willpower have a great influence on training transfer certain human factors Workers who are highly involved in their jobs tend to be more motivated to learn new skills because they feel that their involvement in the training activities will improve their skill levels, job performance, and their overall feelings of self-worth (Noe & Schmidt, 1986) Motivation to learn can be defined as a trainee's particular desire to learn the training content by the trainee (Noe & Schmidt, 1986)

Once a trainee has developed a motivation to learn the trainee must develop a motivation to transfer those learned skills and knowledge from the training environment back to the work environment in order for transfer to occur Motivation to transfer can be defined as the desire on the part of the trainee to apply the knowledge and skills learned in training back on the job (Noe & Schmidt, 1986) The trainee must have the capability and the desire to acquire and apply new skills on the job for learning and training transfer to result (Baldwin, Magjuka, & Loher, 1991) Trainees who master the training content and desire to apply the new knowledge and skills to job activities often experience a change in behavior (Noe & Schmidt, 1986) Observable behavior changes become the foundation for assessing if training transfer has occurred and if worker performance has improved Rouiller & Goldstein (1993) concluded that those individuals who learned more in training and could apply their new work-related behaviors to the job were more likely to make an effort to do additional learning that would ensure their success in performing at an optimal level

Organizational Climate Factors

Employers often have overlooked the critical impact that organizational climate factors, as part of the organizational context, have had upon facilitating and inhibiting training transfer Rather, employers have assumed that a failure to transfer training knowledge and skills is only due to the training design, training delivery, or individual learner characteristics However, the two most likely reasons why learning fails to transfer to the job are that the work environment fails to sustain the learned behavior and that the trainees perceive the training as irrelevant (Garavaglia, 1993) Baldwin & Ford (1988) describe work-environment characteristics as consisting of "climatic factors such as supervisory or peer support as well as constraints and opportunities to perform learned behaviors on the job" (p 64) Organizations must use research that has been done on to develop effective interventions to improve organizational climate and supervisory support (Baldwin & Ford, 1988) Organizational climate needs to be evaluated as a potential facilitator of training transfer (Rouiller, Goldstein, 1993)

Research suggests that the organizational climate may be at least as important as learning in facilitating training transfer (Richey, 1992, Rouiller, 1989 , Rouiller & Goldstein, 1993, Russell et al., 1985) Organizational climate as a component of organizational context is the accumulated workplace atmosphere that is internally developed from the perceptions, feelings, and interactions that face the people and the organization on a regular basis (Childre & Cryer, 1998) Baumgartel et al (1984) concluded from their study that personality factors and organizational climate factors

should be taken into account when evaluating training outcomes because training is dependent upon such factors for its effectiveness

The organizational climate should be evaluated in terms how it can facilitate training transfer for a training outcome of improved performance as an indication of training effectiveness The organizational climate determines as "the type of support or constraints that trainees will be likely to encounter in their job situations, concerning their use of the training" (Rouiller, 1989, p 4) A favorable organizational climate could substantially improve the already successful efforts of trained managerial employees (Baumgartel et al 1984) Baumgartel et al (1984) evaluated the organizational environments on their study on trained managerial employees who successfully applied new knowledge and noticed the following pattern

> -they were free to set their own performance goals
> -higher management was considerate of lower management
> -the organization stimulated and approved of experimentation and innovation
> -the organization was anxious for mangers to use new knowledge gained
> -there was free and open communication among managers
> -top management was willing to spend money on management development
> (pg 3-4)

Managers and coworkers who are perceived as failing to support the trainees' efforts to apply their new knowledge and skills significantly inhibit training transfer (Broad & Newstrom, 1992, Pea, 1987, Richey, 1990, Richey, 1992, Rouiller, 1989) The The organization's willingness to provide proper equipment tools, materials, and technologies are also signs of their support for training transfer (Garavaglia, 1993, Pea, 1987, Richey, 1990) Moreover, organizational pressures and the lack of opportunity to

apply new learning hinder the likelihood that training transfer will occur successfully (Richey, 1990)

Organizational climate that nurtures trainees returning to the work environment provides a foundation in which training can be transposed into improved worker performance Improvements in organizational climate can help to facilitate training transfer to develop (Rouiller & Goldstein, 1993) Employers can distinguish between positive and negative organizational climate based upon the match between the situations of the training environment and the situations of the work environment Trainers and managers need to coordinate the objectives of the learning experience of the trainees in training with the objectives of the work environment for training transfer to result (Robinson & Robinson, 1985). In addition, encouragement and reward need to be given to trainees to lay the foundation for a positive organizational climate that serves to promote training transfer (Robinson & Robinson, 1985) Rouiller and Goldstein (1993) discovered from the results of their study on manager trainees that the level of work-related behaviors applied to the job was directly related to the level of learning that occurred in training and the positive organizational climate If the organizational environment is not changed in any manner to facilitate training transfer, then trainees should be given alternative methods to handle organizational inhibiting factors (Tannenbaum & Yukl , 1992)

CHAPTER 3

METHOD

The present study introduces an ethnographic method, the Heuristic Elicitation Methodology (HEM), as a strategy for examining organizational issues impacting training transfer The HEM emphasizes the personal constructs of the respondent and does not superimpose categories that have already been established by investigators (Kupritz, 1996) The methodology gives equal attention to both qualitative and quantitative methods and can easily be incorporated to accommodate the needs of social science research (Kupritz, 1996) To date, the HEM has not been utilized to examine organizational issues impacting training transfer For this study, the primary purpose of the HEM is to obtain information about organizational issues, including items and attributes which facilitate and impede training transfer Although the HEM is not a device that supplies immediate answers, it allows for data collection to be completed faster than the long-term field work necessary for "true" ethnography, without hampering reliability and validity (Harding & Livesay, 1984)

Sample

The present study investigated the impact that workplace design has on training transfer within the context of particular work practices Factors that have impacted training transfer were examined within three different supervisory training courses intended for all levels of staff at the University of Tennessee, Knoxville (UTK) Twenty-four office workers at the university who completed one of three supervisory training

courses within a span of four months participated in the study The three supervisory

training courses were Communicating Skills for Supervisors, Effective Supervisory

Practices, and Teambuilding for Supervisors Each of the three supervisory training

courses were conducted by the same trainer and involved a length of two hours to

complete the course The twenty-four office workers included supervisors and office

employees who did not hold the supervisor position, however were using the same

supervisory skills daily, which necessitated them to take one of the courses in the first

place

The training skills that were learned by the participants from the three

supervisory training courses included a wide range of supervisory skills Some skills

include encouraging upward communication, disseminating information, delivering

unpopular messages, delivering effective feedback, and mastering listening skills Still

others include identifying basic requirements for performance and evaluation of an

effective supervisor, maintaining high morale, and understanding team influences

Instrumentation

The methodology used to interview the 24 office workers was the Heuristic

Elicitation Methodology (HEM) Bechtel (1997) defined the word, "heuristic", as

'tending to provoke discovery' " Researchers should intensely probe to uncover the

findings and then use heuristic methods as the best means to analyze the findings

(Bechtel, 1997) Often, researchers misinterpret responses of the participants based upon

his or her individual standpoint from a series of erroneous presumptions Thus, the

researcher's outcome is best served when the original question (Bechtel, 1997) is

arranged in such a manner as to provoke discovery of the meanings and assumptions of the respondent

The Heuristic Elicitation Methodology is founded upon a philosophical position known as interpretivism that has a goal to discover patterns in a socially contrived reality with the purpose of explaining some social phenomena in holistic terms (Kupritz, 1996) The methodology derives its interpretations from the idea that language is a gateway in uncovering "cultural meaning structures" (Harding & Livesay, 1984, p 75) The methodology gives equal attention to both qualitative and quantitative methods and can easily be incorporated to accommodate the needs of social science research (Kupritz, 1996) The HEM is widely accepted as a standard procedure in cross-cultural research in the social sciences (Harding & Livesay, 1984)

The methodology emphasizes the personal constructs of the respondent and does not superimpose categories that have already been established by investigators (Kupritz, 1996) Rather, categories are respondent-generated and data respondent-categorized than investigator-generated and investigator-categorized (Kupritz, 1996) The HEM serves to obtain categories from the respondents in his or her own language (Harding, 1974) Categories that are respondent-generated and data respondent-categorized help ensure that that language and the conceptualizations of the respondents are retained (Kupritz, 1996)

Relating distinct items and attributes with distinct cultural values becomes the objective of the methodology (Kupritz, 1996) For this study, the purpose of the methodology was to obtain information about organizational issues, which facilitate and

impede training transfer The methodology attempts to understand the meanings of

beliefs, attitudes, and values for participants (Kupritz, 1996)

The methodology's most prominent feature is that

> The question/instruments are developed from the respondent's language elicited
> in earlier phases and that each successive elicitation phase is built on user
> responses to a prior one (Kupritz, 1996, p 311)

The elicitation techniques have helped to term the methodology as the "Heuristic

Elicitation Methodology" (Harding, 1974)

The Domain Definition or the first phase of the Heuristic Elicitation

Methodology was used which recognizes domains through semantic associations from

behavior, artifacts, and knowledge that people have learned or created (Kupritz, 1996) A

domain is a set of divisions organized based on a single semantic association (Kupritz,

1996) The Beliefs Elicitation Phase, the second phase, recognizes beliefs for their

association with domain items and attributes and their interrelationships among them

(Kupritz, 1996) Although the second phase was not used in this study, each elicitation

phase can be utilized independently and can stand alone as a separate investigation

(Harding, 1974)

The purpose of the Domain Definition is to uncover the full range of perceptions

of the respondents to analyze their impact on the specific variables being examined in the

study (Kupritz, 1996) By exhausting the full range of respondents' perceptions, the

possibility of overlooking significant items and attributes of a domain being examined

reduces (Spradley, 1979, 1980) The Domain Definition consisted of open-ended

interviews in which the respondent's language is formed in a sequence of interlinked

questions, with answers recorded verbatim to retain the respondents' terminology and interpretations (Kupritz, 1996) The open-ended interviews provided the range of items and attributes from a domain that is well defined immediately (Harding, 1974, Harding & Livesay, 1984) The items in the domain are determined by the questions that are asked first and the attributes of each item in the domain of interest are determined by the subsequent questions (Kupritz, 1996) The domain of interest can consist of dimensions, features, traits, and characteristics (Kupritz, 1996)

The researcher received approximately 6 hours of training to effectively utilize various interviewing techniques based upon the conditions of the Heuristic Elicitation Methodology to enable the instrumentation to be effective in achieving the results of this study Dr Virgina Kupritz, an assistant professor in the Department of Human Resource Development in the College of Human Ecology at the University of Tennessee, Knoxville, conducted the training

Materials

The researcher utilized a printed copy of a formatted questionnaire to interview each of the 24 respondents with an unfilled informative sheet for descriptions of each respondent's personal background, job description, and specific features of their work environment

Procedure

The researcher conducted 24 structured interviews with the office workers over a 30-60 minute period Each interview was open-ended in which the interviewees' language formed a sequence of interlinked questions based on a structured format The

answers were recorded verbatim to retain accurate perceptions of the work environment and to identify the various organizational factors that have impacted training transfer Participants' answers given for the first question, which were the items of the domain were inserted into subsequent questions The answers for the subsequent questions, which became the attributes for the items of the domain were not inserted into any questions thereafter A set of questions is provided below, representing the nature and format of questions used in the Domain Definition

- Q1 What skills learned in this workshop are you now using on the-job? [Answers= "X"]

- Q2 When $\underline{X}$, what workplace conditions, or office features or situations make it easier to $\underline{X}$? [Answer= "Y"]

- PROBE What else might make it easier to $\underline{X}$, other than $\underline{Y}$?

- Q3 When $\underline{X}$, what workplace conditions, office features, or situations make it harder to $\underline{X}$? [Answers= "Y"]

- PROBE What else might make it harder to $\underline{X}$, other than $\underline{Y}$?

Appendix A reveals the complete list of questions that were used during the interviews

Data Analysis

A domain analysis was conducted using content analysis procedures (see Spradley, 1979) Cumulative response frequencies for similar types of organizational factors that impact training transfer were calculated to determine how often similar types were derived Content analysis procedures usually do not calculate frequency counts for included terms in a domain category However, by quantifying the terms, the researcher was able to determine included terms derived most frequently by respondents and to gain a better understanding about the distribution of respondent beliefs

The included terms were the elicited verbatim responses that revealed similar types of organizational factors to facilitate and impede training transfer The included terms were grouped together to identify an organizational issue as a domain category in which the included terms would be classified within and in which would be distinguished from being placed in other domain categories Organizational issues as either facilitating or impeding training transfer represented each domain category Each domain category was created from an organized set of divisions from a single semantic association The included terms were the divisions within each domain category from which the items and attributes that facilitate or impede training transfer were developed Cumulative response frequencies were tabulated for each domain category Comparisons were made among cumulative response frequencies of the organizational issues facilitating and impeding training transfer and the response frequencies of the items and attributes within each domain category in facilitating and impeding training transfer Each item and attribute elicited was represented in a domain category

Social Conditions of the Study

Among those studies that investigated transfer of training, they state that a low percentage of training actually transfers and that the amount of training that actually transpires into transfer results in the transfer becoming extinguished (Broad & Newstrom, 1992, Georges, 1988, Grabowski, 1983, Kelly, 1982) The field of training transfer has had some organizational issues that have been documented which have influenced it the level of management and collegial support, the accessibility of resources and technology to sustain transfer, the timeliness of training to practice new learning, the relevance of

training, and the likely utilization of training back to job (Foxon, 1995) The present study investigated the physical design of the workplace as another potential organizational factor to training transfer

The two most likely reasons why learning fails to transfer to the job are that the work environment fails to sustain the learned behavior and that the trainees perceive the training as irrelevant (Garavaglia, 1993) The present study is significant in that it identified an overlooked and unexamined organizational factor in facilitating and impeding training transfer in the work environment, that is, workplace design Employees returning to a supportive workplace design after attending training ultimately can help improve the chances that training transfer will occur and will be maintained for effective worker performance to be achieved for organizational benefits in productivity

CHAPTER 4

RESULTS

The purpose of this study was to examine the impact of workplace design on

training transfer The objectives of the study was to identify what design features

facilitate and impede training transfer and to identify how workplace design fits into what

is important as an organizational issue to trainees for successful training transfer A

domain analysis was conducted using elicited verbatim responses from the interview

participants to discover the range of items and attributes for each specific domain The

organizational issues that surfaced predominantly from the high cumulative response

frequencies for each issue became the domain categories used

Four main organizational issues surfaced in both facilitating and impeding

training transfer, respectively, based on their cumulative response frequencies The top

four organizational issues that were facilitating training transfer were positive

management support, supportive workplace design, resources and technology, and

coworker support The top four organizational issues that were impeding training transfer

were an unsupportive workplace design, lack of management support, lack of resources

and technology, and lack of coworker support Elicited verbatim responses of the

participants became the organizational issues as domain categories

Table 1 compares the cumulative response frequencies for the organizational

issues facilitating training transfer The organizational issue that had the highest

cumulative response frequency in facilitating training transfer was positive management support at 65 counts followed by supportive workplace design at 52 counts

Table 2 compares the cumulative response frequencies for the organizational issues impeding training transfer The organizational issue that had the highest cumulative response frequency in impeding training transfer was unsupportive workplace design at 44 counts followed by lack of resources and technology at 44 counts

Table 1
Organizational Issues Facilitating Training Transfer

Organizational Issues facilitating training transfer	f
Positive management support	65
Supportive workplace design	52
Resources and technology	28
Positive coworker support	9

Table 2
Organizational Issues Impeding Training Transfer

Organizational Issues Impeding Training Transfer	f
Unsupportive workplace design	44
Lack of resources and technology	35
Lack of coworker support	30
Lack of management support	23

Organizational Issue 1 Workplace Design Impacting Training Transfer

Elicited responses by office supervisors and those holding positions that use

equivalent supervisory skills reveal that similar items and attributes of the workplace are

perceived to facilitate training transfer through supportive workplace design

> need our own space, cubicles –gives privacy, have my own office, go to a place
> where you are uninterrupted-need to be away from the environment-the everyday
> environment, have to be comfortable-a desk, chair, and climate in the old building
> we had, pleasant work environment, more space, large office, open space,
> communal area for team meetings, good working space to get things done, an
> office with adequate work space and facilities
> [verbatim responses by office workers]

Table 3 compares response frequencies of items and attributes that are perceived

to facilitate training transfer through a supportive workplace design Office design

features facilitating privacy had the highest frequency for facilitating training transfer at

20 counts Efficient and flexible work space had the second highest frequency for

Table 3
Supportive Workplace Design Facilitating Training Transfer

Domain Category	Items and Attributes	f
Supportive workplace design facilitating training transfer	Office design features facilitating privacy needs	20
	Efficient and flexible work space	13
	Larger worker space	6
	Aesthetics, comfort level, and image of work space	4
	Close proximity to workers	4
	Sharing of work space to increase communication	4
	Work space with windows	1

facilitating training transfer at 13 counts The third highest frequency, at 6 counts, was

larger worker space

The responses revealed similar items and attributes of the workplace that are

perceived to impede training transfer through unsupportive workplace design

> don't have privacy, constant interruptions, sometimes, people congregate
> around phone-makes it hard to hear on the phone, don't have conference room,
> do not have the space that allows to have private one on one conversation, bad
> working environment, the environment does not set up for impromptu, pile
> everyone in one room, too crowded up here, overcrowding; too spread apart
> [verbatim responses]

Table 4 compares response frequencies of items and attributes that are perceived

to impede training transfer through an unsupportive workplace design Office design

features facilitating privacy had the highest frequency for facilitating training transfer at

20 counts Likewise, office design features impeding privacy needs design had the

highest frequency for inhibiting training transfer through an unsupportive workplace

design at 20 counts Proximity too far away from coworkers had the second highest

Table 4
Unsupportive Workplace Design Impeding Training Transfer

Domain Category	Items and Attributes	f
Unsupportive workplace design impeding training transfer	Office design features impeding privacy needs	20
	Proximity too far away from coworkers	7
	Lack of efficient and flexible work space	6
	Lack of space, crowded	6
	Space not shared, creating communication barriers	4
	Lack of aesthetics, comfort level and image of work space	1

frequency for inhibiting training transfer through an unsupportive workplace design at 7

counts

Organizational Issue 2 Level of Management Support Impacting Training Transfer

Responses revealed that similar items and attributes of the workplace are

perceived to facilitate training transfer through positive management support

> [manager] leads and takes the lead, encourage active listening, encourage open
> environment, try to be available, make sure they [employees] are appreciated, try
> to recognize when people express interest, not want to openly chastise them
> infront of their peers, not to have so many layers, you can get so many things
> done, staff meetings-bring up misunderstandings or miscommunication,
> opportunity for cross-training
> [verbatim responses]

Table 5 compares response frequencies of items and attributes that are perceived

to facilitate training transfer through positive management support Staff meetings, at 8

counts, had the highest frequency for positive management support facilitating training

transfer Encourage open environment, at 6 counts, had the second highest frequency for

positive management support facilitating training transfer

In contrast, responses revealed that similar items and attributes of the workplace

are perceived to impede training transfer through a lack of management support

> no management support for team, other priorities, don't have one-on-one
> interaction, some of our supervisors get stuck in the old way of thought,
> don't show that much recognition when someone does something good,
> to go through so many layers to get things approved, no training, difficulty
> communicating upwardly, an employee who has no skills-you need to have
> opportunities, highly specialized activities-very compartmentalized, overbearing
> supervisor multiple supervisors-someone says this is important and then someone
> else says that this is important, when you are bombarded with three or more
> people busy telling me things to do something -they all want an answer right
> away.
> [verbatim responses]

Table 5
Management Support Facilitating Training Transfer

Domain Category	Items and Attributes	f
Positive management support facilitating training transfer	Staff meetings	8
	Encourage open environment	6
	Actively understanding and listening	5
	Communicating work-related information	5
	Accessible supervisor	4
	Appreciation and reward for work	3
	Mentoring and training opportunities	3
	Effectively leading and managing others	3
	Management's willingness to assist workers	3
	Sufficient and proper layers of management	3
	Upholding commitments and honoring integrity	2
	Talking informally	2
	Interaction on an individual basis	2
	Recognize strengths, interests, and talents	2

Continued Table 5

Domain Category	Items and Attributes	f
Positive management support facilitating training transfer	Performance objectives and goals	2
	Opportunities for flexible work schedules	2
	Facilitate a fun and relaxed working atmosphere	1
	Delegation	1
	Awareness by the supervisor of his or her inability to have all the answers	1
	Demonstrating awareness of ability	1
	Advocating the virtue of patience as important	1
	Lack of deadline restrictions	1
	Behaved toward the supervisor as highly skilled to attain personal goals	1

Table 6 compares response frequencies of items and attributes that are perceived to impede training transfer through a lack of management support The lack of opportunity and time for training and priorities and duties and the lack of priorities and duties, each 4 counts, had the highest frequency for lack of positive management support impeding training transfer

Organizational Issue 3 Resources and Technology Impacting Training Transfer

Responses indicated that similar items and attributes of the workplace are perceived to facilitate training transfer through resources and technology

additional staff, good working equipment, need machines up to date, current with technology, use voice-mail, use email; opportunity to network with employers more incentives for each employee, technology that is not accessible, not limiting, an hour and half would be needed to close
[verbatim responses]

Table 7 compares response frequencies of items and attributes that are perceived to facilitate training transfer through resources and technology Technology as accessible and the most latest had the highest frequency for resources and technology facilitating training transfer with 12 counts

Responses revealed similar items and attributes of the workplace that were perceived to impede training transfer through a lack of resources and technology

bad equipment, not all [employees] computer literate, lack of time, when it is real busy, understaffed, office schedules are different, geographic location, workload is harder, when they [employees] cannot take full lunches, involved in too many things, time-sometimes, things go unattended, what happens if they [employees] take the computer courses and then they [employees] do not have the technology to back it-use or lose it, holidays, time-sometimes, things go unattended
[verbatim responses]

Table 6

Lack of Management Support Impeding Training Transfer

Domain Category	Items and Attributes	f
Lack of management support impeding training transfer	Lack of opportunity and time for training	4
	Lack of priorities and duties	4
	Difficulty communicating individually and upwardly	3
	A negative perception in handling problems	3
	Insufficient opportunity to perform wide range of duties from structured environment	3
	Lack of management support and resources for teams	2
	Poor recognition by higher management	2
	Overbearing administrators and personnel having multiple urgent requests	2

Table 7

Resources and Technology Facilitating Training Transfer

Domain Category	Items and Attributes	f
Resources and technology facilitating training transfer	Technology as accessible and the most latest	12
	Good computers, machines, and equipment	7
	A high level of staff	4
	Employee incentives	2
	Aware of available policies	2
	Sufficient time to end workflow	1

Table 8 compares cumulative response frequencies of items and attributes that are perceived to facilitate training transfer through a lack of resources and technology Busy schedules, at 14 counts, had the highest cumulative frequency for lack of resources and technology impeding training transfer

Organizational Issue 4 Level of Coworker Support Impacting Training Transfer

Responses indicated similar items and attributes of the workplace that are perceived to facilitate training transfer through coworker support

> have highly skilled communicators [in meetings], an office with adequate workers, certain amount of credentials that you need to get your point across, to step out of your role and help, have highly skilled communicators [in meetings], everyone cooperating
> [verbatim responses]

Table 9 compares response frequencies of items and attributes that are perceived to facilitate training transfer through coworker support Flexible job roles for collective support, with 5 counts, had the highest frequency for coworker support facilitating training transfer High level of communication and skillful workers, with each 2 counts, were next highest frequency for coworker support

In contrast, responses indicated similar items and attributes of the workplace that were perceived to impede training transfer through a lack of coworker support

> always going to be two or three people that are not going to make it [meeting]; do not have time to spend one on one, have not been to training-thinking the old way-start ridiculing ideas before people have a chance to express themselves, personality conflicts, it can be harder if there are stereotypes exist-female supervision over a man, an attitude-you can be in a poor attitude, when someone does not do their job,
> [verbatim responses]

Table 8
Lack of Resources and Technology Impeding Training Transfer

Domain Category	Items and Attributes	f
Lack of resources and technology impeding training transfer	Busy schedules	14
	Inadequate or lack of available machines, equipment, computers, and technology	7
	Insufficient time to follow through on supervisory commitments	7
	Low in the number of staff to finish workload	2
	Different and conflicting work schedules	2
	Managing time contingent upon geographic location	2
	Lack of competencies in various computer skills	1

Table 9
Coworker Support Facilitating Training Transfer

Domain Category	Items and Attributes	f
Coworker support facilitating training transfer	Flexible job roles for collective support	5
	High level of communication	2
	Skillful workers	2

Table 10 compares cumulative response frequencies of items and attributes that are perceived to impede training transfer through a lack coworker support. Personality conflicts, at 10 counts, had the highest cumulative frequency for lack of support impeding training transfer More responses were elicited for lack of coworker support impeding training transfer than coworker support facilitating training transfer

Table 10
Lack of Coworker Support Impeding Training Transfer

Domain Category	Items and Attributes	f
Lack of coworker support impeding training transfer	Personality conflicts	10
	Worker styles in personal motivation and satisfaction	5
	Lack of assertiveness	3
	Lack of communication	2
	Negative results for hardworking employees	2
	Excessive workload with no coworker support	2
	Poor worker attendance	2
	Old thinking inhibits the expression of new ideas	1
	No respect for a supervisor	1
	Constant interruptions by workers	1
	No positive messages	1

The impact that organizational issues have upon training transfer is revealed in more detail through a comparison of the frequency counts that certain types of items and attributes have within each domain category or organizational issue As simple frequencies classifying nominal level data, no inference can be made at this time about the strength of association or the relative weighting of importance for these elicited items and attributes Another research instrument designed specifically to address these issues is needed so that inferences can be made based upon more powerful statistics (see Kupritz, 1999) Response frequencies were compared across domain categories to identify the most salient items and attributes for each domain category

Table 11 compares the highest response frequencies of the items and attributes within each domain category that facilitate training transfer Office design features facilitating privacy needs had the highest response frequency of all the items and

Table 11

Highest Response Frequencies for Items and Attributes that Facilitate Training Transfer

Domain categories for facilitating training transfer	Items and Attributes	f
Supportive workplace design facilitating training transfer	Office design features facilitating privacy needs	20
	Efficient and flexible work space	13
	Larger worker space	7
Resources and technology facilitating training transfer	Technology as accessible and the most latest	12
	Good computers, machines, and equipment	7
Positive management support facilitating training transfer	Staff meetings	8
	Encourage open environment	6
Coworker support facilitating training transfer	Flexible job roles for collective support	5

attributes within a domain category facilitating training transfer Efficient and flexible work space had the second highest frequency of all the items and attributes within a domain category facilitating training transfer followed by technology as accessible and the most latest as the third highest within a domain category.

Table 12 compares the highest response frequencies of the items and attributes within each domain category that impede training transfer Office design features impeding privacy needs had the highest frequency of all the items and attributes within a domain category impeding training transfer Busy schedules had the second highest frequency of all the items and attributes within a domain category impeding training transfer followed by personality conflicts as the third highest within a domain category

Table 12

Highest Response Frequencies for Items and Attributes that Impede Training Transfer

Domain categories for impeding training transfer	Items and Attributes	f
Unsupportive workplace design impeding training transfer	Office design features impeding privacy needs	20
	Lack of efficient and flexible work space	6
Lack of resources and technology impeding training transfer	Busy schedules	14
	Inadequate or lack of available machines, equipment, computers, and technology	7
	Insufficient time to follow through on supervisory commitments	7
Lack of coworker support impeding training transfer	Personality conflicts	10
Lack of management support impeding training transfer	Lack of opportunity and time for training	4
	Lack of priorities and duties	4

Appendix B reveals a complete listing of all the elicited verbatim responses that formed each of items and attributes within all of the domain categories An introductory page precedes Appendix B as a quick reference to locate each of the items and attributes with an assigned number for each of them that match the number within each domain category

Summary of Results

The study examined the impact of workplace design on training transfer The objectives were to identify design features that facilitate and impede training transfer and to identify the significance of workplace design as an issue organizations must consider in order to achieve successful training transfer The twenty-four office workers who included supervisors and office employees who did not hold the supervisor position, however were using the same supervisory skills daily were interviewed as participants for this study

Organizational Issues

Content analysis and a comparison of cumulative response frequencies revealed that organizational issues facilitating training transfer were positive management support, supportive workplace design, resources and technology, and positive coworker support The organizational issue that had the highest cumulative response frequency in facilitating training transfer was positive management support Supportive workplace design was the organizational issue that received the second highest cumulative response frequency for facilitating training transfer followed by resources and technology and coworker support

Content analysis and a comparison of cumulative response frequencies revealed that organizational issues impeding training transfer were an unsupportive workplace design, lack of management support, lack of resources and technology, and lack of coworker support An unsupportive workplace design was the organizational issue that had the highest cumulative response frequency in impeding training transfer followed by the lack of resources and technology and the lack of coworker support Although positive management support received the highest cumulative response frequency in facilitating training transfer, lack of management support received the lowest cumulative response frequency in impeding training transfer

Items and Attributes

Cumulative response frequencies for items and attributes were compared across domain categories that impacted training transfer Although positive management support received the highest cumulative frequency across categories that was facilitating transfer, it did not receive the highest frequency for each item and attribute within its domain category Office design features facilitating privacy needs had the highest response frequency of individual items and attributes for facilitating training transfer Unsupportive workplace design received the highest cumulative frequency for an organizational issue that was impeding training transfer Office design features impeding privacy needs had the highest response frequency of individual items and attributes for impeding training transfer Quantitative data helped to reveal the distribution of beliefs and confirmed the impact that workplace design has upon training transfer in relation to

the other key organizational factors that facilitate or impede training transfer The

qualitative data helped to give further merit to the quantitative data

CHAPTER 5

DISCUSSION

Workplace design has been overlooked as an organizational factor that has impacted training transfer, yet practitioners have noted that trainees often complain about difficulties in training transfer that are directly attributable to workplace design. The studies that have researched individual, group, and organizational performance report that the design of the workplace can facilitate or impede the organizational effectiveness as a whole (Brill, Marguilis, Konar, & BOSTI, 1984, 1985, Davis, Becker, Duffy, & Sims, 1985, DeMarco & Lister, 1985, Springer, 1982, Vischer, 1996) Noe & Schmitt (1986) asserted that the "motivation to transfer and perceptions of the favorability of the work environment for the use of new skills may influence training effectiveness" (p 519)

The present study examined workplace design as an organizational factor impacting training transfer As a potential component for training transfer, workplace design was examined as part of organizational context that included the physical environment (see Sundstrom et al, 1990) Design features that facilitated and impeded training transfer were identified in the study. The study, also, identified how workplace design fits into what is important as an organizational issue to trainees for successful training transfer

Results indicated that workplace design was crucial as an organizational issue in impacting training transfer for particular work practices when compared to other organizational issues The significance was revealed in the content analysis of verbatim

responses and the response frequency of salient variables mentioned most frequently

Although workplace design did not receive the highest cumulative response frequency of

the top four organizational issues that surfaced in facilitating training transfer, it

nevertheless did not lose in its credibility as an organizational factor with impact on

training transfer The cumulative response frequencies indicated that workplace design

was crucial as a factor in impeding training transfer

On the contrary, cumulative response frequencies indicated that the level of

management support was crucial in facilitating training transfer, however, they also

indicated that the lack of management support may not be as crucial in impeding training

transfer when compared to other organizational issues The discrepancy between the level

of management support in facilitating training transfer with the level of management

support in inhibiting training transfer may be due to an involuntary response to think of

management support in terms of its positive attributes rather than negative attributes

However, workplace design was the highest organizational factor in impeding

training transfer and was the second to highest organizational factor in facilitating

training transfer Furthermore, workplace design was the organizational factor that had

the top items and attributes in facilitating and inhibiting training transfer as indicated by

the highest cumulative frequencies The high incidence of the verbatim responses that

comprise the frequencies of the items and attributes reveal the highly important impact

that workplace design has upon training transfer Incorporating a supportive workplace

design along with management support, coworker support and available resources and

technology can help further create a supportive environment for training transfer This

study validates the significance of the physical setting to support or impede training

transfer It is a crucial organizational issue that can impact the ultimate success or failure

of a training intervention

Implications for Human Resource Development

Human Resource Development research has ignored the potential impact that

workplace design has had upon training transfer and given considerable emphasis on the

perception of management support as the most highly influential factor in applying the

training knowledge and skills back to the work environment (Richey, 1992, Rouiller,

1989) The results of the study revealed that workplace design had a significant enough

impact upon training transfer to be concluded as a crucial organizational component in

facilitating and impeding training transfer compared to the level of management support

General implications were determined from the results of the study An overall

implication of the major findings in the study is that human resource practitioners must

identify ineffective worker performance from unsuccessful training transfer and identify

whether workplace design is an impeding factor Another implication is that they need to

become familiar with the specific items and attributes of workplace design that have

previously impeded training transfer A third implication is that human resource

practitioners need to understand the job requirements and worker needs to incorporate

positive workplace design structures Furthermore, they need to become actively involved

in analyzing workplace design to best accommodate the needs of workers so that training

transfer will result The role of human resource development practitioners should be

reshaped so that human resource practitioners can contribute in the designing of the

workplace so that employees can transfer training skills and knowledge learned in

training back to the work environment for positive organizational outcomes

Limitations of the Study

As a case study, further research is required to generalize these results As an

inductive approach, the qualitative nature of the study did not allow the investigator to

measure the strength of relationships between items and attributes nor the relative

importance given to organizational issues

Twenty-four office workers participated from the same large university who

completed one of three different supervisory training courses within a span of four

months The study only examined the impact of organizational issues including

workplace design for particular work practices involving supervisory skills It may be

that the organizational issues elicited as impacting training transfer in this study are not as

crucial in impacting training transfer for work practices involving procedural and motor

skills As stated earlier, procedural and motor skills frequently result in a high level of

transfer whereas conceptual, judgmental, and cognitive training skills frequently result in

a low level of transfer

Since all the participants were gathered from the same organizational culture, a

similarity in responses by the participants may have developed based upon a positive or

negative organizational climate Depending on whether the office workers perceived the

organizational climate as positive or negative, office workers may have provided

responses that reflected their positive or negative perceptions Those office workers who

may have been slightly to moderately dissatisfied with the organizational climate may

have been more focused in providing the full range of unfavorable items or attributes that they perceived were impeding training transfer In addition, they may have been less focused on items or attributes that may have been facilitating training transfer However, those office workers who may had a more neutral attitude about the organizational climate may have been less focused on various items or attributes that were impeding training transfer If half of the total participants from a different organizational culture were interviewed and then compared with the remaining half of the participants from the present organizational culture, then possibly the organizational climate would not be a limitation

Some participants were supervisors and some were office employees who did not hold the supervisor position However, those that did not hold the supervisor position were using the same supervisory skills daily, which necessitated them to take one of the three courses in the first place Although the training courses in which the participants were obtained from were three different training courses, all three of them were training courses for supervisory skills that included a wide range of communication skills The perception of the trainer's effectiveness of a course could have been a limitation However, all of the participants indicated that the trainer who was the same trainer for each of the three courses was highly effective in delivering the course content If attendance in one of the training courses was mandatory and if a negative attitude was held preceding the training course and following the training course, then the results may have been different

Suggestions for Future Research

The present study used the available research in human resource development on training transfer and in environmental design on workplace design to demonstrate that workplace design can impact training transfer By linking both disciplines of knowledge, research can be used to reshape the future work environment for employees to become better empowered, in return, to reshape an organization's effectiveness However, workplace design needs to be examined as part of the organizational context which includes the physical environment (Sundstrom, De Meuse, & Futrell, 1990) The physical environment should be taken into account when training is planned, developed, and evaluated (Richey, 1992, Tannenbaum & Yukl, 1992) A systematic analysis of the physical environment can facilitate training transfer by matching worker preferences in workplace design in terms of aesthetic and functional qualities to the actual physical environment

Future research could expand upon the research that workplace design is an influential organizational component that impacts training transfer Workplace design can be further investigated on its effect upon training transfer on different skill areas The current study examined workplace design on training transfer on supervisory skills A similar study could examine workplace design on training transfer on motor skills Furthermore, research could take into account how workplace design facilitates and impedes training transfer when working in teams A comparison could then be made with workplace design and other key organizational issues such as the level of management support, the level of coworker support, and the level of available resources and

technology to conclude its significant impact upon training transfer Researchers should

systematically analyze how worker place design impacts workers' opportunity to

maintain successful training transfer for effective worker performance so that

organizational benefits can be attained in terms of productivity

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APPENDIXES

APPENDIX A

BACKGROUND INFORMATION SHEET
&
QUESTIONNAIRE
FOR INTERVIEWS

Background Information Sheet for Interviews

Name _____

Date of Birth _____

Job Title _____

Brief Job Description _____
(duties performed)

_____

_____

- I am examining work issues that impact using new training skills back on-the-job

Examples of <u>work issues,</u> that is, the workplace conditions, office features or situations:

management type issues—management procedures to support level, timeliness of training

to try out new skills, availability of resources and equipment, training relevance, potential

application of training, coworker support, and workplace design issues ”

What kind of walls enclose your work area [your immediate workspace]?

- Floor-to-ceiling solid walls with door

- 5' Height partitions with/without door

- 7' Height partitions with door

- Open area with no screens or walls

Questionnaire for Interviews

1   What skills learned in this workshop are you now using on the-job? [Answers= "X"]

2   When X, what workplace conditions, or office features or situations make it easier to X? [Answer= "Y"]

3   What else, might make it easier to X, other than Y? [Probe]

4   When X, what workplace conditions, office features, or situations make it harder to X? [Answers= "Y"]

5   What else, might make it harder to X, other than Y? [Probe]

6   What skills learned from the workshop have you not been able to use? [Answers= "X"]

7   What workplace conditions, office features, or situations have not allowed you to use X?

8   What workplace conditions, office features, or situations would make it easier to X?

9   Now, please describe for me what for you would be the "ideal" workplace conditions to support your training skills learned from the workshop What workplace conditions, office features or situations would the ideal workplace have to support your new training skills back on-the-job?

10 What workplace conditions, office features, or situations would the ideal workplace avoid, or not have, that would hinder you training skills back on-the-job?

APPENDIX B

DOMAIN ANALYSIS

Table of Contents for the Items and Attributes in All the Domain Categories

Each item and attribute is assigned a number that corresponds to the same number for the group of verbatim responses provided by the participants for the four main organizational issues that surfaced workplace design, level of management support, level of available resources and technology, and level of coworker support as facilitating and impeding factors

Domain Category: Facilitating training transfer through
supportive workplace design
<u>**Items and Attributes**</u>

1   Close proximity to workers
2   Larger worker space
3   Office design features facilitating privacy needs
4   Aesthetics, comfort level, and image of work space
5   Sharing of work space to increase communication
6   Efficient and flexible work space
7   Work space with windows

Domain Category: Impeding training transfer through
unsupportive workplace design
<u>**Items and Attributes**</u>

1   Office design features impeding privacy needs
2   Lack of efficient and flexible work space
3   Lack of aesthetics, comfort level and image of work space
4   Lack of space, crowded
5   Proximity too far away from coworkers
6   Space not shared, creating communication barriers

Domain Category: Facilitating training transfer through
resources and technology
<u>**Items and Attributes**</u>

1   Retreat with a quiet atmosphere
2   A high level of staff
3. Good computers, machines, and equipment
4. Technology as accessible as the most latest
5   Employee incentives
6   Aware of available policies
7. Sufficient time to end workflow

Domain Category: Impeding training transfer through
lack of resources and technology
<u>Items and Attributes</u>

1 Inadequate or lack of available machines, equipment, computers, and technology
2 Lack of competencies in various computer skills
3 Insufficient time to follow through on supervisory commitments
4 Busy schedules
5 Low in the number of staff to finish workload
6 Different and conflicting work schedules
7 Managing time contingent upon geographic location

Domain Category: Facilitating training transfer through
positive management support
<u>Items and Attributes</u>

1 Management's willingness to assist workers
2 Sufficient and proper layers of management
3 Delegation
4 Upholding commitments and honoring integrity
5 Staff meetings
6 Effectively leading and managing others
7 Actively understanding and listening
8 Talking informally
9 Not to disparage others
10 Encourage open environment to express concerns and ideas
11 Accessible supervisor
12 Appreciation and reward for work
13 Facilitate a fun and relaxed working atmosphere
14 Awareness by the supervisor of his or her inability to have all the answers
15 Demonstrating awareness of ability
16 Interaction on an individual basis
17 Advocating the virtue of patience as important
18 Lack of deadline restrictions
19 Behaved toward the supervisor as highly skilled to attain personal goals
20 Recognize strengths, interests, and talents
21 Mentoring and training opportunities
22 Communicating work-related information to the office
23 Opportunities for flexible work schedules

Domain Category: Impeding training transfer through
lack of management support
<u>Items and Attributes</u>

1 Lack of management support and resources for teams
2 Priorities and duties
3 Difficulty communicating individually and upwardly
4 A negative perception in handling problems
5 Poor recognition by higher management
6 Insufficient opportunity to perform wide range of duties from structured environment
7 Overbearing administrators and personnel having multiple urgent requests
8 Lack of opportunity and time for training

Domain Category: Facilitating training transfer through
positive coworker support
<u>Items and Attributes</u>

1 High level of communication
2 Skillful workers
3 Flexible job roles for collective support

Domain Category: Impeding training transfer through
lack of coworker support
<u>Items and Attributes</u>
1 Poor worker attendance
2 Excessive workload with no coworker support
3 Old thinking inhibits the expression of new ideas
4 Lack of respect for a supervisor
5 Constant interruptions
6 Lack of communication
7 No positive messages
8 Conflicts and with differences in personalities
9. Negative results for hardworking employees
10 Worker styles in personal motivation and satisfaction
11 Lack of assertiveness

Items and attributes were insignificant in the following domain categories

    Domain Category Training Skill Learned Now Using Back On-The Job

    Domain Category Training Skill Learned Now, But Not Using Back On-The-Job

    Domain Category Facilitate Training Transfer in Dealing with Clients' Personalities and Expectations

    Domain Category Facilitate Training Transfer Through Relevant Training

    Domain Category Facilitate Training Transfer Through Timeliness to Try Out New Learning

    Domain Category Impede Training Transfer Through Lack of Understanding of Job Knowledge

DOMAIN ANALYSIS

A-1
<u>Training Skill Learned Now Using Back On-The Job</u>

INCLUDED TERM	SEMANTIC RELATIONSHIP	COVER TERM
-Training skill -Ask their input -Solicit more input -Better communications skills-listen to person first before you give your input -Don't always know what Frame of mind the other person is in -Communicate expectations to other people on how [you] want things to be done Communicate to not over control or under control -Dealing with people effectively -Learning how to deal with difficult people -Interact with other people-be assertive without offending someone -Understanding policies and procedures- supervisory standpoint -Emphasize good things in relation to the environment[that] UT is a good place to work -Delivering unpopular messages	is a kind of	training skill learned now using back on-the job

Continued A-1

INCLUDED TERM	SEMANTIC RELATIONSHIP	COVER TERM
-Not letting negative communication that goes on between the management and filters down affect how I communicate with them [employees] -Open communication -Looking at communicating within the office and being aware of the gaps in the office and how to address those -Identifying barriers of teambuilding -Being award of different roles-the complainer, coach, the whiner -Learned-different personality styles Communicating with people daily in this office -Communicating skills -Better communication -Have better communication between departments -Learned to not overexpect or underexpect -To stop and think before I say something	is a kind of	**training skill learned now using back on-the job**

Continued A-1

INCLUDED TERM	SEMANTIC RELATIONSHIP	COVER TERM
-To be a little bit more assertive when I say something -[To be] more patient -Understanding that training is very important -How to be assertive -Facilitating the upward communication-I want to encourage others to talk to me -Better communicating unpopular messages -Identifying strengths and weaknesses -Communicating effectively -Communications skills -Working in a team -[To be] a better listener -Show subordinates that they are valuable members of a team -Learning how to keep morale when we were shorthanded -Delegating -Communicating skills -Problem-solving -Trying to deliver effective feedback -Training for room for diversity issues	**is a kind of**	**training skill learned now using back on-the job**

Continued A-1

INCLUDED TERM	SEMANTIC RELATIONSHIP	COVER TERM
-Ability to listen -Have an open environment to express ideas -Can change people's personalities -Learn from your mistakes and other mistakes -Be willing to say I made a mistake Have to be suspectible to change -Be willing to give and take to understand supervisory skills -Everyone knows what I expect and they expect -[Your] goal is striving constantly to make things better -If their[employees] frustration level [isn't there] Have a good attitude about me or the way I manage, then they are much more open to my suggestions -Good attitudes on the part of the staff -Good mood -Teach them [employees] about different personalities- not everyone is a type a or confrontational	is a kind of	training skill learned now using back on-the job

Continued A-1

INCLUDED TERM	SEMANTIC RELATIONSHIP	COVER TERM
-Would have unlimited time to get things done -When you know someone is not in a good mood, you can hold off on something -Humor is good-we [staff] all have a good sense of humor to get our point across -An evaluation of the entire staff's work styles -Positive regard of supervisors and coworkers -Commitment to delivering a good product -Taking personal responsibility for self-management -Taking personal responsibility for getting work done -Who cares and wants to succeed-I saw who was not getting along this semester and asked them[student workers] to write down who they want to work with -I learned-people's perceptions of things are different	is a kind of	training skill learned now using back on-the job

A-2

Facilitate Training Transfer Through Supportive Workplace Design

INCLUDED TERM	SEMANTIC RELATIONSHIP	COVER TERM
1 -your [supervisor] cubicle and your [supervisor] office needs to be close to theirs [employees] -For us to be closer [proximity] -Close proximity -Being close together 2 -more space -large office -office [that]is [not]very compact -an office with less people -It would be not enough [less] traffic -If we had less other offices in this unit, it would create unity 3 -Should be offered some sort of withdrawl if you are dealing with sensitive matters -If it is quiet -I would like walls to go all the way up to the ceiling to be a better listener -Walls to go to ceiling -If you were set up in cubicles door is closed, then it is private	is a way to	**facilitate training transfer through supportive workplace design**

Continued A-2

INCLUDED TERM	SEMANTIC RELATIONSHIP	COVER TERM
3 -I wish I had an office with a door-you need to talk privately -Having my own office-would be ideal so you can concentrate on that thing at one time -Need our own space -Cubicles –gives privacy -Have my own office -Easier if you have a meeting and discuss it in a meeting room -Go to a place where you are uninterrupted-need to be away from the environment-the everyday environment -Always pull them aside-never in public place-get them in my office where they are relaxed -If I can't get them in my office, then I will take them to a new room -More space for professional staff to work-right now, we have seven people in one room-makes it difficult to have private conversation -I do it [communicate unpopular messages] in a private setting	is a way to	facilitate training transfer through supportive workplace design

Continued A-2

INCLUDED TERM	SEMANTIC RELATIONSHIP	COVER TERM
3 -Nice to have private room with one on one supervision -Private space to read and write -[For better communication]-it[facility] is needed to be closed -If [there] are no interruptions -Have a private place to have the person to talk to 4 -pleasant office furnishings (carpet, furniture), attractive posters at least not from 70's -a non-threatening atmosphere-the colors [on the wall] -Have to be comfortable-a desk, chair, and climate in the old building we had -Pleasant work environment 5 -we all share the space together-we are all in the office, not separated -need to work as a team -open space -Communal area for team meetings	is a way to	facilitate training transfer through supportive workplace design

Continued A-2

INCLUDED TERM	SEMANTIC RELATIONSHIP	COVER TERM
6 -Good working environment -Good working space to get things done -Office environment plays a role-puts the team in a better frame of mind -Better office-would put you in a better frame of mind -As far as efficiency and morale-a nicer environment -Environment to make the job easier -Nice if the temperature controls was fine-the staff gets grumpy -Nice to have big dry eraser board-so everyone can see-most of these students are visual learners -More shelves -Place for storage -An office with adequate work space and facilities -Environmental things-add to take away from one's motivation -[For better communication]-tables need to be moved and the chairs need to be in a circle 7 -an office with windows to see outside	is a way to	facilitate training transfer through supportive workplace design

A-3

Impede Training Transfer Through Unsupportive Workplace Design

INCLUDED TERM	SEMANTIC RELATIONSHIP	COVER TERM
1 -Don't have any privacy to talk to them [clients] -Don't have privacy -Constant interruptions -A situation was that you close the door because there is no window -If your door is closed -Keep your door shut -If you were in customer service, and you were in cubicles-you don't have an open door policy -Out their in the open space-because if you have a person who blows up you have to take them aside -Are there in the cubicle -The open area-physically my office is separated from the sweet shop [where employees work] -Really isn't any office -Don't have my own office-keeps me distracted -Don't have room for cubicles physically-find yourself listening to others' conversations and it breaks your concentration -Remove ourselves from the office-hear all the conversations -I am sitting there with no privacy-often, times I can hear the other person on the phone	is a way to	impede training transfer through unsupportive workplace design

Continued A-3

INCLUDED TERM	SEMANTIC RELATIONSHIP	COVER TERM
1 -Sometimes, people congregate around phone-makes it hard to hear on the phone -Don't have conference room -The break room is right there-the room is very disruptive-you don't feel free to talk -Do not have the space that allows to have private one on one conversation -Music is so loud-hard to talk 2 -Bad working environment -The environment does not set up for impromptu -Pile everyone in one room -The nature of the business by virtue of the physical structure where my office and there is a physical line to not allow the employees to stop by -Harder down here because of the layout of the facility -I wished the music was controlled by the student's preference 3 -Nice to have some plants 4 -Too crowded up here -Overcrowding -Not enough room	is a way to	impede training transfer through unsupportive workplace design

Continued A-3

INCLUDED TERM	SEMANTIC RELATIONSHIP	COVER TERM
4 -No space-we are getting to have a big sale-the weather is too cold to have a sidewalk sale -Don't have enough space -Don't have availability-rooms 5 -Too spread apart -Too spread apart -Have three locations -Need to be face to face-we are set up, it is hard to do that -A lot of skills I cannot use because I am so far moved -If my office was closer-the physical part -Difference between working out on the floor than in the office 6 -Have a wall between this lady and me-we sometimes over book -Am in my own room-a barrier to open communication with staff -Some physical barriers-walls-I am separate from the staff -Cubicles-problem is you have to physically get up-[to]ask them[co-workers]	is a way to	impede training transfer through unsupportive workplace design

A-4

Facilitate Training Transfer Through Resources and Technology

INCLUDED TERM	SEMANTIC RELATIONSHIP	COVER TERM
1 -Additional staff -Fully staffed -Staff to take out supervision -If we can hire somebody-at rush-in the middle of the time of year 2 -State of the art computer equipment -The computers have been great-got computer recently -Need machines up to date -Equipment that is accessible, not limiting -Good equipment -Good working equipment -Right equipment to do the job 3 -Technology that is not accessible, not limiting -Need technology up to date -Up to date software packages -Current with technology -Have an internet chat program to discuss issues and ideas	is a way to	facilitate training transfer through resources and technology

Continued A-4

INCLUDED TERM	SEMANTIC RELATIONSHIP	COVER TERM
3 -Use voice-mail -Use email -Use e-mail -If someone is not here, use your e-mail -E-mail -E-mail my supervisor -Have three locations, but we have e-mail 4 -Opportunity to network with employers -More incentives for each employee 5 -Being aware of what policies are in your office -Having them [policies] available so that you can convey them to your staff -An hour and half would be needed to close	is a way to	facilitate training transfer through resources and technology

A-5

Impede Training Transfer Through Lack of Resources and Technology

INCLUDED TERM	SEMANTIC RELATIONSHIP	COVER TERM
1 -The fax machine [only one]- they[employees] are right on top of me -Bad equipment -Administrative staff just comes on in- they need to print from this printer-it is a main printer for everyone -Having horrible time with the computer -Technology, the cashier -Only three computers to the website- should be better technical,online -What happens if they [employees] take the computer courses and then they [employees] do not have the technology to back it-use or lose it 2 -Not all [employees] computer literate 3 -Holidays -don't have time -lack of time -lack of time -time -Time-sometimes, things go unattended -Still expected to perform while being a supervisor-not enough time if you want quality supervision 4 -Have five or six things to do at the same time -Involved in too many things -Right now everyone is so busy and you hate to impose	is a way to	impede training transfer through lack of resources and technology

Continued A-5

INCLUDED TERM	SEMANTIC RELATIONSHIP	COVER TERM
4 -Find myself so busy -When it is due date -When it is real busy -When it is real busy -When you get really busy-you put aside things first -So much work-cannot be a better listener -Workload is harder -When they [employees] are working so hard -When they [employees] cannot take full lunches -When they [employees] cannot take full lunches -The nature of the business-strictly on demand 5 -Understaffed -Being shorthanded does something to morale 6 -Don't see these [employees] every day -Office schedules are different 7 -Time management-it is hard to service three different locations -Geographic location	is a way to	impede training transfer through lack of resources and technology

A-6

Facilitate Training Transfer Through Positive Management Support

INCLUDED TERM	SEMANTIC RELATIONSHIP	COVER TERM
1 -Ideal supervisor-allows you to work -Management were willing to do everything [necessary] -The more I help out the more willing they [employees] are to tell me what the problem is 2 -Not to have so many layers, you can get so many things done -Better chain of command to explain directions -If you need to say something, you need to go through the proper channels 3 -Learning to refer things to other people 4 -make a promise you got to keep -have to be honest 5 -Have staff meetings -Having staff meetings on a regular basis-if there is a problem can talk about it right away -regular staff meetings	is a way to	facilitate training transfer through positive management support

Continued A-6

INCLUDED TERM	SEMANTIC RELATIONSHIP	COVER TERM
5 - Regular staff meetings so they can buy into new ideas -Staff meetings that set the ground rule -Staff meeting and conferences -Staff meetings-bring up misunderstandings or miscommunication -Have meetings with the shift to see what's on their mind 6 -[Manager] leads and takes the lead -[Supervisors] pass out information that you normally do not see, they are your eyes and ears -Have to be good parent-late three times, get fired 7.-Manager understands where you are coming from -To understand the staff level -Listen more collectively -Encourage active listening -If I model them 8 -Being just conversational -To go to lunch together-take 1 ½ hour to just chit-chat	is a way to	**facilitate training transfer through positive management support**

Continued A-6

INCLUDED TERM	SEMANTIC RELATIONSHIP	COVER TERM
9 -Not putting the other person down -Not want to openly chastise them infront of their peers 10 -Should always be an open door to express concerns whether negative or positive -Open environment-personnel would be welcome to make comments -Encourage people to voice other ideas -Encourage open environment -People come and drop by to ask questions -Encourage diversity [in opinions] 11 -Supervisors to make them accessible-if not staff meetings, then at least some ongoing continual communication -Try to be available -Try to be approachable -When I am talking to staff, I go to their office instead of them coming to me or maybe stop them in a hall	is a way to	**facilitate training transfer through positive management support**

Continued A-6

INCLUDED TERM	SEMANTIC RELATIONSHIP	COVER TERM
12 -If I appreciate them -Make sure they [employees] are appreciated -A pay raise 13 -Make the job fun -The office is very laid back and relaxed-no person that says I'm the boss 14 -Supervisors realize that they do not have all the answers 15 -Making it known-as I am aware of my ability 16 -Have individual conferences with each person -Interact one on one, a regular basis 17 -Making it known that patience is important 18 -Management were not restricted by deadline 19 -Treated as a professional to accomplish my goals 20 -It is important that supervision recognize your strengths so that you can develop your talents so they can give you opportunities	is a way to	facilitate training transfer through positive management support

Continued A-6

INCLUDED TERM	SEMANTIC RELATIONSHIP	COVER TERM
20 -Try to recognize when people express interest 21 -Learning plans with employees and supervisors -An office needs to have a purpose and a goal 22 -An opportunity to be involved in mentoring -Opportunity for cross-training -Easier for me to show them [employees] on the computer out front 23 -To constantly write in the community book-who really helped-they [student workers]can see what is going on -Sometimes, it is easier to give bad news with a little bit of good news-I try to make something positive 23 -Letting everyone in the office know how the work is going -Letting everyone in the office know how the situation is going -Letting everyone in the office know how it [situation]can be addressed 24 -Give them [student workers] work schedules for the entire semester-so I can give them a day off -Being allowed-flexible schedule	is a way to	facilitate training transfer through positive management support

A-7
Impede Training Transfer Through Lack of Management Support

INCLUDED TERM	SEMANTIC RELATIONSHIP	COVER TERM
1 -No management support for team -Don't know what the question to ask for the team to get the information I have to make several requests 2 -Other priorities -Other priorities -Lack of priorities -Duties 3 -A supervisor that interrupts all the time -Don't have one-on-one interaction -Difficulty communicating upwardly 4 -Intimidated by supervisor -Some of our supervisors get stuck in the old way of thought -If you [supervisor] don't address the problem right away, it becomes harder	is a way to	impede training transfer through lack of management support

Continued A-7

INCLUDED TERM	SEMANTIC RELATIONSHIP	COVER TERM
5 -Don't show that much recognition when someone does something good -Recognition needs to come higher 6 -You can handle things that a supervisor wont' let go -Highly specialized activities-very compartmentalized -To go through so many layers to get things approved 7 -Overbearing supervisor multiple supervisors-someone says this is important and then someone else says that this is important -When you are bombarded with three or more people busy telling me things to do something -they all want an answer right away	is a way to	impede training transfer through lack of management support

A-8
Facilitate Training Transfer Through Positive Coworker Support

INCLUDED TERM	SEMANTIC RELATIONSHIP	COVER TERM
1 -Interact with peers-better atmosphere -Have highly skilled communicators [in meetings] 2 -An office with adequate workers -Certain amount of credentials that you need to get your point across 3 -To step out of your role and help -Office support is good -Not just a group, but a community -Everyone cooperating -If everyone [co-workers]wasn't defined	is a way to	facilitate training transfer through positive coworker support

A-9

Impede Training Transfer Through Lack of Coworker Support

INCLUDED TERM	SEMANTIC RELATIONSHIP	COVER TERM
1 -Some people have taken off sick, holiday-you can't finish something up because someone is gone -Always going to be two or three people that are not going to make it [meeting] 2 -Lack of support from co-workers -An office where I [supervisor] would be doing all the work 3 -Have not been to training-thinking the old way-start ridiculing ideas before people have a chance to express themselves 4 -An office where they [employees]did not respect or view me as a supervisor 5 -Usually, everyone comes into my office 6 -When someone does not communicate -Do not have time to spend one on one 7 -If there is nothing positive that can come out of the bad news-there is nothing positive that I can say 8 -When working with students-the politics -Friendships -Competition -Personality conflicts -Hard to find out about people's personalities	is a way to	impede training transfer through lack of coworker support

A-10
Training Skill Learned Now, But Not Using Back On-The-Job

INCLUDED TERM	SEMANTIC RELATIONSHIP	COVER TERM
-Open communication -The concept that everything is open and your voice is being heard -More of the teamwork things like the rope because students can learn for the future	is a kind of	**training skill learned now, but not using back on-the-job**

A-11
Facilitate Training Transfer in Dealing with Clients' Personalities and Expectations

INCLUDED TERM	SEMANTIC RELATIONSHIP	COVER TERM
-Need to be accessible-too many people coming -If the person is not really hateful -Learned how to deal with a lady who is very difficult and block it out -Not having to deal with difficult people-everybody being very nice and kind -Learning how to be professional-It is a help situation-Being able to understand that and deal with it on this side	is a way to	**facilitate training transfer in dealing with clients' personalities and expectations**

A-12

Facilitate Training Transfer Through Relevant Training

INCLUDED TERM	SEMANTIC RELATIONSHIP	COVER TERM
-Having people trained to do the job -The door should always be open for training skills	is a way to	**facilitate training transfer through relevant training**

A-13

Facilitate Training Transfer Through Timeliness to Try Out New Learning

INCLUDED TERM	SEMANTIC RELATIONSHIP	COVER TERM
-To apply the skills	is a way to	**facilitate training transfer through timeliness to try out new learning**

A-14

Impede Training Transfer Through Lack of Understanding of Job Knowledge

INCLUDED TERM	SEMANTIC RELATIONSHIP	COVER TERM
-Lack of knowledge to get the job done because you get frustrated because you have got all the necessary information to get the job done -A lot of time, employees don't understand whole policies -Inadequate staff-raises the level of stress and time to communicate	is a way to	impede training transfer through lack of understanding of job knowledge

VITA

Tharulatha Y Reddy was a graduate student pursuing a Master of Science degree at the University of Tennessee, Knoxville with a major in Human Resource Development and a concentration in Training and Development While as a graduate student, she worked as a computer trainer for the Office of Human Resource Management at the University of Tennessee, Knoxville Her position as a computer trainer entailed her to train the university's faculty and staff members on various computer programs with each computer program serving as a course with a maximum span of one week. She has been a student member of the Smokey Mountain Chapter of the American Society for Training and Development, the Society for Human Resource Management, and the Society for Technical Communication Her undergraduate background included a Bachelor of Arts degree with a major in Sociology and a minor in Speech Communication at the University of Tennessee, Knoxville During her undergraduate years, she demonstrated strong leadership potential through the heavy responsibilities that she accepted in her role as a president of a student organization while being a full-time student and a student assistant She has aimed to continually learn and apply principles and practices in the area of Human Resource Development from her educational background and work positions