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PREFERRED TEACHING STYLES OF THE MULTIGENERATIONAL WORKFORCE

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DEDICATIONS

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ABSTRACT

There are currently four generations in the workplace today “Matures, Baby Boomers, Generation X, and Generation Y” (Martin & Tulgan, 2002; Zempke, Rains, & Filpczak, 2000). By determining if there is a preferred teaching style for each of the four generations; learning professionals can potentially create learning solutions that are more interesting and engaging resulting in greater transfer of knowledge and skills by the learner. Adult learners in the workplace are motivated by many things. Knowles, Holton, and Swanson (1998) stated, “Adults tend to be more motivated toward learning that helps them solve problems in their lives or results in internal payoffs” (p. 149). The highly customized learning solutions found in corporate training departments today have the high cost of customization built in where as more generic solutions may more logical sense for a cost conscious manager. With this in mind it is important for both the learning professional and manager to know if there are training methods the learners prefer to participate in and if those preferences lead to improved performance. Determining the teaching style preferences of the four generations in the workforce poses challenges for both managers and learning professionals when trying to determine the most effective solution to solve performance related issues. In order to create learning solutions that enable learners to improve performance on the job, research needs to determine if a there is a preferred teaching style for each of the four generations in the workplace today.

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CHAPTER ONE - Introduction

Overview

Determining the teaching style preferences of the four generations in the workforce poses challenges for both managers and learning professionals when trying to determine the most effective solution to solve performance related issues. In order to create learning solutions that enable learners to improve performance on the job, research needs to determine if there is a preferred teaching style for each of the four generations in the workplace today. There are currently four generations in the workplace today, “Matures, Baby Boomers, Generation X, and Generation Y” (Martin & Tulgan, 2002; Zempke, Rains, & Filpczak, 2000). Taking the next logical step in understanding the teaching style preferences requires identifying what differentiates the four generations in the workforce. This generational break down applies to employees at most companies today. The actual breakdown of the generations begins with “The Matures, born between 1925-1945 are making their final preparations before entering retirement” (Martin & Tulgan, 2002). They grew up in the depression and lived through World War II. Next are the Baby boomers who were born between 1946-1964 (Martin & Tulgan, 2002). They now represent the largest group in the workforce and hold many of the senior leadership and management positions. The “Gen-Xers (born 1965-1980) are a smaller group and are beginning to move into leadership and management positions” (Martin & Tulgan, 2002). Finally, “Generation Y (born 1981-2000) is entering the workplace in still greater numbers” (Martin & Tulgan, 2002). Gen Y are entering the workforce as both full-time workers and part-time students. Whether they are in entry level or in more senior positions, the four generations in the workforce today bring with them very different attitudes toward work, work environment preferences, and teaching or learning style preferences. This concept paper will further develop

and support the research topic, problem, and its purpose. The paper presents the research questions and identifies the key elements of the research plan. It will also review relevant research in the field, advantages and disadvantages of a qualitative design and appropriateness of the research design for this study.

Problem Statement

The different teaching styles and preferences of the four generations in the workforce pose challenges for both managers and learning professionals when determining the most effective solution to solve performance related issues. In order to create learning solutions that enable learners to improve performance on the job, research needs to determine what the preferred teaching styles are for each of the four generations in the workplace today.

Purpose of the research

By determining if there is a preferred teaching style for each of the four generations; learning professionals can potentially create learning solutions that are more interesting and engaging resulting in greater transfer of knowledge and skills by the learner. Adult learners in the workplace are motivated by many things. Knowles, Holton, and Swanson (1998) stated, “Adults tend to be more motivated toward learning that helps them solve problems in their lives or results in internal payoffs” (p. 149). Many corporate training departments absorb the high cost of customization their learning solutions rather than provide generic solution in the hopes of providing more relevant and impactful solutions. With this in mind it is important for both the learning professional and manager to know if there are teaching styles the learners prefer to participate in and if those preferences lead to improved performance. This research looked at employees of financial services companies by generation and correlated their preferences based on four types of teaching styles.

The value of the research will come from being able to better assess how the preferred learning styles of employees can aid in the development of customizing training programs. If companies like are looking to remain globally competitive, it would be advantageous to deliver comprehensive training programs that meet the individual needs of a multigenerational workforce. This study has the potential to help companies make the decision to disengage from the “cookie cutter” approach to developing training programs.

According to Wlodkowski (2008), adult learners find learning to be motivating when “the learning is connected to who they are, what they care about, and how they perceive and know” (p. 74). From this view, motivating learners requires the learning professional to gather this information about individual audiences and use the information to adjust the learning solutions to meet the learners’ needs. This idea is practical in corporate training situations where designing learning solutions for small audiences is more the norm than large audiences found in the public education system. A review of the literature disclosed “ample evidence that children and adults will, if asked, express preferences about how they prefer information to be presented” (Pashier, McDaniel, Rohrer, & Bjork, 2009, p. 105). To determine if there are preferred teaching styles based on age, interviews and questionnaires will be used to ask employees to identify a preferred teaching style using a qualitative research method. Adults certainly can learn throughout their lives. If that were not the case, there would not be a 55.8 billion dollar industry that supports adult learning in its many forms (Annual Industry Report and ASTD annual survey, 2007), from adult education classes offered at the community college to the corporate training departments in Fortune 500 companies. Learning doesn’t stop when people leave high school or college. Learning in adulthood takes on many forms and is not limited to the classroom. A number of the formal methods of learning delivery found in financial services companies include instructor led

training, web instructor led training, web based training, paper based self-study (personal communication Bland, 2007). The author leveraged personal interviews to capture data for analysis and build upon the “existence of study preferences” (Pashier et al., 2009, p. 108).

However the majority of the research done in this area does not support a specific teaching style for adults or the “learning-style hypothesis” described by (Pashier et al., 2009, p. 108). Whether approaching the problem from the point of the learner or from the instructor, the research suggests a focus on incorporating the phenomenon known as “aptitude by treatment interaction in psychology and education”, or known more popularly as teaching styles such that instructional approaches or curriculum are designed to match the learner’s style. There is a body of empirical research that has been conducted since the 1970’s on this treatment/instructional effect that has not resulted in supporting the notion of matching instruction/curriculum to someone’s style (Pashier et al., 2009). What drives the need to explore this idea further is “the claim that individualizing learning will be ineffective, or at less efficient than it could be, if learners receive instruction that does not take into account of their teaching style” (Pashier et al., 2009, p. 108). The teaching style hypothesis is further broken down to the meshing hypothesis which is “the claim that presentation should mesh with the learners own proclivities” (Pashier et al., 2009, p. 108). When the teaching style and learner preference are aligned or meshed then there is a great likely hood of learner satisfaction. With learner satisfaction addressed there is also a greater likely hood of the learner actually retaining the intended knowledge or skills. (Kirkpatrick, 1994).

Philosophical Foundation

As Creswell (2009) stated, “Pragmatism is not committed to any one system of philosophy and reality” (p. 10). It uses the best and most appropriate methods of research to find

answers to problems and solutions that can be applied to real life situations. As Creswell (2009) stated, “Pragmatist agree that research always occurs in social, historical, political, and other contexts” (p.11). The author feels that in a hypothetical situation the pragmatic worldview would be an ideal why to determine the preferred leaning styles of a multigenerational workforce. By using qualitative measures both hard data as well as more subjective interpretations could be used to not only determine the preferred style but how best to utilize that information in a variety of situations and contexts. The challenges would be around realistic expectations of completion, correlating the data and supporting the problem statement.

Research Questions

A review of the literature revealed articles, books and studies have been conducted on the multigenerational workplace. Additionally, much has been written on what motivates learners but there is a lack of research correlating the preferred teaching styles of learners based on generational differences. Therefore, the following questions will guide the research design:

1. What have researchers discovered about the preferred teaching styles of working adults?
2. What generalizations can be made from these studies that would promote more effective development and delivery of learning solutions?

These broad questions will be supported by more focused sub-questions that are:

1. Does a preferred teaching style correlate with multigenerational differences in the workplace?
2. What are the preferred teaching styles of the four generations in the workplace?
3. Are the specific learning needs of multigenerational learners in the workplace different?

4. What can learning professionals do to determine the learning needs of a multigenerational workplace?
5. Which teaching styles correlate to existing delivery methods?
6. How would aligning teaching style preferences to generational differences result in improved job performance?

Summary

Determining the teaching style preferences of the four generations in the workforce poses challenges for both managers and learning professionals when trying to determine the most effective solution to solve performance related issues. In order to create learning solutions that enable learners to improve performance on the job, research needs to determine if there is a preferred teaching style for each of the four generations in the workplace today. In Chapter One, the problem statement addressed the different teaching styles and preferences of the four generations in the workforce and how this posed challenges for both managers and learning professionals when determining the most effective solution to solve performance related issues.

Next the purpose of the research was to determine if there is a preferred teaching style for each of the four generations and if there is learning professionals can potentially create learning solutions that are more interesting and engaging resulting in greater transfer of knowledge and skills by the learner. Adult learners in the workplace are motivated by many things. Knowles, Holton, and Swanson (1998) stated, “Adults tend to be more motivated toward learning that helps them solve problems in their lives or results in internal payoffs” (p. 149). The value will come from being able to better assess how the preferred learning styles of employees can aid in the development of customizing training programs. However the majority of the research done in this area does not support a specific teaching style for adults or the “learning-

style hypothesis” described by (Pashier et al., 2009, p. 108). The author felt that this research would need to be aligned with the pragmatic worldview to best help determine the preferred leaning styles of a multigenerational workforce. Finally in this chapter the research questions were stated to help focus the research.

CHAPTER TWO - Literature Review

Overview

The review of the literature in for this study will explore the different components required to understand the adult learner. Adults want to have training programs that are differentiated to include their preferred teaching and learning styles. Adults need to be motivated to learn efficiently and effectively and be secure in the knowledge of how the learning can be applied quickly in their jobs. Corporate training programs traditionally have been designed to deliver training with very limited consideration for how an employee can best learn and advance. As companies are moving away from the traditional style of developing learning programs, the need to understand the adult learner is more significant than in the past. The literature suggests that research in the area of adult learning and learning style assessments should continue so companies will have a better understanding of how they can differentiate instruction to include all learners. A thorough review of the relevant research begins with a discussion of adult learning principles, moves on to teaching styles and delivery methods, explores what it means to be multigenerational adult learners and finally measuring the results learning solutions.

Adult Learners

According to Wlodkowski (2008), adult learners find learning to be motivating when “the learning is connected to who they are, what they care about, and how they perceive and know” (p. 74). From this view, motivating learners requires the learning professional to gather this information about individual audiences and use the information to adjust the learning solutions to meet the learners’ needs. This idea is practical in corporate training situations where designing learning solutions for small audiences is more the norm than large audiences found in the public

educations system. A review of the literature disclosed “ample evidence that children and adults will, if asked, express preferences about how they prefer information to be presented” (Pashier, McDaniel, Rohrer, & Bjork, 2009, p. 105). To determine if there are preferred teaching styles based on age, interviews and questionnaires will be used to ask employees to identify a preferred teaching style using a qualitative research method.

Adults certainly can learn throughout their lives. If that were not the case, there would not be a 55.8 billion dollar industry that supports adult learning in its many forms (Annual Industry Report and ASTD annual survey, 2007), from adult education classes offered at the community college to the corporate training departments in Fortune 500 companies. Learning doesn't stop when people leave high school or college. Learning in adulthood takes on many forms and is not limited to the classroom. The formal methods of delivery used at Financial services companies include instructor led training, web instructor led training, web based training, paper based self-study (personal communication Bland, 2007). The author will use interviews to capture data for analysis and build upon “existence of study preferences” (Pashier et al., 2009, p. 108).

However there has been research done in this area that does not support a specific teaching style for adults or the “learning-style hypothesis” described by (Pashier et al., 2009, p. 108). Whether approaching the problem from the point of the learner or from the instructor, the research suggests a focus on incorporating the phenomenon known as aptitude by treatment interaction in psychology and education, or known more popularly as teaching styles such that instructional approaches or curriculum are designed to match the learner's style. There is a body of empirical research that has been conducted since the 1970's on this treatment/instructional effect that has not resulted in supporting the notion of matching instruction/curriculum to

someone's style (Pashier et al., 2009). What drives the need to explore this idea further is “the claim that individualizing learning will be ineffective or less efficient than it could be, if learners receive instruction that does not take into account of their teaching style” (Pashier et al., 2009, p. 108). The teaching style hypothesis is further broken down to the meshing hypothesis which is “the claim that presentation should mesh with the learners own proclivities” (Pashier et al., 2009, p. 108).

Merriam, Caffarella, and Baumgartner (2007) provide current research and thinking on adult learning today and integrate other important contributions to adult learning in the last decade in their comprehensive work. Merriam et al. (2007) support the idea that learning in adulthood is a deeply personal activity. It is important to first understand who the adult learner is, why adults get involved in learning activities, how adults learn, and how a person's age affects their learning ability. Only when learning professionals understand these things will they be able to create effective solutions tailored to meet individual needs of a multigenerational workforce.

Merriam et al. (2007) examined the demographics, global economy, and technology that have shaped adult learning today and provides a base for the ideas that follow regarding the developmental characteristics and cognitive development of adults. This information is helpful to learning professionals who want to understand adults as learners and how adult learning not only builds upon prior experience just as it does for traditional learners, but also how experience shapes learning in adulthood. Merriam et al. (2007) indicates two key areas, prior knowledge and prior experience, are crucial to how adults learn and the important differences between traditional learners and adult learners are established. For example, adult learners rely more heavily on prior experience than traditional learners, they view their instructors as more of a peer or facilitator, they are more easily offended by a condescending tone, and they get as much out

of offering their own experiences and ideas as they do learning from others. When taken into consideration, these types of ideas can help learning professionals tailor their courses to meet the needs of the adult learner. This source is a very detailed guide to learning in adulthood and offers a number of ways to help adults learn.

Wlodkowski (2008) addresses learning in adulthood but dealt mainly with motivation and instruction and shows learning professionals how to use the information to create motivationally effective learning solutions that can be applied to the needs of multigenerational learners.

Wlodkowski (2008) attempts to show how the learner's history, experience, and perspective are essential to consider in course development and instruction techniques. Wlodkowski (2008) presented 60 very specific motivational strategies that instructors can use to motivate adult learners. By using Wlodkowski (2008) motivational strategies, learning professionals can build an instructionally sound and effective plan of instructional in any delivery style that will most effectively reach the learner. This information is relevant to the preferred teaching styles of the multigenerational workforce today because these strategies can be used to complete learning needs analysis which identifies the most important elements required to support learners in the workplace.

Teaching Styles and Delivery Methods

Over the last 50 years there has been a considerable amount of studies focused on teaching/learning styles. It has been acknowledged that individuals can have differing preferences in styles of learning that doesn't directly relate to their true ability in a given subject area. An individual's inability to gain knowledge through their preferred style of teaching/learning can impact their learning success (Clifford, 2007). Research into learning

styles was first documented as an emerging concept during the 1970's. It focused on how students learn and how students prefer to learn (Williamson and Watson 2007).

The assertion that there are differences in learning and teaching style preferences in the workplace and learners in particular has been substantiated in the educational and psychological literature. Kolb (1971, 1984, 1999a, 1999b) quantified these individual differences through his experiential learning theory and learning cycle: "Learning is conceived as a four-stage cycle starting with concrete experience, which forms the basis for observation and reflection on experiences. These observations are then assimilated into concepts and generalizations that guide new experiences and interactions with the world" (as cited in Loo, 2002, p. 252). The traditional teaching styles where an instructor showed students several examples of how to solve a certain type of problem. Then the instructor would have students to complete problems in class and as homework. Traditional instruction is how most adults were taught as children. "Traditional teaching styles that includes lectures, textbooks, and notes on an overhead projector which often failed to engage students in the learning process" (Harris, 2007, p. 34). People learn naturally and but differently as Reardon and Derner (2004) stated "learning is natural and is always taking place but that the typical structured classroom often fails to engage students" (p. 345). Additionally, Verhovsek (2003) suggested that "non-traditional teaching methods that encourages collaboration and higher-level critical thinking skills on part of the learner and the instructor" (p. 381). She felt that higher education should focus on student learning rather than on the traditional formal teaching environment.

Both instructors and instructional designers should utilize multiple instructional strategies to maximize student success. For example, the use of a technology enabled or blended learning solution in a classroom setting could help students become more active learners versus passive

ones by introducing games, simulations and immediate feedback. By using this type of technology, the students could develop an understanding of procedural as well as theoretical concepts. Verhovsek (2003) suggested that “instructional strategies and delivery formats should be designed to respond to different learning and teaching styles” (p. 382). By employing different instructional strategies learning professionals can help to enhance learning and success for students taking many different forms of courses. Gylmn, Koballa & Thomas (2005) stated that “student motivation and engagement are an ongoing challenge for classroom instructors and the basis of various research endeavors” (p. 81). Kumar & Lighter (2007) suggested that “a substantial body of literature indicates that the use of non-traditional interventions, such as games, simulations, multimedia instruction and interactive activities are valuable teaching methods” (p. 53).

The “cookie cutter” approach to learning is no longer sufficient to meet the needs of a multigenerational workforce. There have been numerous studies comparing different teaching styles and delivery methods to determine if one is more effective than another. The majority of the studies have concluded there are no significant differences in terms of learner performance between online learning and traditional delivery methods (Arbaugh, 2000; Carron, 2006; Dziuban & Moskal, 2001; Samans, 2003; Shea, Fredericksen, Pickett, Pelz, and Swan, 2001). Additionally, Hiltz, Zhang, and Turoff, (2002), in a review of 19 empirical studies, found “overwhelming evidence” that online courses were as effective as traditional courses. Studies showing that online learning is poorer and less effectiveness than traditional classroom learning are very much in the minority (Brown & Liedholm, 2002; Chen, Lehman, and Armstrong, 1991).

A quick summary of the research revealed that online learning offers a new approach to learning and needs to be exploited as such (Silverman, 2001). Silverman (2001) argued that

“there needed to be greater focus on learning objectives and a learner-centered environment rather than technology per se” (p.31). By determining the learners preferred teaching style, delivery method or learning environment will enable instructional designers to do a more thorough audience analysis. The audience analysis portion of the instruction design process drives focused learning objectives and ultimately more effective learning solutions.

Multigenerational Learners

The current crop of business news and information is filled with books and articles warning that the newest generations to enter the workforce are dramatically different from the generations that have preceded them. Articles in business magazines and the internet extol the challenges of working with, managing, motivating, and training members of a multigenerational workforce (Appelbaum, Serena, & Shapiro, 2005) (Yrle, Hartman, & Payne, 2005).

Whitacre (2007) notes that managing the multigenerational workforce is a common theme in the literature today and addressed the challenges of managing employees in the workplace today when there are a wide range of age groups working together. Each age group has unique and identifiable communication preferences, work styles and motivations on the job. These differences can lead to increased tension and conflict. From the manager’s point of view this can impact productivity and ultimately the businesses bottom line. The generational differences in the workplace cannot be ignored and there are many ways to address those differences to facilitate each generation’s individual needs without disregarding the needs of the other groups.

The research indicates there are varying theories supporting the logic and reasoning for identifying specific dates and generational periods that define a multigenerational workforce. The small differences in theoretical perspectives on defining dates of the generations is not

significant when compared to the fact that all researchers are in agreement concerning the discriminating factors that clearly separate the different generations. As Lancaster and Stillman (2003) stated, “While many generational experts have laid out age ranges to define the members of the generations, we believe these are just guidelines. There really is no magic birth date that makes you a part of a particular generation” (p. 13). The majority of authors that have researched this topic support the concept that starting and ending dates defining generations are only guidelines. Generations are better defined by characteristics of similarity and “peer personalities” regarding each defined generation.

The characteristic of each generation is defined by its centralized personality. As Zemke, Raines, and Filipczak (2000) stated: “In addition to the coincidence of birth, a generation is also defined by common tastes, attitudes, and experiences; a generational cohort is a product of its times and tastes” (p. 16). The experiences of life and events that make history during the formative years of each generation are the factors that help to define each generation. These experiences and events that occur during the formative years help shape the thoughts and interpretations gathered during peer interactions as a phase of life. Interactions and interpretations of events and experiences among peers are more easily accepted, discussed, and applied to lifestyles or personalities developed commonly than if directed by persons of a different cohort group. This reveals that the similarities developed by each generation helps identify them as one cohort. A breakdown and comparison each generation adapted from Zemke, Raines, and Filipczak (2000) is in the Appendix.

There has always been the tension between the different generations in the workplace. But many of the old rules no longer apply the way they once did. The oldest generation currently in the workforce, referred to as the Matures, were born between 1922 and 1943. The

Matures were influenced by the economic hardships of growing up during the Great Depression and World War II and are characterized as preferring consistency, being conservative, respectful of authority, patient, and hard working (Martin & Tulgan, 2002) (Zemke, Raines, & Filipczak, 2000). The Baby Boomers were born between 1944 and 1960. The Baby Boomers were influenced by the positive, optimistic environment created by the greatest economic expansion the United States had ever experienced (Zemke et al., 2000). They are characterized as having a high involvement in work, being devoted to personal gratification and somewhat self-centered (Martin & Tulgan, 2002) (Zemke et al., 2000). Hankin stated, “There’s no way to ignore it- people are living longer and staying more active. They are not becoming debilitated in their years as often as was the case in the past” (Hankin, 2005) Next in line Generation X, those born between 1961 and 1980, are said to have grown up in the shadow of the Baby Boomers, and “like the middle child, passively resisted anything the elder child embraced” (Zemke et al., 2000, p 93). They were influenced by growing up in the wake of Vietnam, the first war the United States ever lost, Nixon’s resignation and watching their parents get laid off by companies they’d been loyal to for years (Kupperschmidt, 2000) (Zemke et al., 2000). As a result, Generation X is considered more cynical by nature (Martin & Tulgan, 2002) (Kupperschmidt, 2000), has a more casual approach to authority, and expects flexibility and work-life balance (Martin & Tulgan, 2002) (Zemke et al., 2000). The youngest generation in today’s workforce is known as Generation Y. Although the birth-years that authors use to define the boundaries of each generation vary for each of the four generations being studied, the variation appears the greatest for Generation Y. For example, the boundaries for the Veterans, Baby Boomers, and Generation X tend to vary by two to three years. However, some authors have defined Generation Y as those

born between 1978 and 2000, others have defined the generation as those born between 1978 and 1985 (Martin & Tulgan, 2002, 2001), a difference of fifteen years.

A multigenerational work force is becoming more commonplace throughout the world. The make-up of the future workforce will have a very different demographic from what they are today. The associate's will likely be younger when they start their first jobs (Workforce to get multi-generational, 2007). The four groups, "All of them with very different attitudes and needs," Regan Taikitsadaporn, regional vice- president, Asia Pacific (HR) JW Marriott said, "While the Matures work 'on their own terms', boomers tend to be more participative. The Gen X demands to be told as compared to Gen Y which needs more guidance" (Workforce to get multi-generational, 2007). A simple breakdown of the generational cohorts seen in Figure 1 can make it easier for learning professional and managers to plan for and adapt to the differences.

	MATURES	BABY BOOMERS	GENERATION X	GENERATION Y
STRENGTHS	Stable Detail Oriented Thorough Loyal Hard Working	Service oriented Driven Willing to "go the extra mile" Good at Relationship Want to please Good team players	Adaptable Techno literate Independent Not easily intimidated by authority Creative	Collective action Optimism Tenacity Heroic spirit Multitasking capabilities Technological savvy
WEAKNESSES	Inept with ambiguity and change Reluctant to buck the system Uncomfortable with conflict Reticent when they disagree	Not naturally "budget minded" Uncomfortable with conflict Reluctant to go against peers May put process ahead of result Overly sensitive to feedback Judgmental of those who see	Impatient Poor people skills Inexperienced Cynical	Need for supervision and structure Inexperience, particularly with handling difficult people issues

		things differently Self-centered		
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Figure 1. Strengths and Weakness of the Four Generations. Data drawn from: Ron Zemke, Clair Raines, and Bob Filipczak. *Generations at Work*. New York, New York: AMACOM, 2000.

Measuring Results

Within the business world, training has become an integral part linking success and performance. Salas (2001) reviewed training in business over the past 30 years and found company leaders were using needs analysis of jobs and tasks to help develop training objectives that focused on specific skills and knowledge. Salas also found that the added focus ensured training provided the employee what was needed for the job and the company could reap the benefits of a skilled worker. The return on money invested by a company in training employees can be measured only after the employees have been able to demonstrate that the training enhanced their knowledge and skills. To do this, the employee must remain on the job for some period. If the employee departed before the training benefits are realized for the company, the training money was wasted.

Phillips (1997) shows not only how to design, implement, and assess the effectiveness of learning solutions, but how to ultimately measure their Return on Investment (ROI). So often learning program evaluation focuses on complicated techniques, theories, and processes. Phillips (1997) presented learning evaluation in a practical, useful manner. He clearly presents the why and the how of learning evaluation and describes relevant research fundamentals, but also considers the feasibility of many processes used by researchers. Phillips (1997) offers options for those who need to evaluate the effectiveness of learning but don't have time for complicated or time-consuming resource intensive methods to get it done.

Many learning professionals have the unenviable task of trying to prove that their solutions add value. This task has the added difficulty in that there are numerous factors that contribute to improvements in performance in addition to learning. From changes in the environment to other programs the results or can be diluted by many factors. There are also politically sensitive issues when measuring performance or individuals and groups. For example the team or individuals trained may have instituted a new system, policies or changed managers. The individual may simply be maturing into a new role and finally achieved a level of competence they were previously lacking. An example of this methodology at a large financial services company used a combination of measurement processes and tools. Both the Kirkpatrick (1994) and Phillips (1997) models of evaluation were used with learning solutions such as the Instructional Design Foundations course, which achieved a 115 percent ROI (Dade, 2003).

Summary

The review of the literature revealed the different components required to understand the adult learner. Adults want to have training programs that are differentiated to include learning styles. Adults need motivation to learn and knowledge on how the training can be applied quickly in their jobs. Corporate training programs traditionally have been designed to deliver training with very limited consideration for how an employee can best learn and advance. As companies are moving away from the traditional style of developing training programs, the need to understand the adult learner is more significant than in the past. The literature suggests that research in the area of adult learning and learning style assessments should continue so companies will have a better understanding of how customize instruction in a cost effective manner that allows a level of individual attention for all employees. This chapter reviewed the research on adult learning principles, moved on to teaching styles and delivery methods,

explored what it meant to be a multigenerational adult learner and finally measuring how to measure the results of learning solutions.

CHAPTER THREE - Research Design and Methodology

Overview

This chapter describes the research method, design, description of participants and data collection procedures and analysis. A qualitative research design was used to explore the author's research questions. By using qualitative measures both hard data as well as more subjective interpretations could be used to not only determine the preferred style but how best to utilize that information in a variety of situations and contexts. The challenges were around sample size, random selection and correlating the data to fully support the problem statement.

To successfully determine if learners have a preferred delivery method at financial services companies, a qualitative interview guide made up of questions that will encourage learners of differing age groups to articulate methods of teaching and learning that they feel is most effective for them from a selection made up of instructor led and self study options. The author plans to use a representative sample from the four generations in the workplace. The results of the qualitative interviews were converted, "raw data into a form useful for data analysis" (Creswell & Plano Clark, 2007, p. 130). The qualitative data gathered was explored by reading through the interview notes and writing notes and memos in the margins (Creswell & Plano Clark, 2007). The memos were used to validate and organize the data sufficiently to enable coding and statistical analysis by basic analysis using MS Excel spreadsheet and a qualitative software program called NVIVO 9.0. The next step to analyze the data using the data base of information collected to this point and determining how or if it addresses the original research questions. The qualitative analysis began "with coding the data, dividing the text into small units (phrases, sentences, paragraph), and assigning a label to each unit" (Creswell & Plano Clark,

2007, p. 131). There are potential validation issues and the author used a well documented set of procedures to determine if the results were accurate and meaningful.

Research Questions

The following questions will guide the research design:

1. What have researchers discovered about the preferred teaching styles of working adults?
2. What generalizations can be made from these studies that would promote more effective development and delivery of learning solutions?

These broad questions will be supported by more focused sub-questions that are:

1. Does a preferred teaching style correlate with multigenerational differences in the workplace?
2. What are the preferred teaching styles of the four generations in the workplace?
3. Are the specific learning needs of multigenerational learners in the workplace different?
4. What can learning professionals do to determine the learning needs of a multigenerational workplace?
5. Which teaching styles correlate to existing delivery methods?
6. How would aligning teaching style preferences to generational differences result in improved job performance?

Research Participants

The following steps were taken to invite each of the participants to an interview with the researcher. Each participant received an invitation via email inviting them to participate in a face-to-face interview. The correspondence included an overview of the study purpose along with an explanation outlining their rights as a participant in the study. (Appendix A).

Once a confirmation was received, the date and time for the interviews was scheduled and communicated via telephone. The interviews were scheduled for thirty minutes each and were structured in a semi standardized format. This method of interviewing allowed the researcher the flexibility of asking additional questions to clarify or elaborate upon the interviewees' responses (Berg, 2007). The interviewees were able to share additional information as well. Prior to conducting the interviews the researcher presented the interview questions to his Thesis advisor for their review and approval. The following questions were asked:

1. When were you born?
2. When did you last attend or participate in a training session or course?
3. What type of training did you attend? For example Web Based Training (WBT), Virtual Instructor Led Training (vILT), Instructor Led Training (ILT) classroom, or self-study paper based?
4. What is your preferred teaching style, learning environment or delivery method WBT, vILT, ILT classroom, or self-study paper based?
5. Which teaching styles or learning environment preferences do you feel relate to the company's existing delivery methods?
6. Do you think employees would benefit from attending training based on their preferred teaching styles or learning environments?
7. Do you feel you can learn equally as well regardless of the teaching style, learning environment or delivery method you attend?
8. Do you feel the company can benefit from assessing how their employees learn?
9. How can companies measure if their employees are benefiting from attending training based on their preferred teaching styles or learning environment?
10. Do you think learning environment preferences should be used to customize all training or just for job specific training?

This qualitative research triangulated the data through the literature review, in-depth interviews and data analysis. Triangulation provides rich descriptions that will establish credibility (Creswell & Miller, 2000) and identify themes and patterns that will result in identifying key components to developing a platform for organizations to customize training based on the preferred learning styles of their employees. In the 1990's there was some criticism surrounding qualitative research in regards to its inability to provide validity and reliability; however, today new methods exist to address this perceived problem (Denzin, 2001).

The researcher sent e-mail communication to all corporate training professionals on March 22, 2011, asking them if they would participate in the study and for them to identify a time and date for the face to face interview. After the researcher received confirmation of a set time and date for each interview, a plan was implemented to complete all interviews by April 15, 2011.

Preparing the Data

To successfully determine if learners have a preferred delivery method, a qualitative interview guide made up of questions that encourage learners of differing age groups to articulate methods of teaching and learning that they feel are most effective for them from a selection made up of instructor led and self study options. The author used a representative sample from the four generations in the workplace at financial services companies often described to as the "Matures, Baby Boomers, Generation X, and Generation Y" (Martin & Tulgan, 2002; Zempke, Rains, & Filpczak, 2000). The data was prepared through transcribing interviews into a spread sheet program a qualitative analysis software program called NVIVO 9.0. From the data collected the author used basic statistical analyses of recurring trends and themes to code and prepare for further analysis.

Exploring the Data

The qualitative data gathered was explored by reading through the interview notes and writing notes and memos in the margins (Creswell & Plano Clark, 2007). The memos were used to validate and organized the data sufficiently to enable coding that allowed for statistical analysis. Once the data from the interviews was prepared, the author explored the data by “(a) examining the data with an eye to developing broad trends and the shape of the distribution or (b) reading though the data, making memo, and developing a preliminary understanding of the database” (Creswell & Plano Clark, 2007, p. 130).

Analyzing the Data

The next step was to analyze the data using the data base of information collected to this point and determining how or if it addressed the original research questions. The qualitative analysis began “with coding the data, dividing the text into small units (phrases, sentences, paragraph), and assigning a label to each unit” (Creswell & Plano Clark, 2007, p. 131). As previously stated the use of spread sheet and NVIVO statistical analysis software program helped facilitate the data analysis. From this analysis trends were identified that either confirm or contradict the hypotheses that the multiple generations in the workplace have a preferred delivery method for their training. The author anticipated the preferred choice of matures and baby boomers to be instructor led delivery versus generation X and Y being more comfortable with web based delivery methods. The data revealed trends in the preferences related to the different generational groups.

The Design

The design methodology acknowledges certain risks to credibility, dependability and integrity. The author used an entirely qualitative design instead of a quantitative or mixed

methods design due to the possible risk to validity and reliability of a self developed, nonstandard survey and the difficulty in combining the databases. The use of a series of set open-ended interview questions allowed a great degree of analysis. By using open ended questions it “enable the researcher to understand and capture the points of view of other people without predetermining those points of view through prior selection of questionnaire categories” (Patton, 2002, p. 21). As Patton (2002) stated, “Direct quotations are a basic source of raw data in qualitative inquiry” (p. 21). Qualitative methods research has its share of risks. To construct a research study with the greatest degree of credibility, dependability and integrity, the author modeled closely Lofland’s four people oriented mandates in collecting qualitative data as described by Patton (2002),

First, the qualitative methodologist must get close enough to the people and situation being studied to personally understand in depth the details of what goes on. Second, the qualitative methodologist must aim at capturing what actually takes place and what people actually say: the perceived facts. Third, qualitative data must include a great deal of pure description of people, activities, interactions, and settings. Fourth, qualitative data must include direct quotations from people, both what they speak and what they write down. (p. 28)

Credibility and integrity of the research method relies on the author establishing an appropriate level of rigor to enhance the quality of the data analysis. This helps address the “suspicion that the researcher has shaped the findings according to predispositions and biases” (Patton, 2002, p. 553). A key tactic to address this issue is to

“report that you engaged in a systematic search for alternative themes, divergent patterns, and rival explanations enhances credibility” (Patton, 2002, p. 553).

Content Validity

By addressing both the internal and external threats to validity the overall construct validity of the research can be maintained. Because the research in this study will not use a traditional experiment but instead gather descriptive information, the data used is inherently at less risk of violating the content validity associated with true or quasi experiments. The researcher found studies that addressed the learning styles of adults and the specific generations in the work force. The value of this research for both the learning professional and managers in the workforce is having the knowledge of which training delivery methods the learners prefer and which methods result in improved performance.

Variables

The primary variables are the four different teaching styles: instructor led, web instructor, Web based and paper based self study and the four different generations in the work force today, “Matures, Baby Boomers, Generation X, and Generation Y” (Martin & Tulgan, 2002; Zempke, Rains, & Filpczak, 2000). Additional variables that may impact validity, reliability and accuracy are the Employees willingness and capacity to participate in the interviews while on the job or after work hours. Additionally the total number of Employees participating and the quality of the interviews questions and the skill of the interviewers are variables and potential risks.

Data Analysis

The researcher conducted an analysis of the data collected to look for possible response bias. To assist with this the researcher leveraged an existing format, the free form data collection method capturing verbatim comments from the participants. This allowed for the researcher to

identify further problems with readability and potential conflicts based on interpretation by the participants. If a conflict or clear misinterpretation happened, the response for that item was reviewed and removed from the results. Based on the number of responses the researcher collapsed the results into scales to present the data in a more comprehensive and generalizable way. Reliability of the scales was accomplished before final publication. Finally, inferential statistical tools were applied to bolster the results and prepare for publication. Based on what Patton (2002) stated, “there are no simple formulas or clear cut rules about how to do a credible, high quality analysis. The task is to do ones best to make sense of things” (p. 570).

Content Analysis

Content analysis is the systematic analysis of text (Krippendorff, 2004). It is most commonly used by researchers in the social sciences to analyze recorded transcripts of interviews with participants. As Trochim and Donnelly (2007) stated, “The analysis can be quantitative, qualitative, or both. Typically, the major purpose of content analysis is to identify patterns in text” (p. 151).

There are number of types of analysis done while doing formal research that fall under the area of content analysis; often referred to as thematic, indexing, and quantitative descriptive analysis (Trochim & Donnelly, 2007, p.151). As Cozby (2009) stated, “like systematic observation, content analysis requires researchers to devise coding systems that raters can use to quantify the information in the documents” (p. 118). Researchers quantify and analyze the presence, meanings and relationships of such words and concepts, then make inferences about the messages within the texts, the writer(s), the audience, and even the culture and time of which these are a part.

There are several identified disadvantages or limitations to using content analysis. It can be limited to the type of information available in text form, at risk for sampling bias and automated context analysis can be misinterpreted (Trochim & Donnelly, 2007). As with any method or tool there are also disadvantages that the researcher must be sensitive too. Trochim and Donnelly (2007) stated, “content analysis has the advantage of being unobtrusive and, depending on whether automated methods exist, can be a relatively rapid method of analyzing large amounts of information” (p. 151). Finally, Patton (2002) stated, “For better or worse, the trustworthiness of the data is tied directly to the trustworthiness of the person who collects and analyzes the data-and his or her demonstrated competence (p. 570).

Potential Ethical Issues

The study will focus on financial services company employees based in the United States. The employees were all legal adults over the age of 18. Their selection was based on age and location. The data collected will not contain personal information beyond their preferred leaning method based on a set of questions between different types of learning solutions and teaching styles. The researcher obtained consent from the participants and their employer electronic communication in the form of e-mails and designed the data collection instrument to allow the participants to opt out completely or in part from participating. Both electronic and printed materials were used to disclose the purpose and intended of the data collected as well as the plan for long term storage of the data. The researcher removed all names providing privacy and to minimize any potential risk to the participant’s identity or responses being revealed. There was minimal risk to the participants from participating in the research because the responses were not linked to the participant. The type of information collected or the simple act of participating by the associate will in no way prejudice the associate in the eyes of their employer. By

implementing these tactics the employees are at no risk. The reward for the Associate for participating in this study will be providing information that will potentially result in more targeted learning solutions produced in the future. In addition there is no financial conflict of interest as the researcher is not be requested to do this research and will not be compensated for it based on activity or outcome.

Summary

Collecting and analyzing the data will enable learning professionals and instructional designers to build new learning solution types that are designed with the preferences of specific audiences in mind and thus provide a more effective learning experience for all employees. This information can be generalized to the other employees at financial services companies and beyond by age category and solution type. The research design planned can raise complex ethical issues not present in traditional research. For example, when using interviews to collect data, there is an ethical risk because “people in interviews will tell you things they never intended to tell” (Patton, 2002, 406). The use of adults in the corporate environment, not in a controlled research setting will poses unique challenges. As a result “the interviewer needs to have an ethical framework for dealing with such issues” (Patton, 2002, p. 406). To address this, the author followed the principles addressing the ethical behavior of researchers respect for persons, beneficence, and justice (National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, 1979) which apply to all educational researchers. Additionally the author referenced Patton (2002) Exhibit 7.6 as a checklist to help mitigate ethical issues in the design, data collection and analysis of the research study (p. 408).

CHAPTER FOUR - Results

Overview

The purpose of this qualitative method study was to determine what researchers have discovered about the preferred teaching styles of working adults and what generalizations can be made from these studies that would promote more effective development and delivery of learning solutions? This chapter presents the results from the analysis of qualitative data that was collected from multigenerational employees of financial services companies.

Restatement of the Research Questions

1. Does a preferred teaching style correlate with multigenerational differences in the workplace?
2. What are the preferred teaching styles of the four generations in the workplace?
3. Are the specific learning needs of multigenerational learners in the workplace different?
4. What can learning professionals do to determine the learning needs of a multigenerational workplace?
5. Which teaching styles correlate to existing delivery methods?
6. How would aligning teaching style preferences to generational differences result in improved job performance?

Results of the Interviews

The data collected for this study came from interviewing 43 employees from 18 - 68 years of age at financial services companies. The qualitative data was analyzed from interviews with financial services company employees and hand coded and interpreted using the “open

coding methodology” (Strauss, 1987, p. 30). The open coding methodology is a process wherein the researcher identifies and names the different categories in order to group the data collected from the interviews. The main goal was to create categories that were descriptive and multi-dimensional, to form a preliminary framework for analysis. Words, phrases or events that appear to be similar can be grouped into the same category (Strauss, 1987).

Tables 1 and 2 summarize the data collection demographics: generational distribution, teaching style results of the interviews. There were 75 employees contacted to participate with 43 employees agree to be interviewed resulting in a participation rate of 57 percent. The distribution by gender reflected 58 percent female and 42 percent male. The 43 participants were distributed by generational group with 7 Matures, 12 Baby Boomers, 15 Generation X and 9 Generation Y.

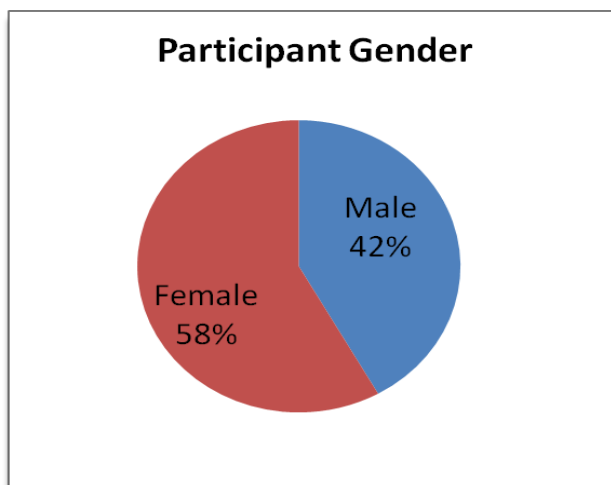


Figure 2. Participants Distribution by Gender

Generation	Number
Matures 1925-1945	7
Baby Boomers 1946-1964	12
Generation X 1965-1980	15
Generation Y 1981-2000	9

Table 1. Distribution of Employees by Generational Group.

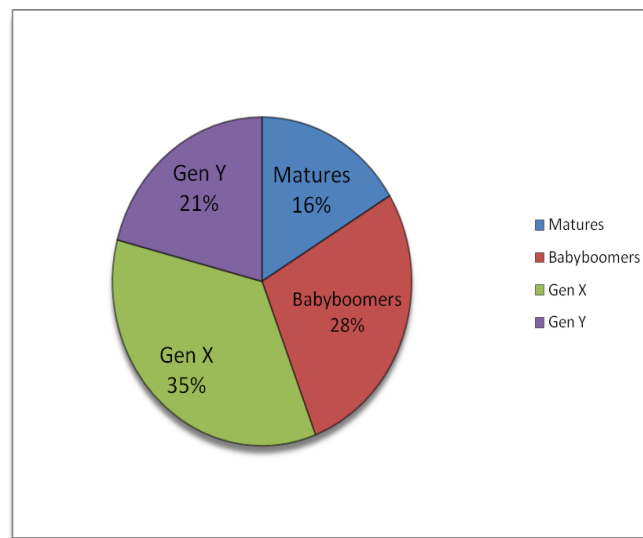


Figure 3. Percentage of participation by generational group

Table 2 presents the data collected from the interviews and breaks out the employees preferred teaching style preference by generation.

	Web Based Training	Virtual Instructor LED	Instructor Led Training	Paper based Self Study
Matures	0	1	6	0
Baby Boomers	2	3	6	0
Generation X	5	3	7	0
Generation Y	2	0	7	0

Table 2. Distribution of Employees by Generation and Preferred Teaching Style Preference

Discussion of Research Questions

This section breaks down each of the interview questions and displays the results or provides a narrative description of the responses from the participants.

Q1. What year were you born? The participants in the interviews ranged from 22-72 years old and fell into the four generational groups.

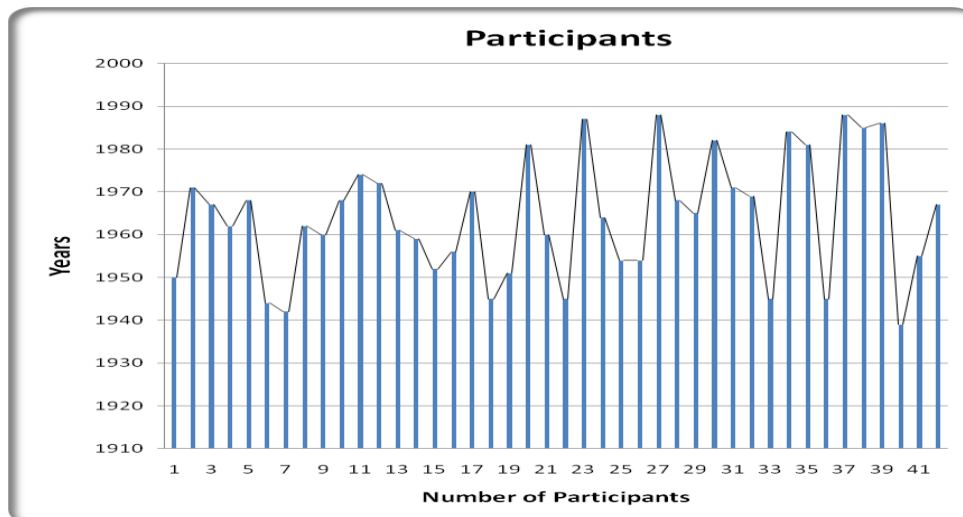


Figure 4. Year of Participants Birth

Q2. When did you last attend or participate in a training session or course? All participants had attended a company sponsored training session or class within five months of the interviews. The interviews took place between 12/10/2010 and 04/10/2011. This supported the need to have all participants be familiar with and be able to comment from experience their preferences in teaching style.

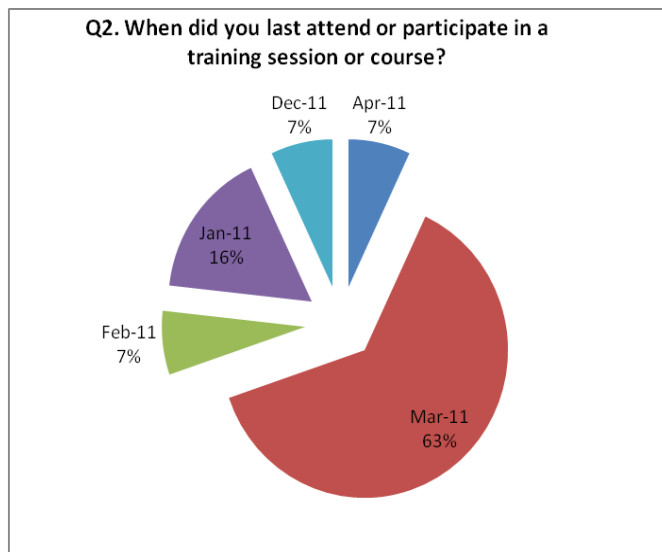


Figure 5. Last Training Attended

Q3. What type of training did you attend? For example Web Based Training (WBT), Virtual Instructor Led Training (vILT), Instructor Led Training (ILT) classroom, or self-study (SS) paper based? The 43 participants responded that they attended 25 WBTs, 10 vILTs, 7 ILTs and 1 SS.

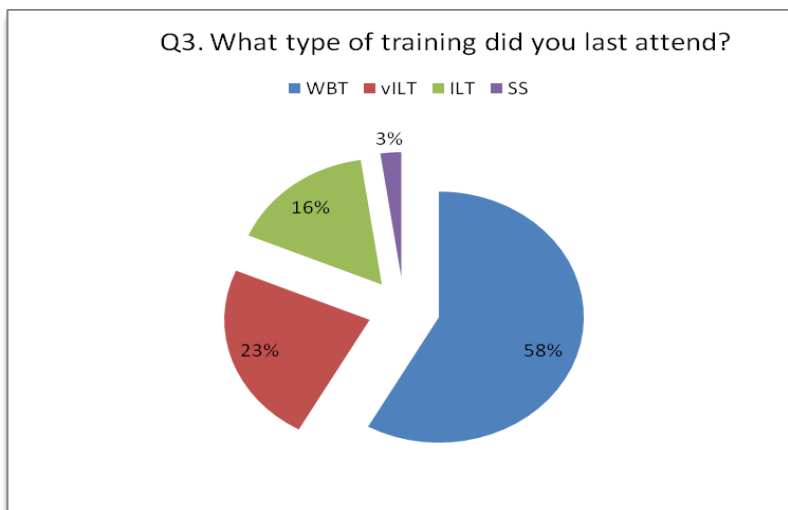


Figure 6. Type of Training last attended.

Q4. Which teaching style, learning environment or delivery method (WBT, vILT, ILT, or SS) do you prefer to participate in? The participants responded that 61percent preferred ILT, 23 percent preferred WBT, 16 percent preferred vILT and none of the participants preferred SS.

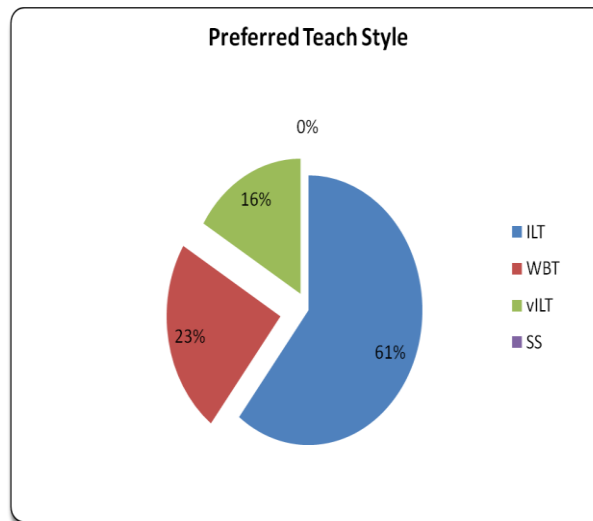


Figure 7. Preferred teaching styles of all participants.

Q4.1. Why? *For participants who preferred ILT, the reasons consistently stated were interaction with the instructor and other students. Participants felt they could learn more by asking questions and receiving feedback for the instructor and other students. They often expressed the benefit of ILT as being able to learn from the other students based on their expressed ideas and feedback. They mentioned group interactions and getting hands on the training materials or doing activities helped them learn better. Also being able to receive immediate feedback to correct mistakes was very helpful. Finally, there were a few participants that said they felt less distracted by work concerns and could focus more when they left the work area and could focus solely on the training.*

For participants that said they preferred WBT, their reason included *convenience, not having to travel for the training and being able to move at their own pace*. For those who selected the vILT option, they stated *the mix of methods enabled them to ask questions and get feedback*. The interactions were again a big reason they chose this option but they mentioned that *not having to travel was a big reason they preferred it*. Finally, none of the participants selected the Self Study paper based options as a preferred teaching style.

Q5. Which teaching styles or learning environment preferences do you feel relate to the company's existing delivery methods? The majority (51 percent) of the participants stated that *all of the teaching styles mentioned in the interview questions were used by their companies* and 23 percent stated *that combination of the styles were used*. The remaining participant's stated that *their companies had just a few or even just one option teaching style option available*. Since the majority of the participants had experience or were aware that their companies used all of the teaching styles, their preferences were more than likely to be based on their experiences versus those who worked for companies with few options.

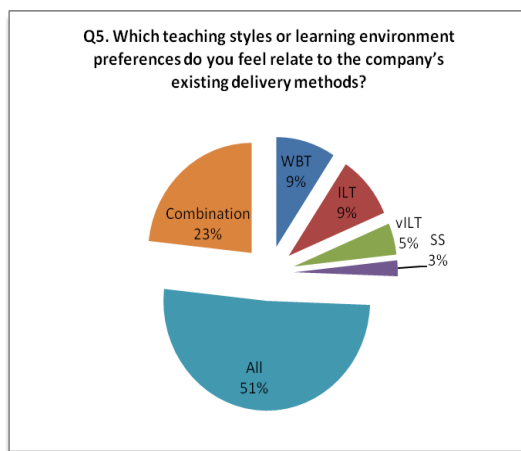


Figure 8. Teaching styles relating to the company's existing delivery methods?

Q6. Do you think employees would benefit from attending training based on their preferred teaching styles or learning environments? The participants overwhelmingly (91 percent) responded that they *thought that all employees would benefit from attending training based on their preferred teaching style.*

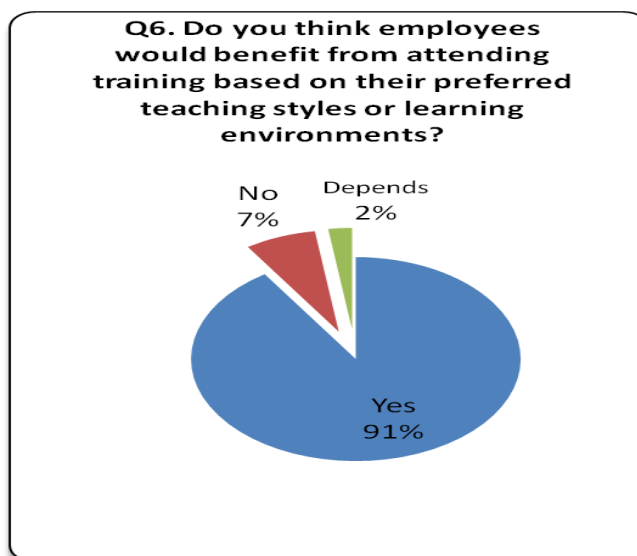


Figure 9. Employees would benefit from attending training based on their preferred teaching styles or learning environments?

Q7. Do you feel you can learn equally as well regardless of the teaching style, learning environment or delivery method you attend? With 60 percent stating they didn't feel like they could learn as well regardless of the teaching style and 35 percent stating they could learn equally as well, the comments as to why they felt that way in the next questions proved more valuable to analyze.

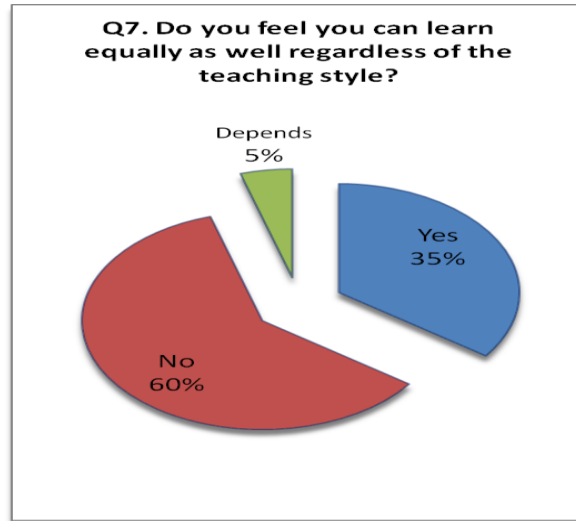


Figure 10. Do employees feel they can learn equally well regardless of teaching style?

Q7.1. Why do you feel that way? The participants had different responses to this question. The following responses were those most often heard: *I can adapt and learn from them all as long as addresses what's in it for me, maybe not as well as my preferred style but I can learn from it. I find it frustrating when not it a preferred style and lose focus. I know the way I learn. I need to be stimulated, motivated and focused or I just lose interest. If it's not my style I retain less, multitask more, get board and lose interest.*

Q8. Do you feel the company can benefit from assessing how their employees learn? This question was the least ambiguous in that 98 percent of the participants stated that they felt the company could benefit from assessing how their employees learn.

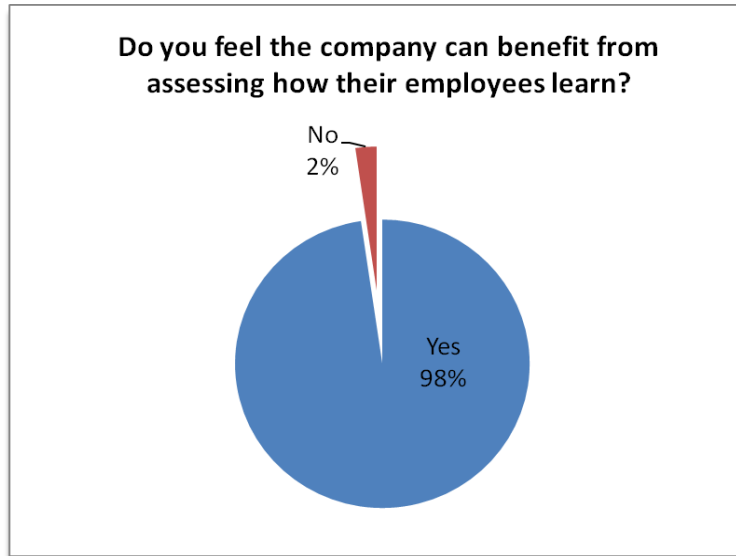


Figure 11. Company would benefit from assessing how employees learn

Q8.1. Please explain? The participants comments included, *The employees would get more out of their training. By customizing in the workplace you can learn faster if it's in your preferred style. People Learn differently. Perhaps, but with an organization the size of ours, it might not be useful. Most managers know how their team members learn and try to drive the training in the direction that is most effective for them. It helps design more effective training when you assess them during the hiring process. Especially police to specific skills required. Theoretically yes; practically no. The extra work involved is not cost effective in many cases. We are also a global organization and sometimes classroom is just not do-able. It's only to the company's benefit to know how their employees learn. But a company's resources don't always allow for the offering of all styles. The company actually designed a survey to ask about modality preferences but never implemented. With the Caveat of ...are they willing to put in the time and money to implement the findings? If not, it is a waste of time. By assessing how their employees learn the company will create more targeted and effective learning solutions. Lowering risk of*

post-learning errors on the job and additional expenses added for additional re-taking of training and special coaching.

Q9. How can companies measure if their employees are benefiting from attending training based on their preferred teaching styles or learning environment? The participants comments included, *The Company should start by testing or using surveys which are not fail-safe methods. Perhaps employee satisfaction and feedback are the best measures, although difficult to measure. A test of questionnaire at the end of the session and then follow up to see if trainees can do something better as a result of the training. Use post training interviews, questionnaires asking the employee what they feel or think. You must touch them. This would be tough to accomplish. We already struggle to measure ROI. Finally, use one-on-one observation of employee and manager or peer-to-peer over time. Use assessments before and after and set periods of time after to assess retention over time. Also observe the employees behaviors--did they change?*

Q10. Do you think learning environment preferences should be used to customize all training or just for job specific training? The participants comments included, *All training. If it is important enough to roll out a training program, it is in the long run; more efficient to customize so the trainee's have the best retention rate and will not have to repeat the training as often. Impractical for all training but some form of alignment to an audience should be done. The company can rarely expect to meet everyone's individual needs or preferences. Optimistically that would be great to do all training. But realistically that cannot happen due to delivery constraints, cost, locations, etc.*

Summary

The tables and participant comments above clearly summarize the results of the study, which are relatively easy to interpret. The results indicated that the teaching style or learning environment was a significant factor in terms of the participant's preferences, and that they felt they would get more out of the training if it was offered in their preferred style. Since there are currently four generations in the workplace today it is important for learning professional to create learning solutions that engage and enable learners to improve performance on the job (Zemke, Rains & Filpaczak, 2000).

CHAPTER FIVE - Findings, Conclusions and Recommendations

Overview

One of the factors that learning professionals need to take into account when developing learning solutions is the learner's individual preference for acquiring knowledge through different teaching styles or learning environments. By assessing the individuals teaching styles, and preferences of the learner, instructional designers can create more appropriate learning solutions that to foster more effective and impactful learning experiences. Historically, learning research has focused on the delivery methods and the influence on trainee behavior (Gagne, 1985). Learning depends on cognitive abilities, which is the sharing of information with students and looking for signs that the information was understood. Piaget's model (1955) of learning and cognitive development implied that a person understands whatever information fits into his or her established view of the world. When information does not fit, the person must reexamine and adjust his or her thinking to accommodate the new information. Within the body of research trying to link cognitive ability to learning, researchers began to focus more on what motivates the learner (Colquitt, LePine, & Noe, 2000).

While there is no consistent agreement among learning professionals on the single best method of learning, most now agree, it is important to create a learning environment that is tailored to the learners' preferred teaching and learning styles. At the same time, the availability and accessibility to computers for personal use, coupled with high-speed networks, has made online or distance learning an increasingly popular option. Despite the results of many studies which indicate that online learning can be just as effective as traditional classroom environments (Arbough, 2000; Blackley & Curran-Smith, 1998; Fallah & Ubell, 2000; Freeman & Capper, 1999; Nesler & Lettus, 1995), There are differing opinions as to the actual results to be gained

from various learning environments, and a general feeling that instructor led learning in a classroom environment is still the most effective method of teaching for the general population. Doubts about the validity of the research studies supporting this opinion, based on the classification process and on the isolation of the learning environments as a significant factor influencing learning, are understandable. Even with the extensive body of research gathered to date, the author feels that any useful information regarding these important questions can contribute to the learning profession. While age, gender, the subject studied, and many other factors obviously may influence the learners' performance, it is a normal procedure in scientific inquiry to try and isolate individual elements in order to examine its effect on a given outcome.

While researchers have shown that greater learning may occur when employee teaching style preferences matched, to function as professionals, students need the skills associated with learning in all modalities of learning (Felder & Spurlin, 2005). By focusing on accommodating employees within the context of multiple learning environments or providing learners with the skills to develop new learning styles, the student becomes more involved in their own learning process (Allen, 2003; Adkins & Brown-Syed, 2002; Smith, 2001; Hayes & Allinson, 1996). The choice of training delivery methods varies by function, but the training should focus on the specified skills and tasks to be trained, available training delivery methods, and the criterion used to operationalize effectiveness (Arthur, Bennett, Edens, & Bell, 2003). The leader's goal for the organization, in relation to training, is to gain expected results through the investment in training. Organizational leaders and learning professionals must begin with a needs assessment to identify the training requirements (Davidove & Schroeder, 1992).

Calculating the return on investment in training is difficult for company managers to do. Research indicated only 20% of organization managers evaluate training results, and those

evaluated results through the economic effect on the organization. Most companies do not calculate the return on investment on their training investments due to the perceived difficulty in quantifying training benefits, separating the influence of training on performance improvements from other factors, and gathering the data needed for these calculations (Bartel, 2000; Phillips, 1997; Williams, n.d.).

Findings

The analysis of the individual interviews generally supported the belief that students benefit from a learning environment that matches their preferred teaching style or learning environment. Thus, the expectations of the study were partially verified, allowing for some tentative conclusions while pointing to the need for further research.

Themes

To answer the research questions in this study, the researcher utilized the qualitative data collected during the interviews of financial services employees from multiple companies and generational groups. The transcripts were analyzed to illustrate the themes that emerged from the interviews. All quotes are taken directly from the transcripts. Any information that revealed the participants' identities was replaced with an alpha numeric code or blacking out references to respect confidentiality.

The first theme that emerged from the interviews was that employees of all ages consistently mentioned wanting interactions with the instructor and other students. They felt they learned best when they could ask questions and listen to other student's ideas and experiences. They often mentioned that the type or content of the training material strongly influenced the types of learning activities they would prefer. For example, about 25 percent specifically stated that they learned best when they had hands-on practice for task oriented training where as

conceptual knowledge required interactive discussions with the instructor and other students. Interviewees' also mentioned that they felt the virtual instructor led training delivery method offered the best of the options in that they didn't have to travel yet still had the structure and interaction to learn new material. The final theme borne out by the data was that the preference for instructor led training was not generationally specific to the older generations and in fact Generation Y preferred ILT nearly as much as the Matures and Baby Boomers.

Conclusions

The conclusion to be drawn from the results was identified in Tables 1, 2 and Figures 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 and 11.

1. Employees regardless of generational group would prefer an instructor led training delivery method over web based training, virtual instructor led and self study. See Table 2.
2. Generation X reported had the most balanced preferences across instructor led training, web based training and virtual instructor led training. See Table 2.
3. Regardless of generational group, 91 percent of those interviewed felt that employees would benefit from training based on their preferred teaching style and 98 percent felt the company would benefit from assessing how employees learn.
4. Only 60 percent of interviewees felt they could learn equally well from any of the teaching styles listed with 35 percent saying they could learn equally as well and 5 percent indicating that it depended on the situation, content and purpose of the training.

Limitations of the Study

This study revealed that regardless of gender, age, or teaching style, learners can be successful in various learning environments. However, further study with a larger more diverse population needs to be conducted to verify that the results hold true across a wider selection of

delivery methods. This sample population was limited to just 43 participants from the four generational groups. These were working adults that have already demonstrated the ability to learn from a variety of teaching styles throughout their lifetimes. This study did not differentiate between content areas or instructors. In addition, further study needs to be done to include students who have dropped their courses or who are choosing not to take specific types of teaching styles and examine the reasoning behind those decisions. Technology affords students today with access to endless amounts of information and opportunity, but does not have the capability to evaluate the needs of students by itself. This study looked at preferences in teaching styles, and opinions for greater use of those preferences with a corporate setting. Future research could provide the information needed for data based decision making regarding learner satisfaction and success in different teaching styles.

Implications for Practice

The researcher recommends broadening the available teaching style preference data provided to instructional designers as well as broadening the instructional methods defined by the author in this study. By incorporating the teaching style preferences of learners and increasing the available instructional methods to include broader delivery methods, such as video games used for teaching and critical thinking, social media for peer learning the designers may be able to focus training material to the appropriate preferences of the learners with minimal financial impact to the company. Although individual preferences are important the financial impacts must be weighted when deciding how to incorporate those preferences in learning catalogues or curriculums.

Recommendations for Future Research

Future research should begin with the evaluation of individual teaching style preferences during the recruiting process. The use of these assessments to predict learner performance will allow companies to focus their limited training resources to produce the best results. Through inexpensive data analysis and data mining, the return-on-investment for training dollars should provide results from the evaluation and indicators for possible disconnects, such as teaching style mismatches. The limited focus of this study and the dominant teaching style preferences of the sample suggest the distribution of teaching styles may be dominated by the teaching style the participants historically experienced. Further research into the distribution of employee styles may provide insight into the personal preferences that attract people to specific careers and impact how successful they are in those careers. The additional data may be useful in focused recruiting for specific career fields using teaching style preferences.

Conclusion

Determining the teaching style preferences of the four generations in the workforce poses challenges for both managers and learning professionals when trying to determine the most effective solution to solve performance related issues. In order to create learning solutions that enable learners to improve performance on the job, research needs to determine if there is a preferred teaching style for each of the four generations in the workplace today. In the first chapter the problem statement, research purpose, philosophical directions and research questions were discussed. In the second chapter, a review of the literature explored the different components required to understand the adult learner. Adults want to have training programs that are differentiated to include their preferred teaching and learning styles. Adults need to be motivated to learn efficiently and effectively and be secure in the knowledge of how the learning can be applied quickly in their jobs. The literature suggests that research in the area of adult learning and learning style assessments should continue so companies will have a better understanding of how they can differentiate instruction to include all learners.

In the third chapter, the author reviewed the research method, design, description of participants and data collection procedures and analysis. A qualitative research design was used to explore the research questions. By using qualitative measures both hard data as well as more subjective interpretations were used to not only determine the preferred style but how best to utilize that information in a variety of situations and contexts. The challenges were around sample size, random selection and correlating the data to fully support the problem statement. The fourth chapter presented the results from the interviews and an analysis of qualitative data collected from multigenerational employees from financial services companies. The results indicated that the teaching style or learning environment was a significant factor in terms of the

participant's preferences, and that they felt they would get more out of the training if it was offered in their preferred style. Since there are currently four generations in the workplace today it is important for learning professional to create learning solutions that engage and enable learners to improve performance on the job (Zemke, Rains & Filpczak, 2000).

The finale chapter discovered that while there is no consistent agreement among learning professionals on the single best method of learning, most now agree, it is important to create a learning environment that is tailored to the learners' preferred teaching and learning styles. At the same time, the availability and accessibility to computers for personal use, coupled with high-speed networks, has made online or distance learning an increasingly popular option. The findings revealed the individual interviews generally supported the belief that students benefit from a learning environment that matches their preferred teaching style or learning environment. Thus, the expectations of the study were partially verified, allowing for some tentative conclusions while pointing to the need for further research.

The first theme that emerged from the interviews was that employees of all ages consistently mentioned wanting interactions with the instructor and other students. They felt they learned best when they could ask questions and listen to other student's ideas and experiences. They often mentioned that the type or content of the training material strongly influenced the types of learning activities they would prefer. Interviewees' also mentioned that they felt the virtual instructor led training delivery method offered the best of the options in that they didn't have to travel yet still had the structure and interaction to learn new material. The final theme borne out by the data was that the preference for instructor led training was not generationally specific to the older generations and in fact Generation Y preferred ILT nearly as much as the Matures and Baby Boomers. The implications for practice, recommend broadening the available

teaching style preference data provided to instructional designers as well as broadening the instructional methods defined by the author in this study. Future research should begin with the evaluation of individual teaching style preferences during the recruiting process. The use of these assessments to predict learner performance will allow companies to focus their limited training resources to produce the best results. Through inexpensive data analysis and data mining, the return-on-investment for training dollars should provide results from the evaluation and indicators for possible disconnects, such as teaching style mismatches.

To create effective learning solutions a *one-size fits all* approach is insufficient to improve performance. The literature suggests determining the preferred teaching styles of the learners first in order to build effective solutions. The use of adult learning theory and strategies are driving factors in the success of learning programs; it stands to reason that the needs of adults in the workplace should be taken into consideration by instructional designers and learning professionals when creating learning solutions. Further research needs to determine the preferred teaching styles are for each of those generations. Determining the preferred teaching styles of the multigenerational workforce is but one of the first steps in creating effective solutions to improve performance in the workplace. The real value of the author's analysis of individual teaching styles lies in the improvement of training curriculum planning, instructional design, and custom-tailored learning environments, so that students may acquire the most appropriate and effective training possible.

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APPENDIX A

E-Mail to Potential Interview Participant

Dear Associate,

I am a doctoral student at and I am presently conducting research for my final doctoral research project.

The purpose of this email is to invite you to be a participant in my study. I am currently reviewing how corporations develop and deliver training to their employees. I am trying to explore if customizing training according to individual's preferred mode of learning would enable employees to be more productive and learning more from the learning programs provided.

The participation in this study is strictly voluntary and you may withdrawal at any time.

The requirement to participate in this study is as follows: be willing to schedule a 30 minute interview and adhere to the set interview date and time. The collected data will be analyzed and used in my final research paper. All your personal information will be kept confidential.

If you are interested in participating in this study, please reply via email to scott.dade@[REDACTED]com by March 31, 2011.

If you have any questions, please feel free to call me 704-519-6279.

Sincerely,

Scott Dade

APPENDIX B

INTERVIEW QUESTIONS

Participation in the study is strictly voluntary and you may withdrawal at any time. The data collected will be analyzed and used in my final research paper. This interview is fulfilling a personal educational requirement and I am not acting on behalf of any other organization. Your employer is not sponsoring my research and you must not disclose any confidential or proprietary business information during this interview. All personal information about you will be kept confidential and even your name will be replaced with an alpha numeric code. The data will be stored on my home computer and after three years destroyed.

1. When were you born?
2. When did you last attend or participate in a training session or course?
3. What type of training did you attend? For example Web Based Training (WBT), Virtual Instructor Led Training (vILT), Instructor Led Training (ILT) classroom, or self-study paper based?
4. What is your preferred teaching style, learning environment or delivery method WBT, vILT, ILT classroom, or self-study paper based?
5. Which teaching styles or learning environment preferences do you feel relate to the company's existing delivery methods?
6. Do you think employees would benefit from attending training based on their preferred teaching styles or learning environments?
7. Do you feel you can learn equally as well regardless of the teaching style, learning environment or delivery method you attend?
8. Do you feel the company can benefit from assessing how their employees learn?
9. How can companies measure if their employees are benefiting from attending training based on their preferred teaching styles or learning environment?
10. Do you think learning environment preferences should be used to customize all training or just for job specific training?

APPENDIX C

Research Approval

From: [REDACTED] Gina I
Sent: Wednesday, March 23, 2011 5:53 PM
To: Dade, Scott
Cc: [REDACTED] Karen W [REDACTED] Jennifer; [REDACTED], Donna
Subject: Requesting Permission to Interview [REDACTED] Employees

Scott: See below for the response from Corporate Communications. Let me know if you have any further questions or concerns.

Gina [REDACTED]

From: [REDACTED], Pamela
Sent: Wednesday, March 23, 2011 2:37 PM
To: [REDACTED], Gina I
Subject: RE: ACTION REQUESTED: Requesting Permission to Interview [REDACTED] Employees

Have an answer: As long as manager agrees, bank won't be named, and our code of ethics doesn't say anything about using work time/resources for this sort of thing, OK to proceed.

From: [REDACTED], Gina I
Sent: Friday, March 18, 2011 9:26 AM
To: [REDACTED], Pamela
Cc: Dade, Scott; [REDACTED] Karen W; [REDACTED] Donna
Subject: ACTION REQUESTED: Requesting Permission to Interview [REDACTED] Employees

Pam: Good Morning! One of our GLO teammates, Scott Dade, is requesting to interview [REDACTED] [REDACTED] associates in connection with writing his Thesis/dissertation.

Logistics. He is looking at learning across groups (Boomers, Gen X, Gen Y, etc.) across the enterprise (including globally) and will pull a "universe" of potential respondents from (1) those who have taken training in the last 12 months (data on myLearning tool) (2) sorted by age groupings. He will send an email to each age grouping asking for participation. The email would be sent from his [REDACTED] employee email.

Approach. All potential interviewees will be told the interview is to fulfill Scott's personal educational requirement, he is not acting on behalf of the [REDACTED] or any other organization, and they must not disclose any confidential or proprietary information during the interview. [REDACTED] employee personal information will be kept confidential; all data will be destroyed after three years. To further protect privacy, Scott will identify respondents as "from a financial institution" – [REDACTED] will not be named.

Additional information, including the questions that will be asked, can be found in the attached document.

Assistance Requested: Please advise if we need to obtain approval to conduct these interviews. If so, who is the appropriate person to ask for approval?

- if you need further information please contact Scott Dade directly at 704.519.6279.
- If you provide an email reply, please reply directly to Scott and cc Karen Humphries.

Thank you!

Gina Vangelos

From: [REDACTED], Donna
Sent: Friday, March 18, 2011 5:40 AM
To: [REDACTED], Gina I
Cc: [REDACTED], Karen W; [REDACTED], Jennifer
Subject: FW: Requesting Permission to Interview

Gina ... can you please check with Corp Communications to see if we need approval. Thanks.

From: Dade, Scott
Sent: Wednesday, March 16, 2011 9:58 AM
To: Humphries, Karen W, Carol, Donna
Subject: Requesting Permission to Interview

Karen,

As you know I'm writing my dissertation/Thesis and part of that process is to interview Associates about their Teaching style or delivery method preferences. Attached is a letter requesting permissions interview Associates [REDACTED] which has a copy of the interview questions attached on page 2.

I'm not sure if you can grant this or if it needs to go to HR, legal or Corporate Communications.

Thanks,

Scott Dade

APPENDIX D

Selection Invitation

April 2, 2011

TO: Employee's
FROM: Scott Dade
RE: Final Doctoral Project

Good morning,

I am emailing you to discuss an opportunity for you to participate in my research study. I am currently working on my final doctoral project. I am conducting research on teaching style and learning environment preferences in a corporate environment.

The purpose of this email is to invite you to be a participant in my study. I am currently reviewing how company's developed and deliver training to their employees. I am examining if customizing training according to individual's preferred mode of learning would enable employees to be more productive and learning more from the learning programs provided.

Please contact me immediately if you have any questions..

Thanks,

Scott Dade

APPENDIX E

MATURES					
Defining Events	Trends	Values	Cultural Memorabilia	Heroes	Social Characteristics
WWI Dust Bowl Great Depression Election of FDR WWII Pearl Harbor D-Day Death of FDR VE Day and VJ Day Hiroshima-Nagasaki	Patriotism Families New Deal Golden Age of Radio Silver Screen Rise of labor unions Dr. Spock	Dedication/ Sacrifice Hard work Conformity Law and order Respect for authority Patience Delayed reward Duty before pleasure Adherence to rules Honor Integrity	Kewpie Dolls Mickey Mouse Flash Gordon The Golden Era of Radio Wheaties Charlie McCarthy Tarzan Jukeboxes Blondie The Lone Ranger	Superman FDR MacArthur, Patton, Montgomery, Halsey, & Eisenhower Winston Churchill Audie Murphy Joe Foss Babe Ruth Joe DiMaggio	Conservative Clean Classy dress Golf American cars Mixed drinks Save for a rainy day Pay cash Patriotic Love of family Love of country Neighborly Community oriented

Source: Ron Zemke, Clair Raines, and Bob Filipczak. Generations at Work. New York: Amacom, 2000.

APPENDIX F

BABY BOOMERS					
Defining Events	Trends	Values	Cultural Memorabilia	Heroes	Social Characteristics
Post War Growth Korean War Television McCarthy hearings Rock 'n Roll Salk Polio vaccine Space program Vietnam Kennedy election Civil Rights Kennedy assassination Moon landing Woodstock	Prosperity Children in the spotlight Television Suburbia Assassinations Vietnam Civil Rights Cold War Women's Liberation Space Race Protesting Dr. Spock Free love	Optimism Team orientation Personal gratification Health and wellness Personal growth Youth Work Involvement Activism	"The Ed Sullivan Show" Quonset huts Fallout shelters Poodle skirts and Pop beads Slinkies TV Dinners "Laugh-In" Hula Hoops "The Mod Squad" The peace sign Army toys Tie Die	Gandhi Martin Luther King, Jr. John and Jacqueline Kennedy John Glen	Redefined roles Promote equality Non-committed to relationships Lives in the moment Manipulates rules to meet needs Designer wear Cellular phones Trendy BMW's Vintage wines Buy now pay later with plastic

Source: Ron Zemke, Clair Raines, and Bob Filipczak. Generations at Work. New York: Amacom,

APPENDIX G

GENERATION Xers					
Defining Events	Trends	Values	Cultural Memorabilia	Heroes	Social Characteristics
Kennedy election Civil Rights Kennedy assassination Moon landing Woodstock Oil Embargo Nixon resigns First PC's Women's Rights John Lennon shot Reagan elected Challenger explosion Fall of Berlin Wall	Watergate Nixon resigns Latchkey kids Stagflation Singleparenting Divorce MTV AIDS Computers Challenger disaster Fall of Berlin Wall Wall Street frenzy Persian Gulf Glasnost, Perestroika	Diversity Thinking globally Balance Technoliteracy Fun Informality Self-reliance Pragmatism	"The Brady Bunch" Pet Rocks Platform shoes "The Simpsons" "Dynasty" ET Cabbage Patch dolls	(none)	Nose rings Naval rings Functional clothing Tattoos Japanese cars Spending is cautious and conservative On-line chatting

Source: Ron Zemke, Clair Raines, and Bob Filipczak. Generations at Work. New York: Amacom,

APPENDIX H

GENERATION Y					
Defining Events	Trends	Values	Cultural Memorabilia	Heroes	Social Characteristics
John Lennon shot Reagan elected Challenger explosion Fall of Berlin Wall Desert Storm Oklahoma City Bombing Death of Princess Diana Clinton scandals	Computers Communication Technology Schoolyard violence Oklahoma City bombing <i>It takes a village</i> TV talk shows Multiculturalism Girl's Movement McGwire and Sosa Child focus	Optimism Civic duty Confidence Achievement Sociability Morality Street smarts	Barney Teenage Mutant Ninja Turtles Tomagotchi & other virtual pets Beanie Babies Pogs American Girl dolls Oprah and Rosie The Spice Girls The X Games	Michael Jordon Princess Dianna Mark McGwire Sammy Sosa Mother Teresa Bill Gates Kerri Strugg Mia Hamm Tiger Woods Christopher Reeves	Polyester Pagers Spend your parent's money as fast as you can Future is in their hands No Social Security Health Care problems WWW and Internet connectivity Flatter world flatter life at home and work

Source: Ron Zemke, Clair Raines, and Bob Filipczak. Generations at Work. New York: Amacom,

Item No.	Date	Particulars	Account	Debit	Credit	Balance	Remarks
101	10/1/2011
102	10/1/2011
103	10/1/2011
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149	10/1/2011
150	10/1/2011

APPENDIX J

Definition of Key Terms

Baby Boomer. The United States Census Bureau considers a baby boomer to be someone born during the demographic birth boom between 1946 and 1964.

Blended learning: Learning events that combine aspects of online and face-to-face instruction (World Wide Learn, 2008).

Cognitive Development. Cognitive development is a field of study in neuroscience and psychology focusing on a child's development in terms of information processing, conceptual resources, perceptual skill, language learning, and other aspects of brain development and cognitive psychology.

Community college. An institution of higher education which provides “open access ... for individuals of all ages, preparation levels, and incomes” (Eckel & King, 2004, p. iii).

Corporate Training and Development. In the field of human resource management, training and development is the field concerned with organizational activity aimed at bettering the performance of individuals and groups in organizational settings. It has been known by several names, including employee development, human resource development, and learning and development (Harrison, 2005, p.5).

E-learning (electronic learning): Term covering a wide set of applications and processes, such as Web-based learning and computer-based learning. It includes the delivery of content via Internet, intranet/extranet (LAN/WAN), audio- and videotape, satellite broadcast, interactive TV, and CD-ROM (World Wide Learn, 2008).

Electronic learning. Electronic learning is sometimes abbreviated as e-learning and refers to teaching and learning activities using electronic media and ICT (Balasundaram & Ramadoss, 2007; Urdan & Weggen, 2000).

Evaluation: A systematic method for gathering information about the impact and effectiveness of a learning offering (World Wide Learn, 2008).

Experiential Learning Theory (ELT): A theory of learning that emphasizes the central role played by experience in the way we learn, thus differentiating it from cognitive and behavioral learning theories. Learning is defined as “the process whereby knowledge is Comparing Online and Classroom Students created through the transformation of experience. Knowledge results from the combination of grasping and transforming experience” (Kolb, 1984, p.41).

Generation X. A term used to describe a group of people born from 1964 to the mid or late 1970s in the United States and Canada. This generation follows the Baby Boomers.

Generation Y. A generation of people born between 1979 and 1994 and follows the group referred to as Generation X.

Individualized Learning. Curriculum or course work designed to advance a learners personal and career objectives instead of fulfillment of traditional classroom competencies or objectives (Murray, 1976, p. 3).

Instructor Led Training. Instructor Led Training or ILT, is the practice of training and learning material between an instructor and learners, either individuals or groups (<http://www.iqat.org/glossary.php>)

Web-instructor led. Similar to instructor led training except it is delivered through an electronic media or delivery system. Can also be referred to Virtual instructor led training or vILT.

Internet-based training: Training delivered primarily by TCP/IP. Network technologies such as email, newsgroups, and proprietary applications (World Wide Learn, 2008).

Interview. An *interview* is "a formal face-to-face meeting, especially, one arranged for the assessment of the qualifications of an applicant, as for employment or admission.... A conversation, as one conducted by a reporter, in which facts, or statements are elicited from another." (*The American Heritage Dictionary*, Second College Edition)

Learning: A cognitive and/or physical process in which a person assimilates information and temporarily or permanently acquires or improves skills, knowledge, behaviors, and/or attitudes (World Wide Learn, 2008).

Learning environment: The physical or virtual setting in which learning takes place (World Wide Learn, 2008).

Learning Style: The manner in which people like to learn or the manner in which they have been taught to learn. In Kolb's terms, the learning style is determined by the degree to which the person learning places emphasis on abstractness over concreteness and action over reflection (See Appendix A, "Kolb's Learning Styles").

Learning styles: characteristic preferences for alternative ways of taking in and processing information (World Wide Learn, 2008).

Learning Style Inventory (LSI): Instrument developed by David Kolb in 1971 to help assess individual learning styles; it has been updated for present-day use (Kolb, 1999a).

Matures. The matures (aka Pre-Boomers, Silents, Traditionalists, Veterans) are a generation of people born between 1900 and 1945 who are still in the workforce today (Kyles, 2005).

Multigenerational workforce. Corporations are now managing four generations of employees at once. The four groups are Matures, Baby Boomers, Generation Xers, and Gen Y or Nexters.

Non-traditional Student. A non-traditional student is a student who does not fall into the category of traditional learner. For example, students over age 22, part-time students, students holding full-time jobs, and students living off campus are considered to be non-traditional.

Online learning: Learning delivered by Web-based or Internet-based technologies (World Wide Learn, 2008).

Personalization: Tailoring web content to an individual user. Can be accomplished by a user entering preferences or by a computer guessing about the user's preferences (World Wide Learn, 2008).

Self Directed Learning. Learning on one's own, being self-directed in one's learning is itself a context in which learning takes place. The key to placing a learning experience within this context is that the learner has the primary responsibility for planning, carrying out, and evaluating his or her own learning (Merriam & Caffarella, 1991, p 54).

Teaching Style. The delivery method or learning style that a learner prefers (Instructor led training, Web instructor led Training, Web Based Training or Self study).

Technology. Technology is the term used to describe electronic or digital products and systems.

Traditional learner. A traditional student is a student who is 18-22 years old and attends full-time at brick-and-mortar higher learning institution.

Transfer of Training. Transfer of training is effectively and continuing applying the skills, knowledge, and/or attitudes that were learned in a learning environment to the job environment (<http://www.nwlink.com/~donclark/hrd/learning/transfer.html>).

Transfer of Learning. The application of skills, knowledge, and/or attitudes that were learned in one situation to another learning situation. This increases the speed of learning (<http://www.nwlink.com/~donclark/hrd/learning/transfer.html>).

Virtual: Not concrete or physical. For instance, a completely virtual university does not have actual buildings but instead holds classes over the Internet (World Wide Learn, 2008).

Virtual classroom: The online learning space where students and instructors interact

WBT (Web-based training): Delivery of educational content via a Web browser over the public Internet, a private intranet, or an extranet (World Wide Learn, 2008).